

6-6 236

Date: API#

February 22, 2002 47-005-01770

State of West Virginia Division of Environmental Protection Section of Oil and Gas Well Operator's Report of Well Work

Farm name:

Dennis Ray Chambers

Operator Well No.:

Allen & Pryor #46

LOCATION:

Elevation:

Longitude:

967

Ouadrangle:

Madison

Boone County:

MIN.

30 30

SEC.

Agent:

Inspector:

District: Latitude:

Scott 8,300

6,400

feet South of feet West of

DEG. 81 DEG.

7 47

MIN.

SEC.

Company: Cabot Oil & Gas Corporation

900 Lee Street East, Suite 500

Charleston, WV 25301

John Abshire Rick Campbell 8/27/01 **Permit Issued:** 10/26/01 Well Work Commenced: 12/21/01 Well Work Completed:

Verbal Plugging

Permission granted on: Cable \mathbf{X} Rotary

Total Depth (feet) Fresh Water Depths (ft) Salt Water Depths (ft)

Is coal being mined in area (Y/N)?

4385' 77', 559', 856'

180'-182', 335'-338', 480'-482', 619'-621', 680'-683', 811'-813'

Casing	Used	Left	Cement
& Tubing Size	in Drilling	in Well	Fill up Cu. Ft.
16"	36'	36'	
9 5/8"	760'	760'	260 sks
7"	1299'	1299'	230 sks
4 ½" Stage Tool	@ 2195'	4366'	109 sks St 1 84 sks St 2

3416' - 3616'

1972' - 1976'

OPEN FLOW DATA

Coal Depths (ft)

Producing formation	DEVONIAN	SHALE	Pay zone depth (ft)	4024' - 42	
Gas: Initial open flow	TSTM	MCF/d	Oil: Initial open	flow	0	Bbl/d
Final open flow	127 Commingled	MCF/d	Final open	flow	0	Bbl/d
Time of open flo	w between	initial an g (surface	d final tests pressure after		4 240	Hours Hours

Second producing formation	BERE BIG LII		Pay zone depth	(ft)	1972' - 1' 1440' - 1	491'
Gas: Initial open flow	TSTM	MCF/d	Oil: Initial op	en flow	0	BbI/d
Final open flow	127	MCF/d	Final op	en flow	0	Bbl/d
	w between initial and final tests			4	Hours	
Static rock pressure	250 _ ps	ig (surface	pressure after		240	Hours

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

CABOT OIL & GAS CORPORATION For:

APR 1 2 2002

Operations Manager_

By

Date

Perforate Devonian Shale using 3 1/8" HSC (12 gram, .33 charges) at 4238', 4237, 4236, 4182', 4181, 4152, 4151, 4150, 4141, 4136, 4127, 4126, 4106, 4105, 4104, 4103, 4094', 4093, 4090, 4089, 4088, 4087, 4086, 4081, 4080, 4079, 4069, 4068, 4049, 4048, 4041, 4040, 4025, 4024, (34 total holes). Dropped 30 perf balls in 500 gal. 15% HCL acid to breakdown formation. Over-displaced with additional 250 gal 15% HCL acid with N2. Performed 90-87 Q FF on stage1 (Devonian Shale) as follows: Breakdown: 1813 psig, ISIP: 1300 psig, Avg Treating: 2600 psig, Max Treating: 2638 psig, Final ISIP: 1900 psig, 5-Min ISIP: 1501 psig, 10-Min ISIP: 1420 psig. Avg N2 Rate: 7000 scfm, Total N2 Vol: 548,200 scf. Total Slurry Vol: 178.6 bbl, Total Fluid Vol: 128.2 bbl, Avg Inj Rate: 60 bpm, Max Inj Rate: 61 bpm, Max Prop Con: 15.8 ppg, Total Prop: 46,784# 20/40 sand.

Perforated 2nd Stage - Devonian Shale using select fire 3 1/8" HSC at 1 SPF from 3616', 3612, 3608, 3607, 3592', 3591, 3588', 3583', 3571', 3570', 3559', 3558', 3557', 3550', 3534', 3533', 3531', 3530', 3528', 3527', 3511', 3506', 3502', 3501', 3500', 3475', 3474', 3471', 3467', 3466', 3458', 3454', 3450', 3418', 3417', 3416'. (36 total holes). Dropped 30 perf balls in 500 gal HCL acid, over-displace with 250 additional gal of 15% HCL with N2. Performed 90-87 Q FF on stage 2 (Devonian Shale) as follows: Breakdown: 1753 psig, ISIP: 1250 psig, Avg Treating: 2450 psig, Max Treating: 2600 psig, Final ISIP: 1750 psig, 5-Min ISIP: 1360 psig, 10-Min ISIP: 1282 psig. Avg N2 Rate: 7000 scfm, Total N2 Vol: 526,700 scf, Total Slurry Vol: 183.5 bbl, Total Fluid Vol: 132.7 bbl, Avg Inj Rate: 60 bpm, Max Inj Rate: 61 bpm, Max Prop Con: 16.9 ppa, Total Prop: 47,106# 20/40 sand. SMFP at 3644' KB.

Perforated Berea section using 3 1/8" HSC (12 gram, .33charges) at 2 SPF from 1980'-1984' (9 holes) and 1972'-1976' (9 holes). Set SMFP. Pump 2 bbls of acid and drop frac ball. Breakdown formation with additional 10 bbls 15% HCL acid. Performed 75 Q FF on stage 3 (Berea) as follows: Breakdown: 3200 psig, ISIP: 2100 psig, Avg Treating: 2950 psig, Max Treating: 3227 psig, Final ISIP: 2250 psig, 5-Min ISIP: 2138 psig, 10-Min ISIP: 2138 psig. Avg N2 Rate: 6000 scfm, Total N2 Vol: 391,000 scf, Total Slurry Vol: 208.9 bbl, Total Fluid Vol: 175.6 bbl, Avg Inj Rate: 20.6 bpm, Max Inj Rate: 21 bpm, Max Prop Con: 10.4 ppg, Total Prop: 30,988# 20/40 sand. SMFP at 2010' KB.

Perforated Big Lime section with 3 1/8" HSC (12 gram, 33 charges) from 1461'-64' (7 holes) and 1440'-50' (21 holes). Set LMFP. Drop frac ball in 250 gal gelled 15% acid, flushed with treated water. Performed DGA 15% acid frac on stage 4 (Big Lime) as follows: Breakdown: 3450 psig, Max Treating: 3332 psig, Final ISIP: 1600 psig, 5-Min ISIP: 1409 psig. Total Slurry Vol: 67.9 bbl, Total Fluid Vol: 94.3 bbl, Avg Inj Rate: 6 bpm, Max Inj Rate: 6.1 bpm. LMFP at 1490' KB.

FORMATION	ТОР	BOTTOM	REMARKS
Breathitt Fm Lee Fm (Salt Sand) Pennington Fm Little Lime Big Lime Injun Borden Coffee Shale Berea Devonian Shale Corniferous	Surface 390 1082 1224 1266 1465 1540 1952 1969 1984 4284	390 1082 1224 1266 1465 1540 1952 1969 1984 4284	