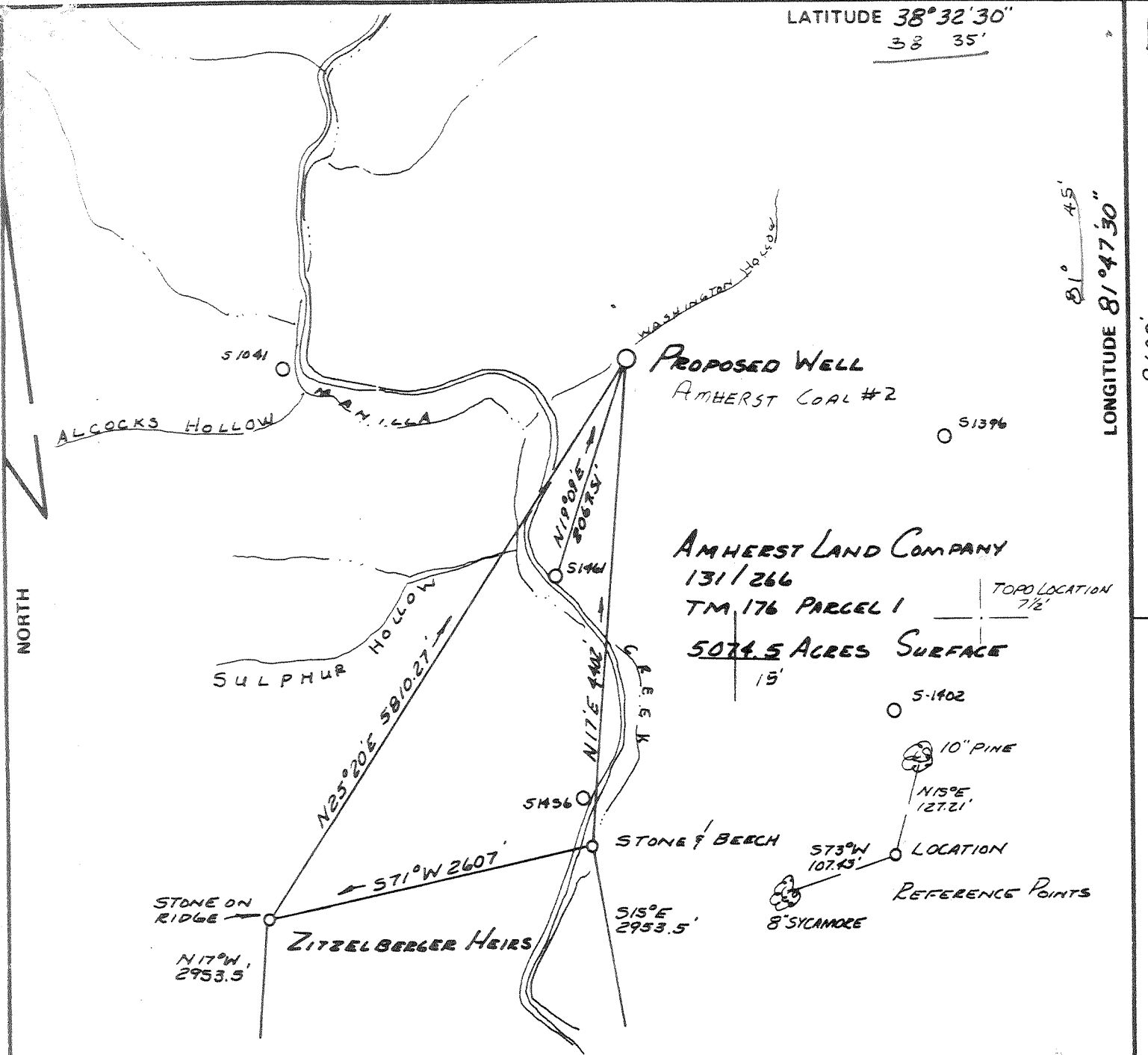


LATITUDE 38° 32' 30"

38 35'

LONGITUDE 81° 47' 30"



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1320'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION WELL 51461
 ELEVATION 584.5

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) James A. Clendenen
 R.P.E. _____ L.L.S. 259

PLACE SEAL HERE

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



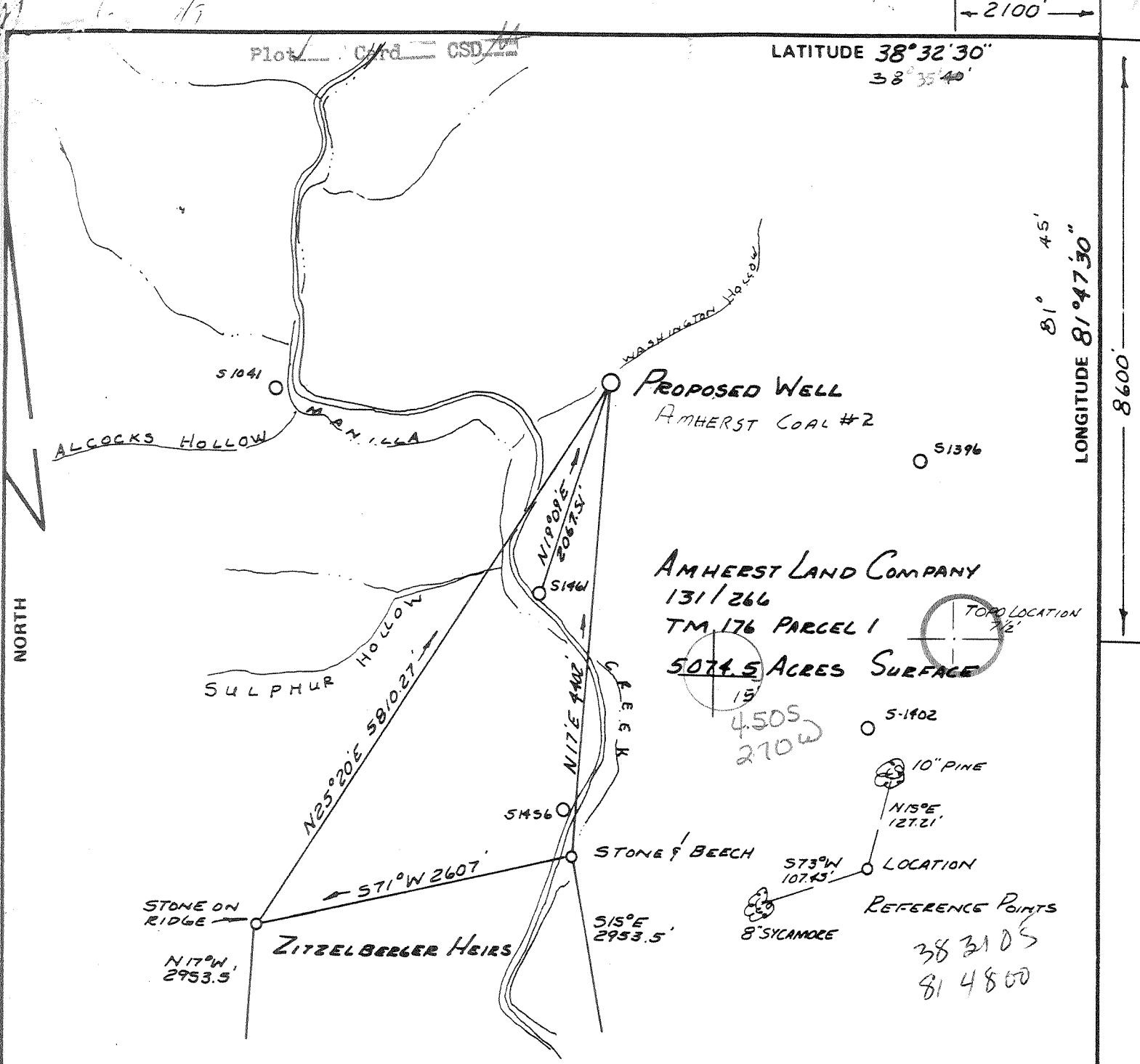
DATE 3-11 19 81
 OPERATOR'S WELL NO. AMHERST #2
 API WELL NO. 47 - 079 - 1068-Frac.
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 648 WATER SHED MANILLA CREEK
 DISTRICT POCATAHICO COUNTY PUTNAM
 QUADRANGLE BANGROET 7 1/2'
 SURFACE OWNER AMHERST COAL COMPANY ACREAGE 5074.5
 OIL & GAS ROYALTY OWNER AMHERST COAL Co. LEASE ACREAGE 3500
 LEASE NO. 47-0616
 PROPOSED WORK: DRILL 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 ORISKANY ESTIMATED DEPTH 4800
 WELL OPERATOR CABOT OIL & GAS CORP. DESIGNATED AGENT TIM CRAMBLETT
 ADDRESS P.O. BOX 628 ADDRESS P.O. BOX 628
CHARLESTON, W.V.A. CHARLESTON, W.V.A.

APR 23 1984



FILE NO. _____
 DRAWING NO. _____
 SCALE $1" = 1320'$
 MINIMUM DEGREE OF ACCURACY $1/200$
 PROVEN SOURCE OF ELEVATION WELL 51461
ELEVATION 584.5

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) _____
 R.P.E. _____ L.L.S. _____

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FORM IV-6 (8-78)

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___


LOCATION: ELEVATION 648 WATER SHED MANILLA CREEK
 DISTRICT POCOTALICO COUNTY PUTNAM
 QUADRANGLE BANGROET 7 1/2' Winfield 15' SE

SURFACE OWNER AMHERST COAL COMPANY ACREAGE 5074.5
 OIL & GAS ROYALTY OWNER AMHERST COAL Co. LEASE ACREAGE 3500
 LEASE NO. 47-0616

PROPOSED WORK: DRILL 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 ORISKANY ESTIMATED DEPTH 4800
 WELL OPERATOR CABOT OIL & GAS CORP. DESIGNATED AGENT TIM CRAMBLETT
 ADDRESS P.O. BOX 628 ADDRESS P.O. BOX 628
CHARLESTON, W.VA. CHARLESTON, W.VA.



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

DATE 3-11 1981
 OPERATOR'S WELL NO AMHERST #2
 API WELL NO. _____

47 - 079 - 1068
 STATE COUNTY PERMIT

OCT 15 1981

(192)



Date: September 4, 19 81

FORM IV-2
(Obverse)
(08-78)

Operator's Amherst #2
Well No. _____

API Well No. 47 - 079 - 1068

State County Permit

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

OIL AND GAS WELL PERMIT

WELL TYPE: Oil _____ / Gas XX /
(If "Gas", Production _____ / Underground storage _____ / Deep XX / Shallow _____ /)

LOCATION: Elevation: 648 Watershed: Manilla Creek
District: Pocatalico County: Putnam Quadrangle: Bancroft

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Richard P. Parsons
Address P.O. Box 628 Address P.O. Box 628
Charleston, WV 25322 Charleston, WV 25322

OIL & GAS ROYALTY OWNER Amherst Coal Co. COAL OPERATOR NONE
Address Attn: Vance Price Address _____
Lundale, WV 25631

ACREAGE _____ COAL OWNER(S) WITH DECLARATION ON RECORD:
SURFACE OWNER Amherst Coal Co. Name Amherst Coal Co.
Address Attn: Vance Price Address Attn: Vance Price
Lundale, WV 25631 Lundale, WV 25631

ACREAGE _____ Name _____
FIELD SALE (IF MADE) TO: Address _____
Address _____

OIL & GAS INSPECTOR TO BE NOTIFIED COAL LESSEE WITH DECLARATION ON RECORD:
Name Martin Nichols Name _____
Address P.O. Box 554 Address SEP 8 - 1981
Clendenin, WV 25045

RECEIVED

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed _____ / lease XX
other contract _____ / dated Sept. 30, 19 _____, to the undersigned well operator from Hatfield Reliance
Coal Co., Hatfield Campbell Creek Coal Co.

(IF said deed, lease, or other contract has been recorded):
Recorded on Nov. 5, 19 86, in the office of the Clerk of the County Commission of Putnam County, West
Virginia in Deed Book 32 at page 224. A permit is requested as follows:

PROPOSED WORK: Drill XX / Drill deeper _____ / Redrill _____ / Fracture or stimulate _____ /
Plug off old formation _____ / Perforate new formation _____ /
Other physical change in well (specify) _____
_____ planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to
make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the
Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to
the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to
the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY
TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMIS-
SION
1615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 348-3092

CABOT OIL AND GAS CORPORATION
Well Operator
By Richard W. Parsons
Its District Drilling Superintendent

BLANKET BOND

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Clint Hurt & Assoc., Inc.
Address P.O. Box 388
Elkview, WV 25071

GEOLOGICAL TARGET FORMATION, Oriskany

Estimated depth of completed well, 4795 feet Rotary XX / Cable tools /

Approximate water strata depths: Fresh, 50 feet; salt, feet.

Approximate coal seam depths: Unknown Is coal being mined in the area? Yes / No XX /

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per ft	New	Used			For drilling
Conductor							Kinds	
Fresh Water	9 5/8			X		300	300	Circ. to Surf.
Coal								Sizes
Intermediate	7			X		2300	2300	Circ. to Surf.
Production	4 1/2			X		4795	4795	200 sks. <i>into 7"</i>
Tubing								
Liners								Perforations:
								Top Bottom

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

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 5-29-82.

J. E. Huggins
Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof.

WAIVER

The undersigned coal operator / owner / lessee / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: , 19

By
Its

RECEIVED



IV-35
(Rev 8-81)

APR 20 1982

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES
State of West Virginia
Department of Mines
Oil and Gas Division

Date April 7, 1982
Operator's _____
Well No. #2 _____
Farm Amherst _____
API No. 47 - 079 - 1068 _____

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: 648' Watershed Manilla Creek
District: Pocatalico 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 Amherst Coal Co.
ADDRESS Attn: Vance Price, Lundale, WV 25631
MINERAL RIGHTS OWNER Amherst Coal Co.
ADDRESS Attn: Vance Price, Lundale, WV 25631
OIL AND GAS INSPECTOR FOR THIS WORK Martin
Nichols ADDRESS P.O. Box 554
Clendenin, WV 25045
PERMIT ISSUED September 8, 1981
DRILLING COMMENCED October 3, 1981
DRILLING COMPLETED October 10, 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	314'	314'	125 sks
8 5/8			
7	2099.65	2099.65	345 sks
5 1/2			
4 1/2	4824.51	4824.51	215 sks
3			
1-1/2		2209.48	
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Prop. Depth 4795 feet
Depth of completed well 4350' 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 Berea Pay zone depth 2228'-2235' feet
Gas: Initial open flow TSTM Mcf/d Oil: Initial open flow ---- Bbl/d
Final open flow 112 Mcf/d Final open flow ---- Bbl/d
Time of open flow between initial and final tests --- hours
Static rock pressure 700# 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)

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

- 10/22/81 - Perforated Oriskany from 4646' - 4656' (12 holes). Pumped 500 gal 15% HCL. Broke down Oriskany @ 2300 psi. Treated w/5000# 80/100 & 15,000# 20/40. Avg Inj Rate: 10 bbl/min w/3950 SCF N₂. Avg Treating Press: 1205#. Total fluid: 465 bbls. (Sand laden: 285 bbls). Total N₂: 179,000 SCF. Instant Shut In Press: 650#; after 15 min - 600#.
- 11/30/81 - Final test on November 25, 1981: SIP 470#; TSTM.
- 12/2/81 - Set bridge plug at 4350' w/2 sks calcele.
- 12/5/81 - Perforated Berea from 2228' - 2235' (12 holes).
- 12/8/81 - Pumped 500 gals 15% HCL. Break dwn press 1500#. Treated w/14,000# 80/100 & 42,000# 20/40. Avg Inj Rate: 10.8 BPM. Avg Treating Press: 2410#. Total fluid: 540 bbls. (Sand laden: 460 bbls). Total 180,000 SCF N₂. Instant Shut In Press: 2000#; after 15 min - 1800#.

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	300	
Sand			300	360	
Shale			360	435	
Sand			435	620	
Shale			620	710	
Sand			710	775	
Sand & Shale			775	1240	
Sand			1240	1495	
Sand & Shale			1495	1625	
Big Lime			1625	1740	
Shale			1740	1745	
Big Injun			1745	1804	
Shale			1804	2204	
Sunbury Shale			2204	2224	
Berea			2224	2238	
Shale			2238	3438	
Huron			3438	3975	
Shale			3975	4290	
Marcellus			4290	4550	
Onondaga			4550	4640	Gas ckeck @ 4550' - TSTM
Oriskany			4640	4658	
<u>Helderberg</u>			4658	4845	Gas check @ TD - small show of gas
				DTD 4845'	
				LTD 4850'	

(Attach separate sheets as necessary)

CABOT OIL AND GAS CORPORATION

Well Operator

By: R. P. BrownDate: April 7, 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 coal, encountered in the drilling of a well."



1) Date: March 26, 19 84
 2) Operator's Well No. Amherst #2
 3) API Well No. 47 - 079 - 1068-FRAC
 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 /
 B (If "Gas", Production / Underground storage / Deep / Shallow /)
- 5) LOCATION: Elevation: 648' / Watershed: Manilla Creek
 District: Pocatalico / County: Putnam / Quadrangle: Bancroft 7 1/2'
- 6) WELL OPERATOR Cabot Oil & Gas Corp. of WV
 Address P.O. Box 628
Charleston, WV 25322
- 7) DESIGNATED AGENT Robert E. Horrell
 Address P.O. Box 628
Charleston, WV 25322
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Jerry Holcomb
 Address Box 5B
Indore, WV 25111 587-7299
- 9) DRILLING CONTRACTOR:
 Name UNKNOWN
 Address _____
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify) Will isolate Berea with packer & GAS DIVISION
- 11) GEOLOGICAL TARGET FORMATION, Brown Shale
 12) Estimated depth of completed well, 4350 feet
 13) Approximate trata depths: Fresh, 50 feet; salt, _____ feet.
 14) Approximate coal seam depths: Unknown Is coal being mined in the area? Yes / No
- 15) CASING AND TUBING PROGRAM WORKOVER

RECEIVED
 MAR 29 1984
 GAS DIVISION
 DEPT. OF MINES

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		PROPOSED	
Conductor	9-5/8"		36				314'	150		Kinds Baker
Fresh water										Model R
Coal										Sizes 7 1/2 x 4 1/2
Intermediate	7		20				2099.65	407		
Production	4-1/2		10.5				4824.51	271		Depths set 2300'
Tubing	1-1/2		2.75				3870	PROPOSED		
Liners										Perforations:
										Top Bottom
4 1/2 Bridge Plug @ 4350' - EXISTING										

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-079-1068-FRAC Date April 16, 19 84

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 April 16, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

BLANKET	Agent: <u>LD</u>	Plat: <u>MH</u>	Casing: <u>MH</u>	Fee: <u>012-684</u>
---------	------------------	-----------------	-------------------	---------------------

[Signature]
 Administrator, Office of Oil and Gas

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

RECEIVED

JUN 4 - 1984

OIL & GAS DIVISION

DEPT. OF MINES

FD-35 (Rev 8-81)

Date May 22, 1984

Operator's

Well No. #2

State of West Virginia

Department of Mines

Oil and Gas Division

Farm Amherst

API No. 47 - 079 - 1068 Frac

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: 648' Watershed Manilla Creek

District: Pocatalico County Putnam Quadrangle Bancroft 7 1/2'

COMPANY Cabot Oil & Gas Corporation of WV

ADDRESS P.O. Box 628, Charleston, WV 25322

DESIGNATED AGENT Robert E. Horrell

ADDRESS P.O. Box 628, Charleston, WV 25322

SURFACE OWNER Diamond Shamrock Coal Company

Attn: Ervin Allen - 1200 First Security Plaza
ADDRESS Lexington, Kentucky 40507

MINERAL RIGHTS OWNER Amherst Coal Company

ADDRESS Attn: Vance Price, Lundale, WV 25631

OIL AND GAS INSPECTOR FOR THIS WORK Jerry

Holcomb ADDRESS Box 5B, Indoor, WV 25111

PERMIT ISSUED April 16, 1984

~~WORKOVER~~ ~~DRILLING~~ COMMENCED 4/13/84

~~WORKOVER~~ ~~DRILLING~~ COMPLETED 4/25/84

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 Cord.			
13-10"			
9 5/8			
8 5/8			
7			
5 1/2			
4 1/2			
3			
2 1-1/2		3956.64'	Parmaco Hookwall Packer set @ 2310
Liners used	w/seating nipple		

GEOLOGICAL TARGET FORMATION Huron Shale Depth feet

Depth of completed well 4480 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 3443-3917 feet

Gas: Initial open flow 0 Mcf/d Oil: Initial open flow Bbl/d

4 Hr. Final open flow 207 Mcf/d Oil: Final open flow Bbl/d

Time of open flow between initial and final tests hours

Static rock pressure 510 psig (surface measurement) after 168 hours shut in

(If applicable due to multiple completion--)

Second producing formation Berea 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.

- 10/22/81 - Perforated Oriskany from 4646' - 4656' (12 holes). Pumped 500 gal 15% HCL. Broke down Oriskany @ 2300 psi. Treated w/5000# 80/100 & 15,000# 20/40. Avg Inj Rate: 10 bbl/min w/3950 SCF N₂. Avg Treating Press: 1205#. Total fluid: 465 bbls. (Sand laden: 285 bbls). Total N₂: 179,000 SCF. Instant Shut In Press: 650#; after 15 min - 600#.
- 11/30/81 - Final test on November 25, 1981: SIP 470#; TSTM.
- 12/2/81 - Set bridge plug at 4350' w/2 sks calcele. *Orig. compl. zones*
- 12/5/81 - Perforated Berea from 2228' - 2235' (12 holes).
- 12/8/81 - Pumped 500 gals 15% HCL. Break dwn press 1500#. Treated w/14,000# 80/100 & 42,000# 20/40. Avg Inj Rate: 10.8 BPM. Avg Treating Press: 2410#. Total fluid: 540 bbls. (Sand laden: 460 bbls). Total 180,000 SCF N₂. Instant Shut In Press: 2000#; after 15 min - 1800#.

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FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
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Sand			300	360	
Shale			360	435	
Sand			435	620	
Shale			620	710	
Sand			710	775	
Sand & Shale			775	1240	
Sand			1240	1495	
Sand & Shale			1495	1625	
Big Lime			1625	1740	
Shale			1740	1745	
Big Injun			1745	1804	
Shale			1804	2204	
Sunbury Shale			2204	2224	
Berea			2224	2238	
Shale			2238	3438	
Huron			3438	3975	
Shale			3975	4290	
Marcellus			4290	4550	Gas ckeck @ 4550' - TSTM
Onondaga			4550	4640	
Oriskany			4640	4658	Gas check @ TD - small show of gas
<u>Helderberg</u>			4658	4845	
				DTD 4845'	
				LTD 4850'	

(Attach separate sheets as necessary)

CABOT OIL AND GAS CORPORATION

Well Operator

By: R. J. [Signature]

Date: April 7, 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 coal, encountered in the drilling of a well."