

# RAILROAD COMMISSION OF TEXAS

Tracking No.: 57506

Status: Work in Progress

Oil and Gas Division

This facsimile W-2 was generated electronically  
from data submitted to the RRC.

API No. 42- 301-31709

7. RRC District No.  
**08**

8. RRC Lease No.

## Oil Well Potential Test, Completion or Recompletion Report, and Log

1. FIELD NAME (as per RRC Records or Wildcat) <b>PHANTOM (WOLFCAMP)</b>		2. LEASE NAME <b>UNIVERSITY 19-19</b>		9. Well No. <b>2H</b>
3. OPERATOR'S NAME (Exactly as shown on Form P-5, Organization Report) <b>CHESAPEAKE OPERATING, INC.</b>		RRC Operator No. <b>147715</b>		10. County of well site <b>LOVING</b>
4. ADDRESS <b>ATTN REGULATORY COMPLIANCE PO BOX 18496 OKLAHOMA CITY, OK 73154-0496</b>				11. Purpose of filing Initial Potential <input checked="" type="checkbox"/> Retest <input type="checkbox"/> Reclass <input type="checkbox"/> Well record only (Explain in remarks) <input type="checkbox"/>
5. If Operator has changed within last 60 days, name former operator				
6a. Location (Section, Block, and Survey) <b>19, 19, UL</b>		6b. Distance and direction to nearest town in this county. <b>12.4 MILES E DIRECTION FORM MENTONE</b>		
12. If workover or reclass, give former field (with reservoir) & Gas ID or oil lease no. <b>FIELD &amp; RESERVOIR</b>		GAS ID or OIL LEASE #	Oil-0 Gas-G	Well #
<b>N/A</b>				
13. Type of electric or other log run <b>None</b>		14. Completion or recompletion date <b>08/14/2012</b>		

### SECTION I- POTENTIAL TEST DATA IMPORTANT: Test should be for 24 hours unless otherwise specified infield rules.

15. Date of test <b>08/23/2012</b>		16. No. of hours tested <b>24</b>		17. Production method (Flowing, Gas Lift, Jetting, Pumping- Size & Type of pump) <b>Flowing</b>		18. Choke size <b>22/64</b>	
19. Production during Test Period	Oil - BBLS <b>402.0</b>	Gas - MCF <b>573</b>	Water - BBLS <b>1821</b>	Gas - Oil Ratio <b>1425</b>	Flowing Tubing Pressure <b>1255.0</b> PSI		
20. Calculated 24-Hour Rate	Oil - BBLS <b>402.0</b>	Gas - MCF <b>573</b>	Water - BBLS <b>1821</b>	Oil Gravity-API-60° <b>43.1</b>	Casing Pressure <b>0.0</b> PSI		
21. Was swab used during this test? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		22. Oil produced prior to test (New & Reworked wells) <b>3262.0</b>			23. Injection Gas-Oil Ratio		
REMARKS: N/A							

**INSTRUCTIONS:** File an original and one copy of the completed Form W-2 in the appropriate RRC District Office within 30 days after completing a well and within 10 days after a potential test. If an operator does not properly report the results of a potential test within the 10-day period, the effective date of the allowable assigned to the well will not extend back more than 10 days before the W-2 was received in the District Office. (Statewide Rules 16 and 51) To report a completion or recompletion, fill in both sides of this form. To report a retest, fill in only the front side.

#### WELL TESTERS CERTIFICATION

I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I conducted or supervised this test by observation of (a) meter readings or (b) the top and bottom gauges of each tank into which production was run during the test. I further certify that the potential test data shown above is true, correct, and complete, to the best of my knowledge.

Signature: Well Tester

Name of Company

RRC Representative

#### OPERATOR'S CERTIFICATION

I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that data and facts stated therein are true, correct and complete, to the best of my knowledge.

**CHESAPEAKE OPERATING, INC.**

Type or printed name of operator's representative

**(318) 674-7214 EXT 47214**

**10/19/2012**

Telephone: Area Code      Number      Month      Day      Year

**Regulatory Analyst I**

Title of Person

**Sara Loftin**

Signature

SECTION III DATA ON WELL COMPLETION AND LOG (Not Required on Retest)									
24. Type of Completion New Well <input checked="" type="checkbox"/> Deepening <input type="checkbox"/> Plug Back <input type="checkbox"/> Other <input type="checkbox"/>					25. Permit to Drill, Plug Back or Deepen DATE 02/10/2012 PERMIT NO. 732834 Rule 37 Exception CASE NO.				
26. Notice of Intention to Drill this well was filed in Name of <b>CHESAPEAKE OPERATING, INC.</b>					Water Injection Permit PERMIT NO.				
27. Number of producing wells on this lease in this field (reservoir) including this well <b>1</b>			28. Total number of acres in this lease <b>641.22</b>		Salt Water Disposal Permit PERMIT NO.				
29. Date Plug Back, Deepening, Workover or Drilling Operations: <b>05/09/2012</b>			Commenced <b>06/21/2012</b>		30. Distance to nearest well, Same Lease & Reservoir <b>0.0</b>				
31. Location of well, relative to nearest lease boundaries <b>250.0</b> Feet From <b>South</b> Line and <b>738.0</b> Feet from <b>West</b> Line of the <b>UNIVERSITY 19-19</b> Lease									
32. Elevation (DF. RKB, RT. GR ETC.) <b>2813</b> <b>GL</b>			33. Was directional survey made other than inclination (Form W-12)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
34. Top of Pay <b>11383 MD:11759</b>	35. Total Depth <b>11377 MD:15935</b>	36. P. B. Depth <b>11377 MD:15935</b>	37. Surface Casing Determined by Field Rules <input type="checkbox"/>	Recommendation of T.D.W.R. Railroad Commission (Special) <input checked="" type="checkbox"/>	Dt. of Letter <b>02/07/2012</b> Dt. of Letter <b>04/13/2012</b>				
38. Is well multiple completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
39. If multiple completion, list all reservoir names (completions in this well) and Oil Lease or Gas ID No. <b>FIELD &amp; RESERVOIR</b>				GAS ID or OIL LEASE #		Oil-G Gas-G		Well #	
<b>N/A</b>									
40. Intervals Drilled by: Rotary Tools <input checked="" type="checkbox"/> Cable Tools	41. Name of Drilling Contractor <b>TRINIDAD 102</b>			42. Is Cementing Affidavit Attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
43. CASING RECORD (Report All Strings Set in Well)									
CASING SIZE	WT #/FT.	DEPTH SET	MULTISTAGE TOOL DEPTH	TYPE & AMOUNT CEMENT (sacks)	HOLE SIZE	TOP OF CEMENT	SLURRY VOL. cu. ft.		
9 5/8	40.0	5070		C 1210	12 1/4	1186	2420.0		
9 5/8	40.0	5070	1186	C 1150	12 1/4	0	1541.0		
7	29.0	11759		H 910	8 3/4	4070	1860.2		
44. LINER RECORD									
Size	Top		Bottom		Sacks Cement		Screen		
4 1/2	10775		15928						
45. TUBING RECORD									
Size	Depth Set	Packer Set	From L1 11759		To 15935				
2 7/8	10808	10776	From		To				
			From		To				
			From		To				
47. ACID, SHOT, FRACTURE, CEMENT SQUEEZE. ETC.									
Depth Interval			Amount and Kind of Material Used						
12084.0		15756.0	SEE ATTACHED						
48. FORMATION RECORD (LIST DEPTHS OF PRINCIPAL GEOLOGICAL MARKERS AND FORMATION TOPS)									
Formations	Depth		Formations		Depth				
3RD BONE SPRING SAND	11175.0 MD: 11175.0								
BASAL 3RD BONE SPRING SAND	11336.0 MD: 11336.0								
A SAND	11346.0 MD: 11346.0								
REMARKS: KOP @ 10889'. EMAIL: SARA.LOFTIN@CHK.COM									

Cementer: Fill in shaded areas  
Operator: Fill in other items

Form W-15  
Cementing Report  
Rev. 4/1/83  
HAL1199

## RAILROAD COMMISSION OF TEXAS

Oil and Gas Division

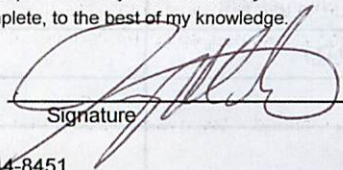
1. Operator's Name (As Shown on Form P-5, Organization Report) <b>Chesapeake Operating, Inc.</b>	2. RRC Operator No. <b>147715</b>	3. RRC District No. <b>08</b>	4. County of Well Site <b>Loving</b>
5. Field Name (Wildcat or Exactly as Shown on RRC Records) <b>Phantom (Wolfcamp)</b>	6. API No. <b>42-301-3709</b>		7. Drilling Permit No. <b>732834</b>
8. Lease Name <b>University 19-19</b>	9. Rule 37 Case No.	10. Oil Lease/Gas ID No.	11. Well No. <b>2H</b>

CASING CEMENTING DATA:		SURFACE CASING	INTER-MEDIATE CASING	PRODUCTION CASING		MULTI-STAGE CEMENTING PROCESS	
				Single String	Multiple Parallel Strings	Tool	Shoe
12. Cementing Date						5/15/2012	5/14/2012
13. *Drilled hole size						12 1/4	12 1/4
*Est. % wash or hole enlargement							
14. Size of casing (in. O.D.)						9 5/8	9 5/8
15. Top of liner (ft)							
16. Setting depth (ft)						1186	5070
17. Number of centralizers used							31
18. Hrs. waiting on cement before drill-out							24
1st Slurry	19. API cement used: No. of sacks ▶					1150	750
	Class ▶					Class-C	Class-C
	Additives ▶					See Remarks	See Remarks
2nd Slurry	No. of sacks ▶						460
	Class ▶						Class-C
	Additives ▶						See Remarks
3rd Slurry	No. of sacks ▶						
	Class ▶						
	Additives ▶						
1st	20. Slurry pumped: Volume (cu.ft.) ▶					1541	1822
	Height (ft.) ▶					4920	5808
2nd	Volume (cu.ft.) ▶						598
	Height (ft.) ▶						1909
3rd	Volume (cu.ft.) ▶						
	Height (ft.) ▶						
Total	Volume (cu.ft.) ▶					1541	2420
	Height (ft.) ▶					4920	7717
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?						Yes	no
22. Remarks Lead Cmt- EconoCem W/ .25 % D-AIR, 2 % H-R 12, Tail Cmt-HalCem W/ 1 % Calcium Chloride 40bbbls Back To Surface cp						Sales Order 9510357 Customer Name CHESAPEAKE OPERATING INC EBU Lease University 19-19 Well Number 2H Loving County	

OVER ►


CEMENTING TO PLUG AND ABANDON	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7	PLUG #8
23. Cementing date								
24. Size of hole or pipe plugged (in.)								
25. Depth to bottom of tubing or drill pipe (ft.)								
26. Sacks of cement used (each plug)								
27. Slurry volume pumped (cu.ft.)								
28. Calculated top of plug (ft.)								
29. Measured top of plug, if tagged (ft.)								
30. Slurry wt. (lbs/gal)								
31. Type cement								

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Jeremy Morales / Service Supervisor			Halliburton Energy Services			
Name and Title of Cementor's Representative			Cementing Company			
6155 w Murphy	Odessa	TX	79763	1-800-844-8451	5/14/2012	
Address	City	State,	Zip Code	Tel: Area Code Number	Date: Mo. Day Yr.	

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

**Sara Loftin, Regulatory Analyst I**

Typed or Printed Name of Operator's Representative			Title			
333 Texas Street - Ste. 1100, Shreveport, LA 71101						
Address	City	State,	Zip Code	Tel: Area Code Number	Date: Mo. Day Yr.	
Phone (318) 674-7214					10/18/12	

#### Instruction to Form W-15, Cementing Report

**IMPORTANT:** Operators and cementing companies must comply with the requirements of the Commission's Statewide rules 8 (Water Protection), 13 (Casing, Cementing, Drilling, and Completion, and 14 (Well Plugging). For offshore operations, see the requirements of Rule 13 (c).

**A. What to file.** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form. Form W-15 should be filed with the following:

- \* An initial oil or gas completion report, **Form W-2 or G-1**, as required by Statewide or special field rules;
- \* **Form W-4**, Application for Multiple Completion, if the well is a multiple parallel casing completion; and
- \* **Form W-3**, Plugging Record, unless the W-3 is signed by the cementing company representative. When reporting **dry holes**, operators must complete **\*Form W-15, in addition to Form W-3, to show any casing cemented in the hole.**

**B. Where to file.** The appropriate Commission District Office for the county in which the well is located.

**C. Surface casing.** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Texas Department of Water Resources, Austin. Before drilling a well in any field or area in which no field rules are in effect or in which surface casing requirements are not specified in the applicable rules, an operator must obtain a letter from the Department of Water Resources stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

**D. Centralizers.** Surface casing must be centralized at the shoe, above and below a stage collar or diverting tool, if run, and through usable-quality water zones. In nondeviated holes, a centralizer must be placed every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar. All centralizers must meet API specifications.

**E. Exceptions and alternative casing programs.** The District Director may grant an exception to the requirements of Statewide Rule 13. In a written application, an operator must state the reason for the requested exception and outline an alternate program for casing and cementing through the protection depth for strata containing usable-quality water. The District Director may approve, modify, or reject a proposed program. **An operator must obtain approval of any exception before beginning casing and cementing operations.**

**F. Intermediate and production casing.** For specific technical requirements, operators should consult Statewide Rule 13 (b) (3) and (4).

**G. Plugging and abandoning.** Cement plugs must be placed in the wellbore as required by Statewide Rule 14. The District Director may require additional cement plugs. For onshore or inland wells, a 10-foot cement plug must be placed in the top of the well, and the casing must be cut off three feet below the ground surface. All cement plugs, except the top plug, must have sufficient slurry volume to fill 100 feet of hole, plus ten percent for each 1,000 feet of depth from the ground surface to the bottom of the plug.

To plug and abandon a well, operators must use only cementers approved by the Director of Field Operations. Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

Cementer: Fill in shaded areas  
Operator: Fill in other items

Form W-15  
Cementing Report  
Rev. 4/1/83  
HAL1199

**RAILROAD COMMISSION OF TEXAS**  
Oil and Gas Division

1. Operator's Name (As Shown on Form P-5, Organization Report) CHESAPEAKE OPERATING INC.	2. RRC Operator No. 147715	3. RRC District No. 08	4. County of Well Site LOVING
5. Field Name (Wildcat or Exactly as Shown on RRC Records) PHANTOM (wolfcamp)	6. API No. 42- 301-31709	7. Drilling Permit No. 732834	
8. Lease Name UNIVERSITY 19-19	9. Rule 37 Case No.	10. Oil Lease/Gas ID No.	11. Well No. 2H

CASING CEMENTING DATA:		SURFACE CASING	INTER-MEDIATE CASING	PRODUCTION CASING		MULTI-STAGE CEMENTING PROCESS	
				Single String	Multiple Parallel Strings	Tool	Shoe
12. Cementing Date			5/31/2012				
13. *Drilled hole size			83/4				
*Est. % wash or hole enlargement							
14. Size of casing (in. O.D.)			7				
15. Top of liner (ft)							
16. Setting depth (ft)			11759				
17. Number of centralizers used			73				
18. Hrs. waiting on cement before drill-out			24				
1st Slurry	19. API cement used: No. of sacks ▶		590				
	Class ▶		H				
	Additives ▶		SEE REMARKS				
2nd Slurry	No. of sacks ▶		320				
	Class ▶		H				
	Additives ▶		SEE REMARKS				
3rd Slurry	No. of sacks ▶						
	Class ▶						
	Additives ▶						
1st	20. Slurry pumped: Volume (cu.ft.) ▶		1498.6				
	Height (ft.) ▶		9476				
2nd	Volume (cu.ft.) ▶		361.6				
	Height (ft.) ▶		2281				
3rd	Volume (cu.ft.) ▶						
	Height (ft.) ▶						
Total	Volume (cu.ft.) ▶		1860.2				
	Height (ft.) ▶		11757				
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?			NO				
22. Remarks LEAD- 0.45% HR-601, 025 LBM D-AIR, 0.1% ECONOLITE, 1 LBM PHENO SEAL TAIL- 0.3% HALAD-23, 0.15% CFR-3				Sales Order 9538884 Customer Name CHESAPEAKE OPERATING INC EBU Lease University 19-19 Well Number 2H Loving County			

CEMENTING TO PLUG AND ABANDON	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7	PLUG #8
23. Cementing date								
24. Size of hole or pipe plugged (in.)								
25. Depth to bottom of tubing or drill pipe (ft.)								
26. Sacks of cement used (each plug)								
27. Slurry volume pumped (cu.ft.)								
28. Calculated top of plug (ft.)								
29. Measured top of plug, if tagged (ft.)								
30. Slurry wt. (lbs/gal)								
31. Type cement								

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

STEVE MCCOY SSIII

Halliburton Energy Services

Name and Title of Cementor's Representative

Cementing Company

Signature

6155 W MURPHY

ODESSA

TX

79763

432-571-8600

5/31/2012

Address

City

State,

Zip Code

Tel: Area Code Number

Date: Mo. Day Yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Sara Loftin, Regulatory Analyst I

Typed or Printed Name of Operator's Representative

Title

Signature

333 Texas Street - Ste. 1100, Shreveport, LA 71101

Address

City,

State,

Zip Code

Tel: Area Code Number

Date: Mo. Day Yr.

Phone (318) 674-7214

## Instruction to Form W-15, Cementing Report

IMPORTANT: Operators and cementing companies must comply with the requirements of the Commission's Statewide rules 8 (Water Protection), 13 (Casing, Cementing, Drilling, and Completion, and 14 (Well Plugging). For offshore operations, see the requirements of Rule 13 (c).

A. What to file. An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form. Form W-15 should be filed with the following:

- \* An initial oil or gas completion report, **Form W-2 or G-1**, as required by Statewide or special field rules;
- \* **Form W-4**, Application for Multiple Completion, if the well is a multiple parallel casing completion; and
- \* **Form W-3**, Plugging Record, unless the W-3 is signed by the cementing company representative. When reporting **dry holes**, operators must complete **Form W-15, in addition to Form W-3, to show any casing cemented in the hole.**

B. Where to file. The appropriate Commission District Office for the county in which the well is located.

C. **Surface casing.** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Texas Department of Water Resources, Austin. Before drilling a well in any field or area in which no field rules are in effect or in which surface casing requirements are not specified in the applicable rules, an operator must obtain a letter from the Department of Water Resources stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

D. **Centralizers.** Surface casing must be centralized at the shoe, above and below a stage collar or diverting tool, if run, and through usable-quality water zones. In nondeviated holes, a centralizer must be placed every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar. All centralizers must meet API specifications.

E. **Exceptions and alternative casing programs.** The District Director may grant an exception to the requirements of Statewide Rule 13. In a written application, an operator must state the reason for the requested exception and outline an alternate program for casing and cementing through the protection depth for strata containing usable-quality water. The District Director may approve, modify, or reject a proposed program. **An operator must obtain approval of any exception before beginning casing and cementing operations.**

F. **Intermediate and production casing.** For specific technical requirements, operators should consult Statewide Rule 13 (b) (3) and (4).

G. **Plugging and abandoning.** Cement plugs must be placed in the wellbore as required by Statewide Rule 14. The District Director may require additional cement plugs. For onshore or inland wells, a 10-foot cement plug must be placed in the top of the well, and the casing must be cut off three feet below the ground surface. All cement plugs, except the top plug, must have sufficient slurry volume to fill 100 feet of hole, plus ten percent for each 1,000 feet of depth from the ground surface to the bottom of the plug.

To plug and abandon a well, operators must use only cementers approved by the Director of Field Operations. Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

Tracking No.: 57506

This facsimile L-1 was generated electronically from data submitted to the RRC.

## Instructions

**When to File Form L-1:**

- with Forms G-1, W-2, and GT-1 for new and deepened gas, oil, and geothermal wells
- with Form W-3 for plugged dry holes
- when sending in a log which was held under a request for confidentiality and the period for confidentiality has not yet expired.

**When is Form L-1 NOT required:**

- with Forms W-2, G-1, and GT-1 filed for injection wells, disposal wells, water supply wells, service wells, re-test wells, re-classifications, and plugbacks of oil, gas or geothermal wells
- with Form W-3 for plugging of other than a dry hole

**Where to File Form L-1:**

- with the appropriate Commission district office

**Filling out Form L-1:**

- Section I and the signature section must be filled out for all wells
- complete only the appropriate part of Section II

**Type of log required:**

- any wireline survey run for the purpose of obtaining lithology, porosity, or resistivity information
- no more than one such log is required but it must be of the subject well
- if such log is NOT run on the subject well, do NOT substitute any other type of log; just select Section II, Part A below

## SECTION I. IDENTIFICATION

Operator Name: CHESAPEAKE OPERATING, INC.	District No. 08	Completion Date: 08/14/2012
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 732834	
Lease Name UNIVERSITY 19-19	Lease/ID No.	Well No. 2H
County LOVING	API No. 42- 301-31709	

## SECTION II. LOG STATUS (Complete either A or B)

☐ A. BASIC ELECTRIC LOG NOT RUN

☒ B. BASIC ELECTRIC LOG RUN. (Select one)

- ☒ 1. Confidentiality is requested and a copy of the header for each log that has been run on the well is attached.
- ☐ 2. Confidentiality already granted on basic electric log covering this interval (applicable to deepened wells only).
- ☐ 3. Basic electric log covering this interval already on file with Commission (applicable to deepened wells only).
- ☐ 4. Log attached to (select one):

☐ (a) Form L-1 (this form). If the company/lease name on log is different from that shown in Section I, please enter name on log here: \_\_\_\_\_

Check here if attached log is being submitted after being held confidential. ☐

☐ (b) Form P-7, Application for Discovery Allowable and New Field Designation.

☐ (c) Form W-4, Application for Multiple Completion:

Lease or ID No(s). \_\_\_\_\_

Well No(s). \_\_\_\_\_

Sara Loftin

Signature

CHESAPEAKE OPERATING, INC.

Name (print)

Regulatory Analyst I

Title

(318) 674-7214 EXT 47214

Phone

10/18/2012

Date

-FOR RAILROAD COMMISSION USE ONLY-



[WWW.NOMACSERVICES.COM](http://WWW.NOMACSERVICES.COM)

## GEO

16217 N. May Ave.  
Edmond, Oklahoma 73013

24/7 Ops Support 405.562.4149  
fax 405.285.0478

APPS.NOMACSERVICES.COM

### Customer Information

Operator: **Chesapeake Energy Corp.**  
**6100 N. Western Avenue**  
**Oklahoma City, OK 73118**

Geologist: **Jakob Wartman**  
Chesapeake Energy Corp.

### Mud Logging Details

Logger: **Adam Lippert**  
**Amanda Phelps**

Log Interval: **5300' to 11701'**

Start Date: **May 13, 2012**

Release Date: **May 29, 2012**

### Well Information

Well Name: **University 19-19 2H**

Location: **Lat 31.8728714°**  
**Long -103.3932248°**

County: **Loving**  
State: **Texas**

Drilling Rig: **Trinidad 102**  
Total Depth: **11701'**  
TD Date: **May 28, 2012**  
Formation: **Bone Spring Sand**  
KB Elevation: **2835'**  
GR Elevation: **2813'**  
API Number: **42-301-31709**

## Hydraulic Fracturing Fluid Product Component Information Disclosure

Tracking No. 57506  
API 42-301-31709

Fracture Date:	7/28/2012
State:	TEXAS
County:	LOVING
API Number:	4230131709
Operator Name:	CHESAPEAKE
Well Name and Number:	UNIVERSITY 19-19 2H
Longitude:	-103.392641
Latitude:	31.672186
Long/Lat Projection:	NAD27
Production Type:	OIL
True Vertical Depth (TVD):	11,393
Total Water Volume (gal)*:	1,521,828

## Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by Mass)**	Maximum Ingredient Concentration in HF Fluid (% by Mass)**	Comments
Fresh Water		Carrier/Base Fluid				85.82241%	
10.1 - 15 HCL	FTS INTERNATI	Acid	Water	007732-18-5	85.00%	0.25885%	
			Hydrochloric Acid	007647-01-0	15.00%	0.04568%	
FE-100L	FTS INTERNATI	Iron Control Agent	Citric Acid	000077-92-9	55.00%	0.00055%	
CI-150	FTS INTERNATI	Corrosion Inhibitor	Isopropanol (Isopropyl Alcohol, Propan-2-ol)	000067-63-0	60.00%	0.00046%	
			Proprietary Organic Amine Resin Salt	TRADE SECRET	30.00%	0.00023%	
			Dimethyl Formamide	000068-12-2	10.00%	0.00008%	
			Proprietary Aromatic Aldehyde	TRADE SECRET	10.00%	0.00008%	
			Proprietary Quaternary Ammonium Compound	TRADE SECRET	10.00%	0.00008%	
Northern White Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	9.89635%	
Optiprop G2		Proppant - Resin Coated	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	97.00%	2.72477%	
			Phenol/Formaldehyde Resin	009003-35-4	5.00%	0.14045%	
			Hexamethylenetetramine (Hexamine)	000100-97-0	1.00%	0.02809%	
100 Mesh Sand		Proppant - Natural	Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	100.00%	0.65161%	
Surfatron 613	CHAMPION	Surfactant	Proprietary Quaternary Salt	TRADE SECRET	60.00%	0.03326%	
Bactron K-87 Microbiocide	CHAMPION	Anti-Bacterial Agent	Glutaraldehyde (Pentanedial)	000111-30-8	30.00%	0.00732%	
			Alkyl dimethyl ethylbenzyl ammonium chloride (68%C12, 32%C14)	085409-23-0	10.00%	0.00244%	
			Quaternary Ammonium Compounds, benzyl-C12-18-alkyldimethyl, chlorides	068391-01-5	10.00%	0.00244%	
Surfatron DW	CHAMPION	Surfactant	Methanol (Methyl Alcohol)	000067-56-1	30.00%	0.00675%	
			Proprietary Nonylphenol Ethoxylate	TRADE SECRET	30.00%	0.00675%	
Gypton T-475	CHAMPION	Scale Inhibitor	Amine Phosphonate 5, Potassium Salt	N/A	30.00%	0.00191%	
			Ethylene Glycol	000107-21-1	30.00%	0.00191%	
			Methanol (Methyl Alcohol)	000067-56-1	10.00%	0.00084%	
			Amine Phosphonate 5	N/A	5.00%	0.00032%	
			Potassium Chloride	007447-40-7	5.00%	0.00032%	
HVG01 (TURQUOISE-1 BULK)	FTS INTERNATI	Gelling Agent	Petroleum Distillate Hydrotreated Light	064742-47-8	55.00%	0.16051%	
			Guar Gum	009000-30-0	50.00%	0.14592%	
			Crystalline Silica (Quartz Sand, Silicon Dioxide)	014808-60-7	2.00%	0.00584%	
			Surfactant	068439-51-0	2.00%	0.00584%	
B10 (HIGH PH BUFFER)	FTS INTERNATI	pH Adjusting Agent	Potassium Carbonate	000584-08-7	48.00%	0.02204%	
			Potassium Hydroxide	001310-58-3	20.00%	0.00918%	
BXL02 Borate XL	FTS INTERNATI	Cross Linker	Sodium Metaborate Tetrahydrate	010555-76-7	25.00%	0.00919%	
			Boric Acid	010043-35-3	15.00%	0.00551%	
			Potassium Hydroxide	001310-58-3	12.00%	0.00441%	
FRW-200	FTS INTERNATI	Friction Reducer	Petroleum Distillate Hydrotreated Light	064742-47-8	26.00%	0.00587%	
APB01 (AMMONIUM PERSULFATE BREAKER)	FTS INTERNATI	Breaker	Ammonium Persulfate	007727-54-0	100.00%	0.00297%	
LEB-300	FTS INTERNATI	Breaker	No Hazardous Components	NONE		0.00000%	
Additional Ingredients Not Listed on MSDS							
Optiprop G2		Proppant - Resin Coated	Non-MSDS Components Not Provided by Supplier	NOT PROVIDED			
Bactron K-87 Microbiocide, Gypton T-475, Surfatron 613, Surfatron DW	CHAMPION	Anti-Bacterial Agent, Scale Inhibitor, Surfactant	Formaldehyde	000050-00-0			
			Potassium Phosphate	007778-53-2			
			Sodium Chloride	007647-14-5			
			Trimethylamine	000075-50-3			
			Trimethylamine Hydrochloride	000593-81-7			
			Water	007732-18-5			
APB01 (AMMONIUM PERSULFATE BREAKER), B10 (HIGH PH BUFFER), BXL02 Borate XL, CI-150, FE-100L, FRW-200, LEB-300	FTS INTERNATI	Breaker, Corrosion Inhibitor, Cross Linker, Friction Reducer, Iron Control Agent, pH Adjusting Agent	Non-MSDS Components Not Provided by Supplier (LEB-300)	NOT PROVIDED			
			Proprietary Breaker (APB01) Additive	TRADE SECRET			
			Proprietary Corrosion Inhibitor Additive (CI-150)	TRADE SECRET			
			Proprietary Friction Reducer Additive (FRW-200 and FRW-200W)	TRADE SECRET			
			Water	007732-18-5			

\* Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

\*Additional Ingredients Not Listed on MSDS\* component information was obtained directly from the supplier. As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of this information should be directed to the supplier who provided it.

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(j) and Appendix D.

**APPLICATION FOR ALTERNATE SURFACE CASING PROGRAM**  
**Statewide Rule 13(b)(2)(g)**  
**RRC District 8/8A**

703

Operator's Name and Address:  <b>Chesapeake Operating, Inc.</b> <b>P. O. Box 18496</b> <b>Oklahoma City, OK 73154-0496</b>	Lease: University 19-19	Well No.: 2H
	Field: Phantom (Wolfcamp)	
	Drilling Permit No.: 732834	
	County: Loving	RRC District: 08
	Location: Sec. 19 Block 19 Sur. UL Twp.	
Proposed TD: 16,075' MD/11,465' TVD		

Distance and Direction from nearest town: 12.4 Miles E from Mentone

Proposed Injection or disposal well? ☐ Yes ☒ No NOTE: Special conditions may apply. See PROVISIONS below.

Usable-quality water strata (as determined by TCEQ "Waterboard" letter) occur to a depth of 350 ft, and from 700 ft to 1075 ft, and from \_\_\_\_\_ ft to \_\_\_\_\_ ft.

**Note: Please submit copy of TCEQ "Waterboard" letter with this request. Request cannot be processed without this information.**

Distance and direction of nearest water well (within ¼ mile): 0

Type of water well (domestic, public, irrigation, stock, etc.): \_\_\_\_\_ Depth: \_\_\_\_\_

**Proposed Casing and Cementing Program**

Note: You may attach a wellbore diagram or cementing proposal to this application.

This application is for (check applicable boxes): ☐ Short Surface Casing ☒ Excess Surface Casing ☐ No Surface Casing

The proposed surface casing depth: 5,058' Multi-Stage tool depth (if applicable): 1,175'

Intermediate or production casing depth: 11,738' Multi-Stage tool depth (if applicable): \_\_\_\_\_

Centralizer number and placement: One every 160'

Does the cement across the critical zone have 72-hr compressive strength of at least 1,200 psi? ☒ Yes ☐ No

Does the filler cement have 24-hr compressive strength of at least 250 psi? ☒ Yes ☐ No

Do you plan on circulating cement to the surface on all casing strings protecting usable-quality water? ☒ Yes ☐ No

Reason for this request: Insure protection of usable water - WBS and groundwater map attached

**PROVISIONS APPLICABLE TO RULE 13 EXCEPTIONS:**

1. Caution: If this well is being drilled for injection or disposal purposes, an injection or disposal well permit may be denied unless surface casing is set and cemented through all zones of usable-quality groundwater.
2. Centralizers must be used through all usable-quality waters. Refer to Rule 13(b)(2)(F).
3. Notify District Office 8 hours prior to setting casing.

Signature: Vickie Collins Print Name: Vickie Collins Date: 4/13/12 Phone: (318)674-7204

**IF CEMENT IS NOT CIRCULATED TO THE GROUND SURFACE AS REQUIRED BY THIS EXCEPTION, YOU MUST IMMEDIATELY CONTACT THE DISTRICT 8/8A OFFICE AT 432-684-5581, AND FOLLOW THE PROCEDURES AS SET OUT IN RULE 13(B)(2)(g)(III) OR AS RECOMMENDED BY THE DISTRICT OFFICE.**

RRC Use Only ▶

RRC District Office Action:	
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied	By: <u>Dan M. L.</u> Date: <u>4-13-12</u>
Remarks/Modifications: <u>Approved as Submitted</u>	

RESET FORM

STATEMENT OF PRODUCTIVITY OF ACREAGE  
ASSIGNED TO PRORATION UNITS

Form P-15

Tracking No.: 57506

This facsimile P-15 was generated electronically  
from data submitted to the RRC.

The undersigned states that he is authorized to make this statement; that he has knowledge of the facts concerning the CHESAPEAKE OPERATING, INC. ,

OPERATOR

UNIVERSITY 19-19

LEASE

, No. 2H ; that such well is

WELL

completed in the PHANTOM (WOLFCAMP) Field, LOVING County,

Texas and that the acreage claimed, and assigned to such well for proration purposes as authorized by special rule and as shown on the attached certified plat embraces \_\_\_\_\_

640.0 acres which can reasonably be considered to be productive of hydrocarbons.

- CERTIFICATE -

*I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge,*

Date 04/02/2013 Signature Sara Loftin

Telephone (318) 674-7214 EXT 47214 Title Regulatory Analyst I  
AREA CODE

CERTIFICATE OF COMPLIANCE  
AND TRANSPORTATION AUTHORITY

P-4

This facsimile P-4 was generated electronically from data submitted to the RRC.  
A certification of the automated data is available in the RRC's Austin office.

Tracking No.: 57506

1. Field name exactly as shown on proration schedule <b>PHANTOM (WOLFCAMP)</b>		2. Lease name as shown on proration schedule <b>UNIVERSITY 19-19</b>					
3. Current operator name exactly as shown on P-5 Organization Report <b>CHESAPEAKE OPERATING, INC.</b>		4. Operator P-5 no. <b>147715</b>	5. Oil Lse/Gas ID no	6. County <b>LOVING</b>	7. RRC district <b>08</b>		
8. Operator address including city, state, and zip code <b>ATTN REGULATORY COMPLIANCE PO BOX 18496 OKLAHOMA CITY, OK 73154-0496</b>		9. Well no(s) (see instruction E) <b>2H</b>					
		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)			11. Effective Date <b>08/14/2012</b>		
12. Purpose of Filing. (Complete section a or b below.) (See instructions B and G) a. Change of: <input type="checkbox"/> operator <input type="checkbox"/> oil or condensate gatherer <input type="checkbox"/> gas gatherer <input type="checkbox"/> gas purchaser <input type="checkbox"/> gas purchaser system code <input type="checkbox"/> field name from _____ <input type="checkbox"/> lease name from _____ -- OR -- b. New RRC Number for: <input checked="" type="checkbox"/> oil lease <input type="checkbox"/> gas well <input type="checkbox"/> other well (specify) _____ Due to: <input checked="" type="checkbox"/> new completion or recompletion <input type="checkbox"/> reclass oil to gas <input type="checkbox"/> reclass gas to oil <input type="checkbox"/> consolidation, unitization, or subdivision (oil lease only)							
13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherer(s) and/or Purchaser(s). (See instruction G).							
Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left (Attach an additional sheet in same format if more space is needed)			Purchaser's RRC Assigned System Code	Percent of Take	Full-well stream
X		CHESAPEAKE MDSTRM DEV, L.P.(147726)				100.0	
	X	CHESAPEAKE ENERGY MARKETING, INC(147710)			0001	100.0	
14. Authorized OIL or CONDENSATE Gatherer(s). (See instruction G).							
Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First (Attach an additional sheet in same format if more space is needed)						Percent of Take	
PLAINS MARKETING, L.P.(667883)						100.0	
RRC USE ONLY: Reviewer's initials: _____ Approval date: _____							
15. PREVIOUS OPERATOR CERTIFICATION FOR CHANGE OF OPERATOR P-4 FILING. Being the PREVIOUS OPERATOR, I certify that operating responsibility for the well(s) designated in this filing, located on the subject lease has been transferred in its entirety to the above named Current Operator. I understand, as Previous Operator, that designation of the above named operator as Current Operator is not effective until this certificate is approved by the Commission.							
Name of Previous Operator  Name (print)  Title				Signature <input type="checkbox"/> Authorized Employee of previous operator <input type="checkbox"/> Authorized agent of previous operator (see instruction G)  Date Phone with area code			
16. CURRENT OPERATOR CERTIFICATION. By signing this certificate as the Current Operator, I certify that all statements on this form are true and correct and I acknowledge responsibility for the regulatory compliance of the subject lease including plugging of well(s) pursuant to Rule 14. I further acknowledge that I assume responsibility for the physical operation, control, and proper plugging of each well designated in this filing. I also acknowledge that I will remain designated as the Current Operator until a new certificate designating a new Current Operator is approved by the Commission.							
CHESAPEAKE OPERATING, INC. Name (print) Regulatory Analyst I Title sara.loftin@chk.com E-mail Address (optional)				Sara Loftin Signature <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G) 10/18/2012 (318) 674-7214 EXT 47214 Date Phone with area code			

Groundwater  
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Date February 7, 2012

GAU File No.: SC- 2666

\*\*\*\*\* EXPEDITED APPLICATION \*\*\*\*\*

API Number 30100000

Attention: JONATHAN VOGEL

RRC Lease No. 000000

SC\_147715\_30100000\_000000\_2666.pdf

CHESAPEAKE OPERATING INC  
P. O. BOX 18496  
OKLAHOMA CITY OK 73154-0496

P-5# 147715

--Measured--

738 ft FWL

250 ft FSL

MRL: SURVEY

Digital Map Location:

X-coord/Long 1344780

Y-coord/Lat 10585190

Datum 27 Zone C

County LOVING

Lease & Well No. UNIVERSITY 19-19 #2H

Purpose ND

Location SUR-UL, BLK-19, SEC-19, -- [TD=12000], [RRC 8],

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Texas Railroad Commission recommends:

Water-bearing strata from the land surface to a depth of 350 feet and the RUSTLER, which is estimated to occur from 700 to 1075 feet must be protected.

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is intended for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

If you have any questions, please contact us at 512-463-2741, [gau@rrc.state.tx.us](mailto:gau@rrc.state.tx.us), or by mail.

Sincerely,

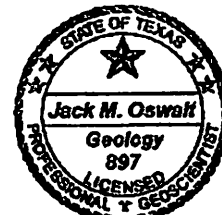


Digitally signed by Jack Oswalt  
DN: c=US, st=TEXAS, l=Austin, o=Railroad  
Commission of Texas, cn=Jack Oswalt,  
email=jack.oswalt@rrc.state.tx.us  
Date: 2012.02.07 15:45:29 -0600

Jack M. Oswalt, P.G.

Geologist, Groundwater Advisory Unit  
Oil & Gas Division

GEOLOGIST SEAL



The seal appearing on this document was authorized by Jack M. Oswalt on 2/7/2012  
Note: Alteration of this electronic document will invalidate the digital signature.



LEASE NAME & WELL NO.:  
**UNIVERSITY 19-19 #2H "AS-DRILLED"**

TOPOGRAPHY & VEGETATION:  
**NATURAL MESQUITE PASTURE**

NEAREST TOWN IN COUNTY:  
**±12.4 MILES EAST OF MENTONE, TEXAS**

DESCRIPTION:  
**SECTION 19, BLOCK 19, UNIVERSITY LAND SURVEY  
LOVING COUNTY, TEXAS**



This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us. This plat does not in any way represent a "Boundary Survey", and does not comply with correct T.B.P.L.S. Minimum Standards of Procedures for Boundary Surveys.

CERTIFICATION:



*William J. Keating*  
Texas Reg. No. 5041

I, William J. Keating, a Registered Professional Land Surveyor, and an authorized agent of Topographic Land Surveyors, do hereby certify that the above described well location was surveyed and staked on the ground as shown herein. This plat is for Texas Railroad Commission permitting only.

**TOPOGRAPHIC**  
SURVEYING • MAPPING • GIS • GPS

2903 N. BIG SPRING • MIDLAND, TEXAS 79705  
TELEPHONE: (432) 682-1653 • (800) 767-1653 • FAX: (432) 682-1743

**Surface Hole Location:**

250' FSL & 738' FWL  
SHL Ground Elevation: 2813'  
X = 1344780 Y = 10585190  
LAT.: N 31.6726714 LONG.: W 103.3932248  
NAD 83 TX-C ZONE  
X = 1048316 Y = 742614  
LAT.: N 31.6725415 LONG.: W 103.3927738

**Penetration Point:**

297' FSL & 739' FWL  
X = 1048303 Y = 742660  
LAT.: N 31.6726678 LONG.: W 103.3928177

**First Perf. Point:**

1226' FSL & 784' FWL  
X = 1048086 Y = 743564  
LAT.: N 31.6751349 LONG.: W 103.3935965

**Last Perf. Point:**

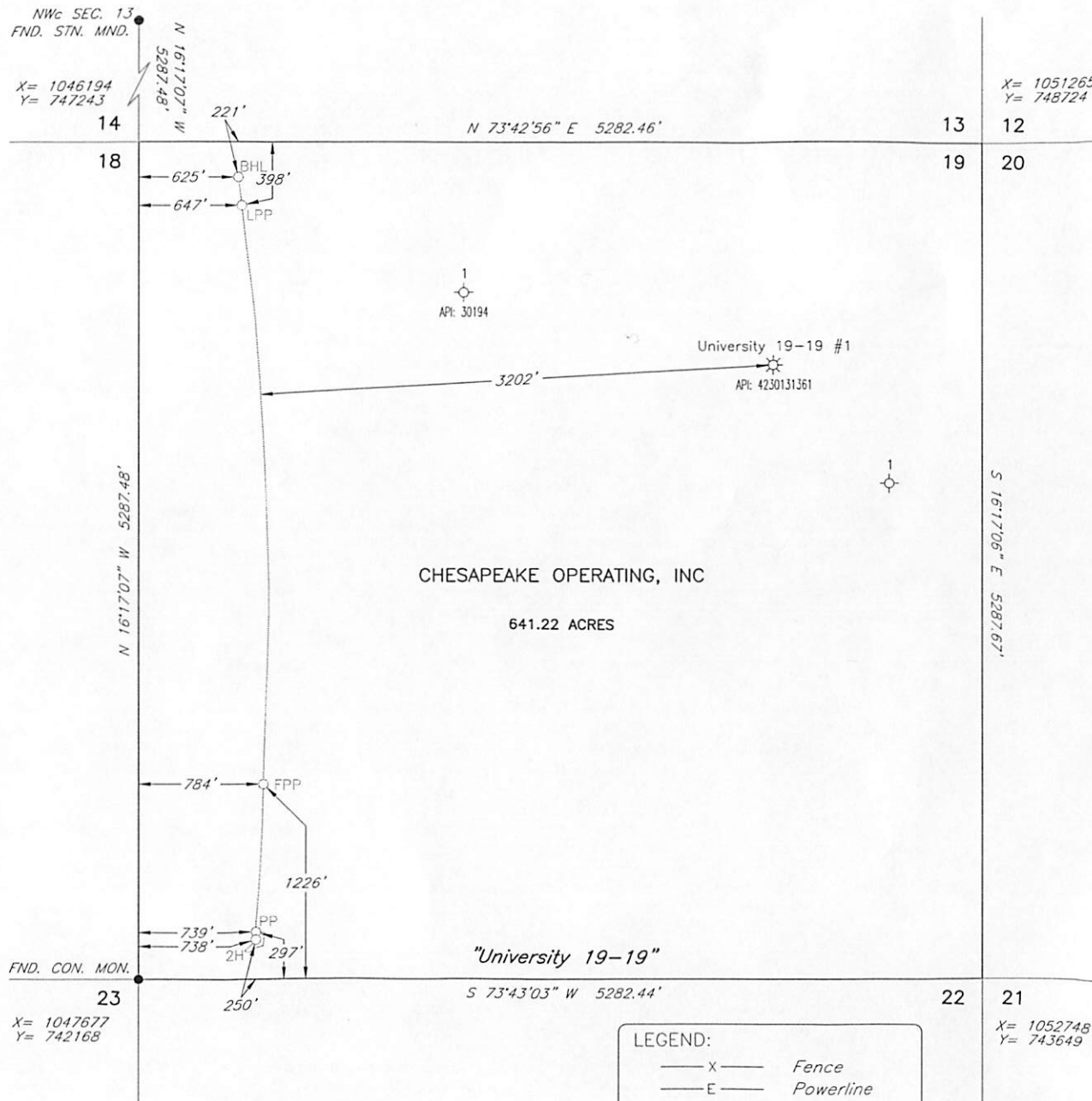
398' FNL & 647' FWL  
X = 1046927 Y = 747042  
LAT.: N 31.6846056 LONG.: W 103.3976273

**Bottom Hole Location:**

221' FNL & 625' FWL  
X = 1046856 Y = 747206  
LAT.: N 31.6850520 LONG.: W 103.3978695

All Coordinates are in NAD 27 TX-C Zone unless otherwise noted.

SCALE: 1" = 1000'  
DATE: DECEMBER 27, 2011  
COGO: 627-71298\_NAD27  
AD\_UNIVERSITY\_19\_19\_2H  
DRAWN BY: ACP; 10-8-12  
ORIGINAL DOC. SIZE: 8.5"x14"



**LEGEND:**  
—X— Fence  
—E— Powerline  
—v— Water Line  
—\\— Pipeline  
===== Lease Road

\*\*NOTE: Wells spotted from information provided by Chesapeake Operating, Inc and the Texas Railroad Commission.

Tracking No. 57506  
API 42-301-3109