Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMLC068545

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
PLU PIERCE CANYON 7 FEDERAL 1H

2. Name of Operator
CHESAPEAKE AGENT FOR BOPCO LP
Contact: LINDA GOOD
EMail: linda.good@chk.com

9. API Well No.
30-015-37029

3a. Address
P.O. BOX 18496
OKLAHOMA CITY, OK 73154-0496

3b. Phone No. (include area code)
Ph: 405-935-4275

10. Field and Pool, or Exploratory
POKER LAKE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 7 T24S R30E NWNW 350FNL 350FWL

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Chesapeake, respectfully, requests permission to change the following to the drilling plan:

Update in Drilling Plan- Update Formation, Casing Depths and Cementing Program
Update in Directional Plan
Change in Rig- Patterson 62 inventory and plat attached
Removing pilot hole

Attachments

(CHK PN 623050)

RECEIVED
MAR 14 2011
NMOCD ARTESIA

Surface OK Just 3-7-11
Eng. OK CRW 3/4/11

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #103288 verified by the BLM Well Information System
For CHESAPEAKE AGENT FOR BOPCO LP, sent to the Carlsbad

Name *(Printed/Typed)* LINDA GOOD — Title SR. REGULATORY COMPLIANCE SPEC

Signature (Electronic Submission) — Date 02/25/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By — Title FIELD MANAGER — Date 3/8/11

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

ACCEPTED

OHSORE OIL & GAS ODER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (CFR 43, Part 3160) and the approved Application for Permit to Drill. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling and completion operations.

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease, which would entitle the applicant to conduct operations thereon.

1. FORMATION TOPS

The estimated tops of important geologic markers are as follows:

FORMATION	SUB-SEA	KBTVD	MD
Rustler	2368	810	810
Salt	1390	1788	1788
Base of Castille	-225	3403	3403
Lamar	-238	3416	3416
Bell Canyon	-269	3447	3447
Cherry Canyon	-1148	4326	4326
Brushy Canyon	-2723	5901	5901
Bone Spring Lime	-3964	7142	7142
Upper Avalon	-4212	7390	7390
Lower Avalon	-4628	7806	7806
TD		7895	12325

2. ESTIMATED DEPTH OF WATER, OIL, GAS & OTHER MINERAL BEARING FORMATIONS

The estimated depths at which the top and bottom of the anticipated water, oil, gas, or other mineral bearing formations are expected to be encountered are as follows:

Substance	Formation	Depth (TVD)
Oil/Gas	Bell Canyon	3447
Oil/Gas	Cherry Canyon	4326
Oil/Gas	Brushy Canyon	5901
Oil/Gas	Bone Spring	7142

All shows of fresh water and minerals will be reported and protected.

3. BOP EQUIPMENT

Will have a 5000 psi rig stack (see proposed schematic) for drill out below surface casing, but this system will be tested to 3000 psi working pressure and 3000 psi working pressure for the annular preventer; therefore, no shoe tests will be conducted.

Chesapeake Operating Inc.'s minimum specifications for pressure control equipment are as follows:

I. BOP, Annular, Choke Manifold Pressure Test - See Exhibit F-1 and F-2

A. Equipment
1. The equipment to be tested includes all of the following that is installed on the well:
(a) Ram-type and annular preventers
(b) Choke manifolds and valves
(c) Kill lines and valves
(d) Upper and lower kelly cock valves, inside BOP's and safety valves

B. Frequency
1. All tests shall be performed with clear water
(a) when installed
(b) before drilling out each casing string
(c) at any time that there is a repair requiring a pressure seal to be broken in the assembly
(d) at least once every 30 days while drilling

C. Frequency
1. In some drilling operations, the pressures to be used for low and high pressure testing of preventers and casing may be different from those given below due to governmental regulations or approved local practices.
2. If an individual component does not test a t the low pressure, do not, test to the high pressure and then drop back down to the low pressure.
3. All valves located downstream of a valve being tested must be placed in the open position.
4. All equipment will be tested with an initial "low pressure" test at 250 psi.
5. The subsequent "high pressure" test will be conducted at the rated working pressure of the equipment for all equipment except the annular preventer unless otherwise stated (see above).
6. The "high pressure" test for the annular preventer will be conducted at 70" of the rated working pressure unless otherwise stated (see above).
7. A record of all pressures will be made on a pressure-recording chart.

II. Accumulator Performance Test

A. Scope
1. The purpose of this test is to check the capabilities of the Bop control systems and to detect deficiencies in the hydraulic oil volume and recharge time.

B. Test Requency
1. The accumulator is to be tested each time the BO's are tested, or any time a major repair is performed.

C. Minimum Requirements

1. The accumulator should be of sufficient volume to supply 1.5 times the volume to close and hold all BOP equipment in sequence, without recharging and the pump turned off, and have remaining pressures of 200 psi above the precharge pressure.
2. Minimum precharge pressures for the various accumulator systems per manufacturers recommended specifications are as follows:

System Operating Pressure	Precharge Pressure
1500 psi	750 psi
2000 psi	1000 psi
3000 psi	1000 psi

3. Closing times for the annular preventer should be less than 20 seconds and for the ram-type preventers less than 10 seconds.
4. System recharge time should not exceed 10 minutes.

D. Test Procedure

1. Shut accumulator pumps off and record accumulator pressure.
2. In sequence, close the annular and one set of properly sized pipe rams, and open the HCR valve
3. Record time to close or open each element and the remaining accumulator pressure after each operation.
4. Record the remaining accumulator pressure at the end of the test sequence. Per the previous requirement, this pressure should not be less than the following pressures:

System Operating Pressure	Remaining Pressure After Test
1500 psi	950 psi
2000 psi	1200 psi
3000 psi	1200 psi

5. Turn the accumulator pumps on and record the recharge time. This time should not exceed 10 minutes.
6. Open annular and ram-type preventers. Close HCR valve.
7. Place all 4-way control valves in full open or full closed position. Do not leave in neutral position.

3. CASING PROGRAM

a. The proposed casing program will be as follows:

Purpose	From	To	Hole Size	Csg Size	Weight	Grade	Thread	Condition
Surface	0'	930'	17-1/2"	13-3/8"	48 #	H-40	STC	New
Intermediate	0'	3,435'	11"	8-5/8"	32 #	J-55	LTC	New
Production	0'	12,325'	7-7/8"	5-1/2"	20 #	L-80	LTC	New

b. Casing design subject to revision based on geologic conditions encountered.

c. Casing Safety Factors

Casing String	Min SF Burst	Min SF Collapse	Min SF Tension
Surface	1.41	1.83	1.46
Intermediate	2.16	1.7	1.93
Production	1.21	2.52	1.76

Min SF is the smallest of a group of safety factors that include the following considerations:
S, I, and P indicate considerations for Surface ,Intermediate, and Production casing strings.

Burst:	Po: pore pressure	Pi:	pressure test (S,I), drill ahead with fluids (S,I), frac at shoe with 1/3 BHP at surface (S,I), Stimulation Pressures (P), Tubing Leak (P)
Collapse:	Po: Mud, Mix water	Pi:	full evacuation (S,I,P), cementing (S,I,P), drill ahead with fluids (S,I)
Tension:	100k lb overpull (S,I,P)		

5. **CEMENTING PROGRAM**

Slurry	Type	Top	Btm	Wt	Yld	%Exc	Sx
Surface				(ppg)	(sx/cu ft)	Open Hole	
Lead	C + 4% Gel	0'	930'	13.5	1.73	150	957
Intermediate							
Lead	TXL	0'	2,435'	12	1.8	150	777
Tail	50C/50Poz +2%Gel, 5% Salt	2,435'	3,435'	14.2	1.37	150	486
Production							
1st Stage Lead	TXL + 1% Salt	4,275'	7,000'	12	1.83	65	474
1st Stage Tail	50H/50Poz +6%Gel, 5%Salt	7,000'	12,710'	13.2	1.74	65	945
2nd Stage Lead	TXL	2,935'	4,025'	12	1.8	200	220
2nd Stage Tail	C	4,025'	4,275'	14.8	1.33	200	98

1. Final cement volumes will be determined by caliper.
2. Surface casing shall have at least one centralizer installed on each of the bottom three joints starting with the shoe joint.
3. The production casing will be cemented in two stages with the DV tool place at: 4,275'
4. Production casing will have one centralizer on every other joint from TD to KOP (horizontal type) and from KOP to intermediate casing (bowspring type).

Pilot Hole Plugging Plan:

There will be no pilot hole for this well.

6. MUD PROGRAM

From	To	Type	Weight	F. Vis	FL
0'	930'	Spud Mud	8.4-8.7	32-34	NC-NC
930'	3,435'	Brine	9.8-10.1	28-29	NC-NC
3,435'	7,432'	FW/Cut Brine	8.4-8.6	28-29	NC-NC
7,432'	8,184'	FW/Cut Brine	8.4-9	28-29	NC-NC
8,184'	12,325'	FW/Cut Brine	8.4-9	28-32	NC-NC

A closed system will by utilized consisting of above ground steel tanks. All wastes accumulated during drilling operations will be contained in a portable trash cage and removed from location and deposited in an approved sanitary landfill. Sanitary wastes will be contained in a chemical porta-toilet and then hauled to an approved sanitary landfill.

All fluids and cuttings will be disposed of in accordance with New Mexico Oil Conservation Division rules and regulations.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

7. TESTING, LOGGING, AND CORING

The anticipated type and amount of testing, logging, and coring are as follows:

a. Drill stem tests are not planned.
b. The logging program will be as follows:

TYPE	Logs	Interval	Timing	Vendor
Mudlog	Mudlogging	Int Shoe to Base of Curve	After set Int Casing	Suttles
OH	GR/Ind/Neutron/Density/Pe/Dual Induction	Curve to Int Shoe	After Curve	Baker Atlas
OH	GR/Neutron	Int Shoe to Surface	After Curve	Baker Atlas
LWD	Gamma/MWD	Curve and Lateral	While Drilling	Ryan

c. Core samples are not planned.
d. A Directional Survey will be run.

8. ABNORMAL PRESSURES AND HYDROGEN SULFIDE

a. No abnormal pressures or temperatures are expected. Estimated BHP is: 3455 psi
b. Hydrogen sulfide gas is not anticipated.

Permian District

Poker Lake
PLU Pierce Canyon 7 Federal 1H
PLU Pierce Canyon 7 Federal 1H

Wellbore #1

Plan: Plat 11-26-08

Standard Planning Report

25 February, 2011

Chesapeake Energy Corporation

Planning Report

Database:	Drilling Database	**Local Co-ordinate Reference:**	Well PLU Pierce Canyon 7 Federal 1H
Company:	Permian District	**TVD Reference:**	WELL @ 3180.0ft (Original Well Elev)
Project:	Poker Lake	**MD Reference:**	WELL @ 3180.0ft (Original Well Elev)
Site:	PLU Pierce Canyon 7 Federal 1H	**North Reference:**	Grid
Well:	PLU Pierce Canyon 7 Federal 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat 11-26-08		

Project Poker Lake, Eddy County, NM

Map System:	US State Plane 1983	**System Datum:**	Ground Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site PLU Pierce Canyon 7 Federal 1H

Site Position:		**Northing:**	450,721.98 usft	**Latitude:**	32.23846173
From:	Map	**Easting:**	666,546.86 usft	**Longitude:**	-103.92836647
Position Uncertainty:	0.0 ft	**Slot Radius:**	0.000 in	**Grid Convergence:**	0.2160470 °

Well PLU Pierce Canyon 7 Federal 1H

Well Position	**+N/-S**	0.0 ft	**Northing:**	450,721.98 usft	**Latitude:**	32.23846173
	+E/-W	0.0 ft	**Easting:**	666,546.86 usft	**Longitude:**	-103.92836647
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	3,158.0 ft	**Ground Level:**	3,158.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/30/2010	7.8024510	60.1726461	48,652

Design Plat 11-26-08

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	179.74

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0000000	
7,432.0	0.00	0.00	7,432.0	0.0	0.0	0.00	0.00	0.00	0.0000000	
8,183.7	90.20	179.74	7,909.5	-479.1	2.2	12.00	12.00	0.00	179.7378289	
12,324.6	90.20	179.74	7,895.0	-4,620.0	21.1	0.00	0.00	0.00	0.0000000	BHL- PC7

Chesapeake Energy Corporation

Planning Report

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Well:	PLU Pierce Canyon 7 Federal 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat 11-26-08		

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 Energy Corporation

Planning Report

Database:	Drilling Database	**Local Co-ordinate Reference:**	Well PLU Pierce Canyon 7 Federal 1H
Company:	Permian District	**TVD Reference:**	WELL @ 3180.0ft (Original Well Elev)
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Well:	PLU Pierce Canyon 7 Federal 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat 11-26-08		

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
7,432.0	0.00	0.00	7,432.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	8.16	179.74	7,499.8	-4.8	0.0	4.8	12.00	12.00	0.00
7,600.0	20.16	179.74	7,596.6	-29.3	0.1	29.3	12.00	12.00	0.00
7,700.0	32.16	179.74	7,686.2	-73.3	0.3	73.3	12.00	12.00	0.00
7,800.0	44.16	179.74	7,764.6	-134.9	0.6	134.9	12.00	12.00	0.00
7,900.0	56.16	179.74	7,828.6	-211.6	1.0	211.6	12.00	12.00	0.00
8,000.0	68.16	179.74	7,875.2	-299.9	1.4	299.9	12.00	12.00	0.00
8,100.0	80.16	179.74	7,902.4	-395.9	1.8	395.9	12.00	12.00	0.00
8,183.7	90.20	179.74	7,909.5	-479.1	2.2	479.1	12.00	12.00	0.00
8,200.0	90.20	179.74	7,909.4	-495.5	2.3	495.5	0.00	0.00	0.00
8,300.0	90.20	179.74	7,909.0	-595.5	2.7	595.5	0.00	0.00	0.00
8,400.0	90.20	179.74	7,908.7	-695.5	3.2	695.5	0.00	0.00	0.00
8,500.0	90.20	179.74	7,908.4	-795.5	3.6	795.5	0.00	0.00	0.00
8,600.0	90.20	179.74	7,908.0	-895.5	4.1	895.5	0.00	0.00	0.00
8,700.0	90.20	179.74	7,907.7	-995.5	4.6	995.5	0.00	0.00	0.00
8,800.0	90.20	179.74	7,907.3	-1,095.5	5.0	1,095.5	0.00	0.00	0.00
8,900.0	90.20	179.74	7,907.0	-1,195.5	5.5	1,195.5	0.00	0.00	0.00
9,000.0	90.20	179.74	7,906.6	-1,295.5	5.9	1,295.5	0.00	0.00	0.00
9,100.0	90.20	179.74	7,906.3	-1,395.5	6.4	1,395.5	0.00	0.00	0.00
9,200.0	90.20	179.74	7,905.9	-1,495.5	6.8	1,495.5	0.00	0.00	0.00
9,300.0	90.20	179.74	7,905.6	-1,595.5	7.3	1,595.5	0.00	0.00	0.00
9,400.0	90.20	179.74	7,905.2	-1,695.5	7.8	1,695.5	0.00	0.00	0.00
9,500.0	90.20	179.74	7,904.9	-1,795.5	8.2	1,795.5	0.00	0.00	0.00
9,600.0	90.20	179.74	7,904.5	-1,895.5	8.7	1,895.5	0.00	0.00	0.00
9,700.0	90.20	179.74	7,904.2	-1,995.5	9.1	1,995.5	0.00	0.00	0.00
9,800.0	90.20	179.74	7,903.8	-2,095.5	9.6	2,095.5	0.00	0.00	0.00
9,900.0	90.20	179.74	7,903.5	-2,195.5	10.0	2,195.5	0.00	0.00	0.00
10,000.0	90.20	179.74	7,903.1	-2,295.5	10.5	2,295.5	0.00	0.00	0.00
10,100.0	90.20	179.74	7,902.8	-2,395.5	11.0	2,395.5	0.00	0.00	0.00
10,200.0	90.20	179.74	7,902.4	-2,495.5	11.4	2,495.5	0.00	0.00	0.00
10,300.0	90.20	179.74	7,902.1	-2,595.5	11.9	2,595.5	0.00	0.00	0.00
10,400.0	90.20	179.74	7,901.7	-2,695.5	12.3	2,695.5	0.00	0.00	0.00
10,500.0	90.20	179.74	7,901.4	-2,795.4	12.8	2,795.5	0.00	0.00	0.00

Chesapeake Energy Corporation

Planning Report

Database:	Drilling Database	**Local Co-ordinate Reference:**	Well PLU Pierce Canyon 7 Federal 1H
Company:	Permian District	**TVD Reference:**	WELL @ 3180.0ft (Original Well Elev)
Project:	Poker Lake	**MD Reference:**	WELL @ 3180.0ft (Original Well Elev)
Site:	PLU Pierce Canyon 7 Federal 1H	**North Reference:**	Grid
Well:	PLU Pierce Canyon 7 Federal 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plat 11-26-08		

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)
10,600.0	90.20	179.74	7,901.0	-2,895.4	13.2	2,895.5	0.00	0.00	0.00
10,700.0	90.20	179.74	7,900.7	-2,995.4	13.7	2,995.5	0.00	0.00	0.00
10,800.0	90.20	179.74	7,900.3	-3,095.4	14.2	3,095.5	0.00	0.00	0.00
10,900.0	90.20	179.74	7,900.0	-3,195.4	14.6	3,195.5	0.00	0.00	0.00
11,000.0	90.20	179.74	7,899.6	-3,295.4	15.1	3,295.5	0.00	0.00	0.00
11,100.0	90.20	179.74	7,899.3	-3,395.4	15.5	3,395.5	0.00	0.00	0.00
11,200.0	90.20	179.74	7,898.9	-3,495.4	16.0	3,495.5	0.00	0.00	0.00
11,300.0	90.20	179.74	7,898.6	-3,595.4	16.5	3,595.5	0.00	0.00	0.00
11,400.0	90.20	179.74	7,898.2	-3,695.4	16.9	3,695.5	0.00	0.00	0.00
11,500.0	90.20	179.74	7,897.9	-3,795.4	17.4	3,795.5	0.00	0.00	0.00
11,600.0	90.20	179.74	7,897.5	-3,895.4	17.8	3,895.5	0.00	0.00	0.00
11,700.0	90.20	179.74	7,897.2	-3,995.4	18.3	3,995.5	0.00	0.00	0.00
11,800.0	90.20	179.74	7,896.8	-4,095.4	18.7	4,095.5	0.00	0.00	0.00
11,900.0	90.20	179.74	7,896.5	-4,195.4	19.2	4,195.5	0.00	0.00	0.00
12,000.0	90.20	179.74	7,896.1	-4,295.4	19.7	4,295.5	0.00	0.00	0.00
12,100.0	90.20	179.74	7,895.8	-4,395.4	20.1	4,395.5	0.00	0.00	0.00
12,200.0	90.20	179.74	7,895.4	-4,495.4	20.6	4,495.5	0.00	0.00	0.00
12,300.0	90.20	179.74	7,895.1	-4,595.4	21.0	4,595.5	0.00	0.00	0.00
12,324.6	90.20	179.74	7,895.0	-4,620.0	21.1	4,620.0	0.00	0.00	0.00

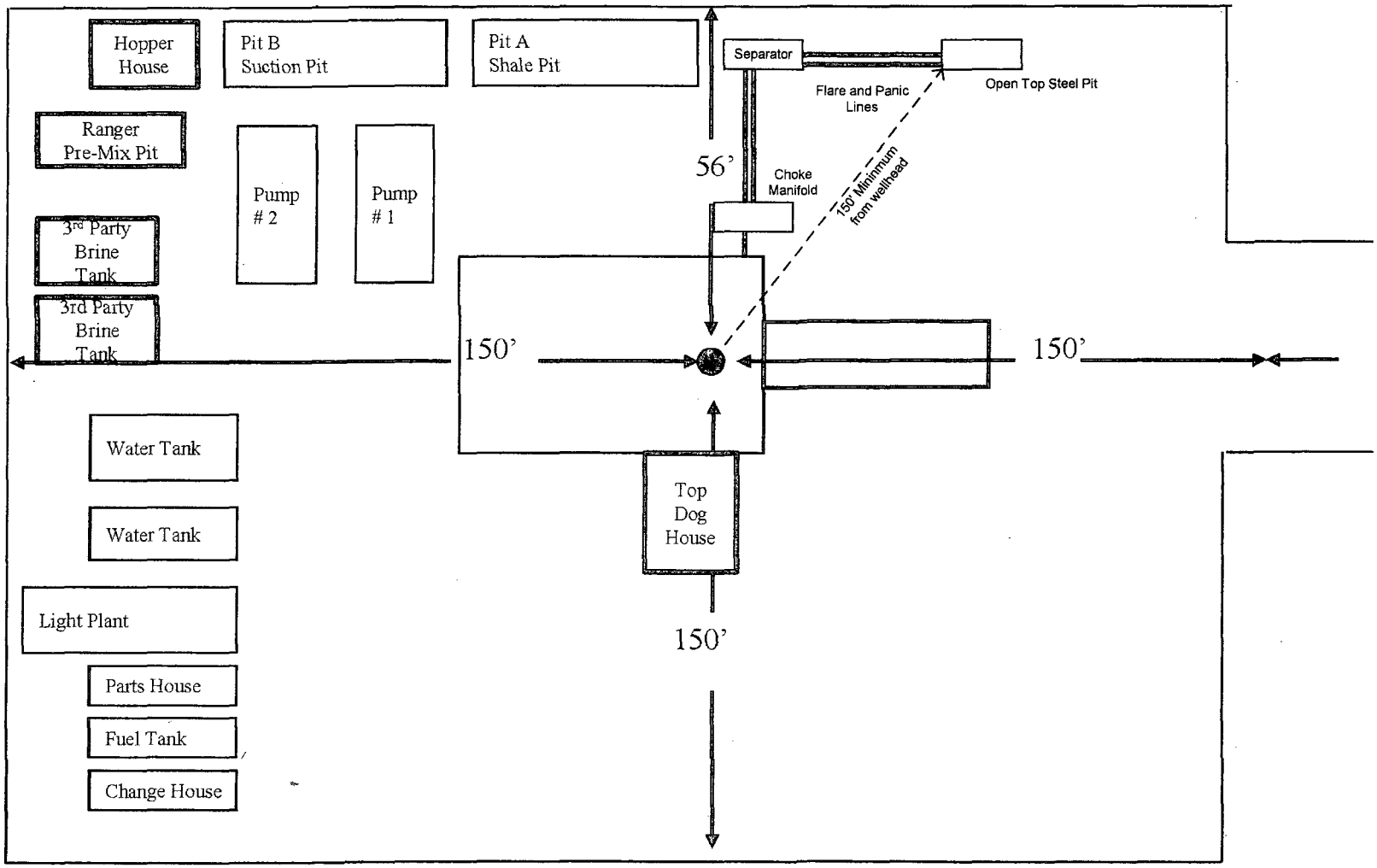
Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL- PC7 - plan hits target center - Point	0.00	0.00	7,895.0	-4,620.0	21.1	446,102.00	666,568.00	32.22576196	-103.92835443
SHL-PC7 - plan misses target center by 199.1ft at 7800.0ft MD (7764.6 TVD, -134.9 N, 0.6 E) - Point	0.00	0.00	7,911.0	0.0	0.0	450,721.98	666,546.86	32.23846173	-103.92836647

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
930.0	930.0	13 3/8" Surface Casing	13.375	17.500
3,435.0	3,435.0	8 5/8" Intermediate Casing	8.625	11.000
12,324.0	7,895.0	5 1/2" Production Casing	5.500	7.875

RIG 62


Hopper House
Pit B Suction Pit
Pit A Shale Pit
Separator
Open Top Steel Pit
Flare and Panic Lines
Ranger Pre-Mix Pit
Pump # 2
Pump # 1
56'
Choke Manifold
150' Minimum from wellhead
3rd Party Brine Tank
3rd Party Brine Tank
150'
150'
Water Tank
Water Tank
Top Dog House
Light Plant
150'
Parts House
Fuel Tank
Change House

Chesapeake Minimum BOPE Requirements

Wellname: PLU Pierce Canyon 7 Federal 1H

County, State: Eddy County, NM

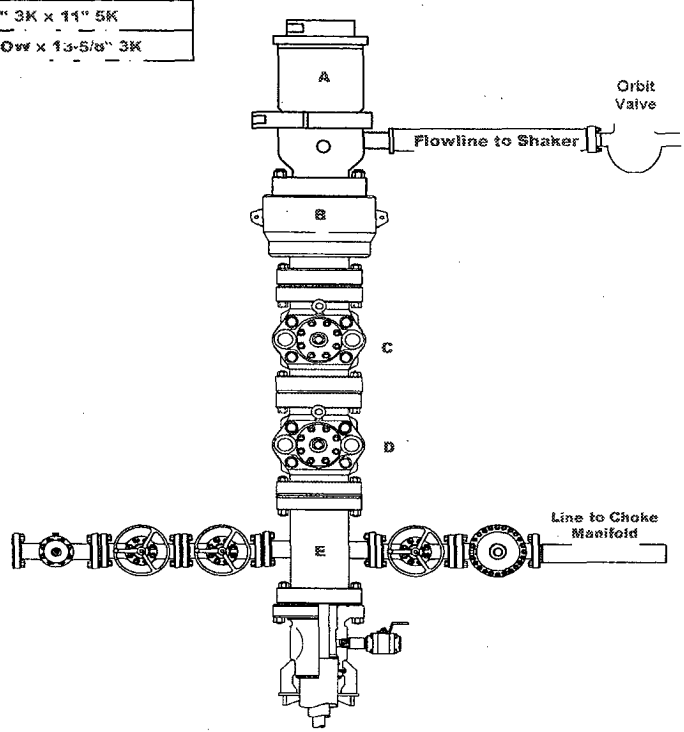
Location: 330' FNL 350' FWL, Section 7, Township 24S, Range 30E

Operation: Intermediate and Production Hole Sections

	SIZE	PRESSURE	DESCRIPTION
A		500	Rotating Head
B	13 5/8"	5,000	
C	13 5/8"	5,000	Pipe Ram
D	13 5/8"	5,000	
E	13 5/8"	5,000	Mud Cross
F			
DSA	As required for each hole size		
C-Sec			
B-Sec	13-5/8" 3K x 11" 5K		
A-Sec	13-3/8" SOW x 13-5/8" 3K		

Test Notes:

- Pressure test to rating of BOP or wellhead every 21 days.
- Function test on trips
- H2S service trim required



Kill Line

SIZE	PRESSURE	DESCRIPTION
2"	5,000	Check Valve
2"	5,000	Gate Valve
2"	5,000	Gate Valve

Choke Line

SIZE	PRESSURE	DESCRIPTION
3"	5,000	Gate Valve
3"	5,000	HCR Valve
3"	5,000	Steel Line Only

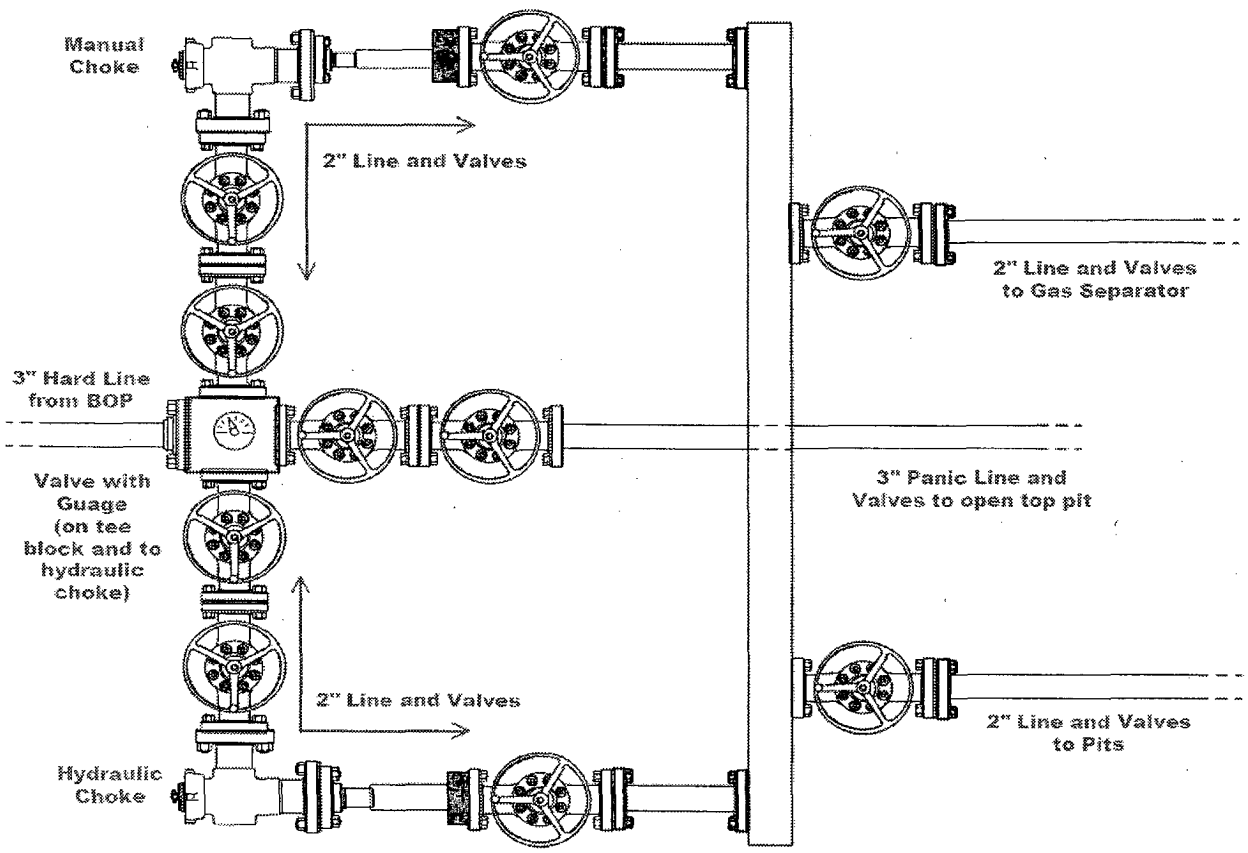
Chesapeake Minimum BOPE Requirements

Wellname: PLU Pierce Canyon 7 Federal 1H

County, State: Eddy County, NM

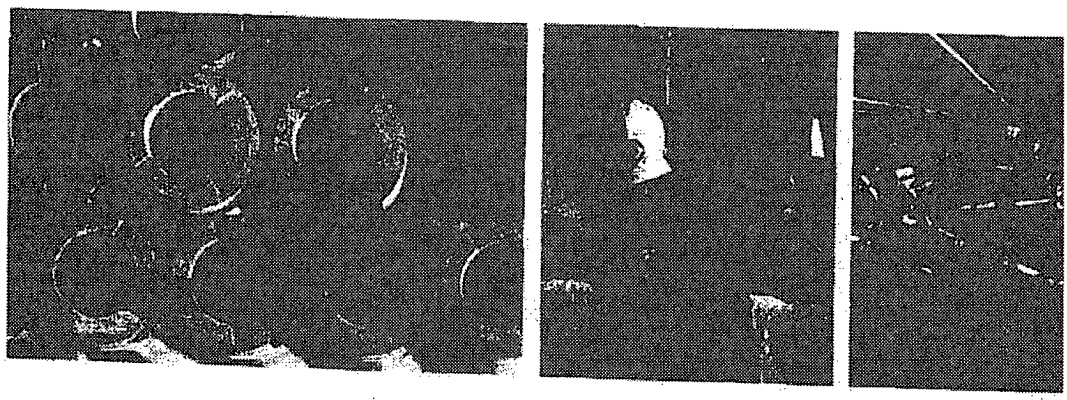
Location: 330' FNL 350' FWL, Section 7, Township 24S, Range 30E

Operation: Intermediate and Production Hole Sections



Choke Manifold

SIZE	PRESSURE	DESCRIPTION
2" or 3"	5,000	Gate Valves
3'x15'		Gas Separator
8"		Gas Separator vent line (anchored)



RIG #62

DRAWWORKS
Skytop Brewster N-75-M (1000HP)
1 1/4" drill line, Parmac 342 auxiliary brake

POWER
(2) Caterpillar 379 engines (550HP each)

LIGHT PLANTS
(2) Caterpillar C-15 engines w/ 320 KW generators

MAST
Ideal 137' w/ 622,000# capacity on 10 lines

SUBSTRUCTURE
Ideal 15' box on box
KB 17' Rotary beam clearance 12' 3"

BLOCK HOOK
McKissick (300 Ton) combo

PUMPS
(2) National 10-P-130 (1300HP each) triplex pumps
Each independently powered by (1) Caterpillar 3512 engine

MUD PITS
(2) tank system - 980 bbl capacity w/ 100 bbl slug pit

SOLIDS EQUIPMENT
Derrick FLC-503 Dual Shaker
Derrick 3-cone desander
Derrick 20-cone desilter
Atmospheric degasser
(5) mud agitators

BOP'S
13 5/8" X 5,000 psi Hydril annular
13 5/8" X 5,000 psi Shaffer double

ACCUMULATOR
Koomey 5-Station, 110 gallon accumulator

CHOKE MANIFOLD
5,000 psi choke manifold

SWIVEL
Continental Emsco (400 Ton)

ROTARY TABLE
National (27 1/2")

DRILL PIPE
4 1/2" drill pipe

DRILL COLLARS
8" and 6 1/2" drill collars
*quantity subject to availibility

AUXILIARY EQUIPMENT
Pason EDR (base system)
Fuel Tank - 10,000 gallon capacity
Water Tank - (2) 500 barrel capacity each
Rig Manager Quarters
NOV ST-80 Iron Roughneck
Satellite automatic driller
Mathey survey unit

Revised 10.01.09

PATTERSON-UTI
DRILLING COMPANY

Chesapeake ENERGY

Drilling Engineer:	Chris Gray
Superintendent:	Cecil Luttrull
Geologist:	Mark Oekerman

Well Name:	**PLU Pierce Canyon 7 Federal 1H**
County, State:	Eddy County, NM
Surface Location:	330' FNL 350' FWL, Section 7, Township 24S, Range 30E
BH Location:	350' FSL 350' FWL, Section 7, Township 24S, Range 30E

SHL Latitude:	32.238464	**SHL North:**	450722
SHL Longitude:	-103.928375	**SHL East:**	666547
BHL Latitude:	32.225767	**BHL North:**	446102
BHL Longitude:	-103.928361	**BHL East:**	666568
Coordinates:	NAD 83	**Coordinates:**	NMSPCE

Drilling Rig:	Patterson 62
Dir. Drilling:	Ryan
Drilling Mud:	Nova
Cement:	Schlumberger
Wellhead:	Sunbelt
Property Number:	623050
AFE Number:	148153

KB Elevation: 3,184'
Ground Elevation: 3,158'

Surface
Bit Size: 17 1/2"

Surface Casing — **Depth**
13 3/8" 48.# H-40 STC 930'

Intermediate
Bit Size: 11"

Intermediate Casing — **Depth**
8 5/8" 32.# J-55 LTC 3,435'

Vertical Production
Bit Size: 7 7/8"

Curve
Bit Size: 7 7/8"

Lateral
Bit Size: 7 7/8"

Production Casing
5 1/2" 20.# L-80 LTC
Depth
12,325'

810'	Rustler
1,788'	Top of Salt
3,403'	Base of Castille
3,416'	Lamar
3,447'	Bell Canyon
4,275'	
4,326'	Cherry Canyon
5,901'	Brushy Canyon
7,142'	Bone Spring Lime
7,390'	Upper Avalon
7,806'	Lower Avalon

Wellhead Equipment	
Casing Head	13-3/8" x 13-5/8" 5K SOW
Casing Spool	13-5/8" 5K x 11" 5K
Tubing Spool	11" 5K x 7-1/16" 10K
Required BOP Stack	
13-5/8" 5K- Double, Annular, Rot Head w/Orbit Valve	

Mud

Depth	Type	Weight	F. Vis	FL
0' - 930'	Spud Mud	8.4-8.7	32-34	NC-NC
930' - 3,435'	Brine	9.8-10.1	28-29	NC-NC
3,435' - 7,432'	FW/Cut Brine	8.4-8.6	28-29	NC-NC
7,432' - 8,184'	FW/Cut Brine	8.4-9	28-29	NC-NC
8,184' - 12,325'	FW/Cut Brine	8.4-9	28-32	NC-NC

Cement

Slurry	Top	Btm	Wt	Yld	%Exc	Bbl	Sx
Surface							
Lead	0'	930'	13.5	1.73	150	295	957
Intermediate							
Lead	0'	2,435'	12.0	1.8	150	249	777
Tail	2,435'	3,435'	14.2	1.37	150	119	486
Production							
1st Stage Lead	4,275'	7,000'	12.0	1.83	65	155	474
1st Stage Tail	7,000'	12,710'	13.2	1.74	65	293	945
2nd Stage Lead	2,935'	4,025'	12.0	1.8	200	70	220
2nd Stage Tail	4,025'	4,275'	14.8	1.33	200	23	98

Notes:

Directional Plan

Target Line:	7911' TVD at 0'VS w/0.2 deg updip
Target Window:	20' above and 20' below

	MD	INC	AZM	TVD	VS	DLS
KOP	7,432'	0.00	0.00	7,432'	0'	0.00
EOB	8,184'	90.20	179.74	7,910'	479'	12.00
TD	12,325'	90.20	179.74	7,895'	4,620'	0.00

Hardlines: Lateral- 330' from all lease lines.
Vertical- Actual Lease Lines

Notes: Please note SHL and BHL distance from lease lines

LOGS

Type	Logs	Interval	Timing	Vendor
Mudlog	Mudlogging	Int Shoe to Base of Curve	After set Int Casing	Suttles
OH	GR/Ind/Neutron/Density/Pe/Dual Induc	Curve to Int Shoe	After Curve	Baker Atlas
OH	GR/Neutron	Int Shoe to Surface	After Curve	Baker Atlas
LWD	Gamma/MWD	Curve and Lateral	While Drilling	Ryan