Type or print only
483-047

RAILROAD COMMISION OF TEXAS
Oil and Gas Division

Form G-1
Rev. 4/1/83
EAG0897

API No 42- 495-31049

7 RRC District No: 08

8 RRC Gas ID No.: 226567

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

1 FIELD NAME (as per RRC Records or Wildcat): Apollo (Atoka)	2 LEASE NAME: University Blk 21 GU
9 Well No: 142	
3 OPERATOR'S NAME (exactly as shown on Form P-5, Organization Report): Forest Oil Corporation	RRC Operator No.: 275740
10. County of well site: Winkler	
4 ADDRESS: 707 17th Street, Suite 3600, Denver, CO 80202	11 Purpose of filing: Initial Potential [X]; Plug Back Retest [ ]; Reclass [ ]; Well record only (Explain in remarks) [ ]
5. Location (Section, Block, and Survey): 14 21 ULS	5b Distance and direction to nearest town in this county: 3 miles west of Wink, TX
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: *RP Apollo (Ellenburger) / Apollo (Fusselman)
GAS ID or OIL LEASE #: 08 4132 / 084131	Oil -- O Gas -- G: G / G
WELL #: 142-L / 142-U	
13 Pipe Line Connection: Duke Energy Field Services	
14. Completion or recompletion date: 1/25/2007	15 Any condensate on hand at time of workover or recompletion? [ ] Yes [X] No
16 Type of Electric or other Log Run: N/A	

Section I — GAS MEASUREMENT DATA

Date of Test: 2/5/2007
Gas measurement Method (Check One): Orifice Meter [X] ▶ Flange Taps [X] Pipe Taps [ ]; Positive Choke [ ]; Orifice Vent Meter [ ]; Pitot Tube [ ]; Critical-flow Prover [ ]
Gas produced during test: 2076.6 MCF

Run No.	Line Size	Orif or Choke Size	24 Hr Coeff Orif or Choke	Static P_m 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	4.026	1.00	6292.880	137.0	95.80	65	0.9952	0.9514	1.0140	692.2
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
0.663	N/A Deg. API	N/A CF/Bbl	G_{mix} =	°F	°F @ (Depth)

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

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

Run No.	Time of Run Min	Choke Size	Wellhead Press. P_w PSIA	Wellhead Flow Temp °F	P_w^2 (Thousands)	R	R^2 (Thousands)	P_1	P_w / P_1
Shut-In			1695						
1	4320		315						
2									
3									
4									

Run No	F	K	$S = \frac{1}{z}$	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 MCF/DAY
3								
4								

RECEIVED RRC OF TEXAS MAR 12 2007 O&G MIDLAND

RECEIVED CENTRAL RECORDS MAY 22 2007 AUSTIN, TEXAS

WELL TESTER'S CERTIFICATION. I declare under penalities 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.

ARC Pressure Data, Inc.

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 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

Tami Hofmann | Tami Hofmann | Regulatory Specialist | 03/07/2007 | Tel (303) 812-1755

Signature Operator's representative | Title | Date | A/C Number

SECTION III — DATA ON WELL COMPLETION AND LOG (Not Required on Retest)

VALID PERMIT AMD 5/16/07

MAY 11 2007

17. Type of Completion: New Well ☐ Deepening ☐ Plug Back ☒ Other ☐

18. Permit to Drill, Plug Back or Deepen — DATE 9/28/2006 — PERMIT NO. 626358

Rule 37 Exception — CASE NO. 0251775

19. Notice of Intention to Drill this well was filed in Name of: HNG Oil Company

Water Injection Permit — PERMIT NO.

Salt Water Disposal Permit — PERMIT NO.

Other — PERMIT NO.

20. Number of producing wells on this lease in this field (reservoir) including this well: 1

21. Total number of acres in this lease: ~~640~~ 5446

22. Date Plug Back, Deepening, WorkOver or Drilling Operations — Commenced: 1/10/2007 — Completed: 1/25/2007

23. Distance to nearest well, Same Lease & Reservoir: N/A

24. Location of well, relative to nearest lease boundaries of lease on which this well is located: 6400 ~~1120~~ Feet From W Line and ~~1500~~ 3780 Feet from ~~S~~ N Line of the University Blk 21 GLL Lease

25. Elevation (DF, RKB, RT, GR, ETC.): 2802 GL

26. Was directional survey made other than inclination (Form W--12)? ☐ Yes ☒ No

27. Top of Pay: 13076

28. Total Depth: 19150

29. P.B. Depth: 13243

30. Surface Casing Determined by: Field Rules ☐ Recommendation of T.D.W.R. Railroad Commission (Special) ☒ — Dt of Letter 4/23/1979 — Dt. of Letter

31. Is well multiple completion? ☐ Yes ☒ No

32. If multiple completion, list all reservoir names (completions in this well) and Oil Lease or Gas ID No.

FIELD & RESERVOIR	GAS ID or OIL LEASE#	Oil--O Gas--G	WELL #

33. Intervals Drilled by: Rotary Tools X — Cable Tools

34. Name of Drilling Contractor

35. Is Cementing Affidavit Attached? ☐ Yes ☒ 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.
13-3/8	61	2828	3800	~~3000 TLW/1300 C~~	17-1/2	surface	7146
9-5/8	53.5 S95	~~11600~~ 11,575'		1375 TLW/850 C	12-1/4	~~10824~~ 776	3390

37. LINER RECORD

Size	TOP	Bottom	Sacks Cement	Screen
7-5/8	11412	14527	575 dk	
5-1/2 & 5	~~14150 & 17000~~ 14,366	~~16985 &~~ 19150	500	

38. TUBING RECORD

Size	Depth Set	Packer Set
3-1/2 10.3# C75	13023	13023
	(Per Tami - 3-12-07 - kt)	

39. Producing Interval (this completion) Indicate depth of perforation or open hole

From 13076	To 13185
From	To
From	To
From	To

40. ACID, SHOT, FRACTURE, CEMENT SQEEZE, ETC.

Depth Interval	Amount and Kind of Material Used
13076-13185	Perf 4 spf, 120 deg, 5000 g 15% HCL w/ ball sealers
16,250 - 16,320 (Fusselman) (084131)	CIBP @ 13,253 w/ 10' of cmt. on top. Leave on schedule.

41. FORMATION RECORD (LIST DEPTHS OF PRINCIPAL GEOLOGICAL MARKERS AND FORMATION TOPS)

Formations	Depth	Formations	Depth
Cherry Canyon	5955	Brushy Canyon	7062
Bone Springs	8612	Atoka	13076

REMARKS: Well was dual completed in Apollo (Ellenburger) and Apollo (Fusselman). Apollo (Ellenburger) was ~~PA~~ isolated w/ CIBP set @ 16530 w/ 2sx cement on top on 5/24/06. Apollo (Fusselman) was ~~PA~~ isolated w/ CIBP set @ 13253 w/ 10' cement on top on 1/16/2007. dk 7518" liner previously not reported.

Add #084131 to return on schedule as a partial plug.

RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

READ INSTRUCTIONS ON BACK

GAS WELL CLASSIFICATION REPORT

Form G-5
Rev. 01/01/86
EAG0897

1. OPERATOR NAME (Exactly as shown on Form P-5 Organization Report)	3. RRC DISTRICT NO.	4. OIL LEASE NO. OR GAS WELL ID NO.
Forest Oil Corporation	08	
2. MAILING ADDRESS 707 17th Street, Suite 3600 Denver, CO 80202	5. WELL NO. 142	6 API NO 42- 495-31049
	7. COUNTY OF WELL SITE Winkler	

8. FIELD NAME	9. LEASE NAME
Apollo (Atoka)	University Blk 21 GU
10. LOCATION (Section, Block, and Survey)	11. PIPELINE CONNECTION OR USE OF GAS
Sec 14, Blk 21 ULS	Duke Energy Field Service

I. PRODUCTION TEST AT RATE ELECTED BY OPERATOR (data on 24-hour basis)

A. Date of Test 02/05/2007

B. Gas Volume 692.2 (Mcf)

C. Oil or Condensate Volume 0 (Bbl)

D. Water Volume 0 (Bbl)

E. Gas/Liquid Hydrocarbon Ratio N/A (Cf/Bbl)

F. Flowing Tubing Pressure 315 (psia)

G. Choke Size _____ (in.)

H. Casing Pressure 355 (psia)

I. Shut-in Wellhead Pressure-Tubing 1695 (psia)

J. Separator Operating Pressure N/A (psia)

K. Color of Stock Tank Liquid N/A

L. Gravity of Separator Liquid N/A °API

M. Gravity of Stock Tank Liquid N/A °API

N. Specific Gravity of the Gas (Air = 1) 0.663

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.

Date Liquid Sample Obtained _____

Where Obtained: ☐ Separator ☐ Stock Tank

% Over	Temp (deg F)	% Over	Temp (deg F)
Initial Boiling Temp		60	
10		70	
20		80	
30		90	
40		95	
50		End Point	

Total Recovery _____ percent

Residue _____ percent

Loss _____ percent

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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.

Tami Hofmann
NAME (Type or Print)

Tami Hofmann
SIGNATURE

Regulatory Specialist
TITLE

3/7/2007
DATE

Tami Hofmann
CONTACT PERSON

(303) 812-1755
PHONE NUMBER

RRC USE ONLY

University BLK-21 #142

Sec. 14, Blk-21, UL Survey
1,500' FSL & 1,120' FWL
Apollo (Fusselman) Field (#142U)
Apollo (Ellenburger) Field (#142L)
Winkler County, TX

Elev GL @ 2,802'.
Elev. KB @ 2,829' (27' KB)

Forest Oil Corporation

Existing Wellbore Diagram

495-31049

API #42-495-31049
3/6/2007
JZ

Spud Date 4/19/79.
Completion Date: 8/23/79 (Fusselman)
Completion Date. 8/23/79 (Ellenburger)
Completion Date. 1/22/07 (Atoka)

Surface Casing

13-3/8", 61#, K-55, ST&C csg set @ 2,828' KB.
Cmted w/ 3,300 sx, Class-A, no returns, TOC @ 280' by Temp, ran 1-1/4" pipe to 235', cmted w/ 500 sx, Class-C, circ cmt to surface.
(17-1/2" Hole).

- 13-3/8" Csg @ 2,828' KB.

Intermediate Casing

9-5/8", 53 5#, S-95, LT&C csg, 0' - 5,252' KB,
9-5/8", 47#, S-95, LT&C csg, 5,252' - 11,575' KB.
Cmted w/ 1,375 sx Trinity Lite & 850 sx, Class-H.
TOC @ 776' (Calculated).
(12-1/4" Hole).

Aotka (13,076' - 13,185' KB)
1/22/07 Treated w/ 5,000 gals 15% HCl acid, 50 - RCN 7/8" 1 3 SG ball sealers, avg 2.0 bpm @ 3,609 psig, max 5 0 bpm @ 4,830 psig, ISIP @ 2,859 psig.

Intermediate Casing Liner

7-5/8", 39#, P-110, SFJP csg liner set @ 14,527' KB.
Liner hanger @ 11,412' KB
8-3/8" x 7-3/9" liner extension @ 4 42'.
7-5/8" TIW "EJ" liner hanger @4 78'.
Cmted w/ 575 sx, Class- H (16 4 ppg, 1 6 cu.ft/sx).
(8-1/2" Hole).

- 7-5/8" Liner hanger @ 11,412' KB.

Production Casing Liner

5" & 5 1/2" csg liner set from 14,366' - 19,150' KB.
TIW tie-back sleeve @ 2 75'
4-23/32" TIW PBR @ 16 45' (Top landed @ 14,369' KB)
TIW EJ-TB liner hanger @ 4 11' (Landed @ 14,385' KB).
5 1/2", 23#, C-75, SFJ csg @ 1,578 67' (14,366' - 15,968').
5-1/2", 20#, S-95, SFJP csg @ 1,017.01' (15,968' - 16,985').
4-7/32" TIW PBR @ 16.45' (Top landed @ 16,985' KB).
5", 23#, C-75, SFJP csg @ 2,148 73' (17,000' - 19,150')
Cmted w/ 500 sx, Class-H 50/50 POZ (13.5 ppg).
(6-1/2" Hole)

- 9-5/8" Csg @ 11,575' KB.

CIBP @ 13,253' KB w/ 10' cmt
CIBP @ 16,530' KB w/ 2 sx cmt

Note. 4-7/32" Seal assembly & 2-7/8" cut off tbg fish @ approximately 16' pushed to btm & still in PBR @ 16,985' KB

- Pkr @ 13,023' KB
- Atoka Perfs @ 13,076' - 13,185' KB
- CIBP @ 13,253' KB w/ 10' cmt.
- 4-23/32" TIW PBR top @ 14,369' KB
- 5-1/2" Liner @ 14,366' KB.
- 7-5/8" Liner csg @ 14,527' KB

Tubing

3-1/2", 10 3#, C-75, CS-CB tbg (1 jnt @ approx 31').
3-1/2" CS-CB (Pin) x 3-1/2" CS-CB (Pin) cross-over.
3-1/2", 10.3#, C-75, CS-CB tbg (413 jnts @ approx 12,962').
3-1/2" OD x 2 75" ID Baker Model L-10 on/off tool w/ 2.75" ID Type-F profile nipple.
3-1/2" (Box) x 2-7/8" (Pin) cross-over.
7-5/8" Baker Hornet (10K) 6 45" OD x 2 37" ID Pkr.
2-7/8" Wireline re-entry guide.
Pkr @ 13,023' KB.

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- Fusselman Perfs @ 16,250' - 16,320' KB (Gross).
- CIBP @ 16,530' KB w/ 2 sx cmt
- 5-1/2" Liner csg @ 16,985' KB.
- 5" Liner csg @ 16,985' - 19,150' KB
- 4-7/32" TIW PBR top @ 16,985' KB w/ Seal Assembly & cut off 2-7/8" tbg @16'
- Ellenburger Perfs @ 18,580' - 18,929' KB (Gross)

Perforation Intervals

Atoka: 13,076' - 13,185' KB Gross (2 spf, 86 holes).
13,076' - 13,079' KB (3', 2 spf, 6 holes).
13,094' - 13,097' KB (3', 2 spf, 6 holes)
13,116' - 13,117' KB (1', 2 spf, 2 holes)
13,120' - 13,123' KB (3', 2 spf, 6 holes).
13,137' - 13,166' KB (29', 2 spf, 58 holes).
13,181' - 13,185' KB (4', 2 spf, 8 holes).

PBTD @ 19,071' KB
TD @ 19,150' KB.