

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88810
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OCT 20 2009

NMUCD ART561A

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37375	Pool Code 96403	Pool Name Wildcat; Bone Spring
Property Code 37900	Property Name PLU PIERCE CANYON "16" STATE	Well Number 1H
OGRID No. 147179	Operator Name CHESAPEAKE OPERATING CO.	Elevation 3289'

Surface Location

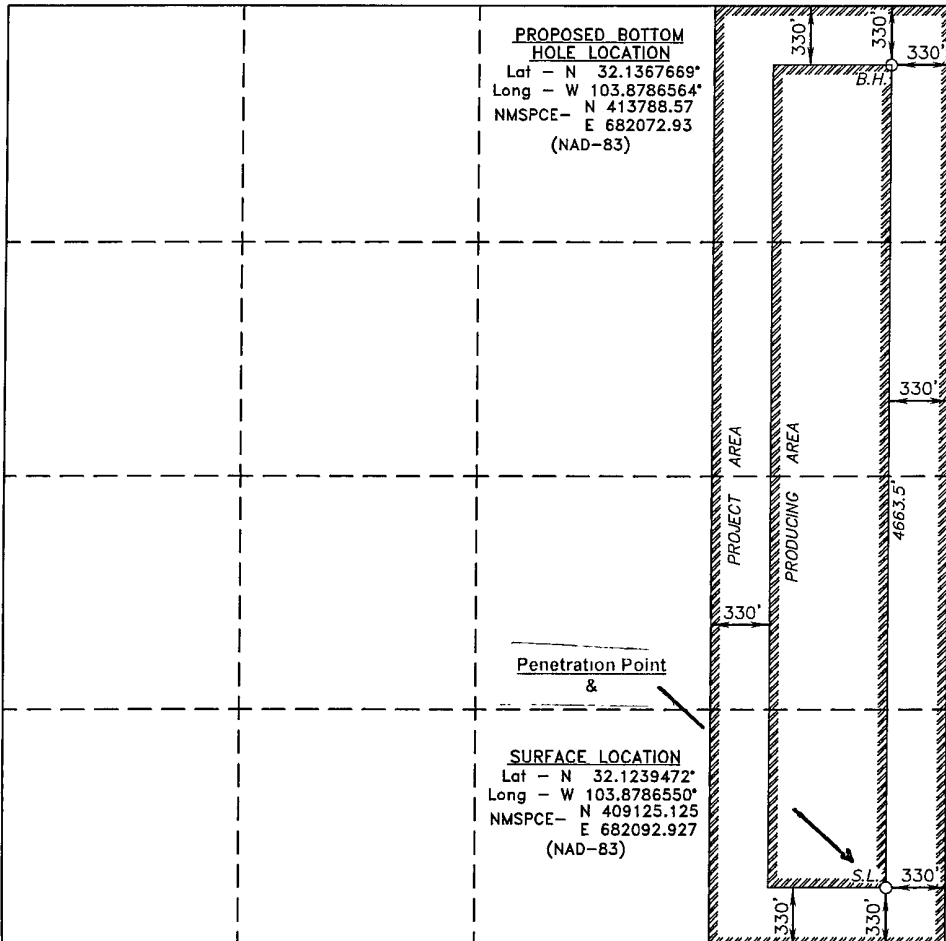
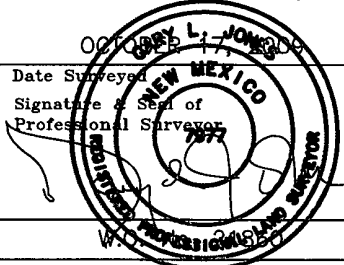
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	16	25 S	30 E		330	SOUTH	330	EAST	EDDY

Bottom Hole Location If Different From Surface

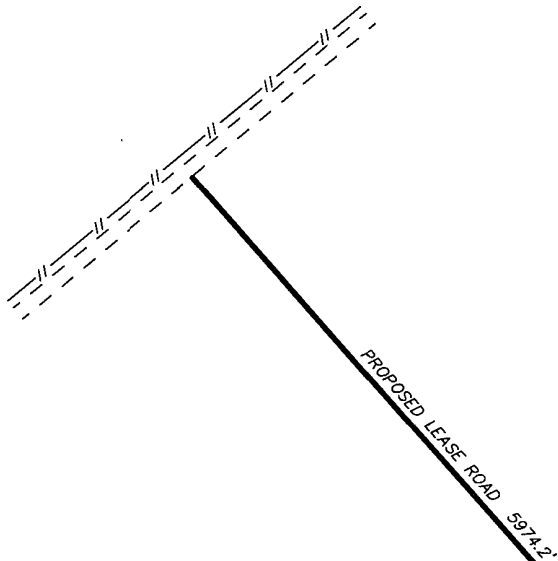
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	16	25 S	30 E		330	NORTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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 Lat - N 32.1367689° Long - W 103.8786564° NMSPCE- N 413788.57 E 682072.93 (NAD-83) SURFACE LOCATION Lat - N 32.1239472° Long - W 103.8786550° NMSPCE- N 409125.125 E 682092.927 (NAD-83) Penetration Point & PROJECT AREA PRODUCING AREA	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 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> 10/19/2009 Signature Date Bryan Arrant Printed Name
	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. OCT 20 2009 Date Surveyed Signature & Seal of Professional Surveyor  Certificate No. Gary L. Jones 7977 BASIN SURVEYS

SECTION 16, TOWNSHIP 25 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



150' NORTH
OFF SET
3293.2'
□

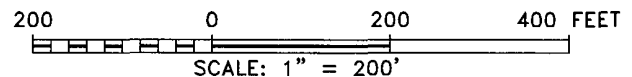
CHESAPEAKE OPERATING CO.
PLU PIERCE CANYON "16" STATE #1H

150' WEST
OFF SET □
3286.9'

ELEV. - 3289'
○
Lat - N 32.1239472°
Long - W 103.8786550°
NMSPCE - N 409125.125
E 682092.927
(NAD-83)
□

150' EAST
OFF SET □
3294.1'

150' SOUTH
OFF SET
3289.2'



Directions to Location:

FROM THE JUNCTION OF BUCK JACKSON AND TWIN
WELLS, GO WEST ON TWIN WELLS FOR 0.1 MILE TO
EPNG PIPELINE ROAD, ON EPNG PIPELINE ROAD GO
SOUTHWEST 3.5 MILES TO PROPOSED LEASE ROAD.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 21860 Drawn By: J. SMALL

Date: 10-19-2009 Disk: JMS 21860

CHESAPEAKE OPERATING CO.

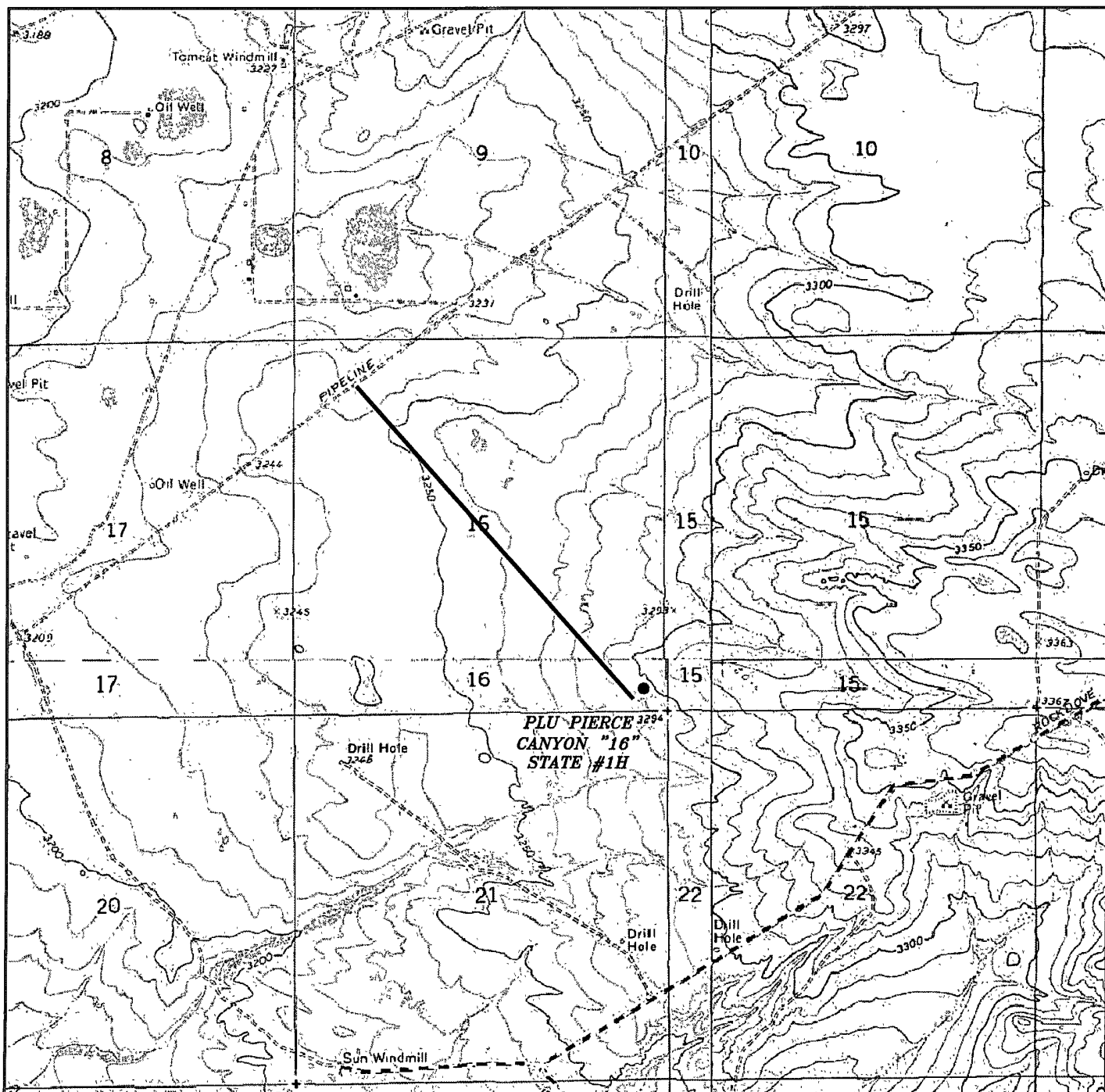
REF: PLU PIERCE CANYON "16" STATE #1H / WELL PAD TOPO

THE PLU PIERCE CANYON "16" STATE #1H LOCATED 330'
FROM THE SOUTH LINE AND 330' FROM THE EAST LINE OF

SECTION 16, TOWNSHIP 25 SOUTH, RANGE 30 EAST,

N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 10-17-2009 Sheet 1 of 1 Sheets



PLU PIERCE CANYON "16" STATE #1H

Located 330' FSL and 330' FEL

Section 16, Township 25 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: JMS 21860

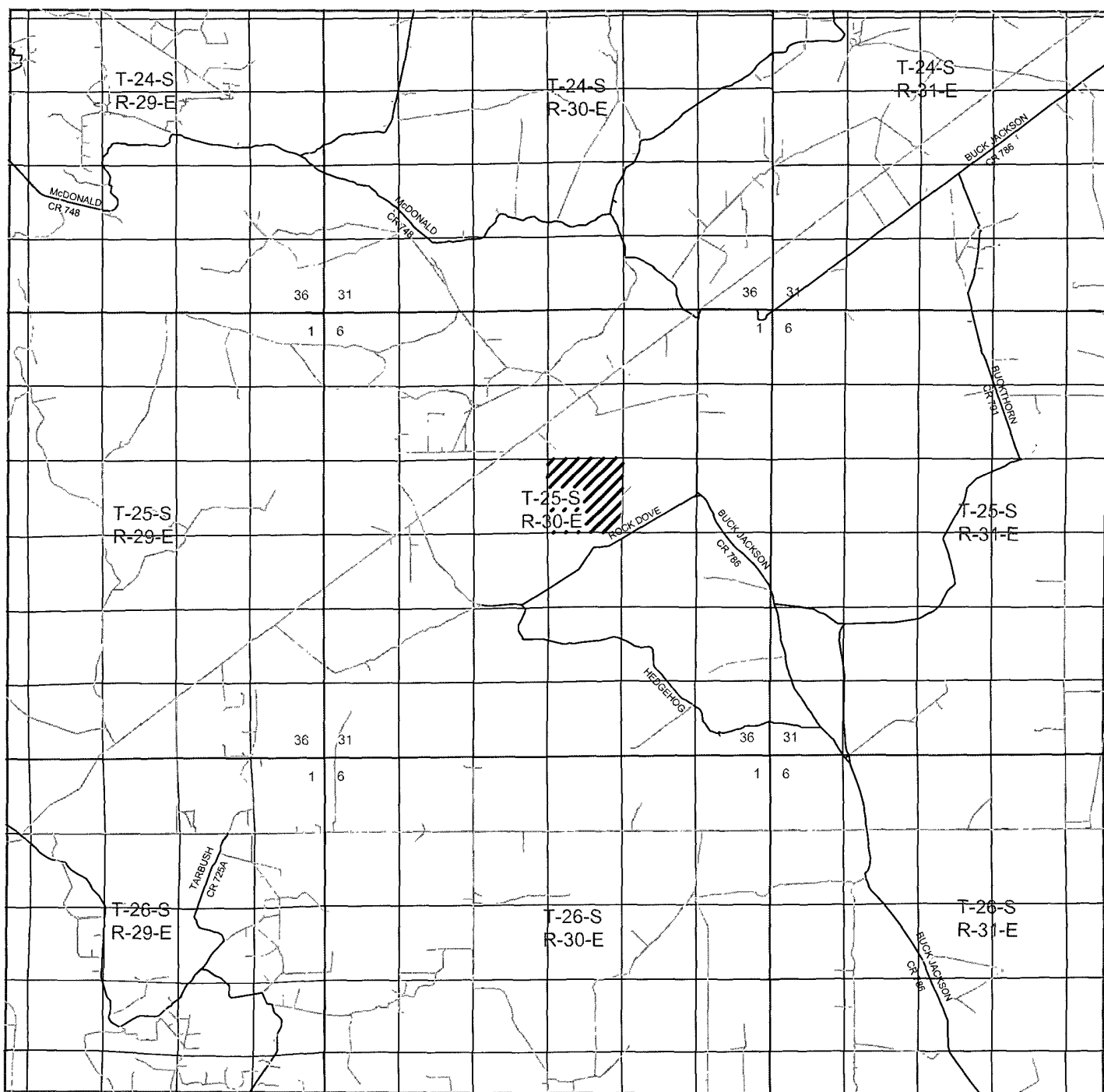
Survey Date: 10-17-2009

Scale: 1" = 2000'

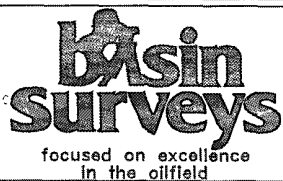
Date: 10-19-2009



CHESAPEAKE
OPERATING CO.



PLU PIERCE CANYON "16" STATE #1H
 Located 330' FSL and 330' FEL
 Section 16, Township 25 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



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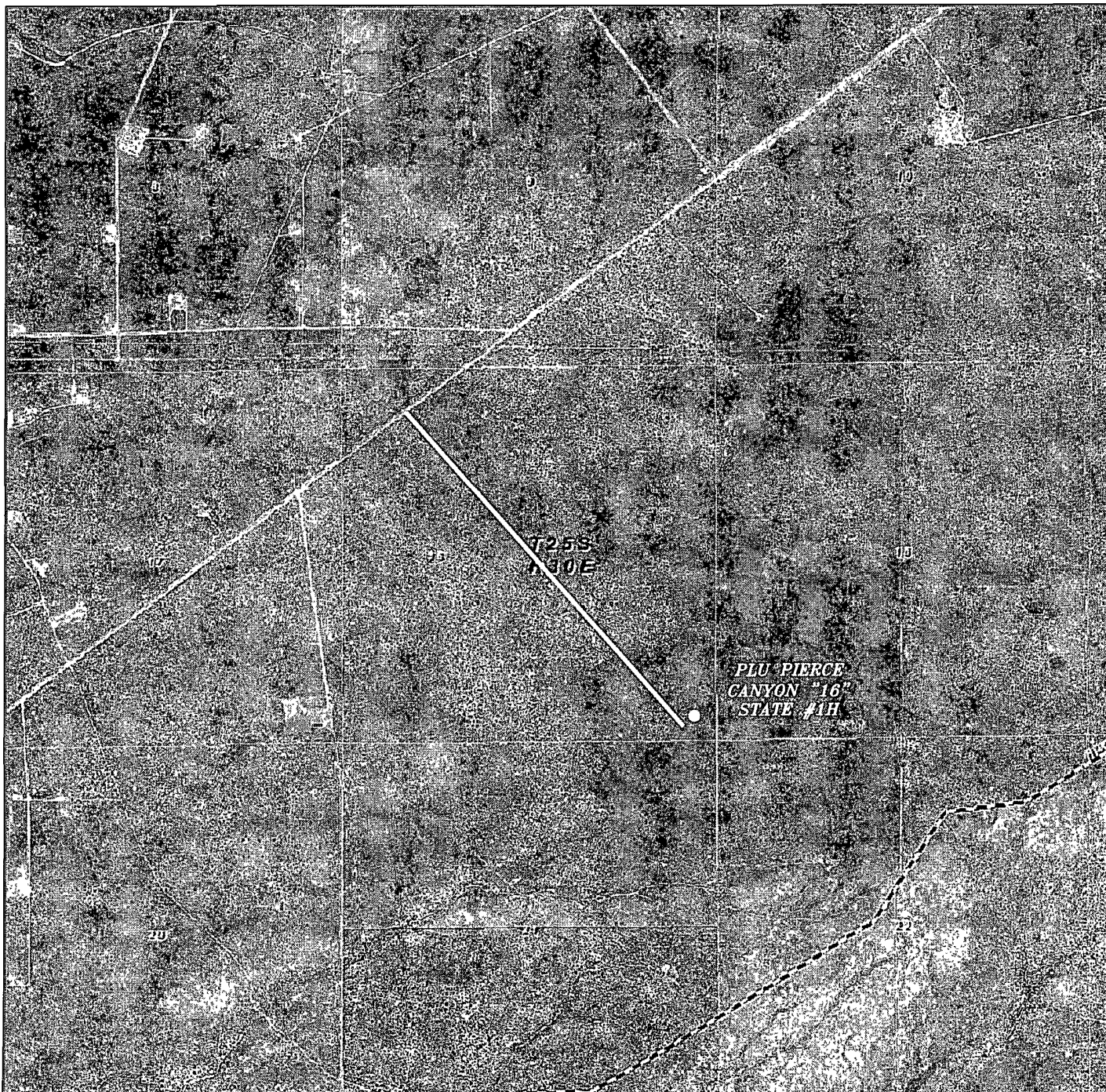
Survey Date: 10-17-2009

Scale: 1" = 2 Miles

Date: 10-19-2009



CHESAPEAKE
OPERATING CO.



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 Located 330' FSL and 330' FEL
 Section 16, Township 25 South, Range 30 East,
 N.M.P.M., Eddy County, New Mexico.



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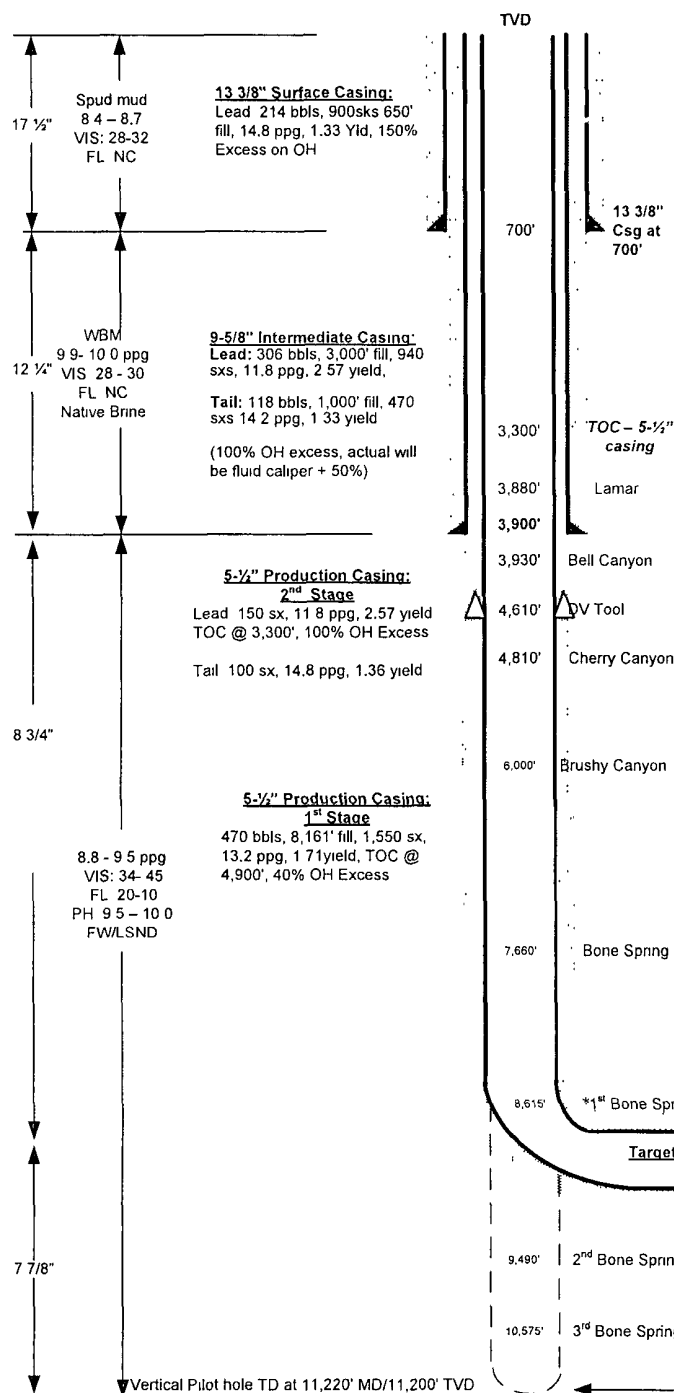
Scale: 1" = 2000'

YELLOW TINT - USA LAND
 BLUE TINT - STATE LAND
 NATURAL COLOR - FEE LAND



CHESAPEAKE
 OPERATING CO.

Well : PLU Pierce Canyon16 State 1H
Field : Delaware Basin North
County : Eddy State : NM
Surf Locat : Section 16 -25S -30E, 330' FSL & 330' FEL
BH Locat : Section 16 -25S -30E, 330' FNL & 330' FEL
KB Elev : 3,325' (Estimate) Grd Elev : 3,295' 3289' 89



Wellhead Equipment

Tree Connection	
Backpressure Valve	
Tree Description	11\" 5M x 7 1/16\" 10K
Tubing Spool	13 5/8\" 5M x 11\" 5M
Bradenhead	13 3/8\" SOW x 13 5/8\" 5M

Logging Program

Company	Log Type	Interval
XX	Tripple-Combospectral GR	Pilot hole 11 200' - 4,000'
XX	GR-Neutron	Pilot hole casing shoe to Surface
XX	Tripple Combo	Lateral TD to penetration point
Ryan	MWD-GR on BHA	Curve and lateral
Mud logging personnel at 4,000' to TD		

Tubular Detail

	Size	Wt	Grd	Conn.	From	To
Surface	13 3/8\"	48#	H-40	STC	0'	700'
Inter	9 5/8\"	40#	J-55	LTC	0'	3,900'
Prod	5 1/2\"	20.0#	L-80	LTC	0'	12,786'

Lateral Directional Plan

	MD	INC	AZM	TVD	BUR	DLS
KOP	8,157'	0	0	8,157'	0	0
EOB	8,907'	90.0	355.4	8,635'	12.0	12.0
TD	12,786'	90.0	359	8,635'	0	0

Directional Planning. Drill vertical pilot hole to TD at 11,200'. Plug #1 Set 300' of cement plug at bottom from 11,200' to 10,900'. Plug #2 Set KOP from 7,957' to 8,457'. Dress top of cement to sidetrack depth at 8,157' MD/8,157' TVD, build angle at 12.0°/100' along 355.4° azimuth to 90° inc at 8,907' MD/8,635' TVD. Drill lateral section to TD at 12,786' MD, 8,635' TVD, 4,356' VS.

HARDLINES: Must stay 330' FSL, 330' FNL and 330' FWL, 330' FEL of the section.

Drawn by

Date

YA

Rev0: 10/16/09

Permian District

Poker Lake

PLU Pierce Canyon 16 State 1H

PLU Piece Canyon 16 State 1H

Lateral

Plan: Design #1

Standard Planning Report

16 October, 2009

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Piece Canyon 16 State 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Piece Canyon 16 State 1H	North Reference:	Grid
Well:	PLU Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Design #1		

Project:	Poker Lake, Eddy County, NM		
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 Piece Canyon 16 State 1H		
Site Position:		Northing:	409,134.83 ft
From:	Lat/Long	Easting:	682,265.90 ft
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in
		Latitude:	32° 7' 26.29200000 N
		Longitude:	103° 52' 41.16360000 W
		Grid Convergence:	0.24 °

Well	PLU Piece Canyon 16 State 1H					
Well Position	+N/-S	0 0 ft	Northing:	409,134 83 ft	Latitude:	32° 7' 26 29200000 N
	+E/-W	0 0 ft	Easting:	682,265 90 ft	Longitude:	103° 52' 41 16360000 W
Position Uncertainty		0 0 ft	Wellhead Elevation:	ft	Ground Level:	0 0 ft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip/Angle (°)	Field Strength (nT)
	IGRF200510	10/16/2009	7.91	60.10	48,744

Design					Design #1					
Audit Notes:										
Version:		Phase:		PROTOTYPE			Tie On Depth:		0 0	
Vertical Section:		Depth From (TVD)		+N-S		+E-W		Direction		
		(ft)		(ft)		(ft)		(°)		
		0.0		0 0		0 0		355.40		

Plan Sections:										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N-S	+E-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,157.5	0.00	0.00	8,157.5	0.0	0.0	0.00	0.00	0.00	0.00	
8,907.5	90.00	355.40	8,635.0	475.9	-38.3	12.00	12.00	0.00	355.40	
12,786.2	90.00	355.40	8,635.0	4,342.1	-349.2	0.00	0.00	0.00	0.00	Lateral TD

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well: PLU Piece Canyon 16 State 1H
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Project:	Poker Lake	MD Reference:	WELL @ 0 0ft (Original Well Elev)
Site:	PLU Piece Canyon 16 State 1H	North Reference:	Grid
Well:	PLU Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0 0	0 00	0 00	0 0	0 0	0 0	0 0	0 00	0 00	0 00
100 0	0 00	0 00	100 0	0 0	0 0	0 0	0 00	0 00	0 00
200 0	0 00	0 00	200 0	0 0	0 0	0 0	0 00	0 00	0 00
300 0	0 00	0 00	300 0	0 0	0 0	0 0	0 00	0 00	0 00
400 0	0 00	0 00	400 0	0 0	0 0	0 0	0 00	0 00	0 00
500 0	0 00	0 00	500 0	0 0	0 0	0 0	0 00	0 00	0 00
600 0	0 00	0 00	600 0	0 0	0 0	0 0	0 00	0 00	0 00
700 0	0 00	0 00	700 0	0 0	0 0	0 0	0 00	0 00	0 00
800 0	0 00	0 00	800 0	0 0	0 0	0 0	0 00	0 00	0 00
900 0	0 00	0 00	900 0	0 0	0 0	0 0	0 00	0 00	0 00
1,000 0	0 00	0 00	1,000 0	0 0	0 0	0 0	0 00	0 00	0 00
1,100 0	0 00	0 00	1,100 0	0 0	0 0	0 0	0 00	0 00	0 00
1,200 0	0 00	0 00	1,200 0	0 0	0 0	0 0	0 00	0 00	0 00
1,300 0	0 00	0 00	1,300 0	0 0	0 0	0 0	0 00	0 00	0 00
1,400 0	0 00	0 00	1,400 0	0 0	0 0	0 0	0 00	0 00	0 00
1,500 0	0 00	0 00	1,500 0	0 0	0 0	0 0	0 00	0 00	0 00
1,600 0	0 00	0 00	1,600 0	0 0	0 0	0 0	0 00	0 00	0 00
1,700 0	0 00	0 00	1,700 0	0 0	0 0	0 0	0 00	0 00	0 00
1,800 0	0 00	0 00	1,800 0	0 0	0 0	0 0	0 00	0 00	0 00
1,900 0	0 00	0 00	1,900 0	0 0	0 0	0 0	0 00	0 00	0 00
2,000 0	0 00	0 00	2,000 0	0 0	0 0	0 0	0 00	0 00	0 00
2,100 0	0 00	0 00	2,100 0	0 0	0 0	0 0	0 00	0 00	0 00
2,200 0	0 00	0 00	2,200 0	0 0	0 0	0 0	0 00	0 00	0 00
2,300 0	0 00	0 00	2,300 0	0 0	0 0	0 0	0 00	0 00	0 00
2,400 0	0 00	0 00	2,400 0	0 0	0 0	0 0	0 00	0 00	0 00
2,500 0	0 00	0 00	2,500 0	0 0	0 0	0 0	0 00	0 00	0 00
2,600 0	0 00	0 00	2,600 0	0 0	0 0	0 0	0 00	0 00	0 00
2,700 0	0 00	0 00	2,700 0	0 0	0 0	0 0	0 00	0 00	0 00
2,800 0	0 00	0 00	2,800 0	0 0	0 0	0 0	0 00	0 00	0 00
2,900 0	0 00	0 00	2,900 0	0 0	0 0	0 0	0 00	0 00	0 00
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3,300 0	0 00	0 00	3,300 0	0 0	0 0	0 0	0 00	0 00	0 00
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3,600 0	0 00	0 00	3,600 0	0 0	0 0	0 0	0 00	0 00	0 00
3,700 0	0 00	0 00	3,700 0	0 0	0 0	0 0	0 00	0 00	0 00
3,800 0	0 00	0 00	3,800 0	0 0	0 0	0 0	0 00	0 00	0 00
3,900 0	0 00	0 00	3,900 0	0 0	0 0	0 0	0 00	0 00	0 00
4,000 0	0 00	0 00	4,000 0	0 0	0 0	0 0	0 00	0 00	0 00
4,100 0	0 00	0 00	4,100 0	0 0	0 0	0 0	0 00	0 00	0 00
4,200 0	0 00	0 00	4,200 0	0 0	0 0	0 0	0 00	0 00	0 00
4,300 0	0 00	0 00	4,300 0	0 0	0 0	0 0	0 00	0 00	0 00
4,400 0	0 00	0 00	4,400 0	0 0	0 0	0 0	0 00	0 00	0 00
4,500 0	0 00	0 00	4,500 0	0 0	0 0	0 0	0 00	0 00	0 00
4,600 0	0 00	0 00	4,600 0	0 0	0 0	0 0	0 00	0 00	0 00
4,700 0	0 00	0 00	4,700 0	0 0	0 0	0 0	0 00	0 00	0 00
4,800 0	0 00	0 00	4,800 0	0 0	0 0	0 0	0 00	0 00	0 00
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5,300 0	0 00	0 00	5,300 0	0 0	0 0	0 0	0 00	0 00	0 00

Chesapeake Operating

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Well:	PLU Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,157.5	0.00	0.00	8,157.5	0.0	0.0	0.0	0.00	0.00	0.00
8,175.0	2.10	355.40	8,175.0	0.3	0.0	0.3	12.00	12.00	0.00
8,200.0	5.10	355.40	8,199.9	1.9	-0.2	1.9	12.00	12.00	0.00
8,225.0	8.10	355.40	8,224.8	4.7	-0.4	4.8	12.00	12.00	0.00
8,250.0	11.10	355.40	8,249.4	8.9	-0.7	8.9	12.00	12.00	0.00
8,275.0	14.10	355.40	8,273.8	14.3	-1.2	14.4	12.00	12.00	0.00
8,300.0	17.10	355.40	8,297.9	21.0	-1.7	21.1	12.00	12.00	0.00
8,325.0	20.10	355.40	8,321.6	29.0	-2.3	29.1	12.00	12.00	0.00
8,350.0	23.10	355.40	8,344.8	38.1	-3.1	38.3	12.00	12.00	0.00
8,375.0	26.10	355.40	8,367.6	48.5	-3.9	48.7	12.00	12.00	0.00
8,400.0	29.10	355.40	8,389.7	60.1	-4.8	60.3	12.00	12.00	0.00
8,425.0	32.10	355.40	8,411.2	72.7	-5.9	73.0	12.00	12.00	0.00
8,450.0	35.10	355.40	8,432.1	86.5	-7.0	86.8	12.00	12.00	0.00
8,475.0	38.10	355.40	8,452.1	101.4	-8.2	101.7	12.00	12.00	0.00
8,500.0	41.10	355.40	8,471.4	117.3	-9.4	117.6	12.00	12.00	0.00
8,525.0	44.10	355.40	8,489.8	134.1	-10.8	134.6	12.00	12.00	0.00
8,550.0	47.10	355.40	8,507.3	151.9	-12.2	152.4	12.00	12.00	0.00
8,575.0	50.10	355.40	8,523.8	170.6	-13.7	171.2	12.00	12.00	0.00
8,600.0	53.10	355.40	8,539.3	190.1	-15.3	190.8	12.00	12.00	0.00
8,625.0	56.10	355.40	8,553.8	210.5	-16.9	211.1	12.00	12.00	0.00
8,650.0	59.10	355.40	8,567.2	231.5	-18.6	232.2	12.00	12.00	0.00
8,675.0	62.10	355.40	8,579.5	253.2	-20.4	254.0	12.00	12.00	0.00
8,700.0	65.10	355.40	8,590.6	275.5	-22.2	276.4	12.00	12.00	0.00
8,725.0	68.10	355.40	8,600.5	298.4	-24.0	299.3	12.00	12.00	0.00
8,750.0	71.10	355.40	8,609.2	321.7	-25.9	322.8	12.00	12.00	0.00

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Piece Canyon 16 State 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Piece Canyon 16 State 1H	North Reference:	Grd
Well:	PLU Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,775.0	74.10	355.40	8,616.7	345.5	-27.8	346.6	12.00	12.00	0.00
8,800.0	77.10	355.40	8,622.9	369.6	-29.7	370.8	12.00	12.00	0.00
8,825.0	80.10	355.40	8,627.9	394.1	-31.7	395.3	12.00	12.00	0.00
8,850.0	83.10	355.40	8,631.5	418.7	-33.7	420.1	12.00	12.00	0.00
8,875.0	86.10	355.40	8,633.9	443.5	-35.7	445.0	12.00	12.00	0.00
8,900.0	89.10	355.40	8,634.9	468.4	-37.7	469.9	12.00	12.00	0.00
8,907.5	90.00	355.40	8,635.0	475.9	-38.3	477.5	12.00	12.00	0.00
9,000.0	90.00	355.40	8,635.0	568.1	-45.7	569.9	0.00	0.00	0.00
9,100.0	90.00	355.40	8,635.0	667.8	-53.7	669.9	0.00	0.00	0.00
9,200.0	90.00	355.40	8,635.0	767.5	-61.7	769.9	0.00	0.00	0.00
9,300.0	90.00	355.40	8,635.0	867.1	-69.7	869.9	0.00	0.00	0.00
9,400.0	90.00	355.40	8,635.0	966.8	-77.8	969.9	0.00	0.00	0.00
9,500.0	90.00	355.40	8,635.0	1,066.5	-85.8	1,069.9	0.00	0.00	0.00
9,600.0	90.00	355.40	8,635.0	1,166.2	-93.8	1,169.9	0.00	0.00	0.00
9,700.0	90.00	355.40	8,635.0	1,265.8	-101.8	1,269.9	0.00	0.00	0.00
9,800.0	90.00	355.40	8,635.0	1,365.5	-109.8	1,369.9	0.00	0.00	0.00
9,900.0	90.00	355.40	8,635.0	1,465.2	-117.8	1,469.9	0.00	0.00	0.00
10,000.0	90.00	355.40	8,635.0	1,564.9	-125.9	1,569.9	0.00	0.00	0.00
10,100.0	90.00	355.40	8,635.0	1,664.6	-133.9	1,669.9	0.00	0.00	0.00
10,200.0	90.00	355.40	8,635.0	1,764.2	-141.9	1,769.9	0.00	0.00	0.00
10,300.0	90.00	355.40	8,635.0	1,863.9	-149.9	1,869.9	0.00	0.00	0.00
10,400.0	90.00	355.40	8,635.0	1,963.6	-157.9	1,969.9	0.00	0.00	0.00
10,500.0	90.00	355.40	8,635.0	2,063.3	-166.0	2,069.9	0.00	0.00	0.00
10,600.0	90.00	355.40	8,635.0	2,162.9	-174.0	2,169.9	0.00	0.00	0.00
10,700.0	90.00	355.40	8,635.0	2,262.6	-182.0	2,269.9	0.00	0.00	0.00
10,800.0	90.00	355.40	8,635.0	2,362.3	-190.0	2,369.9	0.00	0.00	0.00
10,900.0	90.00	355.40	8,635.0	2,462.0	-198.0	2,469.9	0.00	0.00	0.00
11,000.0	90.00	355.40	8,635.0	2,561.7	-206.0	2,569.9	0.00	0.00	0.00
11,100.0	90.00	355.40	8,635.0	2,661.3	-214.1	2,669.9	0.00	0.00	0.00
11,200.0	90.00	355.40	8,635.0	2,761.0	-222.1	2,769.9	0.00	0.00	0.00
11,300.0	90.00	355.40	8,635.0	2,860.7	-230.1	2,869.9	0.00	0.00	0.00
11,400.0	90.00	355.40	8,635.0	2,960.4	-238.1	2,969.9	0.00	0.00	0.00
11,500.0	90.00	355.40	8,635.0	3,060.0	-246.1	3,069.9	0.00	0.00	0.00
11,600.0	90.00	355.40	8,635.0	3,159.7	-254.1	3,169.9	0.00	0.00	0.00
11,700.0	90.00	355.40	8,635.0	3,259.4	-262.2	3,269.9	0.00	0.00	0.00
11,800.0	90.00	355.40	8,635.0	3,359.1	-270.2	3,369.9	0.00	0.00	0.00
11,900.0	90.00	355.40	8,635.0	3,458.8	-278.2	3,469.9	0.00	0.00	0.00
12,000.0	90.00	355.40	8,635.0	3,558.4	-286.2	3,569.9	0.00	0.00	0.00
12,100.0	90.00	355.40	8,635.0	3,658.1	-294.2	3,669.9	0.00	0.00	0.00
12,200.0	90.00	355.40	8,635.0	3,757.8	-302.2	3,769.9	0.00	0.00	0.00
12,300.0	90.00	355.40	8,635.0	3,857.5	-310.3	3,869.9	0.00	0.00	0.00
12,400.0	90.00	355.40	8,635.0	3,957.2	-318.3	3,969.9	0.00	0.00	0.00
12,500.0	90.00	355.40	8,635.0	4,056.8	-326.3	4,069.9	0.00	0.00	0.00
12,600.0	90.00	355.40	8,635.0	4,156.5	-334.3	4,169.9	0.00	0.00	0.00
12,700.0	90.00	355.40	8,635.0	4,256.2	-342.3	4,269.9	0.00	0.00	0.00
12,786.2	90.00	355.40	8,635.0	4,342.1	-349.2	4,356.2	0.00	0.00	0.00

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well, PLU: Piece Canyon 16 State 1H
Company:	Permian District	TVD Reference:	WELL @ 0 0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0 0ft (Original Well Elev)
Site:	PLU: Piece Canyon 16 State 1H	North Reference:	Gnd
Well:	PLU: Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Design #1		

Targets									
Target Name	hit/miss target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	
Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	
Lateral TD		0.00	0.00	8,635 0	4,342 1	-349.2	413,476.98	681,916.65	32° 8' 9 27600000 N 3° 52' 45 01200000 W
- plan hits target center									
- Point									

Permian District

Poker Lake

PLU Pierce Canyon 16 State 1H

PLU Piece Canyon 16 State 1H

Pilot Hole

Plan: Design #1

Standard Planning Report

16 October, 2009

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Pierce Canyon 16 State 1H
Company:	Permian District	TVD Reference:	WELL @ 0 0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0 0ft (Original Well Elev)
Site:	PLU Pierce Canyon 16 State 1H	North Reference:	Grid
Well:	PLU Pierce Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Design #1		

Project	Poker Lake, Eddy County, NM		
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 Pierce Canyon 16 State 1H		
Site Position:		Northing:	409,134.83 ft
From:	Lat/Long	Easting:	682,265.90 ft
Position Uncertainty:	0 0 ft	Slot Radius:	0 000 in
		Latitude:	32° 7' 26 29200000 N
		Longitude:	103° 52' 41 16360000 W
		Grid Convergence:	0.24 °

Well	PLU Pierce Canyon 16 State 1H		
Well Position	+N/-S	0 0 ft	Northing:
	+E/-W	0 0 ft	Easting:
Position Uncertainty	0 0 ft	Wellhead Elevation:	ft
		Latitude:	32° 7' 26 29200000 N
		Longitude:	103° 52' 41 16360000 W
		Ground Level:	0 0 ft

Wellbore	Pilot Hole		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	10/16/2009	7 91
			Dip Angle
			60 10
			Field Strength
			48,744

Design	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0 0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0 0	0 0	0 0
			Direction
			(°)
			0 00

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
0 0	0.00	0.00	0 0	0 0	0 0	0.00	0.00	0 00	0.00	
11,200.0	0.00	0 00	11,200.0	0 0	0 0	0.00	0.00	0 00	0.00	

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well: PLU Piece Canyon 16 State 1H
Company:	Permian District	TVD Reference:	WELL: @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL: @ 0.0ft (Original Well Elev)
Site:	PLU Piece Canyon 16 State 1H	North Reference:	Grid
Well:	PLU Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Piece Canyon 16 State 1H
Company:	Permian District	TVD Reference:	WELL @ 0 0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0 0ft (Original Well Elev)
Site:	PLU Piece Canyon 16 State 1H	North Reference:	Grid
Well:	PLU Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Design #1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,400.0	0.00	0.00	10,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,500.0	0.00	0.00	10,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
10,600.0	0.00	0.00	10,600.0	0.0	0.0	0.0	0.00	0.00	0.00	

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well PLU Piece Canyon 16 State 1H
Company:	Permian District	TVD Reference:	WELL @ 0.0ft (Original Well Elev)
Project:	Poker Lake	MD Reference:	WELL @ 0.0ft (Original Well Elev)
Site:	PLU Piece Canyon 16 State 1H	North Reference:	Grid
Well:	PLU Piece Canyon 16 State 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,700.0	0.00	0.00	10,700.0	0.0	0.0	0.0	0.00	0.00	0.00
10,800.0	0.00	0.00	10,800.0	0.0	0.0	0.0	0.00	0.00	0.00
10,900.0	0.00	0.00	10,900.0	0.0	0.0	0.0	0.00	0.00	0.00
11,000.0	0.00	0.00	11,000.0	0.0	0.0	0.0	0.00	0.00	0.00
11,100.0	0.00	0.00	11,100.0	0.0	0.0	0.0	0.00	0.00	0.00
11,200.0	0.00	0.00	11,200.0	0.0	0.0	0.0	0.00	0.00	0.00