

New Location
 Drill Deeper
 Abandonment

Partial Plug + Epac 7/5/84

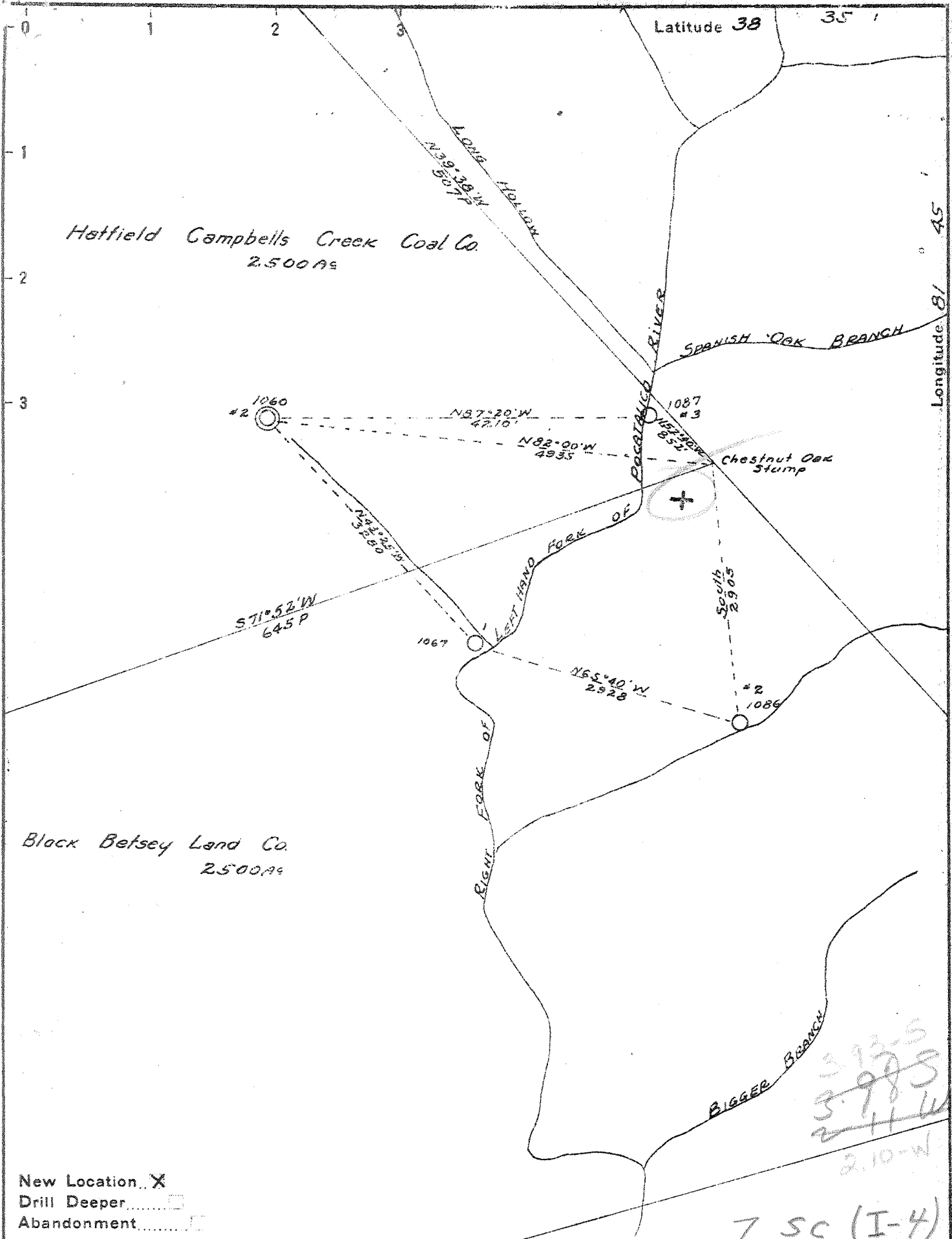
Company Cobot Oil & Gas Corp. of W. Va.
Godfrey L. Cobot, Inc.
 Address P.O. Box 628
900 Union Bldg. Charleston W. Va. 25322
 Farm Hatfield Campbells Creek Coal Co.
 Tract _____ Acres 2,500 Lease No. 3-486
 Well (Farm) No. 2 Serial No. 1060
 Elevation (Spirit Level) 751.88
 Quadrangle Winfield 15' (BANCROFT 7 1/2')
 County Putnam District Pocatalico
 Engineer Ray Boston
 Engineer's Registration No. _____
 File No. _____ Drawing No. _____
 Date 11-18-42 Scale 1" = 1320'

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

WELL LOCATION MAP
 FILE NO. Put-221-PP-Frac.

+ 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.



Company Godfrey L. Cabot Inc
 Address 900 Union Bldg. Charleston Wva
 Farm Hatfield Campbells Creek Coal Co.
 Tract _____ Acres 2500 Lease No. 3-486
 Well (Farm) No. 2 Serial No. 1060
 Elevation (Spirit Level) 751.88
 Quadrangle Winfield - SE
 County Putnam District Pocotalica
 Engineer Ray Boston
 Engineer's Registration No. _____
 File No. _____ Drawing No. _____
 Date 11-18-42 Scale 1" = 1320'

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

WELL LOCATION MAP
 FILE NO. Put-221

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6-6-42 Deep Well

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Put 221
Winfield Quad.

Gas Well
CASING & TUBING

Company	Godfrey L. Cabot, Inc.			
Address	Charleston, W.Va.	Acres --	13 3/8"	196 196
Farm	Hatfield Campbells Crk. Coal Co #2		10 1/2"	560 560
Location	--		8 5/8"	1637 1637
Well No	2 Ser 1060	Elev. 752'	3 1/2"	1840 1840
District	Pocatalico	Futnam County		
Surface	--			1/2 Coupling shoe
Mineral	--			8 5/8" x 16" B.H.
Commenced	Jan. 30, 1943			Packer ; 21 sacks
Completed	March 30, 1943			Aquagel.
Date shot	Acidized 3-29-43; Depth 1823 to 1826			Bottom joint welded.
	with 1000 Gals. ; Gauge B.A. 722 M			TUBED: open 3-26-43
	After addition 1,107 M			Hook Wall Packer
	618# 42 hrs.			8 1/2 x 3
Rock Pressure	70' 2 blrs. pr. hr; 665' 5 blrs. pr. hr.			Depth 1731
Fresh Water	1435' H.F.			3 1/2" O.D. x 107
Salt Water				Anchor.
				Perf. top 1824 Bot 1832
				" " 1836 " 1840

Red Rock	0	14
Sand	14	80
Slate	80	180
Coal	180	188
Slate	188	212
Lime	212	225
Slate	225	255
Sand	255	265
Slate	265	286
Red Rock	286	440
White Slate	440	490
Red Rock	490	560
Sand	560	703
White Slate	703	724
Sand	724	738
Slate & Shells	738	840
Sand	840	940
Slate	940	975
Sand	975	1000
Slate & Shells	1000	1258
Sand	1258	1278
Slate & Shells	1278	1350
Sand - Salt Sand	1350	1618
Slate	1618	1623
Lime & Slate	1623	1702
Big Lime	1702	1840

PRODUCING SAND RECORD:
Best Natural Gauge 1823-1826 735
MCF - Big Lime

TOTAL DEPTH 1840

Gas 1824-26 735 MCF

EAS

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Put 221D		Gas Well
Winfield Quad.		CASING & TUBING
Company	Godfrey L. Cabot, Inc.	
Address	Charleston, W. Va.	* 7" 26# 2005 Same
Farm	Hatfield Campbells Creek Coal Co.	acres 5 17# 695 "
Location		** 5 15.5# 4035 "
Well No.	2-serial 1060	Elev. 752
District	Pocatalico	Putnam County.
Commenced	5-1-52	Rubber Packer
Completed	7-14-52	Lead Packer
Volume	3,129 MCF	45 Min. A.S.
Rock Pressure	1150 lbs. in 64 hrs.	
Water	1881 H.F.;	
Date shot	7-15-52	Depth 4783 to 4804 with 40 qts.
	B.S. 1,653 MCF; 45 Min. A.S. , 3,129 M	

DRILLED DEEPER

Old total depth	1840	PRODUCING SAND RECORD
Big Lime	1702	1881
Sand - <i>in</i>	1881	1920
Slate & Shell	1920	2000
Shell	2000	2055
Slate & Shell	2055	2323
Brown Shale - <i>Coffee Sh.</i>	2323	2353
Sorea	2353	2365
Slate & Shell	2365	3300
Sand	3300	3330
Slate & Shell	3330	3570
Brown Shale - 813	3570	3600
Lime	3600	3725
Slate & Shell	3725	3905
Slate	3905	3940
Brown Shale	3940	4060
Slate - 816	4060	4195
Brown Shale	4195	4215
Slate	4215	4450
Brown Shale - 810, 815	4450	4689
Corniferous	4689	4783
Oriskany Sand	4783	
T.D.	4804	
SLM 1840		
SLM 4709		
Oil 3140 show		
Gas and Oil: 3320 show		
Gas 3905 show		
Gas 4195 No test reported		
Gas 4784-4796 1,738 MCF		

Oriskany Depth 4783 to 4804
init. Prod. 1,738 MCF

$$\begin{array}{r} 4783 \\ - 752 \\ \hline 4031 \end{array}$$

$$\begin{array}{r} 4689 \\ - 752 \\ \hline 3937 \end{array}$$

475

from nearby logs:

UDM	2265
W. Hwan	3570
Java	4060
Angla	4215
Rhinehart	4450
Sonyea	4550
Conasa	4625
Marcellus	4650



1) Date: June 5, 19 84
 2) Operator's Well No. Amherst Coal #2
 3) API Well No. 47 - 079 - 0221-PP-FRA
 State County Permit

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
 APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas X /
 B (If "Gas", Production X / Underground storage / Deep / Shallow X /)
- 5) LOCATION: Elevation: Approx. 700' Watershed: Heizer Creek (KPI)
 District: Pocatalico County: Putnam Quadrangle: Bancroft 7 1/2
- 6) WELL OPERATOR Cabot Oil & Gas Corp. of WV 7) DESIGNATED AGENT Robert F. Horrell
 Address P.O. Box 628 Address P.O. Box 628
Charleston, WV 25322 Charleston, WV 25322
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Jerry Holcomb Name UNKNOWN
 Address Rural Rt. #1 - Box 28 Address
Hamlin, WV 25523 824-3337
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation X / Perforate new formation X
 Other physical change in well (specify) Plug back Oriskany
- 11) GEOLOGICAL TARGET FORMATION, Huron Shale
 12) Estimated depth of completed well, 4300' feet
 13) Approximate trata depths: Fresh, 70, 665, 1435 feet; salt, feet.
 14) Approximate coal seam depths: N/R Is coal being mined in the area? Yes No
- 15) CASING AND TUBING PROGRAM WORKOVER

RECEIVED
 JUN 2 1984
 DEPT. OF MINES
 OIL & GAS DIVISION

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor	13"		48				196'		Kinds
Fresh water	10"		35.75				560'	ON SHOE	
Coal	8-5/8"		25.55				1637'	ON PACKER	Sizes
Intermediate	7"		26				2005'	ON PACKER	
Production	5"		15.5				4730'	ON PACKER	Depths set
Tubing									
Liners									Perforations:
	1-1/2"		2.75				4200'		Top Bottom

1. Spot cement plug 4804-4760'. 3. Set Permanent Bridge Plug @ 4300'.
 2. Gel hole 4760-4300'. 4. Squeeze cement 5" csg. 4250-3400'.

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-079-0221-PP-FRAC Date July 5, 1984

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires July 5, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>Blanket</u>	Agent: <u>MJ</u>	Plat: <u>MU</u>	Casing: <u>MJ</u>	Fee: <u>013 087</u>
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Margaret J. Hasse
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File

RECEIVED

APR 17 1985



TV-35 (Rev 8-81)

OIL & GAS DIVISION DEPT. OF MINES State of West Virginia

Department of Mines Oil and Gas Division

Date April 11, 1985

Operator's Well No. #2

Farm Amherst Coal

API No. 47 - 079 - 0021 PP-Fr

0221-PP-Fr

WELL OPERATOR'S REPORT OF DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal / (If "Gas," Production X / Underground Storage / Deep / Shallow X /)

LOCATION: Elevation: Approx. 700' Watershed Heizer Creek (KPI) District: Pocatalico County Putnam Quadrangle Bancroft 7 1/2

COMPANY Cabot Oil & Gas Corporation

ADDRESS P.O. Box 628, Chas., W.V. 25322

DESIGNATED AGENT Robert E. Horrell

ADDRESS P.O. Box 628, Chas., W.V. 25322

SURFACE OWNER Diamond Shamrock Coal Co. 40507 Attn: Land Mang. Adm., 1200 1st Sec. Plaza, Lex., Ky.

ADDRESS ALSO: Benjamin P. Grosscup, Jr. 37 Woodland Ave., Greensburg, Pa. 25601

MINERAL RIGHTS OWNER Amherst Coal Co.

ADDRESS 1200 1st Sec. Plaza, Lex., Ky. 40507

OIL AND GAS INSPECTOR FOR THIS WORK Jerry

Holcomb ADDRESS Rural Rt. #1, Box 28 Hamlin, W.V. 25523

PERMIT ISSUED June 5, 1984

WORKOVER COMMENCED February 19, 1985

WORKOVER COMPLETED March 4, 1985

IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON

Table with 4 columns: Casing Tubing, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-16, 13-10, 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2 1/2, and Liners used.

GEOLOGICAL TARGET FORMATION Huron Shale Depth 3872-4054 feet

Depth of completed well PBTD=4100 feet Rotary / Cable Tools

Water strata depth: Fresh feet; Salt feet

Coal seam depths: Is coal being mined in the area?

OPEN FLOW DATA

Producing formation Huron Shale Pay zone depth 3920-4097 feet

Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d

Final open flow (411) Mcf/d Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 740 psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)

Second producing formation Pay zone depth APR 29 1985

Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d

Final open flow Mcf/d Oil: Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure psig (surface measurement) after hours shut in

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
 2/19/85 - MIRU Pool derrick rig. R/U McCullough, set Baker P-1 permanent plug w/2 sks Cal-Seal at 4310' to plug black Oriskany. Perf 5½" @ (4130'-32'). McCullough set EZSV cmt retainer @ 4110'. Squeezed shale w/80 sks 50/50 pox, mix 10% salt, 1% CFR-2/
 Ran G/R & CBL. TOC 3877' Perf shale 3920-4097' (18 holes).
 Ran 123 jts. 2 7/8" EUE tbg. w/5½" HOWCO RITS packer. R/U Howco N₂ & pressured up annulus to 800 psi, dumped 500 gals 15% HCL, & brokedown Shaleperfs w/N₂ @ 3200 psi. Treated w/900,000 SCF N₂ @ 25,000 SCF/min. ISIP 1300 psi. Pumped 100 bbls. foam pad, 300 sks 20/40 sand @ 2#/gal in 75 Q foam. Total fluid 165 bbls. S/L 129 bbls. ATP 2908 psi, air 20 BPM foam. ISIP 800 psi, 15 min/590 psi. Opened thru 1/8". Pull 2 7/8" EUE tbg w/RITS packer. Ran 121 jts. 1½" with perf jt. to 4050.04'. Seating nipple @ 4015'. SITP 740 psi. SICP 740 psi. 4 hr O/F 96/10 H₂O thru 2", 411 Mcf/d.
 Perf Shale @ 3920', 30, 37, 40, 47, 57, 66, 75, 81, 88. @ 4000, 20, 25, 34, 40, 48, 67 & 97.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
✓ Plugged back Oriskany			PBTD	4100'	
See attached original well record.					

(Attach separate sheets as necessary)

Cabot Oil & Gas of West Virginia
Well Operator

By: Robert E Howell

Date: _____

Note: Regulation 2.02(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."