CERTIFIED SURVEYS

CHESAPEAKE ENERGY

LOVINGTON #1-5
SEC. 4-T16N-R36E
LEA COUNTY, NEW MEXICO

Sur: 2190/S & 810/W 4-16-36 Unit T
BHL: 2287/S & 875/E 5-16-36 Unit O

APRIL 17, 1997

HALLIBURTON

The Future Is Working Together.

9270

HALLIBURTON
ENERGY SERVICES

Drilling Systems

9800 West Reno / Oklahoma City, OK 73127 / 405-324-2222

April 17, 1997

Re: Chesapeake Energy
Lovington #1-5
Lea County, New Mexico
Sec. 4-T16N-R36E

Enclosed please find the original surveys performed on the referenced well by Halliburton Drilling Systems.

Name & Title of Surveyor	Drainhole Number	Surveyed Depths	Dates Performed	Type of Survey
Joe Bill Stewart Directional Driller	Original Hole	8130' - 12005'	12/05/96 - 12/20/96	Directional/MWD

If any other information is required, please contact the undersigned at the letterhead address and phone number.

Scott Feland
Well Planner

My Commission Expires: Nov. 30, 1999

Shannon Lee
Notary Public

Halliburton Energy Services

Survey Report

Date: 4/17/97
Time: 12:17 pm
Wellpath ID: SURVEY
Date Created: 12/5/96
Last Revision: 4/17/97

Calculated using the Minimum Curvature Method
Computed using WIN-CADDS REV2.2.2
Vertical Section Plane: N 85.30 W

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

CHESAPEAKE
LOVINGTON #1-5
LEA COUNTY, NEW MEXICO
SEC.4-T16N-R36E
SURVEY

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	(ft)	DLS (dg/100ft)
TIE IN								
1415.00	0.50	N 18.10 E	0.00	1415.00	0.00	0.00 N	0.00 E	0.00
1915.00	0.00	N 18.10 E	500.00	1914.99	-0.51	2.07 N	0.68 E	0.10
2456.00	1.50	N 31.90 W	541.00	2455.93	3.72	8.09 N	3.06W	0.28
2788.00	0.25	S 83.90 E	332.00	2787.90	5.58	11.70 N	4.64W	0.50
3267.00	0.50	N 24.10 E	479.00	3266.89	3.84	13.49 N	2.75W	0.10
4156.00	0.75	N 83.10 E	889.00	4155.84	-3.14	17.73 N	4.61 E	0.07
4606.00	1.00	S 36.90 E	450.00	4605.80	-8.64	14.95 N	9.89 E	0.20
4951.00	1.00	S 51.90 E	345.00	4950.75	-13.15	10.68 N	14.07 E	0.08
5525.00	0.50	S 21.90 E	574.00	5524.70	-18.45	5.27 N	18.95 E	0.11
5935.00	1.25	S 21.90 E	410.00	5934.65	-21.25	0.54 S	21.28 E	0.18
6355.00	1.00	S 6.90 E	420.00	6354.57	-24.04	8.43 S	23.43 E	0.09
6849.00	0.75	S 28.10 W	494.00	6848.51	-23.63	15.56 S	22.43 E	0.12
7347.00	0.50	N 18.10 E	498.00	7346.50	-22.83	16.37 S	21.57 E	0.25
7813.00	0.50	N 51.90 W	466.00	7812.49	-21.61	13.18 S	20.60 E	0.12
BHA #1 IN @ 8169 FIRST MWD SURVEY @ 8130' MD								
8100.00	0.10	N 73.80 W	287.00	8099.48	-20.32	12.34 S	19.37 E	0.14
8130.00	0.10	N 13.90 W	30.00	8129.48	-20.28	12.31 S	19.34 E	0.33
8161.00	0.50	N 71.50 W	31.00	8160.48	-20.14	12.24 S	19.21 E	1.47
8193.00	0.90	N 74.90 W	32.00	8192.48	-19.76	12.13 S	18.83 E	1.26
8224.00	1.70	N 83.30 W	31.00	8223.47	-19.06	12.01 S	18.14 E	2.65
8255.00	2.60	N 87.60 W	31.00	8254.45	-17.90	11.93 S	16.98 E	2.95
8286.00	3.40	S 89.90 W	31.00	8285.41	-16.28	11.90 S	15.36 E	2.61
8317.00	4.30	N 89.90 W	31.00	8316.34	-14.21	11.90 S	13.28 E	2.90
8348.00	5.20	N 87.00 W	31.00	8347.23	-11.64	11.83 S	10.71 E	3.00
8379.00	6.20	N 86.90 W	31.00	8378.08	-8.57	11.66 S	7.64 E	3.23
8411.00	7.00	N 88.50 W	32.00	8409.86	-4.89	11.52 S	3.96 E	2.56
8443.00	8.10	N 85.10 W	32.00	8441.59	-0.69	11.27 S	0.23W	3.71
8475.00	8.70	N 86.20 W	32.00	8473.24	3.98	10.92 S	4.90W	1.94

Halliburton Energy Services

Survey Report

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	(ft)	DLS (dg/100ft)
8506.00	9.60	N 83.40 W	31.00	8503.85	8.91	10.47 S	9.80W	3.24
8538.00	10.40	N 82.50 W	32.00	8535.36	14.46	9.78 S	15.32W	2.55
8569.00	10.90	N 81.80 W	31.00	8565.83	20.18	9.00 S	20.99W	1.67
8600.00	11.90	N 79.70 W	31.00	8596.22	26.29	8.01 S	27.04W	3.49
8632.00	12.30	N 81.40 W	32.00	8627.50	32.97	6.91 S	33.65W	1.67
8663.00	13.20	N 81.90 W	31.00	8657.74	39.80	5.92 S	40.42W	2.92
8695.00	13.50	N 83.30 W	32.00	8688.88	47.18	4.97 S	47.75W	1.38
8727.00	14.40	N 83.00 W	32.00	8719.93	54.89	4.05 S	55.41W	2.82
8756.00	15.30	N 82.60 W	29.00	8747.96	62.32	3.12 S	62.78W	3.12
8787.00	15.90	N 84.30 W	31.00	8777.82	70.65	2.17 S	71.06W	2.43
8819.00	17.00	N 85.20 W	32.00	8808.51	79.71	1.34 S	80.09W	3.53
8849.00	17.90	N 85.00 W	30.00	8837.13	88.70	0.57 S	89.05W	3.01
8880.00	18.40	N 85.00 W	31.00	8866.59	98.36	0.27 N	98.67W	1.61
8912.00	19.30	N 85.20 W	32.00	8896.87	108.70	1.15 N	108.97W	2.82
8943.00	20.20	N 85.20 W	31.00	8926.05	119.18	2.03 N	119.41W	2.90
8975.00	21.20	N 85.10 W	32.00	8955.98	130.49	2.99 N	130.68W	3.13
9007.00	22.20	N 84.60 W	32.00	8985.71	142.32	4.05 N	142.46W	3.18
9038.00	22.90	N 84.10 W	31.00	9014.34	154.20	5.22 N	154.29W	2.34
9070.00	23.90	N 84.50 W	32.00	9043.71	166.91	6.48 N	166.94W	3.16
9101.00	24.60	N 85.20 W	31.00	9071.97	179.64	7.62 N	179.62W	2.44
9133.00	25.70	N 86.00 W	32.00	9100.94	193.24	8.66 N	193.18W	3.60
9165.00	26.50	N 85.60 W	32.00	9129.68	207.32	9.70 N	207.22W	2.56
9196.00	27.30	N 85.20 W	31.00	9157.32	221.34	10.82 N	221.20W	2.65
9227.00	28.20	N 85.30 W	31.00	9184.76	235.78	12.02 N	235.58W	2.91
9259.00	29.20	N 85.30 W	32.00	9212.82	251.14	13.28 N	250.90W	3.12
9290.00	30.10	N 85.30 W	31.00	9239.76	266.48	14.53 N	266.18W	2.90
9321.00	30.00	N 85.30 W	31.00	9266.60	282.00	15.80 N	281.66W	0.32
9353.00	29.80	N 84.90 W	32.00	9294.34	297.95	17.17 N	297.55W	0.88
9384.00	30.70	N 85.20 W	31.00	9321.12	313.57	18.51 N	313.11W	2.94
9416.00	30.70	N 85.20 W	32.00	9348.63	329.91	19.88 N	329.39W	0.00
9447.00	30.70	N 85.20 W	31.00	9375.29	345.74	21.21 N	345.16W	0.00
BHA #2 IN @ 9497								
9479.00	31.00	N 85.60 W	32.00	9402.76	362.14	22.52 N	361.52W	1.14
9510.00	31.00	N 85.60 W	31.00	9429.33	378.11	23.75 N	377.43W	0.00
9541.00	30.80	N 85.60 W	31.00	9455.93	394.03	24.97 N	393.31W	0.65
9572.00	30.50	N 85.50 W	31.00	9482.60	409.83	26.19 N	409.06W	0.98
9604.00	30.60	N 85.10 W	32.00	9510.16	426.10	27.53 N	425.27W	0.71
9635.00	30.60	N 84.90 W	31.00	9536.84	441.88	28.90 N	440.99W	0.33
9666.00	30.30	N 85.30 W	31.00	9563.57	457.59	30.24 N	456.65W	1.17
9698.00	30.20	N 85.20 W	32.00	9591.21	473.71	31.58 N	472.71W	0.35
9730.00	30.10	N 84.90 W	32.00	9618.88	489.78	32.97 N	488.72W	0.57

Halliburton Energy Services

Survey Report

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	(ft)	DLS (dg/100ft)
9761.00	29.80	N 84.50 W	31.00	9645.74	505.26	34.39 N	504.13W	1.16
9793.00	30.10	N 84.20 W	32.00	9673.47	521.23	35.97 N	520.03W	1.05
9823.00	30.00	N 83.60 W	30.00	9699.43	536.25	37.56 N	534.97W	1.06
9854.00	30.20	N 83.10 W	31.00	9726.25	551.79	39.36 N	550.41W	1.03
9885.00	30.10	N 82.30 W	31.00	9753.06	567.34	41.34 N	565.86W	1.34
9917.00	30.40	N 82.00 W	32.00	9780.70	583.44	43.54 N	581.83W	1.05
9948.00	31.10	N 81.90 W	31.00	9807.34	599.26	45.76 N	597.52W	2.26
9979.00	31.10	N 81.50 W	31.00	9833.89	615.24	48.08 N	613.36W	0.67
BHA #3 IN @ 10719								
10010.00	31.00	N 81.70 W	31.00	9860.45	631.20	50.41 N	629.18W	0.46
10042.00	31.00	N 82.30 W	32.00	9887.88	647.65	52.71 N	645.50W	0.97
10073.00	30.90	N 82.30 W	31.00	9914.46	663.57	54.84 N	661.30W	0.32
10105.00	31.00	N 82.30 W	32.00	9941.91	680.01	57.05 N	677.61W	0.31
10168.00	30.80	N 82.40 W	63.00	9995.96	712.32	61.35 N	709.68W	0.33
10200.00	30.60	N 82.50 W	32.00	10023.48	728.63	63.50 N	725.87W	0.65
10232.00	30.50	N 82.40 W	32.00	10051.04	744.88	65.64 N	742.00W	0.35
10263.00	30.20	N 82.70 W	31.00	10077.79	760.52	67.67 N	757.53W	1.08
10295.00	29.80	N 82.80 W	32.00	10105.50	776.51	69.69 N	773.40W	1.26
10325.00	29.80	N 83.40 W	30.00	10131.53	791.41	71.48 N	788.20W	0.99
10357.00	29.60	N 84.40 W	32.00	10159.33	807.26	73.16 N	803.96W	1.67
10389.00	29.00	N 84.60 W	32.00	10187.24	822.91	74.67 N	819.55W	1.90
10421.00	29.30	N 84.30 W	32.00	10215.18	838.50	76.17 N	835.07W	1.04
10452.00	30.20	N 84.90 W	31.00	10242.10	853.88	77.62 N	850.38W	3.06
10483.00	30.20	N 84.50 W	31.00	10268.89	869.47	79.06 N	865.91W	0.65
10515.00	30.00	N 84.30 W	32.00	10296.58	885.52	80.63 N	881.88W	0.70
10545.00	29.80	N 84.70 W	30.00	10322.58	900.47	82.06 N	896.77W	0.94
10576.00	30.20	N 84.90 W	31.00	10349.43	915.97	83.46 N	912.20W	1.33
10607.00	30.30	N 85.70 W	31.00	10376.21	931.59	84.74 N	927.77W	1.34
10638.00	30.20	N 85.60 W	31.00	10402.99	947.21	85.93 N	943.34W	0.36
10670.00	29.90	N 85.40 W	32.00	10430.69	963.23	87.19 N	959.31W	0.99
10702.00	29.70	N 85.00 W	32.00	10458.46	979.13	88.52 N	975.16W	0.88
10733.00	29.60	N 84.60 W	31.00	10485.40	994.47	89.91 N	990.43W	0.72
10763.00	30.00	N 86.20 W	30.00	10511.43	1009.38	91.10 N	1005.29W	2.97
10794.00	30.30	N 87.60 W	31.00	10538.24	1024.94	91.94 N	1020.84W	2.47
10825.00	30.20	N 88.30 W	31.00	10565.02	1040.54	92.50 N	1036.45W	1.18
10856.00	29.90	N 88.00 W	31.00	10591.85	1056.04	93.00 N	1051.96W	1.08
10919.00	28.30	N 88.30 W	63.00	10646.89	1086.64	93.99 N	1082.58W	2.55
BHA #4 IN @ 10979								
10950.00	27.60	N 87.70 W	31.00	10674.28	1101.16	94.50 N	1097.10W	2.43
10982.00	27.70	N 87.60 W	32.00	10702.62	1115.99	95.11 N	1111.94W	0.34
11013.00	28.10	N 88.20 W	31.00	10730.02	1130.49	95.64 N	1126.44W	1.58

Halliburton Energy Services

Survey Report

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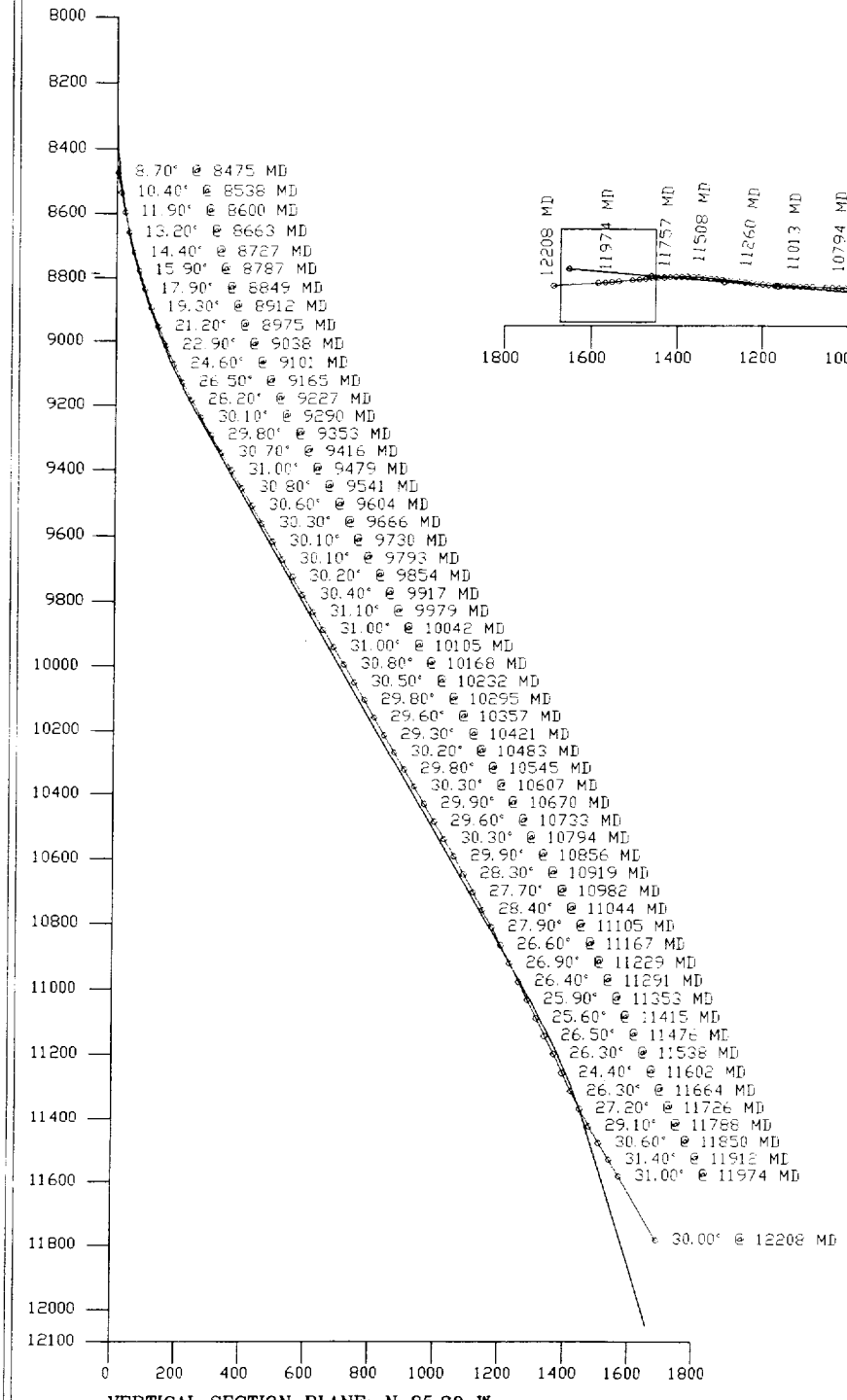
11044.00	28.40	N 88.90 W	31.00	10757.33	1145.13	96.01 N	1141.10W	1.44
11074.00	28.80	N 88.10 W	30.00	10783.67	1159.47	96.39 N	1155.46W	1.85
11105.00	27.90	N 86.60 W	31.00	10810.95	1174.18	97.06 N	1170.16W	3.70
11136.00	26.90	N 84.60 W	31.00	10838.47	1188.45	98.15 N	1184.39W	4.38
11167.00	26.60	N 83.20 W	31.00	10866.16	1202.39	99.63 N	1198.26W	2.25
11198.00	26.40	N 82.80 W	31.00	10893.90	1216.22	101.32 N	1211.99W	0.86
11229.00	26.90	N 83.30 W	31.00	10921.61	1230.11	103.00 N	1225.79W	1.77
11260.00	27.10	N 83.60 W	31.00	10949.23	1244.18	104.61 N	1239.77W	0.78
11291.00	26.40	N 83.30 W	31.00	10976.91	1258.12	106.20 N	1253.63W	2.30
11322.00	26.40	N 84.10 W	31.00	11004.68	1271.90	107.71 N	1267.34W	1.15
11353.00	25.90	N 83.70 W	31.00	11032.50	1285.56	109.16 N	1280.92W	1.71
11384.00	25.90	N 83.20 W	31.00	11060.39	1299.09	110.71 N	1294.37W	0.70
11415.00	25.60	N 82.60 W	31.00	11088.31	1312.55	112.37 N	1307.74W	1.28
11445.00	26.00	N 83.50 W	30.00	11115.32	1325.59	113.95 N	1320.70W	1.87
11476.00	26.50	N 84.60 W	31.00	11143.12	1339.30	115.37 N	1334.33W	2.25
11508.00	26.90	N 85.90 W	32.00	11171.71	1353.68	116.56 N	1348.66W	2.21
11538.00	26.30	N 87.10 W	30.00	11198.54	1367.11	117.38 N	1362.07W	2.68
11569.00	24.80	N 89.60 W	31.00	11226.51	1380.46	117.77 N	1375.43W	5.96
11602.00	24.40	S 89.10 W	33.00	11256.51	1394.14	117.72 N	1389.17W	2.04
BHA #5 IN @ 11649								
11633.00	24.80	S 87.40 W	31.00	11284.70	1406.96	117.32 N	1402.06W	2.62
11664.00	26.30	S 87.10 W	31.00	11312.67	1420.22	116.68 N	1415.42W	4.86
11695.00	27.40	S 87.50 W	31.00	11340.32	1434.10	116.02 N	1429.40W	3.60
11726.00	27.20	S 85.40 W	31.00	11367.87	1448.17	115.14 N	1443.59W	3.17
11757.00	28.50	S 83.90 W	31.00	11395.28	1462.43	113.79 N	1458.01W	4.76
11788.00	29.10	S 84.10 W	31.00	11422.44	1477.11	112.22 N	1472.86W	1.96
11819.00	29.70	S 84.20 W	31.00	11449.45	1492.07	110.67 N	1488.00W	1.94
11850.00	30.60	S 84.70 W	31.00	11476.26	1507.39	109.17 N	1503.50W	3.01
11912.00	31.40	S 85.40 W	62.00	11529.40	1538.87	106.42 N	1535.31W	1.42
11943.00	31.30	S 85.70 W	31.00	11555.88	1554.79	105.16 N	1551.39W	0.60
11974.00	31.00	S 85.80 W	31.00	11582.41	1570.63	103.98 N	1567.38W	0.98
12005 MD LAST MWD SURVEY								
12005.00	30.50	S 86.00 W	31.00	11609.05	1586.29	102.84 N	1583.19W	1.65
PROJECTION TO 12208								
12208.00	30.00	S 87.00 W	203.00	11784.41	1687.51	96.59 N	1685.26W	0.35

CHESAPEAKE ENERGY CORPORATION
LOVINGTON #1-5
LEA COUNTY, NEW MEXICO
SEC.4-T16N-R36E

HALLIBURTON ENERGY SERVICES
DRILLING SYSTEMS

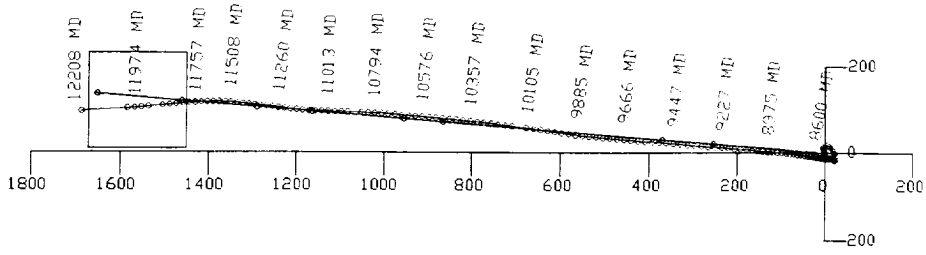
CHESAPEAKE

VERTICAL VIEW
SCALE 200 ft. / DIVISION
TVD REF: WELLHEAD
VERTICAL SECTION REF: WELLHEAD



VERTICAL SECTION PLANE: N 85.30 W

HORIZONTAL VIEW
SCALE 200 ft. / DIVISION
SURVEY REF: WELLHEAD



SURFACE LOCATION
2190' FSL, 810' FWL
SEC. 4 - T16N - R36E

BOTTOM HOLE LOCATION
2287' FSL, 875' FEL
SEC 5 - T16N - R36E