

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

**Form G-1**  
Rev. 4/1/83

Type or print only

483-047

API No. 42- 30131418

7. RRC District No.

8

8. RRC Gas ID No.

## Gas Well Back Pressure Test, Completion or Recompletion Report and Log

1. FIELD NAME (as per RRC Records or Wildcat)

**Haley (LWR Wolfcamp -Penn Cons)**

2. LEASE NAME

**University 19-9**

3. OPERATOR'S NAME (Exactly as shown on Form P-5, Organization Report)

**Chesapeake Operating, Inc.**

RRC Operator No.

**147715**

4. ADDRESS

**2010 Rankin Highway, Midland, Texas 79701**

5. Location (Section, Block, and Survey)

**SEC. 9, BLK. 19, UL SURVEY**

5b. Distance and direction to nearest town in this county.

**11 MILES SE FROM MENTONE**

6. If operator has changed within last 60 days, name former operator

12. If workover or reclass, give former field (with reservoir) & Gas ID or oil lease no.

FIELD & RESERVOIR

GAS ID or  
OIL LEASE #

Oil - O  
Gas - G

WELL  
#

13. Pipe Line Connection

**CHESAPEAKE ENERGY MARKETING, INC.**

11. Purpose of filing

Initial Potential ☒

Retest ☐

Reclass ☐

Well record only  
(Explain in remarks) ☐

14. Completion or recompletion date

**12/07/2008**

15. Any condensate on hand at time of workover or recompletion? ☐ Yes ☐ No

16. Type of Electric or other Log Run.

**SEE ATTACHED L-1**

### Section I

### GAS MEASUREMENT DATA

Date of Test 12/16 - 12/19/08		Gas Measurement Method (Check One) Orifice Meter <input checked="" type="checkbox"/> Flange Taps <input checked="" type="checkbox"/> Pipe Taps <input type="checkbox"/> Positive Choke <input type="checkbox"/> Orifice Vent Meter <input type="checkbox"/> Pitot Tube <input type="checkbox"/> Critical-flow Prover <input type="checkbox"/>				Gas produced during test <b>23046</b> MCF				
Run No.	Line Size	Orif or Choke Size	24 Hr. Coeff. Orif or Choke	Static P <sub>m</sub> or Choke Press	Diff. h <sub>w</sub>	Flow Temp. °F	Temp. Factor F <sub>tf</sub>	Gravity Factor F <sub>g</sub>	Compress Factor F <sub>pv</sub>	Gas Rate MCF / DAY
1	3.068	2.000	28224.83	1033	62.53	78	0.9831	1.0215	1.0666	7682
2										
3										
4										

### Section II

### FIELD DATA AND PRESSURE CALCULATIONS

Gravity (Dry Gas) <b>0.5750</b>		Gravity Liquid Hydrocarbon <b>40.00</b> Deg. API		Gas-Liquid Hydrocarbon Ratio <b>698,364</b> CF/Bbl		Gravity of Mixture G <sub>mix</sub> = <b>0.5795</b>		Avg. Shut-in Temp. <b>163</b> °F		Bottom Hole Temp. <b>252</b> °F @ <b>16213</b> ft (Depth)	
(D <sub>eff</sub> ) <sup>8/3</sup> = <b>50.430</b>		$\sqrt{T_f} = \sqrt{626} = 25.02$				$\sqrt{GL} = \sqrt{9395.434} = 96.930$					
C = $\frac{1118 \times (D_{eff})^{8/3}}{\sqrt{T}} = 1118 \times 50.430 / 25.02 = 2253.428$						$\frac{\sqrt{GL}}{C} = 96.930 / 2253.428 = 0.0430$					
Run No.	Time of Run Minutes	Choke Size	Wellhead Press. PSIA P <sub>w</sub>	Wellhead Flow Temp. °F	P <sub>w</sub> <sup>2</sup> (Thousands)	R	R <sup>2</sup> (Thousands)	P <sub>1</sub>	P <sub>w</sub> / P <sub>1</sub>		
Shut-In	<b>24 hrs</b>	<b>SI</b>	<b>10300</b>	<b>74</b>	<b>106090.0</b>	<b>0.0</b>	<b>0.0000</b>	<b>10300</b>	<b>1.0000</b>		
1	<b>4320</b>	<b>13/64</b>	<b>7554</b>	<b>80</b>	<b>57062.9</b>	<b>330.3</b>	<b>109.1153</b>	<b>7561</b>	<b>0.9991</b>		
2											
3											
4											
Run No.	F	K	S = $\frac{1}{z}$	E <sub>ks</sub>	P <sub>f</sub> and P <sub>s</sub>	P <sub>f</sub> <sup>2</sup> and P <sub>s</sub> <sup>2</sup> (Thousands)	P <sub>f</sub> <sup>2</sup> - P <sub>s</sub> <sup>2</sup> (Thousands)	Angle of Slope			
Shut-In	<b>1.0000</b>	<b>0.2827</b>	<b>0.6532</b>	<b>1.2028</b>	<b>12389</b>	<b>153487</b>		Θ <b>45.00°</b>			
1	<b>0.9995</b>	<b>0.2812</b>	<b>0.7798</b>	<b>1.2452</b>	<b>9415</b>	<b>88642</b>	<b>64845</b>	n <b>1.0000</b>			
2								Absolute Open Flow <b>18,183</b> MCF / DAY			
3											
4											

WELL TESTER'S CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I conducted or supervised this test and that data and facts shown in Sections I and II above are true, correct, and complete, to the best of my knowledge. Bottomhole temperature and the diameter and length of flow string were furnished by the operator of the well.

*Doug McNeely*  
Signature: Well Tester

**FESCO, Ltd.**

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 I prepared or supervised and directed this report, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge.

*Jonathan Lopez*  
Signature: Operator's representative

**SR. REGULATORY COMP. SPECIALIST**

Title

**01/30/2009**

Date

Tel: **432-687-2992 X 6031**

A/C Number

SECTION III DATA ON WELL COMPLETION AND LOG (Not Required on Retest)										
1. Type of Completion: New Well <input checked="" type="checkbox"/> Deepening <input type="checkbox"/> Plug Back <input type="checkbox"/> Other <input type="checkbox"/>						18. Permit to Drill, Plug Back or Deepen DATE 04/02/2008 PERMIT NO. 655985		Rule 37 CASE NO.		
2. Notice of Intention to Drill this well was filed in Name of  <b>CHESAPEAKE OPERATING, INC.</b>						Exception 04/02/2008 08-0255960*		Water Injection PERMIT NO.		
3. Number of producing wells on this lease in this field (reservoir) including this well  <b>2</b>		21. Total number of acres in this lease  <b>640</b>		23. Distance to nearest well, Same Lease & Reservoir  <b>640</b>		Salt Water Disposal PERMIT NO.		Permit PERMIT NO.		
4. Date Plug Back, Deepening, WorkOver or Drilling, Operations: 05/08/2008		Commenced 10/06/2008		Completed 640		Other PERMIT NO.				
5. Location of well, relative to nearest lease boundaries of lease on which this well is located  <b>1320</b> Feet From <b>SOUTH</b> Line and <b>1320</b> Feet from <b>EAST</b> Line of the <b>UNIVERSITY 19-9</b> Lease				26. Was directional survey made other than inclination (Form W-12)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
6. Elevation (DF, RKB, RT, GR, ETC.) <b>2765 GR</b>				30. Surface Casing Determined by: Field <input type="checkbox"/> Recommendation of T.D.W.R. <input checked="" type="checkbox"/> Rules Railroad Commission (Special) <input type="checkbox"/>						
7. Top of Pay <b>14,937</b>		28. Total Depth <b>17,536</b>		29. P.B. Depth <b>17,492</b>		Dt. of Letter <b>02/26/2008</b>		Dt. of Letter		
8. Is well multiple completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		32. If multiple completion, list all reservoir names (completions in this well) and Oil Lease or Gas ID No. <b>FIELD &amp; RESERVOIR</b>				33. Intervals Drilled by:		Rotary Tools <input checked="" type="checkbox"/> Cable Tools		
9. Name of Drilling Contractor <b>LATSHAW DRILLING CO.</b>				34. Cementing Affidavit Attached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
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.			
13-3/8	68	5,020	1500	990 C/1725 C	17-1/2	SURF	1713/3822			
9-5/8	53.5	12,489		1895 PZ H	12-1/4	3,020	4122.35			
5, 5-1/2	23.2, 26	17,536**		600 H/DNSCT	6-1/2	10,580	732			
LINER RECORD										
Size	Top	Bottom	Sacks Cement	Screen						
7-5/8, 39#	12,058	15,945	300 H	-						
TUBING RECORD										
Size	Depth Set	Packer Set	39. Producing Interval (this completion) Indicate depth of perforation or open hole							
			From	14,937	To	17,488				
			From		To					
			From		To					
			From		To					
ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.										
Depth Interval			Amount and Kind of Material Used							
17,156 - 17,488			FRAC W/4,999 G. 15% HCL, 222,138 G. LIN/XL GEL							
			254,500# 100 MESH & 20/40. FL W/13,397 G. BR.							
16,513 - 17,003			FRAC 5,008 G. 15% HCL, 230,241 G. SLKWTR/XL,							
(SEE ADD'L BELOW)			362,970# 100 MESH & 20/40. FL W/9,951 G. BR.							
FORMATION RECORD (LIST DEPTHS OF PRINCIPAL GEOLOGICAL MARKERS AND FORMATION TOPS)										
Formations	Depth	Formations	Depth							
BSPG1	8,836									
WFMP	11,551									
STRAWN 1	12,936									
REMARKS *SWR 38(H) (3). SET 150 SX PLUG AROUND FISH @ 16,293'. ** 5-1/2" XO @ 11,563'. PERF STRAWN @ 14,937 - 15,576', FRAC W/5,225 G. 15% HCL, 243,760 G. SLKWTR & XL GEL, 289,024# 100 MESH & 20/40 BAUX. FL W/11,928 G. SLK 10# BRINE.										



GAS WELL  
CLASSIFICATION REPORT

## READ INSTRUCTIONS ON BACK

1. OPERATOR NAME (Exactly as shown on Form P-5, Organization Report) <b>Chesapeake Operating, Inc.</b>		3. RRC DISTRICT NO. <b>8</b>	4. OIL LEASE NO. OR GAS WELL ID NO.
2. MAILING ADDRESS  <b>2010 Rankin Highway Midland, Texas 79701</b>		5. WELL NO. <b>2</b>	6. API NO. <b>42 - 30131418</b>
		7. COUNTY OF WELL SITE <b>Loving</b>	
8. FIELD NAME (as per RRC Records) <b>Haley (LWR Wolfcamp -Penn Cons)</b>		9. LEASE NAME <b>University 19-9</b>	
10. LOCATION (Section, Block, and Survey) <b>SEC. 9, BLK. 19, UL SURVEY</b>		11. PIPELINE CONNECTION OR USE OF GAS <b>CHESAPEAKE ENERGY MARKETING, INC.</b>	
I. PRODUCTION TEST AT RATE ELECTED BY OPERATOR (data on 24-hour basis)		II. A.S.T.M. DISTILLATION OF LIQUID SAMPLE. Distillation test is required for gas wells ONLY if the producing gas-liquid hydrocarbon ratio is less than 100,000 CF/barrel.	
A. Date of Test <b>12/16 - 12/19/08</b>		Date Liquid Sample Obtained <b>Not Required</b>	
B. Gas Volume <b>7682</b> (Mcf)		Where Obtained: <input checked="" type="checkbox"/> Separator <input type="checkbox"/> Stock Tank	
C. Oil or Condensate Volume <b>11.00</b> (Bbl)		% Over Temp.(°F) % Over Temp.(°F)	
D. Water Volume <b>530.40</b> (Bbl)		Initial Boiling Temp. <b>60</b>	
E. Gas/Liquid Hydrocarbon Ratio <b>698364</b> (Cf/Bbl)		10 <b>70</b>	
F. Flowing Tubing Pressure <b>(Csg) 7554</b> (psia)		20 <b>80</b>	
G. Choke Size <b>13/64</b> (in.)		30 <b>90</b>	
H. Casing Pressure <b>Sealed</b> (psia)		40 <b>95</b>	
I. Shut-in Wellhead Pressure- Tubing <b>(Csg) 10300</b> (psia)		50 <b>End Point</b>	
J. Separator Operating Pressure <b>1033</b> (psia)		Total Recovery <b>percent</b>	
K. Color of Stock Tank Liquid <b>Light Straw</b>		Residue <b>percent</b>	
L. Gravity of Separator Liquid <b>40.00</b> °API		Loss <b>percent</b>	
M. Gravity of Stock Tank Liquid <b>---</b> °API			
N. Specific Gravity of the Gas (Air = 1) <b>0.5750</b>			
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.		RRC USE ONLY	
NAME <b>Doug McNeely - FESCO, Ltd.</b> (Type or Print)			
SIGNATURE <b>Doug McNeely</b> <i>Doug McNeely</i>			
TITLE <b>District Manager - Odessa, TX</b>			
CONTACT PERSON <b>Doug McNeely</b>			
DATE <b>01/22/09</b>		PHONE NUMBER	

OPERATOR NAME AND ADDRESS, including city, state, and zip

Chesapeake Operating, Inc.  
2010 Rankin Highway  
Midland, Texas 79701

# GAS WELL

## STATUS REPORT

RAILROAD COMMISSION OF TEXAS

Oil and Gas Division

P.O. Box 12967

Austin, Texas 78711-2967

Page 1 of 1

Reason for Filing

☒ Survey☐ Retest

Operator P-5 Organization No.

RRC Dist. No.

G-10

147715

8

rev. 7/95  
FOD1296

Test Period:

Due Date:

Effective Date:

☒ Initial Test☐ Correction

FIELD NAME  
\* LEASE NAME

Haley (LWR Wolfcamp -Penn Cons)  
University 19-9

RRC IDENT NO.

WELL NO.

DATE TESTED  
MO/DAY/YR

MARK X FOR  
SHUT-IN WELL

GAS PRODUCED  
MCF/DAY\*\*

GAS SPEC.  
GRAVITY

CONDENSATE  
PRODUCED

CONDENSATE  
GRAVITY (API)

WATER PROD  
BBL/DAY

X BOTTOMHOLE  
PRESSURE PSIA

\*\*\* SIWH  
PRESSURE PSIA

\*\*\* FLOWING  
PRESSURE PSIA

2

12/19/08

0.575

7693 MCF

40.00

11.0 BBL

12389

530 BBL

7554

10300

MCF

BBL

BBL

MCF

BBL

BBL

MCF

BBL

BBL

MCF

BBL

BBL

MCF

BBL

BBL

MCF

BBL

BBL

MCF

BBL

BBL

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

Signature: Wang McNeely

Title: FESCO, Ltd. - Odessa, TX District Manager

Phone: (432) 332-3321 Date: 1/22/2009

\* AN ASTERISK PREPRINTED ON A SURVEY IDENTIFIES WELL SUBJECT TO COMINGLING TEST REQUIREMENT

\*\* GAS PRODUCTION RATE, IN MCF, IS TO BE REPORTED FULL-WELL STREAM, INCLUDING CONDENSATE

X AN "X" PREPRINTED ON A SURVEY IN THE BOTTOMHOLE PRESSURE BOX INDICATES A BOTTOMHOLE PRESSURE MUST BE REPORTED FOR THE WELL.

\*\*\* PRESSURE FOR THE TEXAS HUGOTON FIELD IS REPORTED IN PSIG



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

**Form W-15**  
Cementing Report  
Rev. 4/1/83  
483-045

**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. 147715	3. RRC District No. 8	4. County of Well Site Loving
5. Field Name (Wildcat or exactly as shown on RRC records) HALEY (LWR. WOLFCAMP-PENN CONS.)		6. API No. 42-301-31418	7. Drilling Permit No. 655985
8. Lease Name University 19-9	9. Rule 37 Case No.	10. Oil Lease/Gas ID No.	11. Well No. 2

CASING CEMENTING DATA:		SURFACE CASING	INTER-MEDIATE CASING	PRODUCTION CASING		MULTI-STAGE CEMENTING PROCESS	
				Single String	Multiple Parallel Strings	Tool	Shoe
12. Cementing Date						5/18/2008	5/18/2008
13. ●Drilling hole size						17-1/2	17-1/2
●Est. % wash or hole enlargement							
14. Size of casing (in. O.D.)						13-3/8	13-3/8
15. Top of liner (ft.)							
16. Setting depth (ft.)						1500	5020
17. Number of centralizers used							33
18. Hrs. waiting on cement before drill-out							24
1st Slurry	19. API cement used: No. of sacks ▶					990	1325
	Class ▶					C	C
	Additives ▶					Remarks	Remarks
2nd Slurry	No. of sacks ▶						400
	Class ▶						C
	Additives ▶						Remarks
3rd Slurry	No. of sacks ▶						
	Class ▶						
	Additives ▶						
1st	20. Slurry pumped: Volume (cu. ft.) ▶					1713	3286
	Height (ft.) ▶					2465.6	4731
2nd	Volume (cu. ft.) ▶						536
	Height (ft.) ▶						772
3rd	Volume (cu. ft.) ▶						
	Height (ft.) ▶						
Total	Volume (cu. ft.) ▶					1713	3822
	Height (ft.) ▶					2466	5502
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?						Yes	Yes

1st 50:50 POZ/C + 6% D20 + 0.2%D65+ 0.2%D46 + 5%D44+ 0.125pps D130

2nd Class C + .05gps D177

3rd CLASS C+ 2% D20 + 2% S001+3ppsD42+0.125ppsD130

4th

Remarks: Circulated 174 Sacks to Surface - 1st Stage

Circulated 234 Sacks to Surface - 2d Stage

OVER ➔



Cementor: Fill in shaded areas

Operator: Fill in other items

**Form W-15**  
**Cementing Report**  
 Rev. 4/1/83  
 483-045

**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>8</b>	4. County of Well Site <b>Loving</b>
5. Field Name (Wildcat or exactly as shown on RRC records) <b>HALEY (LWR. WOLFCAMP-PENN CONS.)</b>	6. API No. <b>42-301-31418</b>	7. Drilling Permit No. <b>655985</b>	
8. Lease Name <b>University 19-9</b>	9. Rule 37 Case No.	10. Oil Lease/Gas ID No.	11. Well No. <b># 2</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			6/11/2008				
13. ●Drilling hole size			12-1/4				
●Est. % wash or hole enlargement							
14. Size of casing (in. O.D.)			9-5/8				
15. Top of liner (ft.)							
16. Setting depth (ft.)			12,489				
17. Number of centralizers used			29				
18. Hrs. waiting on cement before drill-out			24				
1st Slurry	19. API cement used: No. of sacks ▶		1330				
	Class ▶		50:50:Poz/H				
	Additives ▶		REMARKS				
2nd Slurry	No. of sacks ▶		565				
	Class ▶		50:50:Poz/H				
	Additives ▶		REMARKS				
3rd Slurry	No. of sacks ▶						
	Class ▶						
	Additives ▶						
1st	20. Slurry pumped: Volume (cu. ft.) ▶		3,404.80				
	Height (ft.) ▶		10,871.01				
2nd	Volume (cu. ft.) ▶		717.55				
	Height (ft.) ▶		2,291.03				
3rd	Volume (cu. ft.) ▶						
	Height (ft.) ▶						
Total	Volume (cu. ft.) ▶		4,122.35				
	Height (ft.) ▶		13,162.04				
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?			NO				

Remarks

1st 5%D44+8%D20+.2%D46+.125ppsD130+5ppsD42+0.03gpsD801

2nd 5%D44+2%D20+.4%D800+.2%D46+.125ppsD130



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

**Form W-15**  
Cementing Report  
Rev. 4/1/83  
483-045

# RAILROAD COMMISSION OF TEXAS

Oil and Gas Division

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8. Lease Name <b>University 19-9</b>	9. Rule 37 Case No.	10. Oil Lease/Gas ID No.	11. Well No. <b>2</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				7/12/2008			
13. ●Drilling hole size				8-1/2			
●Est. % wash or hole enlargement							
14. Size of casing (in. O.D.)				7-5/8			
15. Top of liner (ft.)				12,058			
16. Setting depth (ft.)				15,945			
17. Number of centralizers used				33			
18. Hrs. waiting on cement before drill-out				24			
1st Slurry	19. API cement used: No. of sacks			300			
	Class			H			
	Additives			See Remarks			
2nd Slurry	No. of sacks						
	Class						
	Additives						
3rd Slurry	No. of sacks						
	Class						
	Additives						
1st	20. Slurry pumped: Volume (cu. ft.)			462			
	Height (ft.)			6003.5			
2nd	Volume (cu. ft.)			0			
	Height (ft.)			0.0			
3rd	Volume (cu. ft.)			0			
	Height (ft.)			0.0			
Total	Volume (cu. ft.)	0	0	462.0			
	Height (ft.)	0	0	6003.5			
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?				No			
1st	Class H +35% D30 +.2% D167 +.5% D65 +.7% D198 +.2% D153 +.2% D46 +25% D31 +.125 pps D130						
2nd	0						
3rd	0						
4th	0						

RECEIVED  
RRC OF TEXAS  
FEB 04 2009  
O&G  
MIDLAND

OVER ➔



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

Form W-15  
Cementing Report  
Rev. 4/1/83  
483-045

RAILROAD COMMISSION OF TEXAS  
Oil and Gas Division

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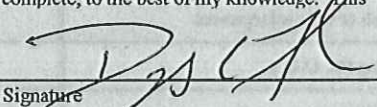
CASING CEMENTING DATA:		SURFACE CASING	INTER-MEDIATE CASING	PRODUCTION CASING		MULTI-STAGE CEMENTING PROCESS	
				Single String	Multiple Parallel Strings	Tool	Shoe
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18. Hrs. waiting on cement before drill-out							
1st Slurry	19. API cement used: No. of sacks						
	Class						
	Additives						
2nd Slurry	No. of sacks						
	Class						
	Additives						
3rd Slurry	No. of sacks						
	Class						
	Additives						
1st	20. Slurry pumped: Volume (cu. ft.)						
	Height (ft.)						
2nd	Volume (cu. ft.)						
	Height (ft.)						
3rd	Volume (cu. ft.)						
	Height (ft.)						
Total	Volume (cu. ft.)						
	Height (ft.)						
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?							
1st	35%D30 + 25% D31+ .2%D167 + .6%D65 + .7%D198 + .2%D153 + .2%D46						
2nd							
3rd							
4th							

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CEMENTING TO PLUG AND ABANDON	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7	PLUG #8
23. Cementing date	8/18/2008							
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)	150							
27. Slurry volume pumped (cu. ft.)	40							
28. Calculated top of plug (ft.)	14426							
29. Measured top of plug, if tagged (ft.)								
30. Slurry wt. (lbs/gal)	17.5							
31. Type cement	H							

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.

<u>Denys E Teodoro, FS</u>	<u>Dowell Schlumberger</u>	
Name and title of cementer's representative	Cementing Company	Signature
<u>2 E. Industrial Loop</u>	<u>Midland, Texas 79701</u>	<u>(432) 683-1887</u>
Address	City, State, Zip Code	Tel.: Area Code Number
		<u>18-Aug-08</u>
		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.

<u>Dorothea Logan</u>	<u>Sr. Reg. Comp. Spec.</u>	
Typed or printed name of operator's representative	Title	Signature
<u>2010 Rankin Hwy</u>	<u>Midland, TX 79701</u>	<u>432-687-2992</u>
Address	City, State, Zip Code	Tel.: Area Code Number
		<u>8/18/08</u>
		Date: mo. day yr.

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

**IMPORTANT:** Operators and cementing companies must comply with the requirements of the Commission's State 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.

Schlumberger Private



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

Form W-15  
Cementing Report  
Rev. 4/1/83  
483-045

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>8</b>	4. County of Well Site <b>Loving, TX</b>
5. Field Name (Wildcat or exactly as shown on RRC records) <b>HALEY (LWR. WOLFCAMP-PENN CONS.)</b>		6. API No. <b>42-301-31418</b>	<b>655985</b>
8. Lease Name <b>University 19-9</b>	9. Rule 37 Case No.	10. Oil Lease/Gas ID No.	11. Well No. <b>#2</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			9/27/2008			
13. ●Drilling hole size			6 1/2			
●Est. % wash or hole enlargement						
14. Size of casing (in. O.D.)			5 1/2, 5			
15. Top of liner (ft.)						
16. Setting depth (ft.)			17536			
17. Number of centralizers used			66			
18. Hrs. waiting on cement before drill-out						
19. API cement used: No. of sacks			300			
Class			Class H			
Additives			*			
No. of sacks			300			
Class			DensCRETE			
Additives			* *			
No. of sacks			0			
Class			0			
Additives			* * *			
20. Slurry pumped: Volume (cu. ft.)			453			
Height (ft.)			5530			
Volume (cu. ft.)			279			
Height (ft.)						
Volume (cu. ft.)			0			
Height (ft.)			0			
Volume (cu. ft.)			732			
Height (ft.)			5530			
21. Was cement circulated to ground surface (or bottom of cellar) outside casing?			No			
22. Remarks	<p>* 25%D31+.2%D167+.6%D65+.5%D198+.2%D153+.2%D46+35%D30</p> <p>* * .045GpsD197+.2%D46+.4%D400+.3%D202</p> <p>* * * 0.00</p>					
Circulated ***** ( )sks ( )bbls						

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**Railroad Commission Of Texas  
Oil And Gas Division**

**Form W-12**

<b>INCLINATION REPORT</b> (One Copy Must Be Filed With Each Completion Report)		6. RRC District 08
1. FIELD NAME (as per RRC Records or Wildcat) HALEY (LWR. WOLFCAMP-PENN CONS.)		7. RRC Lease Number (Oil Completions Only)
2. LEASE NAME <b>University 19-9</b>		8. Well Number <b>#2</b>
3. OPERATOR <b>Chesapeake Operating Inc.</b>		9. RRC Identification Number (Gas Completions Only)
4. ADDRESS <b>PO Box 1050, Midland, OK 79702-8050</b>		10. County <b>Winkler</b>
5. LOCATION (Section, Block, and Survey) SEC. 9, BLK. 19, UL SURVEY		

**RECORD OF INCLINATION**

*11. Measured Depth (feet)	12. Course Length (Hundreds of feet)	13. Angle of Inclination (Degrees)	14. Displacement per 100 feet (Sine of Angle x 100)	15. Course Displacement (Feet)	Accumulative Displacement (Feet)
463	463	0.75	1.31	6.06	6.06
1,380	917	0.75	1.31	12.00	18.06
2,063	683	0.25	0.44	2.98	21.04
3,060	997	1.50	2.62	26.10	47.14
4,023	963	2.00	3.49	33.61	80.75
4,493	470	2.25	3.93	18.45	99.20
5,486	993	0.70	1.22	12.13	111.33
6,443	957	0.30	0.52	5.01	116.34
7,441	998	0.90	1.57	15.68	132.02
7,981	540	0.50	0.87	4.71	136.73
8,933	952	0.60	1.05	9.97	146.70
9,475	542	1.00	1.75	9.46	156.16
10,274	799	1.75	3.05	24.40	180.56
11,225	951	1.75	3.05	29.04	209.60
11,750	525	0.50	0.87	4.58	214.19
12,434	684	0.50	0.87	5.97	220.15

17. Is any information shown on the reverse side of this form? ☒ Yes ☐ No
18. Accumulative total displacement of well bore at total depth of 16,941 feet = 359.04 feet
- \*19. Inclination measurements were made in ☐ Tubing ☐ Casing ☐ Open Hole ☒ Drill Pipe
20. Distance from surface location of well to the nearest lease line..... 1320 Feet
21. Minimum distance to lease line as prescribed by field rules..... 1320 Feet
22. Was the subject well at any time intentionally deviated from vertical in any matter whatsoever?  
 (If the answer to the above question is "yes" attach written explanation of the circumstances.)

<b>Inclination Data Certification</b> I declare under penalties prescribed in Sec. 91.143, Texas National Resource Code, that I am authorized to make this certification, that I have personal knowledge of the inclination data and facts placed on both sides of this form and that such data and facts are true, correct, and complete to the best of my knowledge. This certification covers all data as indicated by asterisks(*) by the item numbers on this form <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div>             Signature of Authorized Representative  <b>Mark Cochran, CFO</b>            Name of Person and Title  <b>Latshaw Drilling Company, LLC</b>            Name of Company            Telephone: 918-355-4380         </div> <div style="text-align: right;">           Date  <u>1/27/09</u> </div> </div>	<b>Inclination Data Certification</b> I declare under penalties prescribed in Sec. 91.143, Texas National Resource Code, that I am authorized to make this certification, that I have personal knowledge of the inclination data and facts placed on both sides of this form and that such data and facts are true, correct, and complete to the best of my knowledge. This certification covers all data as indicated by asterisks(*) by the item numbers on this form <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div>             Signature of Authorized Representative  <b>DOROTHEA LOGAN, SR. REGULATORY COMPLIANCE SPEC.</b>            Name of Person and Title  <b>CHESAPEAKE OPERATING, INC.</b>            Operator            Telephone:         </div> <div style="text-align: right;">           Date  <u>01/30/2009</u> </div> </div>
---	---

Railroad Commission Use Only:

Approved By: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

\*Designates items certified by the company that conducted the inclination surveys.

## RECORD OF INCLINATION

[illegible]



CERTIFICATE OF COMPLIANCE  
AND TRANSPORTATION AUTHORITY

P-4  
5/02  
DBC0702

READ INSTRUCTIONS ON BACK

1. Field name exactly as shown on proration schedule <b>HALEY (LWR. WOLFCAMP-PENN CONS.)</b>		2. Lease name as shown on proration schedule <b>UNIVERSITY 19-9</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>2010 RANKIN HWY. MIDLAND, TX 79701</b>		9. Well no(s) (see instruction E) <b>2</b>					
		10. Classification <input type="checkbox"/> Oil <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)			11. Effective Date <b>12/07/2008</b>		
12. Purpose of Filing. (Complete section a or b below.) (See instruction B and G) <b>a. Change of:</b> <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 <div style="margin-left: 40px;"><input type="checkbox"/> field name from: _____ <input type="checkbox"/> lease name from: _____</div> <b>OR</b> <b>b. New RRC Number for:</b> <input type="checkbox"/> oil lease <input checked="" type="checkbox"/> gas well <b>Due to:</b> <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"/> other well (specify) _____ <input type="checkbox"/> consolidation, unitization, or subdivision (oil lease only)							
13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherers 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	X	CHESAPEAKE ENERGY MARKETING, INC.			0001	100	
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	RRC USE ONLY Reviewer's initials: _____ Approval date: _____	
NONE							
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 <div style="margin-left: 40px;"><input type="checkbox"/> Authorized Employee of previous operator <input checked="" type="checkbox"/> Authorized agent of previous operator (see instruction G)</div> 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.							
DOROTHEA LOGAN Name (print)  SR. REG. COMPLIANCE SPEC. Title  dlogan@chkenenergy.com E-mail Address (optional)				Signature <div style="text-align: center;"> <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G)</div> Date <b>01/27/2009</b> Phone with area code <b>(432)687-2992</b>			

STATEMENT OF PRODUCTIVITY OF ACREAGE  
ASSIGNED TO PRORATION UNITS

Form P-15  
(5-5-71)  
DBC0697

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 19-9 , No. 2 ; that such well is  
LEASE WELL  
completed in the HALEY (LWR. WOLFCAMP-PENN CONS.) 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 \_\_\_\_\_  
320 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 01/27/2009

Signature

*Danathan Logan*

Telephone \_\_\_\_\_

AREA CODE

(432) 687-2992

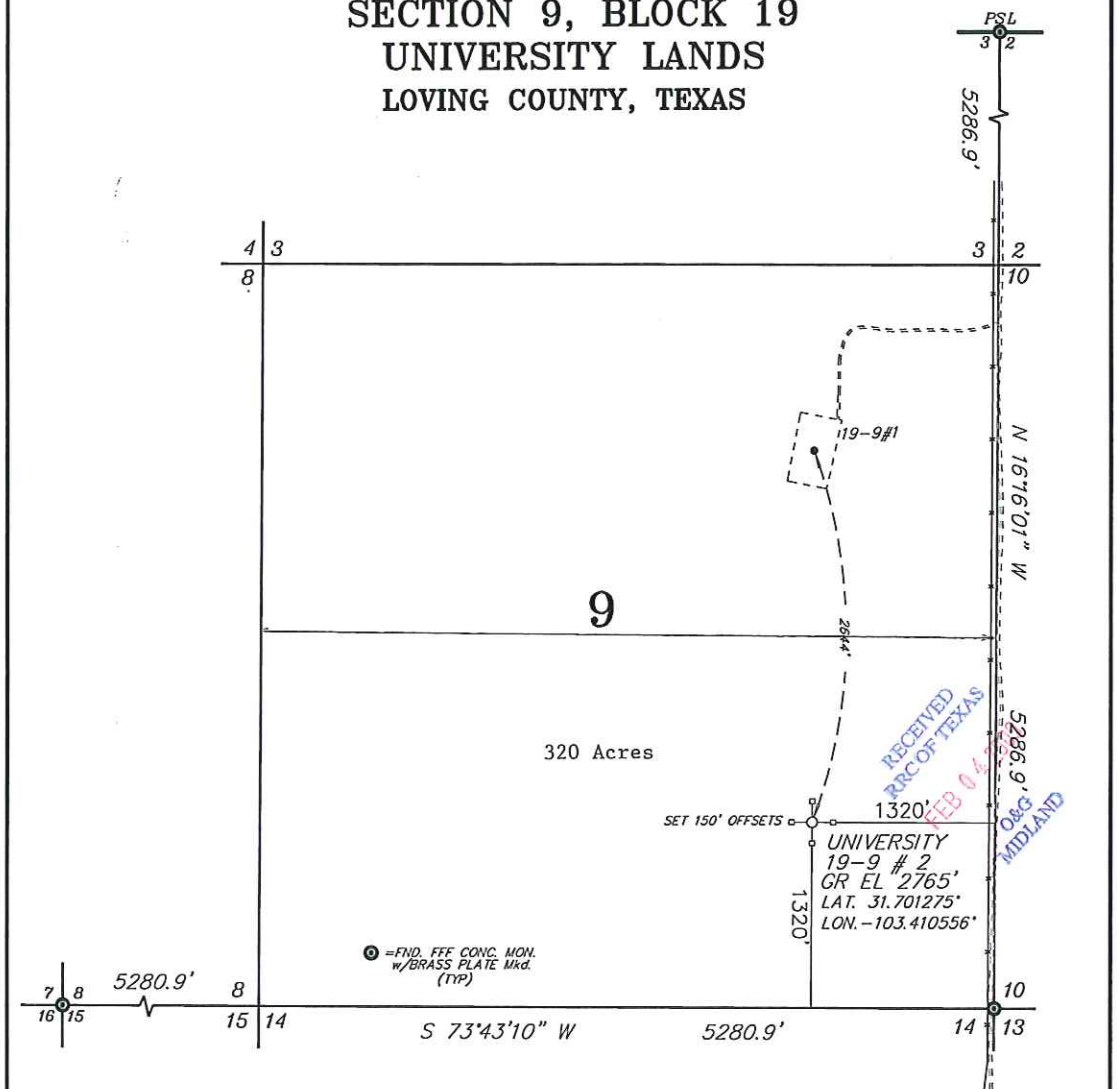
Title

SR. REG. COMPLIANCE SPEC.

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MIDLAND



# SECTION 9, BLOCK 19 UNIVERSITY LANDS LOVING COUNTY, TEXAS



NOTE: THIS PERMIT PLAT HAS BEEN PREPARED FROM A CERTIFIED SURVEY PLAT ON FILE IN THE OFFICE OF WATSON & ASSOCIATES OF MIDLAND, MIDLAND, TEXAS. APPROXIMATELY 11 MILES SOUTHEAST OF MENTONE, TEXAS.

COORDINATES AND BEARINGS ARE BASED ON A LAMBERT CONICAL PROJECTION OF THE TEXAS STATE PLANE COORDINATE SYSTEM (NAD 27), TEXAS CENTRAL ZONE (4203) SINCE NAD 27 IS ANTIQUATED AND UNACCOMPISHABLE WITH MODERN SURVEY EQUIPMENT ALL COORDINATES ARE AN ADJUSTMENT FROM NAD 83 USING THE SOFTWARE "CORPSCON".

SPC NAD 27 Tx C	SPC NAD 83 Tx C
N: (Y) = 753214	N: 10595790.434
E: (X) = 1043075	E: 1339539.220
LAT. = 31°42'04.59"N	LAT. 31°42'05.05"
LONG. = 103°24'38.00"W	LONG. 103°24'39.63"

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE SURVEY INFORMATION FOUND ON THIS PLAT WAS DERIVED FROM ACTUAL FIELD NOTES OF ON-THE-GROUND SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. NO WARRANTY IS MADE OR INTENDED FOR THE LOCATION OF ANY OR ALL EASEMENTS THAT MAY EXIST WITHIN THE BOUNDS OF THIS SURVEY. THE INFORMATION PRESENTED HEREON IS FOR THE PRIVATE USE OF THE PARTY NAMED IN THE "REFERENCE PORTION" OF THE TITLE BLOCK AND DOES NOT CONSTITUTE A COMPLETE BOUNDARY SURVEY AS DEFINED BY THE "PROFESSIONAL LAND SURVEYING PRACTICES ACT."

*Gregory W. Shoult*  
GREGORY W. SHOULTS TEXAS R.P.L.S. No. 5356

AUGUST 24, 2007  
DATE



GRID  
SCALE 1" = 1000'

FILE: M:\Chesapeake LOVING County\dwg

**WATSON & ASSOCIATES OF MIDLAND, INC.**



4500 W. ILLINOIS  
SUITE 201 (79703)  
P.O. DRAWER 11186  
MIDLAND, TEXAS 79702  
(432) 520-9200  
FAX (432) 520-9212  
gshoult@wam-rlsp.com

CONSULTING ENGINEERS, LAND SURVEYORS & PLANNERS

CHESAPEAKE OPERATING  
UNIVERSITY 19-9 # 2  
1320' FEL & 1320' FSL  
SECTION 9, BLOCK 19, UNIVERSITY LANDS  
LOVING COUNTY, TEXAS

JOB NO.: W-416-07, FIELD BOOK 544

DRAFT GWS REV. 0