

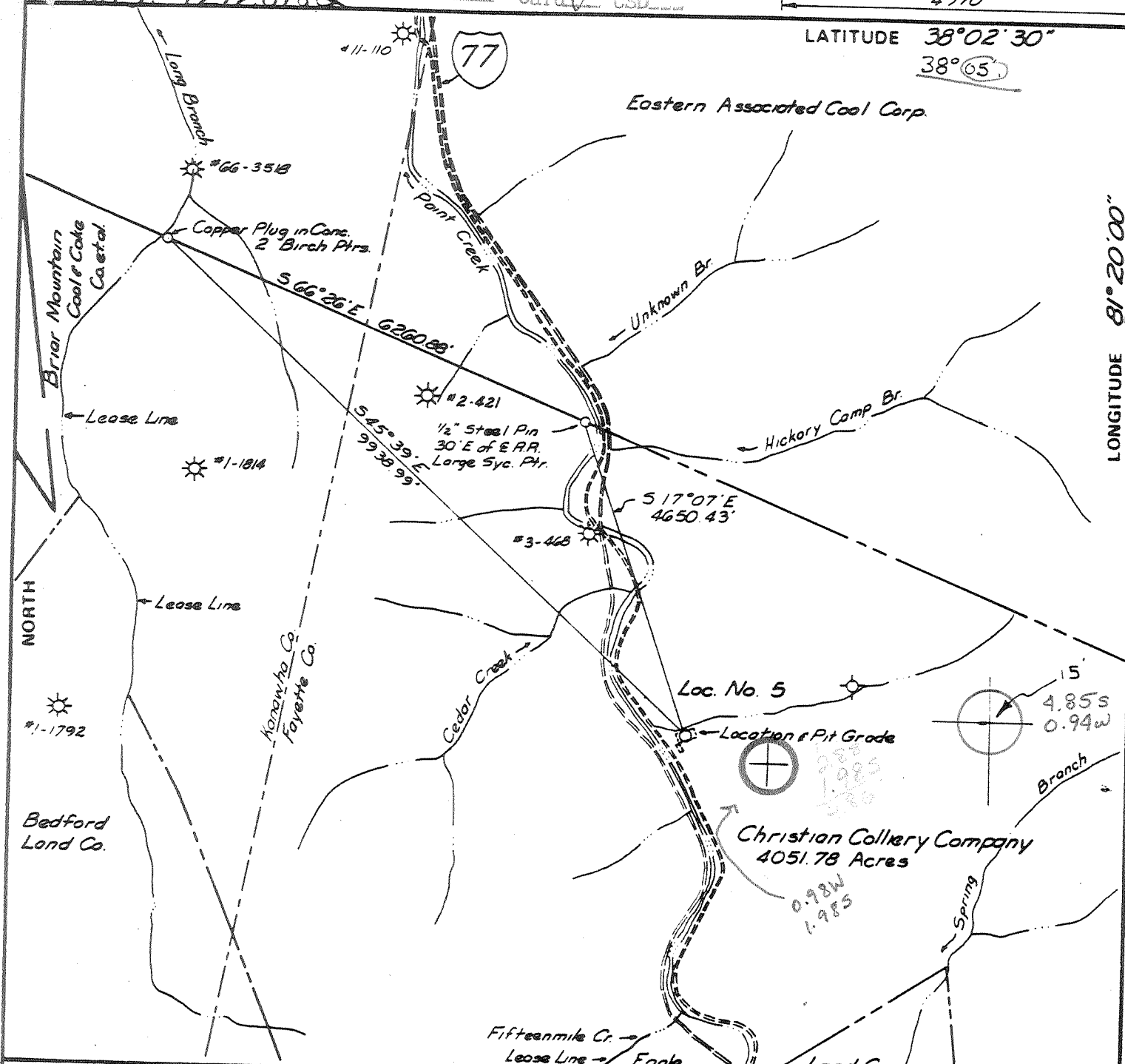
11/2 12/20/82

Plot ✓ Card ✓ CSD 57

4970'

LATITUDE 38°02'30"
38°05'

LONGITUDE 81°20'00"



FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 2000'
 MINIMUM DEGREE OF ACCURACY 1 in 27300
 PROVEN SOURCE OF ELEVATION USGS metal disk in bridge abutment at Mahan

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) Stephen Parks
 R.P.E. 8982 L.L.S. _____

PLACE SEAL HERE

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



DATE Dec 16, 1982
 OPERATOR'S WELL NO. 5-Ser #096561
 API WELL NO. _____
47 - 019 - 0511
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
 LOCATION: ELEVATION 1008.5 WATER SHED Last Branch of Point Creek
 DISTRICT Valley COUNTY Fayette
 QUADRANGLE Powellton Montgomery 15'50
 SURFACE OWNER Christian Colliery Company ACREAGE 4051.78
 OIL & GAS ROYALTY OWNER Christian Colliery Company LEASE ACREAGE 4051.78
 LEASE NO. 9968
 PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION Onondaga Lime ESTIMATED DEPTH 5728'
 WELL OPERATOR Ashland Exploration Inc. DESIGNATED AGENT Forrest Burkett
 ADDRESS P.O. Box 391 Ashland Ky 41114 ADDRESS P.O. Box 156 Brenton WV 24818

JAN 03 1983

Deep well
C/o Burkett (279)



IV-35
(Rev 8-81)

Date 3/26/84
Operator's
Well No. 5
Firm Christian Colliery
API No. 47 - 019 - 0511-REN

State of West Virginia
Department of Mines
Oil and Gas Division

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 x / Shallow ___ /)

LOCATION: Elevation: 1008.5 Watershed Lost Branch of Paint Creek
District: Valley County Fayette Quadrangle Powellton

COMPANY Ashland Exploration, Inc.
ADDRESS P. O. Box 391, Ashland, Ky. 41114
DESIGNATED AGENT Forrest Burkett
ADDRESS P. O. Box 156, Brenton, WV 24818
SURFACE OWNER Christian Colliery Co.
ADDRESS 214 Orchard Way, Wayne, PA 10987
MINERAL RIGHTS OWNER Christian Colliery Co.
ADDRESS 214 Orchard Way, Wayne, PA 10987
OIL AND GAS INSPECTOR FOR THIS WORK Rue
Schoolcraft ADDRESS Box 706, Pineville, WV 24874
PERMIT ISSUED 11/23/83
DRILLING COMMENCED 1/18/84
DRILLING COMPLETED 2/1/84
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 Cond.	30'	30'	20 sks
13-10"	325'	325'	180 sks
9 5/8			
8 5/8	1021'	1021'	200 sks
7			
5 1/2			
4 1/2	4233'	4233'	150 sks
3			
2		4426'	
Liners used			

GEOLOGICAL TARGET FORMATION Onondaga Lime Depth 5728 feet
Depth of completed well 5819 feet Rotary x / Cable Tools _____
Water strata depth: Fresh 30' & 260 feet; Salt 407' feet
Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 5592-4233 feet
Gas: Initial open flow 16 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 133 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 hours

¹²³⁹
¹³³ Static rock pressure 630 psig (surface measurement) after 144 hours shut in
¹⁸⁷² (If applicable due to multiple completion--)
mcf Second producing formation Gordon & Weir Pay zone depth 2108-2124
FOF Gas: Initial open flow 37 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1739 Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests 3 hours
Static rock pressure 650 psig (surface measurement) after 144 hours shut in

APR 9 1984

Rhinestreet
Huron

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

75 Q open hole foam frac Devonian Shale 5592-4233 using 90,000# 20/40 sand, 1,050,000 SCF N₂, 412 bbl TL&FW, 380 bbl TSLF. BD @ 2800#, ATP 3000# @ 16 B/M. MTP 3100#, ISIP 1600#, 15 min 1500#.

75 Q foam frac Gordon thru 20H/2696-2712 using 500 gal 15% HCl, 50,000# 20/40 sand, 297,000 SCF N₂ @ 9000 SCF/min. BD @ 1100#, ATP 1150#, MTP 1150#, ISIP 600#, 15 min 600#, TL&FW 212 bbl, TSLF 172 bbl.

75 Q foam frac Weir thru 24H/2108-2124 using 12,000# 20/40 sand, 130,000 SCF N₂, 134 bbl TL&FW, 84 bbl TSLF (screened out - soap pump failure.)

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS	
					Including indication of all fresh water	and salt water, coal, oil and gas
Sand			0	196		Fresh wtr @ 30'
Shale			196	307		Fresh wtr @ 260'
Salt Sand			307	858		Salt water @ 407'
Shale			858	982		
Sand & Shale			982	1030		
Avis Limestone			1030	1060		
Shale & Sand			1060	1540		
Lower Maxton			1540	1568		
Shale			1568	1606		
Little Lime			1606	1675		
Pencil Cave			1675	1702		
Big Lime			1702	2002		
Shale			2002	2019		
Injun			2019	2053		
Shale			2053	2094		
Upper Weir			2094	2125		
Shale			2125	2170		
Middle Weir			2170	2184		
Shale			2184	2202		
Lower Weir			2202	2235		Show of gas
Shale			2235	2468		
Coffee Shale			2468	2490		
Berea			2490	2524		
Devonian Shale			2524	2692		
Gordon			2692	2713		Show of gas
Devonian Shale			2713	5735		Show of gas
Onondaga LS			5735	TD		

DTD 5815
LTD 5786

3s
51

5735
5592
143

4223
2524
1709

5735
2524
3211

(Attach separate sheets as necessary)

ASHLAND EXPLORATION, INC.

Well Operator

By: *Don S. King*

Date: March 26, 1984

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



1) Date: November 7, 1983
 2) Operator's Serial #096561
 Well No. Christian Colliery #5
 3) API Well No. 47 - 019 - 0511-Ren
 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 X / Shallow)
- 5) LOCATION: Elevation: 1008.5 Watershed: Lost Branch of Paint Creek
 District: Valley County: Fayette Quadrangle: Powellton
- 6) WELL OPERATOR Ashland Exploration, Inc. 7) DESIGNATED AGENT Forrest Burkett
 Address P.O. Box 391 Address Box 156
Ashland, KY 41114 Brenton, WV 24818
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Rue Schoolcraft Name Ray Resources Drilling Company
 Address P.O. Box 706 Address 2101 Washington St., East
Pineville, WV 24874 Charleston, WV 25311
- 10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate X /
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Onondaga Lime
- 12) Estimated depth of completed well, 5728' feet top of
- 13) Approximate trata depths: Fresh, feet; salt, salt sand feet.
- 14) Approximate coal seam depths: None Is coal being mined in the area? Yes NOV 8 - 1983

RECEIVED
 NOV 8 - 1983

15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	OIL & GAS DIVISION PACKERS	
	Size	Grade	Weight per ft.	New	Used	For drilling		Left in well	DEPT. OF MINES
Conductor	11 3/4	H-40	43	X		40	40	20 sks	Kinds
Fresh water									
Coal									Sizes
Intermediate	8 5/8	K-55	24	X		994	994	Circ to surface by rule 15.05	
Production	4 1/2	K-55	10.5	X		5728	5728	As needed by rule 15.01	
Tubing									
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-019-0511-Ren Date November 23, 19 83

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 November 23, 1985 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: MARKET BOND	Agent: <u>LO</u>	Plat: <u>MH</u>	Casing: <u>MH</u>	Fee: <u>713</u>
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Margaret J. Hass
 Administrator, Office of Oil and Gas



1) Date: December 16, 1982
 2) Operator's Well No. 3, Serial No. 096561
 3) API Well No. 47 - 019 - 0511
 State _____ County _____ Permit _____

DRILLING CONTRACTOR:
Ray Resources Drilling Co.
2101 Washington St., East
Charleston, WV 25311

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

- 4) WELL TYPE: A Oil _____ / Gas X /
 B (If "Gas", Production _____ / Underground storage _____ / Deep X / Shallow _____)
- 5) LOCATION: Elevation: 1000.5 Watershed: Lost Branch of Paint Creek
 District: Valley County: Fayette Quadrangle: Powellton
- 6) WELL OPERATOR Ashland Exploration, Inc. 11) DESIGNATED AGENT Forrest Burkett
 Address P. O. Box 391 Address P. O. Box 150
Ashland, KY 41114 Brenton, WV 24818
- 7) OIL & GAS ROYALTY OWNER Christian Colliery Company 12) COAL OPERATOR None - Location is
 Address 214 Orchard Way Address below all mineable coal seams
Wayne, PA 19087
 Acreage 4051.78
- 8) SURFACE OWNER Christian Colliery Company 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Address 214 Orchard Way Name Christian Colliery Company
Wayne, PA 19087 Address 214 Orchard Way
 Acreage 4051.78 Address _____
- 9) FIELD SALE (IF MADE) TO:
 Address _____
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name W. Craig Duckworth
 Address P. O. Box 454
Mt. Lookout, WV 26678
- 15) PROPOSED WORK: Drill _____ / Drill deeper _____ / Redrill _____ / Fracture or stimulate X /
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 16) GEOLOGICAL TARGET FORMATION, 5728'
 17) Estimated depth of completed well, _____ feet
 18) Approximate water strata depths: Fresh, None feet; salt, top of salt sand feet,
 19) Approximate coal seam depths: _____ Is coal being mined in the area? Yes _____ / No X /

20) 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	Left in well			
Conductor	2 7/8	K-40	43			40	40	20 SACS		Kinds
Fresh water										
Coal	6 5/8	K-55	24	X		994	994	circ to surface		Sizes
Intermediate	4 1/2	K-55	10.5	X		5728	5728	as needed		Depths set
Production										
Tubing										
Liners										Perforations: Top Bottom

- 21) EXTRACTION RIGHTS
 Check and provide one of the following:
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)
- 22) ROYALTY PROVISIONS
 Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No
- If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.

23) Required Copies (See reverse side.)
 24) 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.

Notary: W. W. Duckworth Signed: J. H. Burkett
 My Commission Expires May 21, 1986 Its: Regional Civil Engineer

OFFICE USE ONLY
DRILLING PERMIT
 Permit number 67-019-0511 Date January 1 1982

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. 10) 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.)

Permit expires _____ unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee

Administrator, Office of Oil and Gas