

RAILROAD COMMISSION OF TEXAS

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Tracking No.: 3159

Status: **Work in Progress**

Oil and Gas Division

API No. 42- 103-33479

7. RRC District No.

08

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) BLOCK 31 (ATOKA 7900)		2. LEASE NAME BLOCK 31 UNIT		9. Well No. O 11	
3. OPERATOR'S NAME (Exactly as shown on Form P-5, Organization Report) BP AMERICA PRODUCTION COMPANY			RRC Operator No. 040798		10. County of well site CRANE
4. ADDRESS ATTN T. COLVIN RM 6.115 P O BOX 3092 HOUSTON, TX 77253-0000					
5. Location (Section, Block, and Survey) 27, 31, UL, 000000			5b. Distance and direction to nearest town in this county. 7 MILES NW OF CRANE COUNTY, TEXAS		
6. If operator has changed within last 60 days, name former operator					
11. Purpose of filing					
Initial Potential <input type="checkbox"/>					
Retest <input type="checkbox"/>					
Reclass <input checked="" 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. FIELD & RESERVOIR				GAS ID or OIL LEASE #	Oil-0 Gas-G
ATOKA 7900				36151	Oil Well
BLOCK 31 (DEVONIAN)				00442	Oil Well
13. Pipe Line Connection					

14. Completion or recompletion date 04/20/2010		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. None	
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Section I GAS MEASUREMENT DATA											
Date of Test		Gas Measurement Method (Check One)						Gas produced during test			
05/22/2010		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"/>	437.0 MCF		
Run Size	Line Size	Orif. or Choke Size	24 hr Coeff. Orif. or Choke	Static Pm or Choke Press	Diff h _w	Flow Temp. °F	Temp. Factor F _{tf}	Gravity Factor F _g	Compress Factor F _{pv}	Volume MCF/DAY	
1	4.0	.625	2443.0	65.0	78.0	60.0	1.0	0.8361	1.0042	146.0	
2											
3											
4											

Section II FIELD DATA AND PRESSURE CALCULATIONS						
Gravity (Dry Gas)	Gravity Liquid Hydrocarbon	Gas-Liquid Hydro Ratio	Gravity of Mixture	Avg. Shut-in Temp.	Bottom Hole Temp.	
0.858	41.0 Deg. API	48666 CF/Bbl	G _{mix} = 0.915	115.0 °F	165.0 °F @ 8340.0 (Depth)	

$$D_{eff}^{8/3} = \sqrt{T_f} = \sqrt{\quad} = \quad = \sqrt{GL} = \sqrt{\quad} = \quad$$

$$C = \frac{1118 \times (D_{eff}^{8/3})}{\sqrt{T}} = \quad = \quad = \frac{\sqrt{GL}}{C} = \quad = \quad = \quad$$

Run No.	Time of Run Min	Choke Size	Wellhead Press. PSIA P _w	Wellhead Flow Temp °F	P _w ² (Thousands)	R	R ² (Thousands)	P ₁	P _w / P ₁
Shut-in	1440		1015	65.0					
1	4320	.750	80	75.0					
2									
3									
4									

Run No.	F	K	S = 1/Z	E ^{ks}	P _f and P _s	P _f ² and P _s ² (Thousands)	P _f ² - P _s ² (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.

GARY MORGAN

RED DOG WELL TESTING

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.

Toya Colvin

Regulatory Analyst

07/08/2010

Tel: **(281) 366-7148**

Signature: Operator's representative

Title

Date

A/C Number

SECTION III DATA ON WELL COMPLETION AND LOG (Not Required on Retest)											
17. Type of Completion New Well <input type="checkbox"/> Deepening <input type="checkbox"/> Plug Back <input type="checkbox"/> Other <input checked="" type="checkbox"/>					18. Permit to Drill, Plug Back or Deepen DATE 12/14/1999 PERMIT NO. 490270 Rule 37 Exception Water Injection Permit Salt Water Disposal Permit Other						
19. Notice of Intention to Drill this well was filed in Name of BP AMERICA PRODUCTION COMPANY					PERMIT NO.						
20. Number of producing wells on this lease in this field (reservoir) including this well 138			21. Total number of acres in this lease 7840.0		PERMIT NO.						
22. Date Plug Back, Deepening, Workover or Drilling Operations: 03/23/2010		Commenced 04/20/2010		Completed		23. Distance to nearest well, Same Lease & Reservoir 714.0					
24. Location of well, relative to nearest lease boundaries 9390.0 Feet From North Line and 8080.0 Feet from East Line of the BLOCK 31 UNIT Lease				25. Elevation (DF, RKB, RT, GR ETC.)							
27. Top of Pay 7586 MD:				28. Total Depth 9125 MD:		29. P. B. Depth 8082 MD:		30. Surface Casing Determined by: Field Rules <input type="checkbox"/> Recommendation of T.D.W.R. Railroad Commission (Special) <input checked="" type="checkbox"/>			
31. Is well multiple completion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Dt. of Letter 06/19/2010		Dt. of Letter					
32. If multiple completion, list all reservoir names (completions in this well) and Oil Lease of Gas ID No. FIELD & RESERVOIR					GAS ID or OIL LEASE #		Oil-G Gas-G		Well #		
33. Intervals Drilled by: Rotary Tools <input checked="" type="checkbox"/> Cable Tools					34. Name of Drilling Contractor KEY ENERGY SERVICES					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.				
8 5/8	28.0	3630		"C" LIGHTWEIGHT 1500	11	CIRC	2508.0				
5 1/2	17.0	9125		PSL 50/50 POZ 1600	7 7/8	CIRC-SURFACE	3012.0				
37. LINER RECORD											
Size	Top	Bottom	Sacks Cement	Screen							
38. TUBING RECORD											
Size	Depth Set	Packer Set	From	To	39. Producing Interval (this completion) Indicate depth of perforation or open hole						
2 7/8	9109		7586	7600	From	8168	To	8250			
			From	8166	To	8699					
			From	8716	To	8832					
			From	8833	To	9095					
40. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.											
Depth Interval	Amount and Kind of Material Used										
8166.0 - 8699.0	3400 GALS 20% HCL XYLENE 50% MIXTURE ACID										
8716.0 - 8832.0	5300 GALS 20% HCL W/ 50% XYLENE BY VOLUME ACID										
8833.0 - 9095.0	1000 GALS 20% HCL W/ 50% XYLENE										
41. FORMATION RECORD (LIST DEPTHS OF PRINCIPAL GEOLOGICAL MARKERS AND FORMATION TOPS)											
Formations	Depth	Formations	Depth								
DEVONIAN	8097.0	BARNETT	7599.0								
ATOKA	7753.0	WOODFORD	7906.0								
GRAYBURG	3066.0										
REMARKS: ATOKA 7900 PERFS 7586'-7600', AND DEVONIAN PERFS 8168'-8250' ARE STILL IN WELL. REMOVED											
DEVONIAN PACKER @ 8096'. ON 01/25/2010 THE RRC APPROVED SWR 10 EXCEPTION FOR THE BLOCK 31 UNIT #											
O11. WE ARE COMMINGLING THE GAS FOR THE BLOCK 31 (DEVONIAN) FIELD # 09358450 AND ATOKA 7900 FIELD # 09358090.											

RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

GAS WELL
CLASSIFICATION REPORT

Form G-5

Tracking No.: 3159

This facsimile G-5 was generated electronically from data submitted to the RRC.

1. OPERATOR NAME (Exactly as shown on Form P5 Organization Report) BP AMERICA PRODUCTION COMPANY		3. RRC DISTRICT NO. 08	4. OIL LEASE NO OR GAS WELL ID NO.
2. MAILING ADDRESS ATTN T. COLVIN RM 6.115 P O BOX 3092 HOUSTON, TX 77253		5. WELL NO. 0 11	6. API NO. 42- 103-33479
		7. COUNTY OF WELL SITE CRANE	
8. FIELD NAME (as per RRC Records) BLOCK 31 (ATOKA 7900)		9. LEASE NAME BLOCK 31 UNIT	
10. LOCATION (Section, Block and Survey) 27 , 31 , UL , 000000		11. PIPELINE CONNECTION OR USE OF GAS	

PRODUCTION TEST AT RATE ELECTED BY OPERATOR (data on 24-hour basis)		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 <u>05/22/2010</u>		Date Liquid Sample Obtained <u>06/21/2010</u>	
B. Gas Volume <u>146.0</u> (Mcf)		Where Obtained: <input checked="" type="checkbox"/> Separator <input type="checkbox"/> Stock Tank	
C. Oil or Condensate Volume <u>3.0</u> (Bbl)		% Over Temp. (deg. F)	
D. Water Volume <u>1.0</u> (Bbl)		Initial Boiling Temp. <u>123.0</u> 60 <u>532.0</u>	
E. Gas/Liquid Hydrocarbon Ratio <u>48666</u> (Cf/Bbl)		10 <u>200.0</u> 70 <u>587.0</u>	
F. Flowing Tubing Pressure <u>80</u> (psia)		20 <u>260.0</u> 80 <u>619.0</u>	
G. Choke Size <u>.750</u> (in.)		30 <u>327.0</u> 90 <u>625.0</u>	
H. Casing Pressure _____ (psia)		40 <u>426.0</u> 95 <u>0.0</u>	
I. Shut-in Wellhead Pressure-- Tubing <u>1015</u> (psia)		50 <u>467.0</u> End Point <u>626.0</u>	
J. Separator Operating Pressure <u>65.0</u> (psia)		Total Recovery <u>95.0</u> percent	
K. Color of Stock Tank Liquid <u>Brown</u>		Residue <u>2.8</u> percent	
L. Gravity of Separator Liquid <u>40.5</u> °API		Loss <u>2.2</u> percent	
M. Gravity of Stock Tank Liquid _____ °API			
N. Specific Gravity of the Gas (Air = 1) <u>0.858</u>			

<p>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.</p> <p><u>07/07/2010</u> DATE</p>	NAME (Type or Print)	RRC USE ONLY
	<u>Toya Colvin</u> SIGNATURE	
	<u>Regulatory Analyst</u> TITLE	
	<u>(281) 366-7148</u> PHONE NUMBER	
	CONTACT PERSON	



Texas Commission on Environmental Quality

Surface Casing Program

DEPTH OF USABLE-QUALITY GROUND WATER TO BE PROTECTED

Date June 18, 2010

TCEQ File No.: SC- 7183

***** EXPEDITED APPLICATION *****

API Number 10333479

Attention: TOYA COLVIN

RRC Lease No. 000442

SC_048998_16388009_000000_7988.pdf

BP AMERICA PRODUCTION CO
501 WESTLAKE PARK BLVD
HOUSTON TX 77079

--Measured--

2480 ft FWL

1170 ft FSL

MRL: SURVEY

Digital Map Location:

X-coord/Long 102.45310

Y-coord/Lat 31.46194

Datum 83 Zone

P-5# 040798

County CRANE

Lease & Well No. BLOCK 31 UNIT #011

Purpose SWR 10

Location SUR-UL, BLK-31, SEC-27, -- [TD=9125], [RRC 8],

To protect usable-quality ground water at this location, the Texas Commission on Environmental Quality recommends:

The interval from the land surface to the base of the SANTA ROSA, which is estimated to occur at a depth of 650 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. Approval of the well completion methods for protection of this groundwater falls under the jurisdiction of the Railroad Commission of Texas. 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 512-239-0515, sc@tceq.state.tx.us, or by mail MC-151.

Sincerely,

Digitally signed by Mark R Vining
DN: c=US, st=Texas, l=Austin,
cn=Mark R Vining,
email=mvining@tceq.state.tx.us
Date: 2010.06.18 13:10:36 -05'00'

Mark R. Vining, P.G.

GEOLOGIST SEAL



Geologist, Surface Casing Team
Waste Permits Division

The seal appearing on this document was authorized by Mark R. Vining on 6/18/2010
Note: Alteration of this electronic document will invalidate the digital signature.