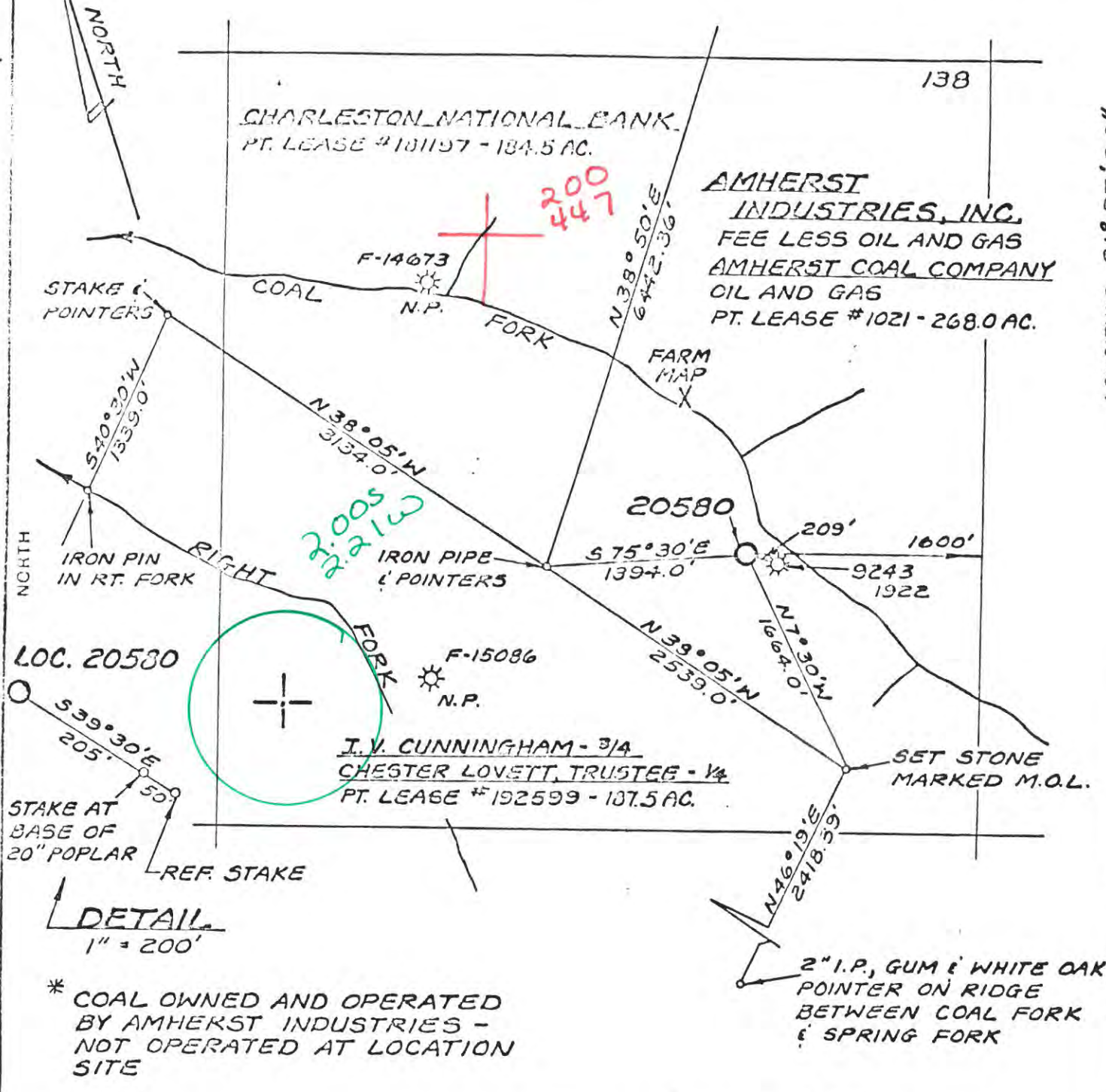


15



DETAIL
1" = 200'

* COAL OWNED AND OPERATED BY AMHERST INDUSTRIES - NOT OPERATED AT LOCATION SITE

REVISION 3/6/87

FILE NO. 68-55
 DRAWING NO. 20530
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION U.S. GOV'T B.M.
ELEV. 839'

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, WV



PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 M.D.K. BOOK 2474 PG. 45
 LAT.: 38°18'17"
 LONG.: 81°29'57"



DATE JUNE 13, 1984
 OPERATOR'S WELL NO. 20580
 API WELL NO. 47-039-4500
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
 LOCATION: ELEVATION 819' WATER SHED COAL FORK
 DISTRICT MALDEN 7 COUNTY KANAWHA
 QUADRANGLE QUICK 563 029 7
 SURFACE OWNER AMHERST INDUSTRIES ACREAGE 5,000
 OIL & GAS ROYALTY OWNER AMHERST INDUSTRIES LEASE ACREAGE 640 AC. UNIT
 LEASE NO. 1021
 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 TUSCARORA ESTIMATED DEPTH 6,380'
 WELL OPERATOR COL. NATURAL RES., INC. DESIGNATED AGENT J.E. CAMPBELL
 ADDRESS P.O. BOX 1273 1013 ADDRESS SAME
CHARLESTON, W.VA. 25325 DEEP WELL 6-6 Indian Creek (358)

JUN 1 1987



Date September 8, 1987
 Operator's Well No. 20580
Farm Amherst Industries, Inc.
 API No. 47 - 039 - 45

RECEIVED
 SEP 15 1987

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: 819' Watershed Coal Fork of 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 Amherst Industries, Inc.

ADDRESS Port Amherst, Charleston, WV 25306

MINERAL RIGHTS OWNER Amherst Industries, Inc.

ADDRESS Port Amherst, Charleston, WV 25306

OIL AND GAS INSPECTOR FOR THIS WORK _____

Carlos W. Hively ADDRESS Elkview, WV

PERMIT ISSUED May 29, 1987

DRILLING COMMENCED July 21, 1987

DRILLING COMPLETED August 3, 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 20-1/2 Cond.	38'	38'	To surfa
13-1/2 3/8	391'	391'	To surfa
9 5/8	1477'	1477'	To surfa
8 5/8			
7	4886'	4886'	200 sac
5 1/2			
4 1/2	6243'	6243'	120 sac
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Tuscarora Depth 6280 feet

Depth of completed well 6294 feet Rotary X / Cable Tools _____

Water strata depth: Fresh 75/190 feet; Salt _____ feet

Coal seam depths: _____ Is coal being mined in the area? _____

OPEN FLOW DATA

Producing formation Tuscarora Pay zone depth 6280 feet

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

Final open flow 4600 Mcf/d Final open flow _____ Bbl

Time of open flow between initial and final tests _____ hours

Static rock pressure 1441 psig (surface measurement) after 72 hours shut

(If applicable due to multiple completion--)

Second producing formation _____ Pay zone depth _____ feet

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

Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl

Time of open flow between initial and final tests _____ hours

Static rock pressure _____ psig (surface measurement) after _____ hours shut

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

✓ Open hole completion.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all f. and salt water, coal, oil and
Fill			0	25	
Shale			25	30	
Coal			30	33	
Sand			33	45	
Shale			45	75	
Sand and Shale			75	135	
Sand			135	190	
Sand and Shale			190	284	
Sand and Shale			284	327	
Coal			327	330	
Sand and Shale			330	369	
Sand and Shale			369	472	
Sand			472	620	
Shale			620	660	
Sand			660	792	
Shale			792	800	
Sand			800	868	
Shale			868	910	
Sand and Shale			910	978	
Sand			978	1066	
Sand and Shale			1066	1109	
Sand			1109	1149	
Little Lime			1149	1380	
Injun Sand			1380	1405	
Shale			1405	1500	
Shale			1500	1810	
Berea			1810	1820	
Shale			1820	2350	
Shale			2350	4668	
Oriskany and Lime			4668	4782	
Oriskany			4782	4810	
Shale			4810	5019	
Dolomite Sand and Shale			5019	5400	
Sand and Shale			5400	5460	
Lime			5460	5545	
Sand			5545	5585	
Lock Port Dolomite			5585	5720	
Limestone			5720	5760	
Keefer			5760	5790	

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SEP 15 1987

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

(See Attached)

(Attach separate sheets as necessary)

COLUMBIA NATURAL RESOURCES, INC.

Well Operator

By: *James H. Campbell*

Date: 9-8-87

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

6812

0394500, Pg. 2

<u>FORMATION COLOR HARD OR SOFT</u>	<u>TOP FEET</u>	<u>BOTTOM FEET</u>
Rosehill	5790	5995
1# Red Bed	5995	6000
Shale	6000	6180
2# Red Bed	6180	6190
Shale	6190	6220
3# Red Bed	6220	6223
Tuscarora Sand	6223	6280
Shale <i>Juniata</i>	6280	<u>6294</u>

RECEIVED
SEP 15 1987

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

SEP 21 1987

RECEIVED
MAR 27 1987



1) Date: March 20, 1987
2) Operator's Well No. 20580
3) API Well No. 47 State 039 County 4500 Permit

(Formerly: 039-4170)

STATE OF WEST VIRGINIA
DIVISION OF OIL & GAS DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
DEPARTMENT OF ENERGY APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil / Gas / B (If "Gas", Production / Underground storage / Deep / Shallow)
- 5) LOCATION: Elevation: 819' Watershed: Coal Fork 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 Hively Address 233 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, 6380 feet
- 13) Approximate strata depths: Fresh, _____ feet; salt, _____ feet.
- 14) Approximate coal seam depths: 55'; 310' Is coal being mined in the area? Yes / No

15) 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	20"	H-40	94#			60'	60'	To surface	Kinds Per Rule 15.05 S&E 490 SKS OR BY Rule 15.01 630 SKS OR BY Rule 15.01 BY Rule 15.01
Fresh water	13-3/8"	H-40	48#			380'	380'	To surface	
Coal	9-5/8"	K-55	36#			1900'	1900'	To surface	
Intermediate	7"	N-80	26#			4900'	4900'		
Production	4-1/2"	C-75	13.5#			6380'	6380'		
Tubing									
Lin.									

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-039-4500 Date May 29 1987

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 29, 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 5011715 189	WPCP <input checked="" type="checkbox"/>	S&E <input checked="" type="checkbox"/>	Other
---	--	---	--	-----------------	--	---	-------

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.

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