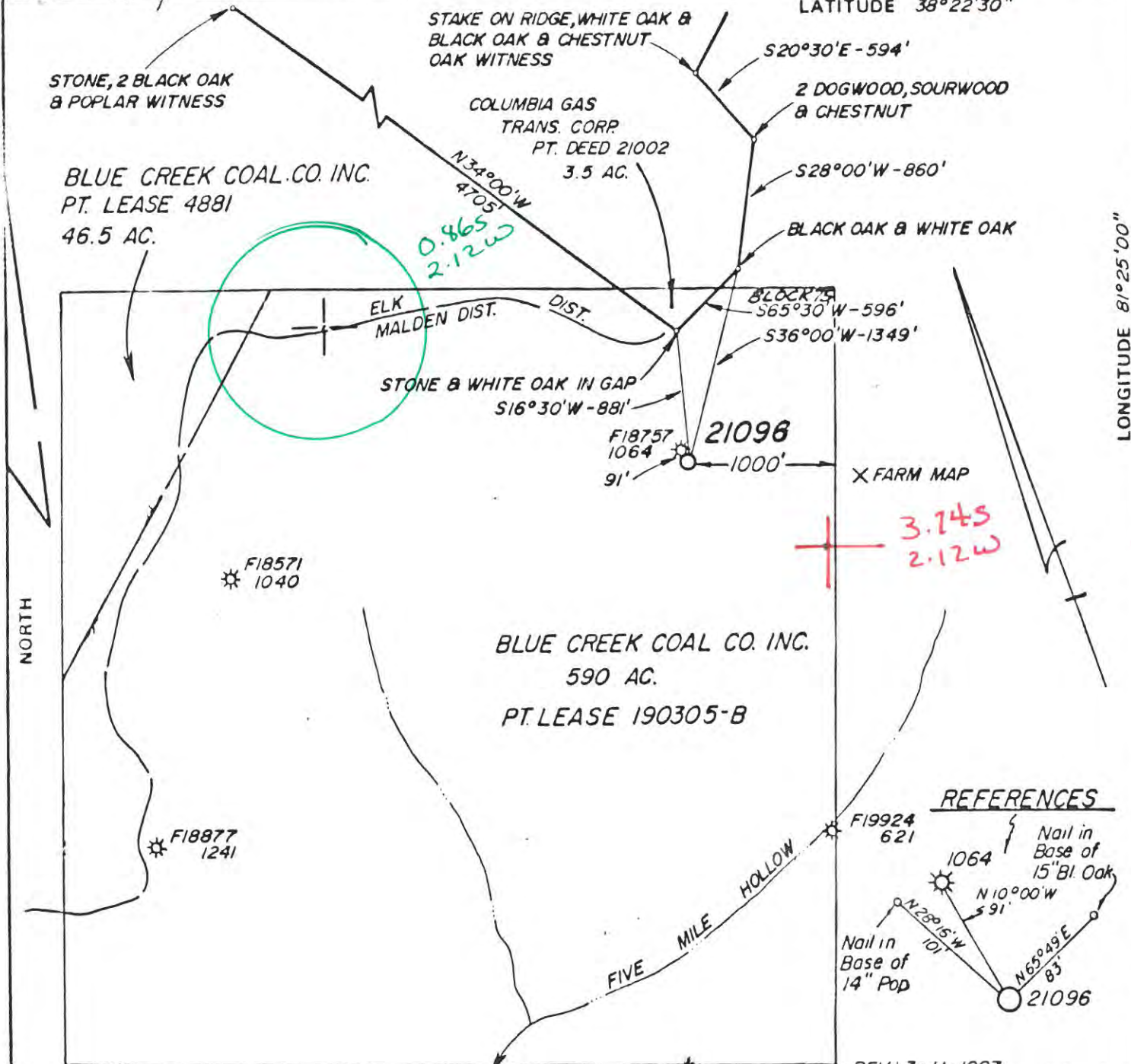


70 5/12/87

11,100'

25



FILE NO. 70-59
 DRAWING NO. 21096
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION U.S. GOV'T. B.M.
ELEV. 945'

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) [Signature]
 R.P.E. _____ L.L.S. 99 W.V.

REFERENCES

1064 Nail in Base of 15" Bl. Oak
 N 10°00'W 591'
 N 28°15'W 101'
 N 65°49'E 83'
 21096
 Nail in Base of 14" Pop

PLACE SEAL HERE

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

NOTE BOOK 2427-27
 B 435-A-30

FORM IV-6
 (8-78) LAT.: 38°21'40"
 LONG.: 81°27'20"



DATE MAY 11, 19 82
 OPERATOR'S WELL NO. 21096
 API WELL NO. 47-039-4484
 STATE WV COUNTY KANAWHA PERMIT 4484

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

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

LOCATION: ELEVATION 1269.80' WATER SHED CAMPBELLS CREEK
 DISTRICT MALDEN 7 COUNTY KANAWHA
 QUADRANGLE QUICK 563 629 Wly Clendenin

SURFACE OWNER BLUE CREEK COAL CO INC. ACREAGE 3,080 AC.
 OIL & GAS ROYALTY OWNER BLUE CREEK COAL CO INC. LEASE ACREAGE 640 AC. UNIT
 LEASE NO. 190305-B

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 TUSCARORA ESTIMATED DEPTH 6620'
 WELL OPERATOR COL. NAT RES. DESIGNATED AGENT J.E. CAMPBELL
 ADDRESS P.O. BOX 1273 1013 ADDRESS SAME
CHARLESTON, WV 25325

JUN 1 1987

H. T. HALL

6-6 Indian Creek (deep well)

IV-35
(Rev 8-81)



Date February 25, 1988
Operator's
Well No. 21096
Farm Union Carbide
API No. 47 - 039 - 4484

RECEIVED
MAR 01 1988

State of West Virginia
Department of Mines
Oil and Gas Division

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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: 1269.8 Watershed Campbells Creek
District: Malden County Kanawha Quadrangle Quick

COMPANY Columbia Natural Resources, Inc.
ADDRESS P. O. Box 1273, Charleston, WV 25325
DESIGNATED AGENT Joseph E. Campbell

ADDRESS P. O. Box 1273, Charleston, WV 25325
SURFACE OWNER Blue Creek Coal Co., Inc. (Real Estate Department)

ADDRESS 32 Sanderson Road, Clendenin, WV 25045
MINERAL RIGHTS OWNER Blue Creek Coal Co., Inc. (Real Est. Department)

ADDRESS 32 Sanderson Road, Clendenin, WV 25045
OIL AND GAS INSPECTOR FOR THIS WORK
Carlos Hively ADDRESS 223 Pinch Ridge Road Elkview, WV 25071

PERMIT ISSUED May 28, 1987
DRILLING COMMENCED August 29, 1987
DRILLING COMPLETED September 10, 1987

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.	40	40	24
13-10"	502	502	532
9 5/8	2027	2027	854
8 5/8			
7	5516	5516	236
5 1/2			
4 1/2	6888	6888	227
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Tuscarora Depth 6948 feet

Depth of completed well 6965 feet Rotary X / Cable Tools _____

Water strata depth: Fresh 70 feet; Salt 1095 feet

Coal seam depths: 436-450 Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Tuscarora Pay zone depth 6939-6948 feet

Gas: Initial open flow 5280 Mcf/d Oil: Initial open flow - Bbl/d

Final open flow 5280 Mcf/d Final open flow - Bbl/d

Time of open flow between initial and final tests 6 hours

Static rock pressure 1454 psig (surface measurement) after 48 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

natural well

MAR 4 1988

(Continue on reverse)

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

N/A

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Top Soil			0	10	
Sand			10	80	
Sand & Shale			80	196	
Shale			196	245	
Coal			245	250	
Sand			250	436	
Coal			436	450	
Shale			450	469	
Sand			469	595	
Shale			595	670	
Sand & Shale			670	730	
Sand			730	820	
Sand & Shale			820	920	
Shale			920	940	
Sand & Shale			940	1050	
Sand			1050	1500	
Sand & Shale			1500	1563	
Sand			1563	1589	
Sand & Shale			1589	1685	
Maxon			1685	1768	
Big Lime			1768	1931	
Injun			1931	1962	
Sand & Shale			1962	2305	
Berea			2305	2310	
Shale			2310	5276	
Onondaga Lime			5276	5390	
Oriskany			5390	5450	
Lime			5450	6450	
Sand			6450	6475	
Shale			6475	6500	
Sand & Shale			6500	6732	
First Red Bed			6732	6737	
Sand & Shale			6737	6800	
Sand			6800	6887	
Red			6887	6891	
Tuscarora			6891	6950	
✓ Juniata Shale			6950	6965	

Drillers T.D. 6965'
Loggers T.D. 6979'

(Attach separate sheets as necessary)

COLUMBIA NATURAL RESOURCES, INC.
Well Operator
By: *Frank Campbell*
Date: 2-29-88

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..."

(Obverse)
7/8

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MAY 07 1987



1) Date: March 20, 1987
 2) Operator's Well No. 21096
 3) API Well No. 47 039 4484
 State County Permit

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY, 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: 1269.80 Watershed: Campbells Creek
 District: Malden 7 County: Kanawha 039 Quadrangle: Quick 562
- 6) WELL OPERATOR Columbia Natural Resources, Inc. 7) DESIGNATED AGENT J. E. Campbell
 Address P. O. Box 1273 10460 Address P. O. Box 1273
Charleston, WV 25325 Charleston, WV 25325
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Carlos W. Hively
 Address 223 Pinch Ridge Road
Elkview, WV 25071
- 9) DRILLING CONTRACTOR: Name _____ Address _____
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate /
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Tuscarora
- 12) Estimated depth of completed well, 6220 feet
- 13) Approximate strata depths: Fresh, 2477 feet; salt, _____ feet.
- 14) Approximate coal seam depths: 420' 2697' Is coal being mined in the area? Yes / No /
- 15) CASING AND TUBING PROGRAM see 039-1064

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									Kinds
Fresh water	3-3/8	H-40	48	X		500' 470'	500'	To surface	Per Rule 15.0
Coal	9-5/8	K-55	36	X		1760'	1760'	To surface	
Intermediate	7"	N-80	26	X		5100'	5100'		
Production	4-1/2"	C-75	13.5	X		6620'	6620'	660 SKS OR DEPT. REQUIRED BY RULE 15.01	
Tubing									Perforations:
Lin.									Top Bottom

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-039-4484 Date May 28 19 87

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 May 28, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>5011774</u> <u>201</u>	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>
---	--	---	---	-----------------------------------	---	--	---------------------------------

NOTE: Keep one copy of this permit posted at the drilling location. _____
 Director, Division of Oil and Gas File

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

10096