

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: COLEMAN, FRED Operator Well No.: HINTERER #1

LOCATION: Elevation: 1,140.00 Quadrangle: NEW MILTON

District: NEW MILTON County: DODDRIDGE
Latitude: 8200 Feet South of 39 Deg. 12 Min. 30 Sec.
Longitude: 8510 Feet West of 80 Deg. 42 Min. 30 Sec.

Company: KEY OIL COMPANY
22 Garton Plaza
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD
Permit Issued: 05/19/97
Well Work Commenced: 06/01/97
Well Work Completed: 06/11/97

Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 5530'
Fresh water depths (ft) None
Salt water depths (ft) 385'

Is coal being mined in area (Y / N) ? N
Coal Depths (ft): 1241 (5'), 1350 (6'), 1514 (5')

OPEN FLOW DATA

Warren
Speechley
Balltown
Rileys
Benson
Alexander
Pay zone depth (ft)
3375' - 3440'
3458' - 3686'
3873' - 4309'
4564' - 4980'
5050' - 5062'
5295' - 5411'

Producing formation _____
Gas: Initial open flow 5 MCF / d
Final open flow 1,586 MCF / d
Time of open flow between initial and final tests N/A
Static rock pressure 1560 psig (surface pressure) after 96 Hours

Second producing formation _____
Gas: Initial open flow _____ MCF / d
Final open flow _____ MCF / d
Time of open flow between initial and final tests _____
Static rock pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: KEY OIL COMPANY

By: *Jan E. Chapman*

Date: OCTOBER 13, 1997

OCT 17 1997
PRESIDENT

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"	129.65	129.65	70 sks To Surface
8 5/8"	2030.55	2030.55	590 sks To Surface
4 1/2"	5442.2	5442.2	480 sks
2 3/8"		5302	

Hinterer #1 (47-017-04365)
Four Stage Foam Frac - Halliburton

1st Stage:	Alexander (14 holes) (5322.5' - 5403.25')	60 Quality Foam. 500 gal. 15% HCL. 40,000# 20/40 sand, 421,000 SCF N2, 624 bbis foam.
2nd Stage:	Benson (6 holes) (5053.5' - 5054.75') Third Riley (4 holes) (4963.25' - 4964')	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 618 bbis foam.
3rd Stage:	Riley (7 holes) (4597.75' - 4616') Balltown (4 holes) (4181.25' - 4302.25')	60 Quality Foam. 1000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 438,000 SCF N2, 648 bbis foam.
4th Stage:	Speechley (11 holes) (3462.25' - 3673.25') Warren (4 holes) (3428' - 3433.75')	60 Quality Foam, 1000 gal 15% HCL. 5,000# 80/100 sand, 55,000# 20/40 sand, 522,000 SCF N2, 779 bbis foam.

WELL LOG

Fill	0	6	
Sand & Shale & Red Rock	6	67	
Sand & Shale	67	170	
Shale & Red Rock	170	193	
Sand & Shale	193	415	
Sand & Shale & Red Rock	415	717	1/4" H ₂ O & 420'
Sand	717	729	
Red Rock & Shale & Sand	729	1135	
Sand & Shale & Lime	1135	1241	
Coal	1241	1246	
Shale & Sand	1246	1350	
Coal	1350	1356	
White Sand	1356	1399	
Sand & Shale	1399	1514	
Coal	1514	1519	
Sand & Shale	1519	2042	
Little Lime	2042	2052	
Shale & Sand	2052	2094	
Big Lime	2094	2146	
Big Injun	2146	2218	
Shale	2218	2344	
Weir	2344	2439	
Sand & Shale	2439	2544	
Berea	2544	2560	
Sand & Shale	2560	2758	
Gordon	2758	2779	
Sand & Shale	2779	3375	
Warren	3375	3440	
Shale	3440	3458	
Speechley	3458	3686	
Shale	3686	3873	
Balltown	3873	4309	
Shale & Sand	4309	4564	
Riley	4564	4642	
Shale	4642	4950	
3 rd Riley	4950	4980	
Shale	4980	5050	
Benson	5050	5062	
Sand & Shale	5062	5295	
Alexander	5295	5411	
Sand & Shale	5411	5530	

Gas Checks
 1854 No Show
 2507 No Show
 3000 No Show
 3710 4/10^{ths} 1/2" w/H₂O
 4447 16/10^{ths} 1/2" w/H₂O
 4850 6/10^{ths} 1/2" w/H₂O
 5124 6/10^{ths} 1/2" w/H₂O
 TD 2/10^{ths} 1/2" w/H₂O
 Collars No Show

T.D. = 5530'

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WELL WORK PERMIT APPLICATION

1) Well Operator: KEY OIL COMPANY HINTERER #1
 2) Operator's Well Number: 475 25655 (b) S11 3) Elevation: 1140'
 4) Well type: (a) Oil X / or Gas X / Issued 05/19/97
 (b) If Gas: Production X / Underground Storage X / Expires 05/19/99
 Deep / Shallow X /

23597

Proposed Target Formation(s): ALEXANDER USA
 Proposed Total Depth: 5600 feet
 Approximate fresh water strata depths: 90
 Approximate salt water depths: 539'
 Approximate coal seam depths: N/A

9) Does land contain coal seams tributary to active mine? Yes / No X /
 10) Proposed Well Work: DRILL, STIMULATE PRODUCE New Well

12) CASTING AND TUBING PROGRAM

TYPE	SPECIFICATIONS	FOOTAGE INTERVALS	CEMENT			
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor						
Fresh Water	11 3/4	ERW	42	132	132	39059/11.3 70 SKS. TO SURFACE
Coal						
Intermediate	8 5/8	ERW	23	2010	2010	39059/11.2 545 SKS. TO SURFACE
Production	4 1/2	J-55	10.5	5500	5500	490 SKS.
Tubing	1.5					39059/11.1
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____
 For Office of Oil and Gas Use Only
 Fee(s) paid: Well Work Permit Reclamation Fund WPC?
 Plat WW-9 WW-2B Bond _____ (Type) _____
 Agent: _____

510

1) Date: MAY 12, 1997
2) Operator's well number
HINTERER #1
3) API Well No: 47 - 017 - 4365
State County Permit

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served: 5) (a) Coal Operator:

(a) Name FRED COLEMAN Name NONE
Address 2425 DERBY DRIVE Address
FALLSTON, MD 21047

(b) Name (b) Coal Owner(s) with Declaration
Address Name
 Address

(c) Name Name
Address Address

6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration
Address RT. 2 BOX 135 Name
SALEM, WV 26426 Address
Telephone (304)- 782-1043

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR

 Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through on the above named parties, by:

- Personal Service (Affidavit attached)
- Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator KEY OIL COMPANY
By:
Ms. PRESIDENT
Address 22 GARTON PLAZA
WESTON, WV 26452
Telephone 304-269-7102

Subscribed and sworn before me this 12TH day of MAY 1997
My commission expires MARCH 24, 2003

