



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 500 FT
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION TOP OF POINT, ELEV. 1032

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) Michael F. Hoff
 R. P. E. # 6023 L. L. S. _____

APPLIED FOR 2
 PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6
 (8-78)



DATE DECEMBER 12, 19 80
 OPERATOR'S WELL NO. PUTNAM B-24
 API WELL NO. 47-079-1020
 STATE COUNTY PERMIT

Department of Mines
 Oil & Gas Division

WELL TYPE: OIL _____ GAS X LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS", PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW X)
 LOCATION: ELEVATION 900' WATER SHED PAINTERS BRANCH OF EIGHTEEN MILE CREEK
 DISTRICT UNION COUNTY PUTNAM
 QUADRANGLE BANGROET Winfield EC
 SURFACE OWNER RUBY Mc FARLAND ACREAGE 44.0
 OIL & GAS ROYALTY OWNER PUTNAM Co. LEASE ACREAGE 22,000
 LEASE NO. 47-0561
 PROPOSED WORK: DRILL X CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 4200'
 WELL OPERATOR CAROT OIL & GAS DESIGNATED AGENT TIM CRAMLETT
 ADDRESS P.O. BOX 628 ADDRESS P.O. BOX 628
66 MIDWAY - EXTRA CHARLESTON, W.VA 278
 MAR 23 1981

RECEIVED

APR 20 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES



State of West Virginia

Department of Mines
Oil and Gas Division

Date April 19, 1982
Operator's Well No. B-24
Farm Putnam
API No. 47 - 079 - 1020

WELL OPERATOR'S REPORT
OF

REVISED

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 900' Watershed Painters Branch
District: Union County Putnam Quadrangle Bancroft

COMPANY Cabot Oil & Gas Corporation
ADDRESS P.O. Box 628, Chas., WV 25322
DESIGNATED AGENT Richard P. Parsons
ADDRESS P.O. Box 628, Chas., WV 25322
SURFACE OWNER Ruby McFarland
ADDRESS Box 419, WolfePenn Dr., Chas., WV 25314
MINERAL RIGHTS OWNER Putnam Co, Frank A. Hardy et al, c/o Pat Brown
ADDRESS Trust Dept, One Valley Square Charleston, WV 25301
OIL AND GAS INSPECTOR FOR THIS WORK Martin Nichols
ADDRESS P.O. Box 554 Clendenin, WV 25045
PERMIT ISSUED March 6, 1981
DRILLING COMMENCED July 17, 1981
DRILLING COMPLETED July 24, 1981
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	688.30'	688.30'	250 sks
8 5/8			
7	2755.90'	2755.90'	400 sks
5 1/2			
4 1/2	4518.50'	4518.50'	115 sks
3			
2			
1-1/2" Liners used	4408.90'	4408.90'	

GEOLOGICAL TARGET FORMATION Brown Shale Development Depth 4488' feet
Depth of completed well feet Rotary xx / Cable Tools
Water strata depth: Fresh feet; Salt feet
Coal seam depths: Is coal being mined in the area?

OPEN FLOW DATA

Producing formation Brown Shale Pay zone depth 3874'-4364' feet
Gas: Initial open flow 1.06 Mcf/d Oil: Initial open flow Bbl/d
Final open flow 622 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure 825# 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

(Continue on reverse side)

APR 26 1982

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

10-6-81 - Ran 1000 gal 15% HCL. Break down pressure 1900#. Treated with 15,000# 80/100 & 75,000# 20/40. AIR: 10 bbls/min - 18,000 SCF N₂. Total N₂: 630,000 SCF. Avg. treating pressure: 1900 psi. Total fluid: 351 bbls (Sand laden - 265 bbls). Instant shut in pressure: 1900 psi; 15 min - 700 psi. Shut in 1 hr. Released thru 1/2" choke.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Shale			0	470	No coal or water reported: Uphole drilled on fluid.
Sand			470	492	
Shale			492	600	
Sand & Shale			600	703	
Shale			703	764	
Sand			764	777	
Shale			777	1000	
Sand & Shale			1000	1030	
Sand			1030	1080	
Shale			1080	1130	
Sand			1130	1284	
Sand & Shale			1284	1334	
Sand			1334	1356	
Sandy Shale			1356	1400	
Sand			1400	1750	
Sand & Shale			1750	1920	
Salt Sand			1920	2130	
Big Lime			2130	2170	
Sand Shale			2170	2240	
Injun Sand			2240	2620	
Grey Shale			2620	2648	
Sunbury Shale			2648	2656	
Berea Sand			2648	3870	
Shale			3870	4370	Show of Gas: 4250'-4290'
Brown Shale			4370	4560	
Shale					
				LTD 4562'	Gas check @ TD: 1.06 MCF/D
				DTD 4550'	

(Attach separate sheets as necessary)

CABOT OIL AND GAS CORPORATION

Well Operator

By: *Richard M. Law*

District Drilling
Superintendent

Date: April 19, 1982

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 ... encountered in the drilling of a well."



RECEIVED

NOV 20 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date November 16, 1981
Operator's
Well No. B-24
Farm Putnam
API No. 47 - 079 - 1020

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

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

LOCATION: Elevation: 900' Watershed Painters Branch
District: Union County Putnam Quadrangle Bancroft

COMPANY Cabot Oil & Gas Corporation
ADDRESS P.O. Box 628, Chas., WV 25322
DESIGNATED AGENT Richard P. Parsons
ADDRESS P.O. Box 628, Chas., WV 25322
SURFACE OWNER Ruby McFarland
ADDRESS Box 419, WolfePenn Dr., Chas., WV 25314
MINERAL RIGHTS OWNER Putnam Co, Frank A. Hardy
et al, c/o Pat Brown
ADDRESS Trust Dept, One Valley Square
Charleston, WV 25301
OIL AND GAS INSPECTOR FOR THIS WORK Martin
Nichols ADDRESS P.O. Box 554
Clendenin, WV 25045
PERMIT ISSUED March 6, 1981
DRILLING COMMENCED July 17, 1981
DRILLING COMPLETED July 24, 1981

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
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Time of open flow between initial and final tests hours
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DEC 6 1981

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Shale			4370	4560	
				LTD 4562'	
				DTD 4550'	

(Attach separate sheets as necessary)

CABOT OIL AND GAS CORPORATION

Well Operator

By:

R P Pavon

Date:

November 16, 1981

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 all, encountered in the drilling of a well."



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

MAR - 6 1981

Oil and Gas Division
OIL & GAS DIVISION
DEPT. OF MINES
OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE March 3, 1981
Company Cabot Oil & Gas Corporation
Address P.O. Box 628, Chas., WV 25322
Farm Putnam Company Acres 44
Location (waters) Painters Branch
Well No. Putnam B-24 Elevation 900'
District Union County Putnam
Quadrangle Bancroft

Surface Owner Ruby McFarland
Address Box 419, Wolfe Penn Dr., Chas., WV
Mineral Owner Putnam Co., Frank A. Hardy, et al
c/o Mr. Pat Brown, Trust Dept.
Address One Valley Square, Chas., WV 25301
Coal Owner Same as Mineral Owner
Address _____
Coal Operator Not Operated
Address _____

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling. This permit shall expire if operations have not commenced by 11-18-81

John B. Burkett
Deputy Director - Oil & Gas Division

INSPECTOR
TO BE NOTIFIED Martin Nichols
ADDRESS P.O. Box 554, Clendenin, WV 25045
PHONE 304-548-9663

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated February 1 19 36 by Frank Hardy et al made to Godfrey L. Cabot, Inc. and recorded on the 13th day of June 19 36 in Putnam County, Book 31 Page 517

XX NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ~~ten~~ ¹⁵ days.

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

Very truly yours,
(Sign Name) R. P. Patton Cabot Oil & Gas Corporation
Well Operator
P.O. Box 628
Street
Charleston
City or Town
West Virginia 25322
State

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

47-079-1020

PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by _____

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO XX DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME Clint Hurt & Associates Inc. NAME R.P. Parsons
 ADDRESS P.O. Box 1973, Midland, TX 79702 ADDRESS P.O. Box 628, Charleston, WV 25322
 TELEPHONE _____ TELEPHONE 304-344-8355
 ESTIMATED DEPTH OF COMPLETED WELL: 4355 ROTARY XX CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Shale
 TYPE OF WELL: OIL _____ GAS XX COMB. _____ STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8	685	685	circ
8 - 5/8			
7	2650	2650	circ
5 1/2			
4 1/2			
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 50 FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS 615 _____
 IS COAL BEING MINED IN THE AREA? No BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

For Coal Company

Official Title