

New Location
 Drill Deeper
 Abandonment

Cabot Oil & Gas Co. of WVa. ¹⁴⁹
 P.O. Box 454--Glasgow, WVa. 25086
 Surface: Robert H. Britton

Farm THE PUTNAM CO
 Tract Plat 22,000 Acres Lease No. 3-464
 Well (Farm) No. 25 Serial No. 997
 Elevation (Spirit Level) 898.09 Rig Floor
 Quadrangle Kenna ^{Sissonville} WC 609 063
 County Kanawha District Poca 8
 Engineer Charles Sturm
 Engineer's Registration No. 975
 File No. _____ Drawing No. _____
 Date Sept 4 1941 Scale 1"=1320'

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

WELL LOCATION MAP
 FILE NO. KAN-856-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.

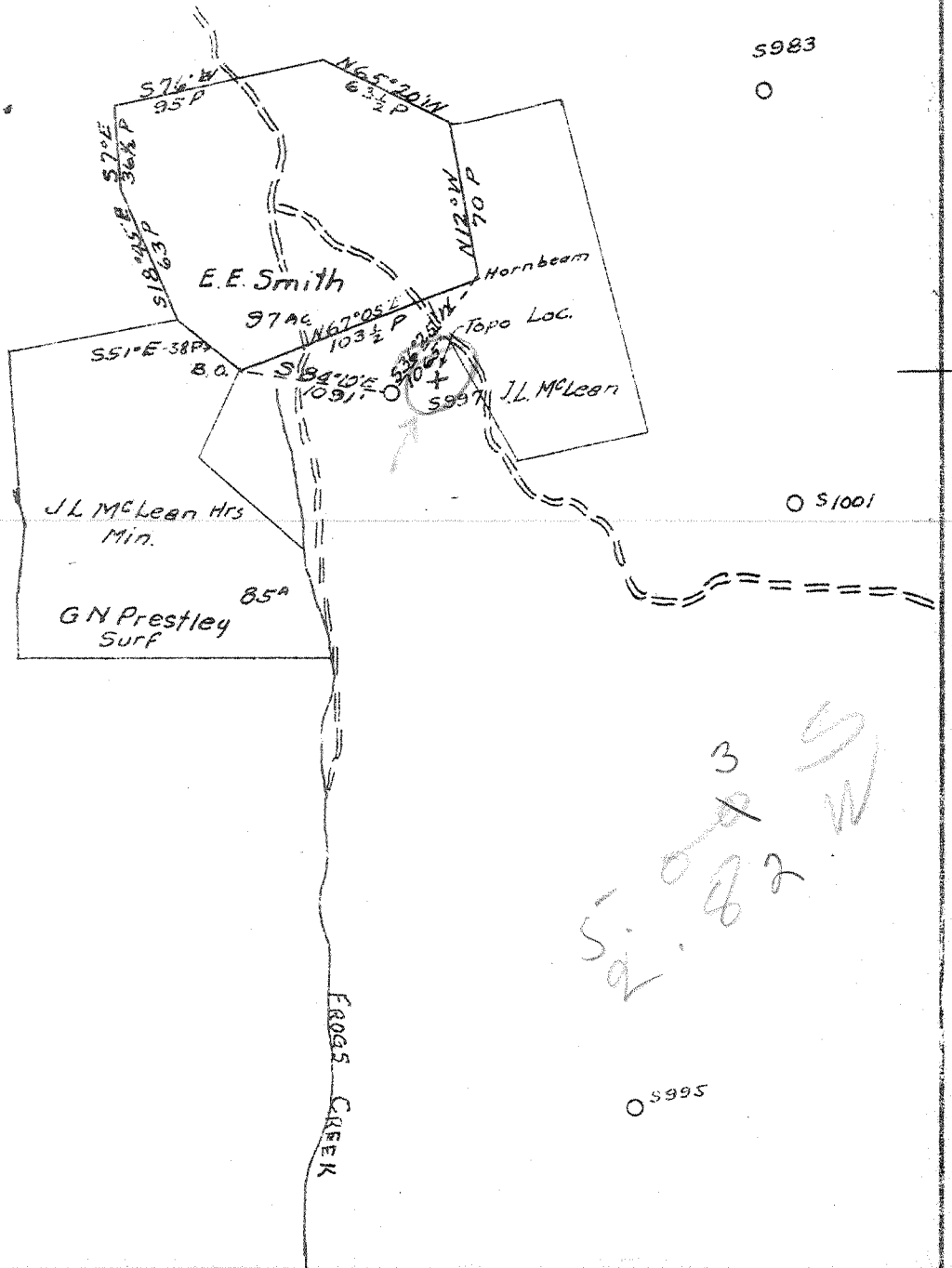
- Denotes one inch spaces on border line of original tracing.

Sissonville WC4

47-039

Latitude 38 ° 40 '

Longitude 81 ° 40 '



- New Location
- Drill Deeper
- Abandonment

Company GODFREY L CABOT INC.
 Address 900 UNION BLDG CHARLESTON WVA
 Farm THE PUTNAM CO
 Tract Pt of 22,000 Acres Lease No. 3-464
 Well (Farm) No. 25 Serial No. 997
 Elevation (Spirit Level) 898.09 Rig Floor
 Quadrangle Kenna WC
 County Kanawha District Poca
 Engineer John L. ...
 Engineer's Registration No. 975
 File No. _____ Drawing No. _____
 Date Sept 4 1941 Scale 1"=1320'

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 CHARLESTON

WELL LOCATION MAP
 FILE NO. KAN-856

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Handwritten note:
 3
 S
 51001
 W

Handwritten note: Deep well ✓

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

Permit No. KAN-856	Godfrey L. Cabot, Inc.	Gas Well
Company	Charleston, W. Va.	Casing Record
Address	Putnam Company	10 3/4 892 892
Farm	25 Serial No. 997 Elev. 898 D	8 5/8 2102 -
Well No.	Poca Kanawha County	7" 4996 4996
District	9-17-41	2 3/8" 5131 5131 Bot./welded.
Commenced	1-6-42	10 3/4" Casing shoe.
Completed	1-6-42 from 5066 to 5081 with 30 qts.; from 5093 to 5098 with 10 qts.	8 5/8"x10"x16" B.H.Packer, 30 sacks aquagel.
Shot	B.S. 84 MCF; 40 Min. A.S. 622 MCF	1 - 7" OD Sp.Orisk.Packer, 40 sacks aquagel & 4 sacks fibortex
Volume	1825 lbs. in 71 hrs. Orisk., Test Gas.	980' Enuf to drill; 1165' HF
Rock Pressure		90'
Fresh Water		980' Enuf to drill; 1165' HF
Salt water		980' Enuf to drill; 1165' HF
Surface	0 5 Shale	3990 4060
Rod Rock	5 70 Sl. & Sh.	4060 4168
Sand	70 80 Br. Shale	4168 4290
Rod Rock	80 140 Wh. Slate	4290 4725
Slate	140 150 Br. Shale	4725 4875
Rod Rock	150 175 Slate	4875 4900
Slate	175 200 Shale	4900 4974
Rod Rock	200 240 Corniferous	4974 5063 5069 S.L.
Slate	240 260 Oriskany	5063 5097
Rod Rock	260 300 Bk. Lime	5097 5112
Sand	300 325 Oriskany	5112 5130
Rod Rock	325 360 Lime	5130 5133 5137 S.L.
Sand	360 400	
Rod Rock	400 455 Total Depth	5137 S.L.
Gritty Lime	455 465	
Slate	465 510	
Rod Rock	510 525	12-23-41 5067 260 M
Slate	525 545	12-23 Shut down casing, test
Rod Rock	545 570	12-31 Before drilling 112 M
Sand	570 578	12-31 5073 112 M
Slate	578 590	12-31 5075 103 M
Sand	590 635	1-1-42 5077 146 M
Slate	635 655	1-1-42 5080 133 M
Rod Rock	655 680 Cavo	1-1-42 5087 133 M
Slate	680 697	1-1-42 5092 119 M
Lime	697 725	1-1-42 5095 140 M
Slate	725 734	1-2-42 5100 119 M
Coal	734 740	1-2-42 5110 119 M
Sl. & Sh.	740 790	1-3-42 5125 103 M
Rod Rock	790 795	1-3-42 5132 84 M
Lime Shells	795 807	1-3-42 5137 84 M
Slate	807 815	
Rod Rock	815 820	Gauges in Oriskany - After shot
Sand	820 850	1-6-42 B.S. 84 M
Slate	850 895	1-6-42 5 Mins. A.S. 696 M
Sand	895 925	10 " " 660 M
Slate	925 975	15 " " 660 M
Sand	975 990	20 " " 660 M
Sl. & Sh.	990 1020	40 " " 622 M
Sand	1020 1032	
Sl. & Sh.	1032 1145	
Sand	1145 1230	
Lime	1230 1260	
Slate	1260 1265	
Sand	1265 1290	
Sl. & Sh.	1290 1415	
Sand	1415 1435	
Slate	1435 1375	
Salt Sand	1475 1320	
Slate	1320 1323	
Maxton	1323 1338	
Little Lime	1338 1355	
Slate	1355 1359	
Big Lime	1359 2032	
Injun	2032 2073	
Sl. & Sh.	2073 2510	
Berea	2510 2525	
Sl. & Sh.	2525 3990	

17-35
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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date September 18, 1985
Operator's
Well No. #25
Farm Putnam
API No. 47 - 039 - 0856 FRAC-PP

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: 898 Watershed Frogs Creek
District: Roca County Kanawha Quadrangle Sissonville 7 1/2"

COMPANY Cabot Oil & Gas Corp. of WV
ADDRESS P.O. Box 454, Glasgow, WV 25086
DESIGNATED AGENT Robert E. Horrell
ADDRESS P.O. Box 454, Glasgow, WV 25086
SURFACE OWNER See Attached Sheet
ADDRESS
MINERAL RIGHTS OWNER Kanawha Valley Bank
Agent for Frank A. Hardy
ADDRESS P.O. Box 1793, Charleston, WV 25326
OIL AND GAS INSPECTOR FOR THIS WORK Carlos
W. Hively ADDRESS 223 Pinch Ridge Rd.
Elkview, WV 25071
PERMIT ISSUED July 9, 1985
WORKOVER COMMENCED 8/29/85
WORKOVER COMPLETED 9/10/85
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"			
9 5/8			
8 5/8			
7	Squeezed cemented	from	225 sks. 4400-4056'
5 1/2			
4 1/2			
3			
2	pulled	5131'	
2" knives used	Ran	4252.85'	w/seating nipple @ 4241.85'

GEOLOGICAL TARGET FORMATION Huron Shale Depth 4148-4262 feet
Depth of completed well PBTD=4400 feet Rotary / Cable Tools
Water strata depth: Fresh 90 feet; Salt feet
Coal seam depths: 734-40 Is coal being mined in the area?

OPEN FLOW DATA

Producing formation Huron Shale Pay zone depth 4148-4262 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
6 hrs Final open flow 183 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure 860 psig (surface measurement) after 72 hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth feet
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.

8/29/85 - MIRU Pool Well Service. Pulled 5131' 2-3/8" 10RD tbg. Set 7" BP @ 4845', dumped 2 sks Cal-seal. Shot 2' (8 holes) @ 4400'. Ran Baker Model "K-1" cmt retainer on 2-7/8" EUE 8RD tbg to 4384'. R/U B-J, squeezed 7" w/125 sks 50/50 poz 10% salt, .75% friction reducer & 5# gilsonite/sk. Ran GRC-CBL w/Sonic Seismogram. TOC 4150'. Perf 2' (8 holes) @ 4120'. R/U B-J, squeezed 7" w/100 sks 50/50 poz, 10% salt, .75% friction reducer, 5# gilsonite/sk. Ran GRC-CBL w/Sonic Seismogram. TOC 4056'. Perf Huron 4148', 52', 58', 68', 70', 78', 86', 91', 96', 4207', 16', 23', 30', 35', 50', 53', 56' & 62' (18 holes). Ran Baker Model "C" full bore pkr on 130 jts 2-7/8" EUE tbg, set @ 4106'. R/U B-J. Pump 500 gal 15% HCL. B/D Huron shale @ 2310 psi w/N₂. Pumped 1,000,000 Scf/N₂ @ 40,000 Scf/min. ISIP 2170 psi. Pumped 8,000 gal foam pad, 90 Q foam. Treated w/300 sks 20/40, max sand concentration 1.5#/gal. Total N₂ 440,000 Scf @ 20,000 Scf/min. ATP 3916 psi. AIR 30 BPM foam, T/F 113 bbls, S/L 83 bbls. ISIP 1390 psi, 15 min 1000 psi. Flowed back thru 1/4" choke. Pulled tubing & packer. Ran 134 WELL LOG jts 2-3/8", 4.6#, 10RD tubing 4252.85' w/seating nipple @ 4241.85'. 9/13/85 - SICP 860#, SITP 840#, 4 hr open flow

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
					200 MCF/d, 6 hr open flow 183 MCF/d.
			PBTD	4400'	Plugged back Oriskany See Attached Original Well Record.

(Attach separate sheets as necessary)

Cabot Oil & Gas Corp. of WV

Well Operator

By: Robert E. Horrell - Dist. Prod. Superintendent

Date: September 18, 1985

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 sand, encountered in the drilling of a well."



1) Date: July 9, 19 85
 2) Operator's Well No. Putnam #25
 3) API Well No. 47 039 0856 Frac
 State County Permit

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

OIL & GAS DIV APPLICATION FOR A WELL WORK PERMIT
DEPT. OF MINES

- 4) WELL TYPE: A Oil Gas / B (If "Gas", Production X / Underground storage _____ / Deep _____ / Shallow X /)
- 5) LOCATION: Elevation: 898 Watershed: Frogs Creek
 District: Poca County: Kanawha Quadrangle: Sissonville 7 1/2'
- 6) WELL OPERATOR Cabot Oil & Gas Corp. of W.V. 7) DESIGNATED AGENT Robert E. Horrell
 Address P.O. Box 454 Address P.O. Box 454
Glasgow, W.V. 25086 8150 Glasgow, W.V. 25086
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Carlos W. Hively
 Address 223 Pinch Ridge Road
Elkview, W.V. 25071
- 9) DRILLING CONTRACTOR: Name _____ Address _____
- 10) PROPOSED WELL WORK: Drill _____ / Drill deeper _____ / Redrill _____ / Stimulate X /
 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, PBTD = 4400 feet
- 13) Approximate trata depths: Fresh, 90 feet; salt, _____ feet.
- 14) Approximate coal seam depths: 734-40' Is coal being mined in the area? Yes _____ / No _____

15) CASING AND TUBING PROGRAM **WORKOVER**

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		Kinds	Sizes
Conductor										
Fresh water										
Coal	10		35.75			Existing	892	on shoe		
Intermediate	8 5/8		25.55			"	2102	on packer		
Production	7		24			"	4996	on packer		
Tubing	2		3.75			"	5131	to be pulled		
Liners										
tubing	1 1/2	J-55	2.75	X		Proposed	4300			Perforations: Top Bottom

- (1) Set 7" bridge plug @ 4950' and dump 2 sks Cal-seal. (3) Set cement retainer @ 4400'
 (2) Gel hole 4950' - 4400'. (4) Squeeze cement 7" csg. 4430' - 3800'.

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-039-0856 Frac Date August 6 19 85

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 August 6, 1987 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <u>ALB</u>	Plat: <u>MU</u>	Casing: <u>MU</u>	Fee: <u>14978</u>
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[Signature]
 Director, Division
 Administrator, Office of Oil and Gas

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