

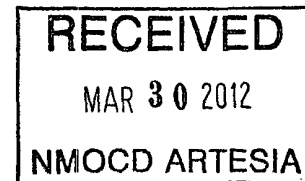


**PHOENIX
TECHNOLOGY SERVICES**

March 26, 2012

Chesapeake Energy Corporation
Attention: Regulatory Department
6100 Western Ave
Oklahoma City, OK 73118

Re: Chesapeake Operating Inc.
PLU Big Sinks 15 25 30 USA 1H
Eddy County, NM
API #30-015-39693
Job No. 1210176



Dear Regulatory Department;

Phoenix Technology Services, Inc. has filed the survey certification, surveys, and lease plat for the above referenced well with the State of New Mexico Oil Conservation Division – District 2 via certified mail. A copy of the filing is attached for your records.

Name of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Will Harper	1H	199	13,525	03/01/12	03/17/12	MWD

Thank you for the opportunity to be of service. Please contact me if you have any questions or require additional information.

Best Regards,



Gretchen Briggs
Operations Administrator

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1210176

OPERATOR Chesapeake Energy

WELL NAME PLU Big Sinks 15-28 30 USA 1H

COUNTY & STATE Eddy County, New Mexico

API WELL NUMBER 157211 / 30-015-39693

PROPOSED DIRECTION 359.75

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
ft	.00 ft	.0 ft	.0 ft	.00 ft	.00 ft	Surface

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
1-Mar-12	199 ft	0.4	74.9

SURVEY INSTRUMENT
TYPE
Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
17-Mar-12	13,525 ft	90.6	358.4

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
17-Mar-12	13,571 ft	90.6	358.4

Will Harper

PRINT YOUR NAME ABOVE

Will Harper

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.38
DECLINATION OR GRID	GRID

3/17/2012

TODAY'S DATE

MWD SUPERVISOR 1 Patrick Brown

DIRECTIONAL DRILLER 1 Brad Hayes

MWD SUPERVISOR 2 Will Harper

DIRECTIONAL DRILLER 2 Victor Mata

1805 Brittmore Road Houston, Texas 77043 (713)3370609 (Voice), (713)337-0599 (Fax)

DISTRICT I
1025 N. French Dr., Hobbs, NM 88240
Phone (505) 393-6101 Fax: (505) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax: (505) 748-0720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6170 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 478-3450 Fax: (505) 478-3182

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 96403	Pool Name WILDCAT; BONE SPRING
Property Code	Property Name PLU BIG SINKS 15 25 30 USA	Well Number 1H
OGRID No. 147179	Operator Name CHESAPEAKE OPERATING CO.	Elevation 3339'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	22	25 S	30 E		10	NORTH	1980	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	15	25 S	30 E		100	NORTH	1980	WEST	EDDY

Dedicated Acres 163.02	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

PROPOSED BOTTOM HOLE LOCATION Lot - N 32.13746604' Long - W 103.87119257' NMSPCE- N 414052.713 E 684382.151 (NAD-83) Lot - N 32.13734203' Long - W 103.87071040' NMSPCE- N 413994.474 E 643197.150 (NAD-27) Projected Penetration Point 330' FSL & 1980' FVL SURFACE LOCATION Lot - N 32.12306940' Long - W 103.8711942' NMSPCE- N 408815.491 E 684404.128 (NAD-83) Lot - N 32.12294525' Long - W 103.87071260' NMSPCE- N 408757.366 E 643218.961 (NAD-27)		OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Bryan Arrant</i> 02/22/2012 Signature Date Bryan Arrant Printed Name bryan.arrant@chk.com Email Address SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. <i>GARY L. JONES</i> Date Surveyed Seal of Professional Surveyor 24821 Certificate No. Gary L. Jones 7977 BASIN SURVEYS 24821
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Chesapeake Operating Inc.

Eddy County, New Mexico (NAD 1983)

PLU Big Sinks 15 25 30 USA 1H

Job # 1210176

Rig: Patterson 62

Survey: Phoenix MWD Surveys

Chesapeake Energy, Survey Report

26 March, 2012

Chesapeake Energy, Survey Report

Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well Job # 1210176
Project:	Eddy County, New Mexico (NAD 1983)	TVD Reference:	WELL @ 3364.00usft (Patterson 62)
Site:	PLU Big Sinks 15 25 30 USA 1H	MD Reference:	WELL @ 3364.00usft (Patterson 62)
Well:	Job # 1210176	North Reference:	Grid
Wellbore:	Rig: Patterson 62	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patterson 62	Database:	Compass5000

Project	Eddy County, New Mexico (NAD 1983)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	PLU Big Sinks 15 25 30 USA 1H		
Site Position:		Northing:	408,815.48 usft
From:	Map	Easting:	684,404.13 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 23.0498 N
		Longitude:	103° 52' 16.2989 W
		Grid Convergence:	0.25 °

Well	Job # 1210176		
Well Position	+N-S	0.00 usft	Northing:
	+E-W	0.00 usft	Easting:
Position Uncertainty		0.00 usft	Wellhead Elevation:
			25.00 usft
			Latitude:
			32° 7' 23.0498 N
			Longitude:
			103° 52' 16.2989 W
			Ground Level:
			3,339.00 usft

Wellbore	Rig: Patterson 62		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	02/27/12	7.63
			Dip Angle
			(°)
			60.02
			Field Strength
			(nT)
			48,452

Design	Rig: Patterson 62		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			359.75

Survey Program	Date 03/26/12		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
199.00	13,571.00	Phoenix MWD Surveys (Rig: Patterson 62)	MWD
			Description
			MWD - Standard

Chesapeake Energy, Survey Report

Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well Job # 1210176
Project:	Eddy County, New Mexico (NAD 1983)	TVD Reference:	WELL @ 3364.00usft (Patterson 62)
Site:	PLU Big Sinks 15 25 30 USA 1H	MD Reference:	WELL @ 3364.00usft (Patterson 62)
Well:	Job # 1210176	North Reference:	Grid
Wellbore:	Rig: Patterson 62	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patterson 62	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.00	0.00	0 00	3,364.00	0.00	0 00	0.00	0.00	0 00	408,815.48	684,404.13	
Surface											
199.00	0.40	74.90	3,165.00	199.00	0.18	0.67	0.18	0.20	408,815.66	684,404.80	
First Phoenix MWD Surveys @ 199' MD											
308.00	0 60	90.70	3,056.01	307.99	0.27	1.61	0 27	0.22	408,815.76	684,405.74	
590.00	0.10	94 30	2,774.01	589.99	0 24	3.33	0.22	0.18	408,815.72	684,407.46	
780.00	0.40	266.70	2,584.01	779.99	0 19	2.83	0.17	0.26	408,815.67	684,406.96	
970.00	1 30	223.50	2,394.03	969.97	-1.42	0.69	-1 42	0 55	408,814.07	684,404.82	
1,107.00	1.40	232.40	2,257.07	1,106.93	-3.56	-1.71	-3.56	0 17	408,811.92	684,402.42	
1,230.00	1.80	227.60	2,134.12	1,229.88	-5.78	-4 32	-5 76	0 34	408,809.70	684,399.80	
1,420.00	1.90	239.50	1,944.22	1,419.78	-9.39	-9.24	-9.35	0.21	408,806.09	684,394.89	
1,610.00	2.00	251.80	1,754.33	1,609.67	-12.03	-15 11	-11.96	0.23	408,803.46	684,389.02	
1,800.00	1 40	263.80	1,564.41	1,799.59	-13.31	-20 56	-13.22	0.37	408,802.17	684,383.57	
1,990.00	1.40	276.00	1,374.47	1,989.53	-13.32	-25.18	-13.21	0.16	408,802.16	684,378.95	
2,181.00	1.40	266.50	1,183.53	2,180.47	-13.22	-29.83	-13.09	0.12	408,802.26	684,374.30	
2,371.00	1.50	260 60	993.59	2,370.41	-13.77	-34.60	-13.62	0.09	408,801.71	684,369.53	
2,561.00	1.00	267.70	803.63	2,560.37	-14.24	-38.71	-14.07	0.27	408,801.24	684,365.42	
2,752.00	0.90	268.90	612.66	2,751.34	-14.34	-41.87	-14.15	0.05	408,801.15	684,362.25	
2,942.00	0.60	311.10	422.67	2,941.33	-13.71	-44.12	-13 52	0.32	408,801.77	684,360.01	
3,132.00	0.50	282.60	232.68	3,131.32	-12.88	-45.67	-12.68	0.15	408,802.61	684,358.45	
3,322.00	0.20	126.90	42.68	3,321.32	-12.90	-46.22	-12.69	0.36	408,802.59	684,357.91	
3,511.00	1 00	129.60	-146.30	3,510.30	-14.14	-44.68	-13.95	0.42	408,801.34	684,359.44	
3,702.00	2.40	141.80	-337.22	3,701.22	-18 35	-40.93	-18.17	0.75	408,797.13	684,363.20	
3,809.00	2.50	140.80	-444.12	3,808.12	-21 92	-38.07	-21.75	0.10	408,793.56	684,366.06	
3,912.00	1.80	144.20	-547.05	3,911.05	-24.97	-35.70	-24.82	0.69	408,790.51	684,368.43	
4,103.00	1.10	161.10	-737.98	4,101.98	-29.14	-33.35	-28.99	0.43	408,786.34	684,370.78	
4,292.00	0.80	155.90	-926.96	4,290.96	-32.06	-32.22	-31.92	0 16	408,783.42	684,371.90	

Chesapeake Energy, Survey Report

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Project:	Eddy County, New Mexico (NAD 1983)	TVD Reference:	WELL @ 3364 00usft (Patterson 62)
Site:	PLU Big Sinks 15 25 30 USA 1H	MD Reference:	WELL @ 3364.00usft (Patterson 62)
Well:	Job # 1210176	North Reference:	Grid
Wellbore:	Rig. Patterson 62	Survey Calculation Method:	Minimum Curvature
Design:	Rig Patterson 62	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
4,483.00	0.60	162.20	-1,117.94	4,481.94	-34.23	-31.37	-34.09	0.11	408,781.25	684,372.75	
4,673.00	0.30	154.30	-1,307.94	4,671.94	-35.63	-30.85	-35.49	0.16	408,779.86	684,373.27	
4,863.00	0.30	236.60	-1,497.94	4,861.94	-36.35	-31.05	-36.21	0.21	408,779.14	684,373.07	
5,054.00	0.50	266.50	-1,688.93	5,052.93	-36.67	-32.30	-36.53	0.15	408,778.81	684,371.82	
5,244.00	0.70	283.90	-1,878.92	5,242.92	-36.45	-34.26	-36.30	0.14	408,779.04	684,369.87	
5,434.00	0.40	273.30	-2,068.91	5,432.91	-36.13	-36.05	-35.97	0.17	408,779.36	684,368.08	
5,625.00	0.10	55.00	-2,259.91	5,623.91	-35.99	-36.58	-35.83	0.25	408,779.49	684,367.55	
5,815.00	0.30	63.20	-2,449.91	5,813.91	-35.67	-36.00	-35.52	0.11	408,779.81	684,368.13	
6,005.00	0.30	111.00	-2,639.91	6,003.91	-35.63	-35.09	-35.48	0.13	408,779.85	684,369.04	
6,196.00	1.40	185.80	-2,830.89	6,194.89	-38.13	-34.86	-37.98	0.71	408,777.35	684,369.27	
6,386.00	1.00	189.90	-3,020.84	6,384.84	-42.07	-35.38	-41.92	0.22	408,773.41	684,368.75	
6,573.00	0.40	212.60	-3,207.83	6,571.83	-44.23	-36.01	-44.07	0.35	408,771.25	684,368.12	
6,762.00	0.30	203.80	-3,396.83	6,760.83	-45.24	-36.56	-45.08	0.06	408,770.25	684,367.57	
6,952.00	0.30	168.80	-3,586.82	6,950.82	-46.18	-36.67	-46.02	0.09	408,769.30	684,367.46	
7,144.00	0.60	146.80	-3,778.82	7,142.82	-47.52	-36.02	-47.36	0.18	408,767.97	684,368.11	
7,332.00	0.80	160.00	-3,966.80	7,330.80	-49.57	-35.03	-49.42	0.14	408,765.91	684,369.10	
7,522.00	0.90	163.60	-4,156.78	7,520.78	-52.25	-34.16	-52.10	0.06	408,763.23	684,369.97	
7,711.00	0.90	189.30	-4,345.76	7,709.76	-55.14	-33.98	-54.99	0.21	408,760.34	684,370.15	
7,900.00	0.50	223.30	-4,534.75	7,898.75	-57.20	-34.78	-57.05	0.30	408,758.28	684,369.35	
7,946.00	0.50	264.30	-4,580.74	7,944.74	-57.37	-35.12	-57.22	0.76	408,758.11	684,369.01	
7,989.00	0.90	259.10	-4,623.74	7,987.74	-57.45	-35.64	-57.30	0.94	408,758.03	684,368.49	
8,020.00	2.20	343.70	-4,654.73	8,018.73	-56.93	-36.04	-56.77	7.41	408,758.56	684,368.08	
8,052.00	7.30	3.60	-4,686.61	8,050.61	-54.31	-36.09	-54.15	16.51	408,761.18	684,368.04	
8,083.00	12.00	6.60	-4,717.17	8,081.17	-49.14	-35.59	-48.98	15.24	408,766.35	684,368.53	
8,115.00	14.90	5.50	-4,748.29	8,112.29	-41.74	-34.82	-41.58	9.10	408,773.75	684,369.31	
8,147.00	19.00	4.10	-4,778.89	8,142.89	-32.44	-34.05	-32.29	12.87	408,783.04	684,370.08	
8,179.00	22.60	7.60	-4,808.80	8,172.80	-21.15	-32.86	-21.00	11.90	408,794.34	684,371.26	

Chesapeake Energy, Survey Report

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Project:	Eddy County, New Mexico (NAD 1983)	TVD Reference:	WELL @ 3364.00usft (Patterson 62)
Site:	PLU Big Sinks 15 25 30 USA 1H	MD Reference:	WELL @ 3364.00usft (Patterson 62)
Well:	Job # 1210176	North Reference:	Grid
Wellbore:	Rig: Patterson 62	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patterson 62	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,211.00	24.80	4.00	-4,838.10	8,202.10	-8.35	-31.58	-8.22	8.23	408,807.13	684,372.55	
8,245.00	28.90	358.40	-4,868.43	8,232.43	6.98	-31.31	7.12	14.16	408,822.46	684,372.81	
8,277.00	32.20	359.40	-4,895.99	8,259.99	23.24	-31.62	23.38	10.43	408,838.72	684,372.51	
8,309.00	35.10	357.60	-4,922.62	8,286.62	40.96	-32.09	41.10	9.58	408,856.45	684,372.03	
8,341.00	38.80	357.60	-4,948.19	8,312.19	60.18	-32.90	60.32	11.56	408,875.66	684,371.23	
8,372.00	42.50	358.60	-4,971.71	8,335.71	80.36	-33.56	80.50	12.12	408,895.84	684,370.57	
8,404.00	46.10	359.90	-4,994.61	8,358.61	102.70	-33.85	102.85	11.60	408,918.18	684,370.28	
8,436.00	50.20	0.40	-5,015.95	8,379.95	126.53	-33.78	126.68	12.87	408,942.01	684,370.35	
8,468.00	54.20	0.40	-5,035.56	8,399.56	151.81	-33.60	151.96	12.50	408,967.29	684,370.52	
8,499.00	58.20	0.60	-5,052.80	8,416.80	177.56	-33.38	177.71	12.91	408,993.05	684,370.75	
8,531.00	62.30	1.80	-5,068.68	8,432.68	205.33	-32.79	205.48	13.22	409,020.82	684,371.34	
8,563.00	66.60	2.60	-5,082.48	8,446.48	234.18	-31.68	234.31	13.63	409,049.66	684,372.45	
8,594.00	70.70	2.80	-5,093.76	8,457.76	263.01	-30.32	263.14	13.24	409,078.49	684,373.81	
8,626.00	76.40	1.80	-5,102.82	8,466.82	293.66	-29.09	293.79	18.06	409,109.15	684,375.04	
8,658.00	82.10	1.20	-5,108.79	8,472.79	325.08	-28.27	325.20	17.91	409,140.56	684,375.86	
8,689.00	88.30	1.40	-5,111.38	8,475.38	355.95	-27.57	356.06	20.01	409,171.43	684,376.56	
8,719.00	92.60	1.80	-5,111.14	8,475.14	385.93	-26.73	386.04	14.40	409,201.41	684,377.40	
8,781.00	92.10	1.60	-5,108.60	8,472.60	447.85	-24.90	447.95	0.87	409,263.33	684,379.23	
8,876.00	91.60	0.90	-5,105.53	8,469.53	542.77	-22.82	542.87	0.91	409,358.26	684,381.30	
8,972.00	92.80	1.10	-5,101.85	8,465.85	638.69	-21.15	638.77	1.27	409,454.17	684,382.98	
9,067.00	92.50	0.30	-5,097.46	8,461.46	733.58	-19.99	733.66	0.90	409,549.06	684,384.14	
9,162.00	92.90	0.00	-5,092.98	8,456.98	828.47	-19.74	828.55	0.53	409,643.95	684,384.39	
9,257.00	91.80	359.70	-5,089.09	8,453.09	923.39	-19.99	923.47	1.20	409,738.87	684,384.14	
9,353.00	90.70	1.00	-5,086.99	8,450.99	1,019.36	-19.40	1,019.44	1.77	409,834.84	684,384.72	
9,448.00	90.70	0.90	-5,085.83	8,449.83	1,114.34	-17.83	1,114.41	0.11	409,929.82	684,386.30	
9,543.00	90.80	0.70	-5,084.59	8,448.59	1,209.32	-16.50	1,209.38	0.24	410,024.81	684,387.63	
9,638.00	90.30	0.80	-5,083.68	8,447.68	1,304.31	-15.26	1,304.36	0.54	410,119.79	684,388.87	

Chesapeake Energy, Survey Report

Company:	Chesapeake Operating Inc.	Local Co-ordinate Reference:	Well Job # 1210176
Project:	Eddy County, New Mexico (NAD 1983)	TVD Reference:	WELL @ 3364.00usft (Patterson 62)
Site:	PLU Big Sinks 15 25 30 USA. 1H	MD Reference:	WELL @ 3364.00usft (Patterson 62)
Well:	Job # 1210176	North Reference:	Grid
Wellbore:	Rig: Patterson 62	Survey Calculation Method:	Minimum Curvature
Design:	Rig Patterson 62	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
9,733.00	89.80	0.10	-5,083.59	8,447.59	1,399.31	-14.51	1,399.36	0.91	410,214.79	684,389.61	
9,828.00	90.20	0.50	-5,083.59	8,447.59	1,494.30	-14.02	1,494.35	0.60	410,309.79	684,390.11	
9,924.00	90.50	0.50	-5,083.01	8,447.01	1,590.30	-13.18	1,590.34	0.31	410,405.78	684,390.95	
10,019.00	91.30	1.20	-5,081.51	8,445.51	1,685.28	-11.77	1,685.31	1.12	410,500.76	684,392.36	
10,114.00	91.00	1.90	-5,079.61	8,443.61	1,780.22	-9.20	1,780.24	0.80	410,595.70	684,394.93	
10,210.00	90.70	2.00	-5,078.18	8,442.18	1,876.15	-5.93	1,876.16	0.33	410,691.64	684,398.19	
10,305.00	91.50	1.80	-5,076.36	8,440.36	1,971.08	-2.78	1,971.08	0.87	410,786.57	684,401.34	
10,400.00	91.10	0.80	-5,074.20	8,438.20	2,066.03	-0.63	2,066.02	1.13	410,881.52	684,403.50	
10,496.00	90.60	359.60	-5,072.78	8,436.78	2,162.02	-0.29	2,162.00	1.35	410,977.50	684,403.83	
10,591.00	90.40	359.60	-5,071.95	8,435.95	2,257.01	-0.96	2,257.00	0.21	411,072.50	684,403.17	
10,686.00	90.90	359.20	-5,070.87	8,434.87	2,352.00	-1.95	2,351.99	0.67	411,167.49	684,402.18	
10,781.00	90.60	359.10	-5,069.63	8,433.63	2,446.98	-3.36	2,446.98	0.33	411,262.47	684,400.77	
10,876.00	88.90	359.40	-5,070.04	8,434.04	2,541.97	-4.61	2,541.97	1.82	411,357.46	684,399.52	
10,971.00	88.70	358.60	-5,072.03	8,436.03	2,636.94	-6.26	2,636.94	0.87	411,452.42	684,397.86	
11,066.00	88.10	357.50	-5,074.69	8,438.69	2,731.84	-9.49	2,731.86	1.32	411,547.33	684,394.63	
11,161.00	87.70	357.10	-5,078.17	8,442.17	2,826.67	-13.97	2,826.71	0.60	411,642.16	684,390.16	
11,257.00	89.50	357.10	-5,080.51	8,444.51	2,922.52	-18.82	2,922.57	1.87	411,738.00	684,385.31	
11,352.00	89.70	358.20	-5,081.18	8,445.18	3,017.43	-22.72	3,017.50	1.18	411,832.92	684,381.41	
11,447.00	89.90	358.50	-5,081.51	8,445.51	3,112.39	-25.45	3,112.47	0.38	411,927.88	684,378.68	
11,542.00	89.60	358.00	-5,081.92	8,445.92	3,207.35	-28.35	3,207.44	0.61	412,022.83	684,375.77	
11,637.00	90.70	358.40	-5,081.67	8,445.67	3,302.30	-31.34	3,302.40	1.23	412,117.78	684,372.79	
11,732.00	88.40	357.30	-5,082.42	8,446.42	3,397.22	-34.90	3,397.34	2.68	412,212.70	684,369.23	
11,827.00	88.20	358.30	-5,085.24	8,449.24	3,492.11	-38.55	3,492.24	1.07	412,307.59	684,365.58	
11,922.00	88.20	359.00	-5,088.22	8,452.22	3,587.03	-40.78	3,587.18	0.74	412,402.52	684,363.35	
12,018.00	88.00	358.50	-5,091.40	8,455.40	3,682.96	-42.88	3,683.11	0.56	412,498.44	684,361.25	
12,113.00	87.50	358.30	-5,095.13	8,459.13	3,777.85	-45.53	3,778.01	0.57	412,593.33	684,358.60	
12,208.00	88.90	358.90	-5,098.12	8,462.12	3,872.77	-47.85	3,872.94	1.60	412,688.25	684,356.28	

Chesapeake Energy, Survey Report

Company:	Chesapeake Operating, Inc.	Local Co-ordinate Reference:	Well Job # 1210176
Project:	Eddy County, New Mexico (NAD 1983)	TVD Reference:	WELL @ 3364.00usft (Patterson 62)
Site:	PLU Big Sinks 15 25'30 USA 1H	MD Reference:	WELL @ 3364.00usft (Patterson 62)
Well:	Job # 1210176	North Reference:	Gnd
Wellbore:	Rig: Patterson 62	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patterson 62	Database:	Compass5000

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVDSS (usft)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
12,304.00	89.20	0.00	-5,099.71	8,463.71	3,968.75	-48.77	3,968.93	1.19	412,784.23	684,355.36	
12,399.00	89.90	359.40	-5,100.46	8,464.46	4,063.74	-49.26	4,063.92	0.97	412,879.23	684,354.86	
12,494.00	91.20	0.00	-5,099.54	8,463.54	4,158.74	-49.76	4,158.91	1.51	412,974.22	684,354.37	
12,589.00	91.60	0.10	-5,097.22	8,461.22	4,253.71	-49.68	4,253.88	0.43	413,069.19	684,354.45	
12,684.00	92.10	0.20	-5,094.16	8,458.16	4,348.66	-49.43	4,348.83	0.54	413,164.14	684,354.70	
12,780.00	92.20	0.30	-5,090.55	8,454.55	4,444.59	-49.01	4,444.76	0.15	413,260.07	684,355.12	
12,875.00	89.60	359.40	-5,089.06	8,453.06	4,539.57	-49.26	4,539.74	2.90	413,355.05	684,354.87	
12,970.00	87.40	357.40	-5,091.55	8,455.55	4,634.49	-51.91	4,634.67	3.13	413,449.97	684,352.22	
13,067.00	90.50	357.40	-5,093.33	8,457.33	4,731.36	-56.31	4,731.56	3.20	413,546.84	684,347.82	
13,164.00	90.60	357.60	-5,092.40	8,456.40	4,828.26	-60.54	4,828.48	0.23	413,643.75	684,343.59	
13,256.00	91.50	359.70	-5,090.71	8,454.71	4,920.22	-62.71	4,920.44	2.48	413,735.70	684,341.42	
13,351.00	91.30	358.80	-5,088.39	8,452.39	5,015.18	-63.95	5,015.41	0.97	413,830.66	684,340.18	
13,446.00	91.10	359.30	-5,086.40	8,450.40	5,110.14	-65.53	5,110.38	0.57	413,925.63	684,338.60	
13,525.00	90.60	358.40	-5,085.23	8,449.23	5,189.12	-67.11	5,189.36	1.30	414,004.60	684,337.02	
Last Phoenix MWD Surveys @ 13525' MD											
13,571.00	90.60	358.40	-5,084.75	8,448.75	5,235.10	-68.40	5,235.35	0.00	414,050.58	684,335.73	
Projection to TD @ 13571' MD											

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	Surface
199.00	199.00	0.18	0.67	First Phoenix MWD Surveys @ 199' MD
13,525.00	8,449.23	5,189.12	-67.11	Last Phoenix MWD Surveys @ 13525' MD
13,571.00	8,448.75	5,235.10	-68.40	Projection to TD @ 13571' MD

Chesapeake Energy, Survey Report

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Project:	Eddy County, New Mexico (NAD 1983)	TVD Reference:	WELL @ 3364.00usft (Patterson 62)
Site:	PLU Big Sinks 15'25'30 USA 1H	MD Reference:	WELL @ 3364.00usft (Patterson 62)
Well:	Job # 1210176	North Reference:	Grid
Wellbore:	Rig: Patterson 62	Survey Calculation Method:	Minimum Curvature
Design:	Rig: Patterson 62	Database:	Compass5000

Checked By: _____ Approved By: _____ Date: _____