

## RAILROAD COMMISSION OF TEXAS

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Status: Submitted

Oil and Gas Division

API No. 42- 005-30392

7. RRC District No.

06

8. RRC Gas ID No.

267038

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

1. FIELD NAME (as per RRC Records or Wildcat) <b>CARTHAGE (HAYNESVILLE SHALE)</b>		2. LEASE NAME <b>ACLCO HAY GU</b>		9. Well No. <b>1H</b>	
3. OPERATOR'S NAME (Exactly as shown on Form P-5, Organization Report) <b>GOODRICH PETROLEUM COMPANY</b>		RRC Operator No. <b>314909</b>		10. County of well site <b>ANGELINA</b>	
4. ADDRESS <b>801 LOUISIANA STREET SUITE 700 HOUSTON, TX 77002-4936</b>					
5. Location (Section, Block, and Survey) <b>RICHARDSON, T , A-525</b>		5b. Distance and direction to nearest town in this county. <b>13.9 MILES NE FROM LUFKIN</b>			
6. If operator has changed within last 60 days, name former operator					
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"/>					
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 #	
<b>N/A</b>					
12. If workover or reclass, give former field (with reservoir) & Gas ID or oil lease no. <b>FIELD &amp; RESERVOIR</b>				Oil-0 Gas-G	
<b>N/A</b>					
13. Pipe Line Connection <b>TPF II EAST TEXAS GATHERING (863679)</b>					
14. Completion or recompletion date <b>04/27/2013</b>		15. Any condensate on hand at time of workover or recompletion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		16. Type of Electric or other Log Run. <b>None</b>	

Section I GAS MEASUREMENT DATA											
Date of Test <b>05/21/2013</b>		Gas Measurement Method (Check One) Orifice Meter <input checked="" type="checkbox"/> Flange Taps <input 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>24544</b> MCF			
Run Size	Line Size	Orif. or Choke Size	24 hr Coeff. Orif. or Choke	Static Pm 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>	Volume MCF/DAY	
1	4.026	2.000	20210.9	948.0	107.0	130.4	0.9385	1.2964	1.0443	8229.0	
2											
3											
4											

Section II FIELD DATA AND PRESSURE CALCULATIONS											
Gravity (Dry Gas) <b>0.595</b>		Gravity Liquid Hydrocarbon Deg. API		Gas-Liquid Hydro Ratio CF/Bbl		Gravity of Mixture G <sub>mix</sub> = <b>0.0</b>		Avg. Shut-in Temp. <b>111.0</b> ° F		Bottom Hole Temp. <b>304.0</b> ° F @ <b>20850.0</b> (Depth)	
$D_{eff}^{8/3} =$		$\sqrt{T_f} = \sqrt{\quad} =$		$\sqrt{GL} = \sqrt{\quad} =$							
$C = \frac{1118 \times (D_{eff})^{8/3}}{\sqrt{T}} =$				$\frac{\sqrt{GL}}{C} =$							
Run No.	Time of Run Min	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		21	11000	111.0							
1	7320	21	6400	130.0							
2											
3											
4											
Run No.	F	K	$S = \frac{1}{Z}$	E <sup>ks</sup>	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								θ .....			
1								n .....			
2								Absolute Open Flow			
3								..... MCF/DAY			
4											

WELL TESTERS 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.

GOODRICH PETROLEUM COMPANY(314909)

Signature: Well Tester

Name of Company

RRC Representative

OPERATORS CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that I or prepared supervised and directed this report, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge.

GOODRICH PETROLEUM COMPANY

Shelley Copeland

Signature: Operator's representative

Regulatory Analyst

Title

07/11/2013

Date

Tel: (832) 399-3156

A/C

Number

SECTION III										DATA ON WELL COMPLETION AND LOG (Not Required on Retest)									
17. 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 <b>10/24/2012</b> PERMIT NO. <b>723922</b> Rule 37 Exception CASE NO. <b>0272472</b> Water Injection Permit PERMIT NO. Salt Water Disposal Permit PERMIT NO. Other PERMIT NO.									
19. Notice of Intention to Drill this well was filed in Name of <b>GOODRICH PETROLEUM COMPANY</b>																			
20. Number of producing wells on this lease in this field (reservoir) including this well <b>1</b>					21. Total number of acres in this lease <b>913.925</b>														
22. Date Plug Back, Deepening, Workover or Drilling Operations: <b>11/30/2011</b>		Commenced <b>11/30/2011</b>		Completed <b>02/10/2012</b>		23. Distance to nearest well, Same Lease & Reservoir <b>0.0</b>													
24. Location of well, relative to nearest lease boundaries <b>1308.0</b> Feet From <b>West</b> Line and <b>161.0</b> Feet from <b>North</b> Line of the <b>ACLCO HAY GU</b> Lease																			
25. Elevation (DF, RKB, RT, GR ETC.) <b>189</b> <b>GL</b>					26. Was directional survey made other than inclination (Form W-12)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No														
27. Top of Pay <b>15333 MD:15737</b>		28. Total Depth <b>15797 MD:20850</b>		29. P. B. Depth <b>15790 MD:20738</b>		30. Surface Casing Determined by Field Rules <input type="checkbox"/> Recommendation of T.D.W.R. <input checked="" type="checkbox"/> Railroad Commission (Special) <input checked="" type="checkbox"/>		Dt. of Letter <b>09/21/2011</b>											
								Dt. of Letter <b>09/27/2011</b>											
31. 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>										GAS ID or OIL LEASE #		Oil-0 Gas-G		Well #					
<b>N/A</b>																			
33. Intervals Drilled by: <input checked="" type="checkbox"/> Rotary Tools <input checked="" type="checkbox"/> Cable Tools		34. Name of Drilling Contractor <b>NICKLOS</b>								35. Is Cementing Affidavit Attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
36. 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.					
10 3/4		45.5		3896				TYPE 1 1822		13 1/2		SURFACE		3555.0					
7 5/8		29.7		14874				CLASS H 1689		9 7/8		6100		2763.0					
5 1/2		26.0		20830				CLASS H 911		6 1/2		6400		1285.0					
37. LINER RECORD																			
Size		Top		Bottom		Sacks Cement		Screen											
38. TUBING RECORD														39. Producing Interval (this completion) Indicate depth of perforation or open hole					
Size		Depth Set		Packer Set		From L1 15737				To 20698									
2 3/8		8920		8891		From				To									
						From				To									
						From				To									
40. ACID, SHOT, FRACTURE, CEMENT SQUEEZE. ETC.																			
Depth Interval						Amount and Kind of Material Used													
N/A																			
41. FORMATION RECORD (LIST DEPTHS OF PRINCIPAL GEOLOGICAL MARKERS AND FORMATION TOPS)																			
Formations				Depth				Formations				Depth							
KNOWLES				13410.0 MD: 13414.0															
HAYNESVILLE				15214.0 MD: 15349.0															
0				0.0 MD: 0.0															
REMARKS: THIS WELL HAD PROBLEMS DURING THE 1ST FRAC. WE HAD TO FLOW THE WELL BACK TO GET THE PRESSURE DOWN. WE FILED THE PRODUCTION FROM THIS FLOW BACK FOR FEBRUARY.																			