

Janice 12/21/88

5580

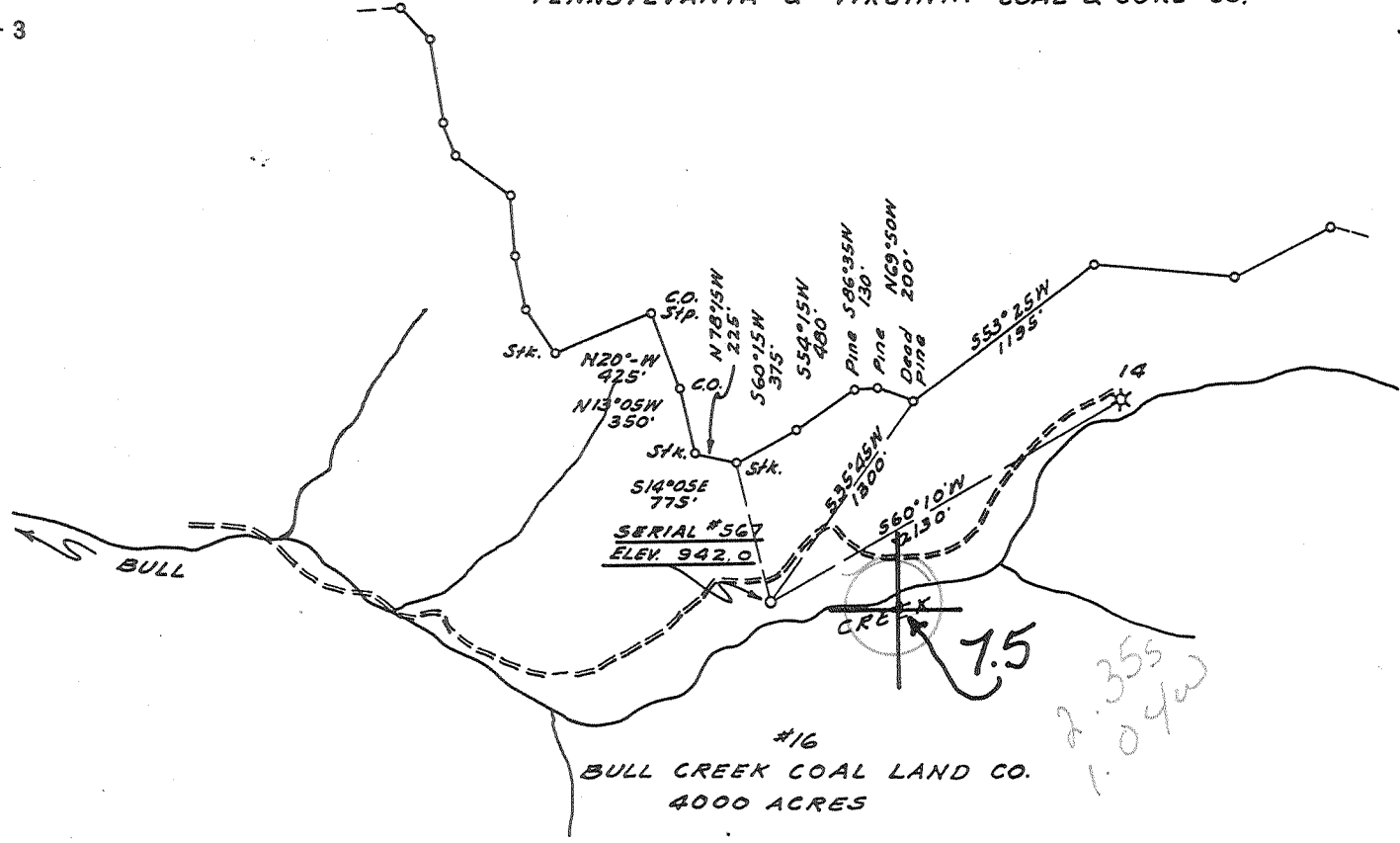
Latitude 38° 15'

15 7.5

Longitude 81° 40'

12440

PENNSYLVANIA & VIRGINIA COAL & COKE CO.



Frac ID - 4/26/89

- New Location
- Drill Deeper
- Abandonment

Company Cabot OGC of W.V. 11409

Address Box 1473 Char., W.V. 25325

Farm BULL CREEK COAL LAND CO.

Tract _____ Acres 4000 Lease No. 16

Well (Farm) No. 15 Serial No. _____

Elevation (Spirit Level) 942.0 565

Quadrangle PEYTONA 15 / RACING 7.5

County BOONE District PEYTONA 2

Engineer T.S. Janney

Engineer's Registration No. 269

File No. _____ Drawing No. _____

Date 5-24-40 Scale 1" = 1000

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
CHARLESTON

WELL LOCATION MAP
FILE NO. 300-462-Frac. 47.005

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

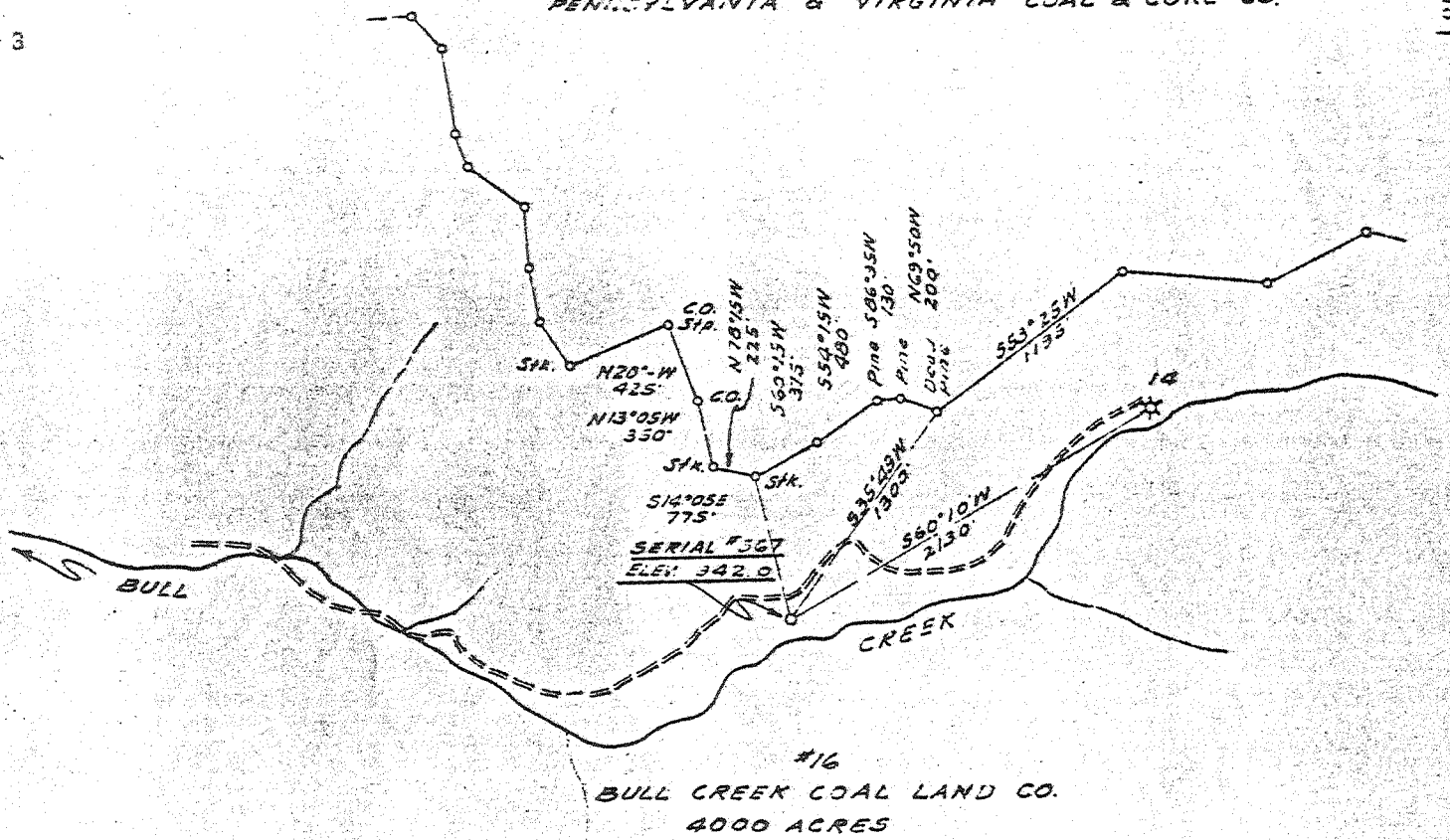
- Denotes one inch spaces on border line of original tracing.

APR 28 1989

Latitude 38° 15'

Longitude 81° 40'

PENNSYLVANIA & VIRGINIA COAL & COKE CO.



New Location X
Drill Deeper
Abandonment

Vol. XVI p. 14
Vol. XVII, p. 63-65

1.07 W.
2.39 S.

3 EC (K-S)

Company THE OWENS, LIBBEY-OWENS GAS DEPT.

Address BOX 1375 CHARLESTON, W. VA.

Farm BULL CREEK COAL LAND CO.

Tract Acres 4000 Lease No. 16

Well (Farm) No. 15 Serial No. 567

Elevation (Spirit Level) 342.0

Quadrangle PEYTONA - NW

County BOONE District PEYTONA

Engineer T.S. [Signature]

Engineer's Registration No. 269

File No. Drawing No.

Date 5-24-40 Scale 1"=1000

KANAWHA FOREST
STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION
CHARLESTON

WELL LOCATION MAP
FILE NO B00-462-D

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

Sample 1-5 (M/G) 1250-4559

6-6 238 - One Dead Well V

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

Reviewed ACB

Farm name: Dickinson Fuels Operator Well No.: Bull Creek #15

LOCATION: Elevation: 930' Quadrangle: Racine
District: Peytona County: Boone
Latitude: 12,300' feet South of 38° DEG. 15' MIN. 0" SEC.
Longitude: 5500' feet West of 81° DEG. 40' MIN. 0" SEC.

Company: Cabot Oil & Gas Corporation
900 Lee Street East, Suite 500
Charleston, WV 25301

Agent: John Abshire
Inspector: Richard Campbell
Permit Issued:
Well Work Commenced: 10/17/00
Well Work Completed: 10/22/00
Verbal Plugging
Permission granted on:
Rotary X Cable
Total Depth (feet)
Fresh Water Depths (ft)
Salt Water Depths (ft)

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
SEE EXISTING RECORD FOR CASING DEPTHS AND CEMENT FILL UP			
2-3/8" TUBING		4581'	
SET ON ARROW M2 TENSION PACKER @ 4544'			

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

Coal Depths (ft)

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth (ft) 45-42-45-56

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock pressure _____ psig (surface pressure after _____ Hours

Second producing formation Pay zone depth (ft)

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock pressure _____ psig (surface pressure after _____ Hours

RECEIVED
Office of Oil & Gas
Permitting
JAN 18 2001
WV Division of
Environmental Protection

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: CABOT OIL & GAS CORPORATION

By: Ray Purdinick Operations Manager
Date: 1-17-01

800 0462 W

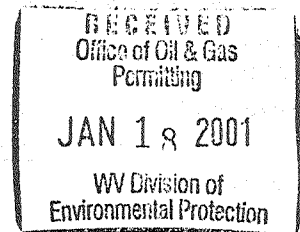
Top of existing packer @ 4635' GL. Pulled 25,000# on tbg, could not pull free. Shot tbg off @ 4615' GL. Pulled tubing out and ran back in hole with 2-3/8" tubing and Arrow M-2 Tension Packer @ 4544'. Perforated joint from 4548' to 4544'. SN @ 4544'. Packer set 13,000# over string weight. 35,000# setting in well head slips. Oriskany perms: 4542' - 4556' KB.

FORMATION

TOP

BOTTOM

REMARKS



RECEIVED
FEB 23 1990

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FEB 23 1990

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas
Well Operator's Report of Well Work

Farm name: APPALACHIAN POWER CO. Operator Well No.: BULL CREEK 15
Location: Elevation: 942.00 Quadrangle: PEYTONA

District: PEYTONA County: BOONE
Latitude: 12440 Feet South of 38 Deg. 15 Min. 0 Sec.
Longitude: 5580 Feet West of 81 Deg. 40 Min. 0 Sec.

Company: CABOT OIL & GAS CORPORATION
P. O. Box 1473
Charleston, WV 25325

Agent: DAVID G. MCCLUSKEY

Inspector: JERRY HOLCOMB
Permit Issued: 4/26/89
Well Work Commenced: 6/21/89
Well Work Completed: 7/29/89
Verbal Plugging _____
Permission granted on: _____
Rotary _____ Cable _____ Rig _____
Total Depth (feet) WORKOVER _____
Fresh water depths (ft) _____
Salt water depths (ft) _____
Is coal being mined in area (Y/N): Y
Coal Depths (ft): _____

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
10'	255'	255'	
8-1/2"	1307'	1307'	
6-5/8"	4473'	4473'	
4-1/2"	5227.5'	5227.5'	100 sks CL-A
2-3/8"	5219'	5219'	

OPEN FLOW DATA

Producing formation Newburg Pay zone depth (ft) 5204
Oriskany 4542-4556
 Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d
 Final open flow 250 MCF/d Final open flow 0 Bbl/d
 Time of open flow between initial and final tests 4 Hours
 Static rock Pressure 460 psig (surface pressure) after 192 Hours

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

NOTE: ON BACK OF THIS FORM BUT 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: CABOT OIL & GAS CORPORATION

By: David G. McCluskey

Date: 2/15/90

FEB 23 1990

005 7028

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Set 4-1/2" Baker RBP @ 5000'. Perforate Oriskany 4542'-4556' 2 SPF. B/D Oriskany
perfs w/ 500 gal 15% HCl & 50,000 scf N₂ @ 20,000 scfm. BDP 4300#. ISIP 2900#.
Treat w/ 25,000# sand in 75-65Q foam. Pulled RBP out of hole. Ran 5219' 2-3/8"
tbg.

FORMATION

TOP

BOTTOM

WORKOVER



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle Peytona

Permit No. Boo-462-D

WELL RECORD

Oil or Gas Well GAS
(KIND)

Company OWENS, LIBBEY-OWENS GAS DEPARTMENT
Address P. O. Box 4168, Charleston 4, W. Va.
Farm Bull Creek Coal Land Co. Acres 4,000
Location (waters) _____
Well No. 15 (Serial No. 567) Elev. 942
District Peytona County Boone
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by Bull Creek Coal Land Co.
44 Lyman Road Address Buffalo 26, N.Y.
~~Drilling~~ commenced 9-11-61
Deepening _____
~~Drilling~~ completed 10-21-61
Date Shot _____ From _____ To _____
With _____

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13			
10			Size of
8 1/4			
6 3/4			Depth set
5 3/4	5164'	Pulled	
5 1/2	5227'5"	5227'5"	Perf. top
2-3/8"	4557'9"	Pulled	Perf. bottom
2-3/8"	5195'10"	Pulled	Perf. top
2-3/8"	5212'2"	Pulled	Perf. bottom

Open Flow /10ths Water in _____ Inch
/10ths Merc. in _____ Inch
Volume _____ Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil _____ bbls., 1st 24 hrs.

CASING CEMENTED 4 1/2" SIZE 5228'5" No. Ft. 11-17-61 Date
Dowell pumped 8 sacks Aqua-gel, 1 sack gel flake
& 100 sacks bulk cement.
COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES

WELL ACIDIZED Dowell acidized Newberg Sand _____ FEET _____ INCHES _____ FEET _____ INCHES
11-27-61, 2-1-62, 2-12-62, & 4-25-62 -- See Remarks FEET _____ INCHES _____ FEET _____ INCHES
WELL FRACTURED Dowell fracted Newberg 3-12-62 -- See Remarks

RESULT AFTER TREATMENT Estimated 360 MCF - Newberg Sand

ROCK PRESSURE AFTER TREATMENT 2000# in 115 Hours

Fresh Water _____ Feet Salt Water _____ Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
(as completed 8-19-40)				4561	8-31-61		
Lime	Dark	Hard	4561	4631	Pulled packer and 4557'9" of 2-3/8" tubing.		134 MCF
Lime	Dark	Hard	4631	4839	Gas 4577'		141 MCF
Lime	Dark	Hard	4839	5036	Gas 4588'		143 MCF
Lime	Dark	Hard	5036	5082	Gas 4591'		152 MCF
Lime	Blue	Hard	5082	5094	Gas 4736'		154 MCF
Lime	Dark	Hard	5094	5121	Gas 4776'		
Sandy Lime	Grey	Hard	5121	5128			
Lime	Dark	Hard	5128	5182			
Lime	Dark	Hard	5182	5201			
Newberg Sand	--	--	5201	5214	Water 5082-5086' filled up to 4400'		160 MCF
Lime	Light	Hard	5214	5229	Gas 5086'		
			Total Depth 5229				
					10-30 & 31-61		
					Installed 5 1/2" casing at 5160'10" set on 5 1/2" Hookwall Packer from 5156'6" to 5160'10"		
					11-9-61 & 11-10-61		
					Pulled 5164' of 5 1/2" casing		
					11-15-61 & 11-16-61		
					Installed 4 1/2" casing at 5228'5" set on Larkin Casing shoe with 5 centralizers		



5201
942
4254

545

Formation	Color	Hard or Soft	Top <u>2</u>	Bottom	Oil, Gas or Water	Depth Found	Remarks
					11-17-61 Dowell Division cemented 4½" casing Pumped 8 sacks Aqua-gel, 1 sack of gel flake and 100 sacks bulk cement. Est. 92 sacks bulk cement pumped in hole.		
					11-22-61 Schlumberger perforated 4½" casing from 5200 to 5204'. Used Tri jet tool.		
					11-27-61 Dowell Division acidized well using 1500 gals. Mud acid and 3,000 gals. XXFM acid. Flushed displacing acid. Total amount acid and water 216 bbls.		
					12-2-61 Test 4:30 P.M.		362 MCF
					1-15-62 Installed 2-3/8" tubing at 5192' with Baker cement retainer set 5190'		
					1-16-62 Dowell Division applied a cement squeeze job through perforations in 4½" casing from 5200 feet up. Used 300 gals. cealment (Latex cement). Pulled 5195' 10" of 2-3/8" tubing		
					1-31-62 Installed 2-3/8" tubing at 5214' to use abrasi-jet on 4½" casing		
					2-1-62 Dowell Division perforated 4½" casing with abrasi-jet at 5204' After perforating casing, pumped 350 gals. Iron inhibited HCL acid into hole.		
					2-2-62 Pulled 2-3/8" tubing		
					2-6-62 Test 4:30 P.M.		125 MCF
					2-12-62 Dowell Division acidized well 3rd time with 5,000 gals. XFL acid.		
					2-14-62 Test 8:30 A.M.		360 MCF
					3-12-62 Dowell Division water fraced Newberg using 400# J-100, 3300# 12-20 walnut shells, 1500# 20-40 sand, 23,520 gals. F-33 treated water; 560 bbls. water and 60 bbl. flush.		
					4-2-62 Test 3:15 P.M.		63.6 MCF
					4-25-62 Dowell Division acidized Newberg Sand with 5000 gals. 15% XFL acid. Used 80 barrels of water to flush.		
					5-1-62 Test 4:30 P.M.		315 MCF
					Final Open Flow: Estimated 360 M Newberg Sand		

Date July 20, 1962

APPROVED OWENS, LIBBEY-OWENS GAS DEPARTMENT, Owner

By A. H. Smith, Mgr. (Title Land, Engrg. & Geol.)

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
WELL RECORD

Permit No. Boo-462
Peytona Quad.

Gas Well

Company The Owens, Libbey-Owens Gas Dept.,
Address P. O. Box 1375, Charleston, W. Va.
Farm Bull Creek Coal Land Co. ACRES 4000
Location Bull Creek
Well No. 567 ELEV. 947' DF
District Peytona - Boone County
Surface & Mineral Bull Creek Coal Land Co.
Address 886 Ellicott Sq., Buffalo, N. Y.
Commenced June 4, 1940
Completed Aug. 9, 1940
Open Flow -
Volume 959,000 c.f.
Rock Pressure 1160 lbs. 35 hrs.
Fresh Water 100
Salt Water 365, 582 and 590

CASING & TUBING

10	255	255
8-1/4	1307	1307
6-5/8	4473	4473
3	64	64
2	4552	4552

Packer - Spang Anchor
Size - 6-5/8x2
Depth set - 4488-4495
Perf. top 3" - 4495
" bot. - 4458
" top 2" - 4540
" bot. - 4556

Coal at:
136' 36"
220' 36"

Surface		0	15
Sand	wh s	15	25
Slate	gr s	25	110
Shell	dk s	110	126
Slate	dk s	126	136
Coal	bk s	136	139
Slate	wh s	139	146
Sand	wh s	146	182
Slate&Shells	dk s	182	220
Coal	bk s	220	223
Slate	dk s	223	241
Sand	wh s	241	282
Slate	gr s	282	312
Sand	lt s	312	440
Slate	dk s	440	470
Sand	gr s	470	493
Slate&Shells	dk s	493	532
Salt Sand	wh h	532	710
Slate	bk s	710	736
Sand	lt h	736	832
Sand	dk h	832	879
Sand	lt h	879	1093
Slate&Shells	dk s	1093	1107
Red Rock	rd s	1107	1110
Slate&Shells	lt s	1110	1131
Slate&Shells	gr s	1131	1171
Slate	gr s	1171	1175
Sand	wh h	1175	1226
Little Lime	dk h	1226	1259
Slate	dk s	1259	1261
Lime	dk h	1261	1294
Big Lime	wh h	1294	1453
Injun Sand	rd s	1453	1493
Shell	dk h	1493	1502
Slate&Shells	dk s	1502	1910
Shale	bn s	1910	1924
Berea Sand	lt h	1924	1929
Slate&Shells	dk s	1929	1942
Shells	lt h	1942	1974
Slate&Shells	gr s	1974	2187
Shells	gr h	2187	2222
Slate	lt s	2222	2253
Slate&Shells	dk s	2253	2299
Shells	dk s	2299	2335
Slate&Shells	dk s	2335	2561
Slate&Shells	wh s	2561	2604
Slate	dk s	2604	2704
Slate	lt s	2704	2841

sample slides

Slate&Shells	lt s	2841	2982
Slate	lt s	2982	3103
Shell	dk h	3103	3123
Shell	bn h	3123	3130
Shale	bn s	3130	3143
Shell	dk m	3143	3292
Slate&Shells	dk s	3292	3421
Shale	bn s	3421	3691
Slate&Shells	bn h	3691	3703
Shells	lt h	3703	3727
Slate	gr s	3727	4103
Slate	dk s	4103	4146
Shale	bn s	4146	4386
Shale	dk s	4386	4442
Corniferous Lime	gr h	4442	4534
Criskany Sand	wh h	4534	4548
Lime	tan h	4548	4558
Total Depth			4558

Fresh Water	100'	1-1/2 bailers per hr.
"	219	4 bailers per hr.
Salt Water	365	3 bailers per hr.
"	582	5 bailers per hr.
"	590	hole full
Gas	312	show
"	585	show
"	1473	30,000 c.f.
"	2015	10,000 c.f.
"	4537-44	890,000 c.f.

Handwritten notes:
1453-1463
375
1463-1493

RECEIVED
APR 19 1989

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

- 1) Date: April 18, 1989
- 2) Operator's well number
Bull Creek #15
- 3) API Well No: 47 - 005 - 0462-FRAC
State - County - Permit

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - (a) Name Dickinson Fuel Co.
Address Attn. Stan Buckus
1401 Kanawha Valley Bldg., Chas. WV
 - (b) Name _____ 25301
Address _____
 - (c) Name _____
Address _____
- 5) (a) Coal Operator:
 - Name Servco, Inc.
Address PO Box 6100
Huntington, WV 25770
 - (b) Coal Owner(s) with Declaration
Name Dickinson Fuel Co.
Address Attn. Stan Buckus
1401 Kanawha Valley Bldg. Chas., WV
 - Name _____ 25301
Address _____
 - (c) Coal Lessee with Declaration
Name _____
Address _____
- 6) Inspector Jerry Holcomb
Address RT. 2 Box 159 Hwy #34
Hamlin, WV 25523
Telephone (304)-824-5963

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
x Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B 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)
x Certified Mail (Postmarked postal receipt attached)
____ Publication (Notice of Publication attached)

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

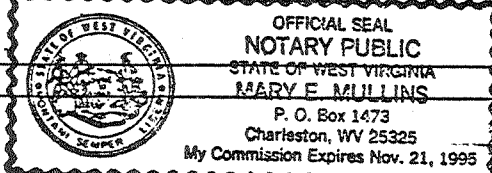
I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true,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

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

Well Operator Cabot Oil & Gas Corporation
By: Thomas A. Duke
Its: _____ Drilling Superintendent
Address _____ PO Box 1473
_____ Charleston, WV 25325
Telephone _____ (304) 347-1600

Subscribed and sworn before me this 18th day of April, 1989

Mary E. Mullins
My commission expires _____



Notary Public
Nov. 21, 1995

21

005-0462-F

Issued 4/26/89 Expires 4/26/91
Page ___ of ___

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
WELL WORK PERMIT APPLICATION

- 1) Well Operator: CABOT OIL & GAS CORPORATION OF WV 8150 (27696)
- 2) Operator's Well Number: Bull Creek #15 3) Elevation: 942'
- 4) Well type: (a) Oil ___ / or Gas X /
(b) If Gas: Production X / Underground Storage ___ /
Deep ___ / Shallow X /
- 5) Proposed Target Formation(s): Oriskany (4534'-4548')
- 6) Proposed Total Depth: 5229 feet
- 7) * Approximate fresh water strata depths: 100', 219'
- 8) * Approximate salt water depths: 365', 582', 590'
- 9) * Approximate coal seam depths: 136' (3'), 220' (3')
- 10) Does land contain coal seams tributary to active mine? Yes X / No ___ /
- 11) Proposed Well Work: Cement 4-1/2" csg across Oriskany. Additionally complete Oriskany for commingled Oriskany/Newburg.
- 12)* From COGC Well Records.

CASING 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	10-3/4"			255'	255'	
Coal	8-5/8"			1307'	1307'	
Intermediate	6-5/8"			4473'	4473'	
Production	4-1/2"	N-80	11.6	5228'	5228'	92 sks
Tubing	2-3/8"			5205'	5205'	
Liners						

PACKERS : Kind N/A
Sizes _____
Depths set _____

RECEIVED
APR 05 1989

19209
Fee(s) paid: Well Work Permit Reclamation Fund WPCP
Plat WW-9 WW-2B Bond Blanket Agent
(Type)