

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

Well Operator's Report of Well Work

Farm name: DEBRULAR, C.P. HEIRS

Operator Well No.: C.E. ROSS #1

LOCATION: Elevation: 997.00

Quadrangle: OXFORD

District: CENTRAL
Latitude: 6940 Feet South of 39 Deg. 15 Min. 0 Sec.
Longitude: 11120 Feet West of 80 Deg. 50 Min. 0 Sec.

County: DODDRIDGE

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

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD
Permit Issued: 12/29/97
Well Work Commenced: 1/04/98
Well Work Completed: 01/10/98

Verbal Plugging
Permission granted on: _____ Rig
Rotary X Cable _____ 5346'
Total Depth (feet) _____
Fresh water depths (ft) 50', 224'
Salt water depths (ft) 1992'

Is coal being mined in area (Y / N) ? N
Coal Depths (ft): NONE

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"	129.45'	129.45'	70 sks To Surface
8 5/8"	1990.15'	1990.15'	580 sks To Surface
4 1/2"	5295'	5295'	380 sks
2 3/8"		5180'	

OPEN FLOW DATA

Balltown
Rileys
Benson

Producing formation: Alexander
Gas: Initial open flow 39 MCF / d Pay zone depth (ft) 3734' - 4360'
Final open flow 1,504 MCF / d Oil: Initial open flow 0 Bbl / d 4480' - 4864'
Time of open flow between initial and final tests N/A Oil: Final open flow show Bbl / d 4904' - 4916'
Static rock pressure 1750 psig (surface pressure) after 96 Hours Oil: 5147' - 5232'

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

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: 

PRESIDENT

Date: August 9, 1998

C. E. Ross #1 (47-017-4419)
Four Stage Foam Frac - Halliburton

1st Stage: Alexander (13 holes) (5179' to 5222.50') 60 Quality Foam, 500 gal, 15% HCL, 60,000# 20/40 sand, 550,000 SCF N2, 812 bbls foam.

2nd Stage: Benson (3 holes) (4908.50' to 4912.50') 60 Quality Foam, 750 gal 15% HCL, Third Riley (7 holes) (4843.50' to 4849.50') 40,000# 20/40 sand, 417,000 SCF N2, Second Riley (3 holes) (4763.25' to 4763.75') 616 bbls foam.

3rd Stage: Riley (5 holes) (4521' to 4522') 60 Quality Foam, 1,000 gal 15% HCL, Balltown (8 holes) (4293.25' to 4314.25') 5,000# 80/100 sand, 45,000# 20/40 sand, 502,000 SCF N2, 743bbls foam.

4th Stage: Balltown (12 holes) (3903.75' to 4118.25') 60 Quality Foam, 1,000 gal 15% HCL, 5,000# 80/100 sand, 45,000# 20/40 sand, 502,000 SCF N2, 684 bbls foam.

WELL LOG

Clay	0	9	
Sand & Shale	9	98	1/2" H ₂ O @ 50'
Sand & Shale & Red Rock	98	142	
Sand	142	234	Damp @ 224'
Sand & Shale	234	298	
Sand & Shale & Red Rock	298	421	
Sand & Shale	421	620	
Sand	620	701	
Sand & Shale	701	733	
Lime	733	745	
Sand & Shale	745	1517	
Sand	1517	1780	
Sand & Shale	1780	1931	
White Sand	1931	1956	
Little Lime	1956	1968	
Sand & Shale	1968	1992	
Big Lime	1992	2071	Damp @ 1992'
Big Injun	2071	2114	Gas Checks
Shale	2114	2282	2413' - 2110 ^{ths} -1" w/H ₂ O
Weir	2282	2411	2569' - 2110 ^{ths} -1" w/H ₂ O
Sand & Shale	2411	3334	3031' - No Show
Warren	3334	3407	3711' - No Show
Shale	3407	3414	4512' - 14/10 ^{ths} -1" w/H ₂ O
Speechley	3414	3544	4979' - 14/10 ^{ths} -1" w/H ₂ O
Shale	3544	3734	TD - 14/10 ^{ths} -1" w/H ₂ O
Balltown	3734	4360	
Shale	4360	4480	
Riley	4480	4545	
Shale	4545	4756	
Second Riley	4756	4768	
Sand & Shale	4768	4810	
Third Riley	4810	4864	
Shale	4864	4904	
Benson	4904	4916	
Shale	4916	5100	
Elk	5100	5110	
Shale	5110	5147	
Alexander	5147	5232	
Sand & Shale	5232	5413	
TD	5413		

1) Well Operator: KEY OIL COMPANY 4-5 25613 ① 826
Operator's Well Number: C. E. ROSS #1 3) Elevation: 997'

Well type: (a) OIL X / or Gas X /
(b) If Gas: Production X / Underground Storage
Deep / Shallow X /

Proposed Target Formation(s): ALEXANDER ⁴³⁹ RT-017-04419

Proposed Total Depth: 5600 feet Issued 12/29/97
Approximate fresh water strata depths: 80 Expires 12/29/99
Approximate salt water depths: N/A
Approximate coal seam depths: N/A

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

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS	FOOTAGE INTERVALS	CEMENT			
	Size	Grade	Weight per ft. drilling	For	Left in	Fill-up
				drilling	well	(cu. ft.)
Conductor						
Fresh Water	11 3/4	ERW	42	132	132	70 SKS. TO SURFACE <i>ROSS/BM.3</i>
Coal						
Intermediate	8 5/8	ERW	23	1970	1970	530 SKS. TO SURFACE <i>ROSS/BM.2</i>
Production	4 1/2	J-55	10.5	5500	5500	490 SKS. <i>ROSS/BM.1</i>
Tubing	1.5					
Liners						

PACKERS : Kind _____
Sizes _____
Depths sec _____

FOR Office of Oil and Gas Use Only

200/25 Fee(s) paid: Well Work Permit Reclamation Fund WPC2
 Plat WW-9 WW-29 Bond _____ (Type)

1) Date: DECEMBER 16, 1997
2) Operator's well number
C. E. ROSS #1
3) API Well No: 47 - 077 - 4419
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

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

(a) Name C. P. DEBRULAR HEIRS Name NONE
Address C/O ROBERTA D. FINCH Address
2604 27TH STREET

(b) Name PARKERSBURG, WV 26104 (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:
Title: PRESIDENT
Address 22 GARTON PLAZA
WESTON WV 26452

Subscribed and sworn before me this 16TH day of DECEMBER 997

My commission expires MARCH 24, 2003

