

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



Well Operator's Report of Well Work

1997

Farm name: BARKER, ANNA B., ETAL Operator Well No. : DUCKWORTH #3

LOCATION: Elevation: 1165.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE
Latitude: 6200 Feet South of 39 Deg. 17 Min. 30 Sec.
Longitude: 1650 Feet West of 80 Deg. 50 Min. 0 Sec.

Permitting
Bureau of Oil & Gas

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

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD
Permit Issued: 11/14/96
Well Work Commenced: 11/21/96
Well Work Completed: 12/10/96
Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 5599'
Fresh water depths (ft) 40', 283'
Salt water depths (ft) _____

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

OPEN FLOW DATA

Balltown
Rileys
Benson

Producing formation Alexander
Gas: Initial open flow Show MCF / d MCF / d Pay zone depth (ft)
Final open flow 1,646 MCF / d Oil: Initial open flow 0 Bbl / d
Time of open flow between initial and final tests N/A Oil: Final open flow show Bbl / d
Static rock pressure 1900 psig (surface pressure) after 96 Hours

3602' - 4180'
4678' - 5083'
5126' - 5136'
5372' - 5454'

Second producing formation Commingled
Gas: Initial open flow MCF / d Pay zone depth (ft)
Final open flow MCF / d Oil: Initial open flow Bbl / d
Time of open flow between initial and final tests Oil: Final open flow Bbl / d
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: 
Date: 4-22-97

PRESIDENT

MAY 28 1997

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"			
8 5/8"	1151.15	1151.15	320 sks To Surface
4 1/2"	5493	5493	360 sks
2 3/8"		5395	

Duckworth #3 (47-017-04323)
Four Stage Foam Frac - Halliburton

1st Stage:	Alexander (10 holes) (5415.5' - 5433.5')	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 814 bbls foam.
2nd Stage:	Benson (5 holes) (5131.5' - 5132.5') Third Riley (2 holes) (5070.25' - 5070.5') Second Riley (4 holes) (4978.5' - 4979.25')	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 619 bbls foam.
3rd Stage:	Riley (10 holes) (4702.5' - 4722.25') Balltown (5 holes) (4134' - 4238.25')	60 Quality Foam. 500 gal 15% HCL. 10,000# 80/100 sand, 35,000# 20/40 sand, 438,000 SCF N2, 650 bbls foam.
4th Stage:	Balltown (11 holes) (4122.75' - 4308.75')	60 Quality Foam, 1,000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 390,000 SCF N2, 589 bbls foam.

WELL LOG

Fill	0	14	
Shale	14	79	Damp @ 40'
Red Rock	79	105	
Sand	105	190	
Red Rock & Shale	190	225	
Sand & Shale	225	300	Damp @ 283" 1 1/2" H ₂ O
Sand	300	410	
Sand & Shale	410	1720	
Sand	1720	1773	
Sand & Shale	1773	2085	
Little Lime	2085	2120	
Big Lime	2120	2229	
Big Injun	2229	2304	
Shale	2304	2623	
Weir	2623	2588	
Shale	2588	2660	
Berea	2660	2666	
Sand & Shale	2666	3526	
Warren	3526	3597	
Shale	3597	3602	
Speechley	3602	3728	
Shale	3728	3954	
Balltown	3954	4670	
Shale & Sand	4670	4678	
Riley	4678	4744	
Shale	4744	4924	
2nd Riley	4924	4990	
Shale	4990	5044	
3rd Riley	5044	5083	
Shale	5083	5126	
Benson	5126	5136	
Sand & Shale	5136	5372	
Alexander	5372	5454	
Sand & Shale	5454	5599	
T.D.	5599		

Gas Checks

2115'	No Show
2521'	No Show
3047'	Oil Odor
3606'	2/10ths 1/2" w/H ₂ O
4253'	3/10ths 1/2" w/H ₂ O
4517'	No Show
4811'	7/10ths 1/2" w/H ₂ O
5143	Show
5453	Show
TD	Show

Well Operator: KEY OIL COMPANY 475 25658 671

Operator's Well Number: DUCKWORTH #3 3) Elevation: 1165'

Well type: (a) OIL X / or Gas X / dated 11/14/96

(b) If Gas: Production X / Underground Storage / Expires 11/14/97
 Deep / Shallow X /

22891

Proposed Target formation(s): ALEXANDER
 Proposed Total Depth: 5600' feet
 Approximate fresh water strata depths: 100'
 Approximate salt water depths: -0-
 Approximate coal seam depths: N/A

RECEIVED
 W Division of
 Environmental Protection
 NOV 16 1996
 Permitting
 Office of Oil & Gas

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

12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS	FOOTAGE INTERVALS	COMMENT			
	Size	Grade	Weight per ft.	For drilling	Left in well	Pull-up (cu. ft.)
Conductor	11 3/4	ERW	42	40	0	3850/811.3
Fresh Water	8 5/8	ERW	23	1165	1165	315 SKS TO SURFACE
Coal						3850/811.3
Intermediate						
Production	4 1/2	J-55	10.5		5500'	450 SKS.
Tubing	1.5					3850/811.3
Liners						

PACERS : Kind _____ Sizes _____ Depths sec _____

143
 Fee(s) paid: 171 Well Work Permit 171 Reclamation Fund 171 WPC3
 Plat 171 WW-23 171 Bore 171 (Site: 171) WPC3
 Agent: 171

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My Division of
Environmental Protection

NOV 08 1996

1) Date: NOVEMBER 7, 1996
2) Operator's well number DUCKWORTH #3
3) API Well No: 47 - 017 - 4323
State County Permit

Permitting
Office of Oil & Gas
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 ANNA B. BARKER, ET AL Name NONE
 Address 99 WOOD STREET Address _____
 WEST UNION, WV 26356
 (b) Name _____ (b) Coal Owner(s) with Declaration
 Address _____ Name _____
 (c) 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

8(d) 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: _____ PRESIDENT
 Its: _____
 Address 22 GARTON PLAZA
 WESTON, WV 26452

Telephone 304-269-7102

Subscribed and sworn before me this 7TH day of _____ 1996

Karen Cook
 My commission expires MARCH 24, 2003 Public

