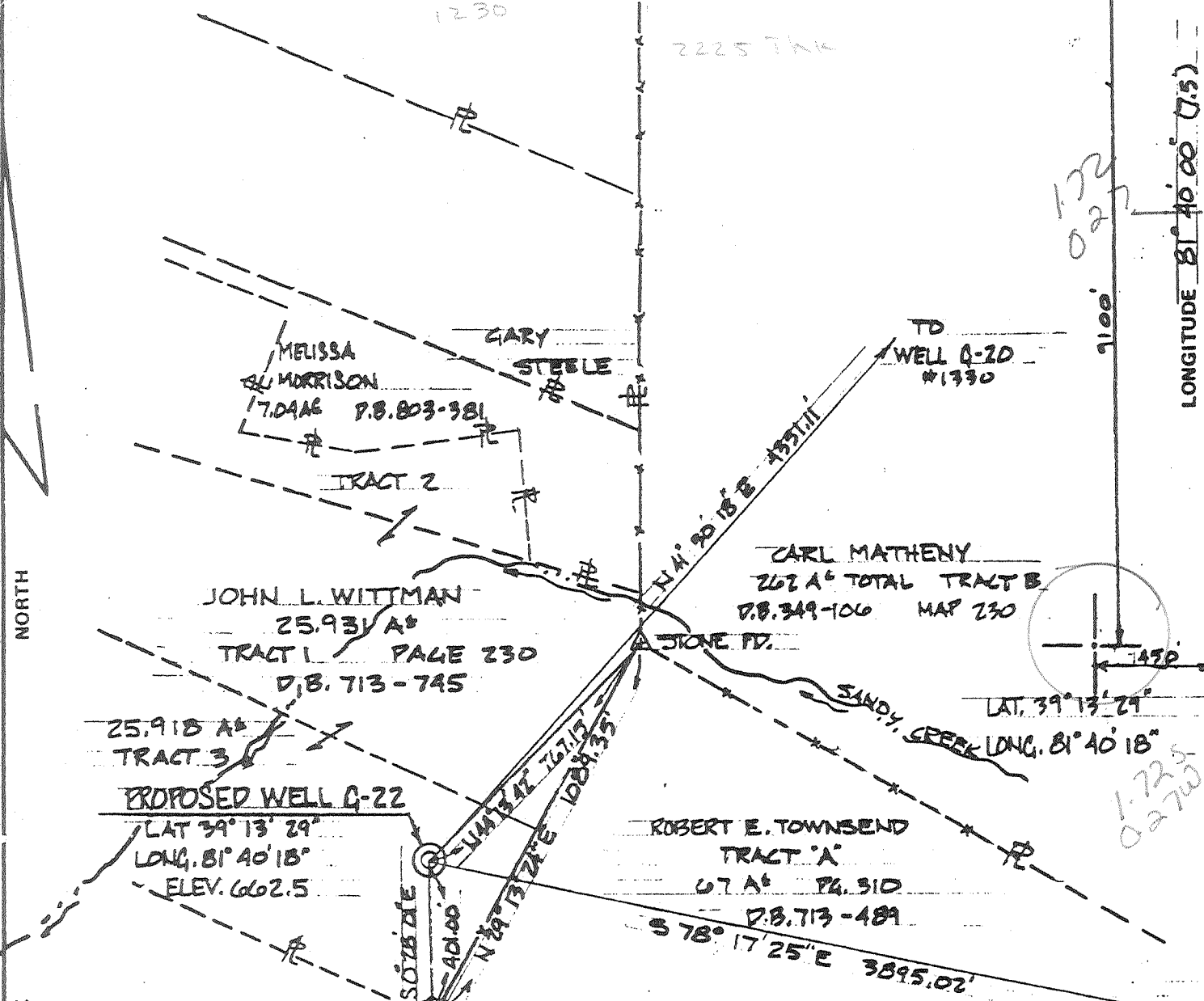
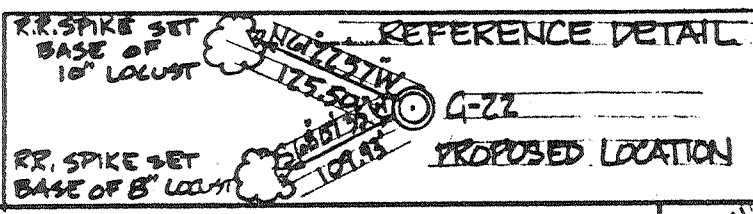


LATITUDE 39° 15' 00" (7.5)

LONGITUDE 81° 40' 00" (7.5)

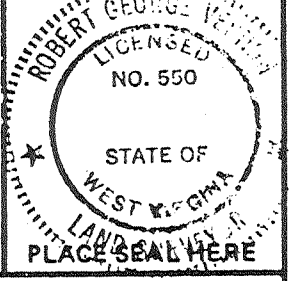


ROYALTY OWNERS
 JOHN L. & BETTY J. WITTMAN 40A
 JOHN C. WITTMAN
 CARL MATHENY 30A
 ROBERT E. TOWNSEND 30A



FILE NO. B6-2534
 DRAWING NO. _____
 SCALE 1" = 400'
 MINIMUM DEGREE OF ACCURACY 1:5000
 PROVEN SOURCE OF ELEVATION U.S.G.S.
CONTOUR LOCATION

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) Peter P. Yining
 R.P.E. _____ L.L.S. 550



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE 7-28 1986
 OPERATOR'S WELL NO. Q-22
 API WELL NO. 47-107-1403
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL ___ GAS ___ LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 662.5 WATER SHED SANDY CREEK
 DISTRICT LOBECK COUNTY WOOD
 QUADRANGLE LOBECK (7.5) 444 009 NW, Belleville
 SURFACE OWNER JOHN L. & BETTY J. WITTMAN ACREAGE 40
 OIL & GAS ROYALTY OWNER SEE ABOVE LEASE ACREAGE 100
 LEASE NO. _____
 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 4400
 WELL OPERATOR EL DUPONT DE JEMOURS DESIGNATED AGENT PETER P. YINING AUG 4 1986
 ADDRESS P.O. BOX 1217 PARKERSBURG, WV ADDRESS P.O. BOX 1217 PARKERSBURG, WV

FORM WW-2(B)
(Obverse)
7/85

FILE COPY

RECEIVED
JUL 23 1986



1) Date: July 15, 1986
 2) Operator's Well No. Du Pont G-22
 3) API Well No. 47 107-1403
 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 X /
 B (If "Gas", Production _____ / Underground storage _____ / Deep X / Shallow _____)
- 5) LOCATION: Elevation: 662.5 Watershed: Sandy Creek/Ohio River 449
 District: Lubeck 3 County: Wood Quadrangle: Lubeck WV-Ohio (7.5 min.)
- 6) WELL OPERATOR E. I. du Pont CODE: 14690 7) DESIGNATED AGENT P. B. Vining/co E.I. Du Pont
 Address de Nemours & Co, Inc P. O. Box 1217 Address P. O. Box 1217
Parkersburg, WV 26102 Parkersburg, WV 26102
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Glen P. Robinson
 Address Rte 1 No. 6 Mt. Pleasant Est.
Mineral Wells, WV 26150
- 9) DRILLING CONTRACTOR:
 Name Ray Resources
 Address 600 Commerce St.
Charleston WV 25301
- 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, Oriskany Sandstone
 12) Estimated depth of completed well, 4400' feet
 13) Approximate trata depths: Fresh, 50 feet; salt, _____ feet.
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes _____ / No X

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	11-3/4"	H-40	42	X		250'	250'	130 s x s (surf)	Per Rule 15.05 Sizes
Fresh water									
Coal									
Intermediate	8-5/8"	K-55	24		X	2100'	2100'	380 s x s (surf)	255 s x s (2000 lbs) 440 DL AS REQUIRED BY RULE 15.05 Perforations:
Production	5-1/2"	K-55	15.5		X	4400'	4400'		
Tubing	2-3/8"	J-55	4.7		X	4200'	4200'		
Lin...									Top Bottom

Note: cmt. vols. include 25% excess

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-107-1403 Date July 28 1986

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 July 28, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>✓</u>	Agent: <u>ASB</u>	Plat: <u>AS</u>	Casing: <u>AS</u>	Fee: <u>319-00533</u> <u>133</u>	WPCR: <u>AS</u>	S&E: <u>AS</u>	Other: <u>OK HPR</u>
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NOTE: Keep one copy of this permit posted at the drilling location. [Signature] Director, Division of Oil and Gas File

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



Date Sept. 11, 1986
 Operator's Well No. G-22
 Farm Wittman No. 1
 API No. 47 - 107 - 1403

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: 662.5 Watershed Sandy Creek/Ohio River
 District: Lubeck County Wood Quadrangle Lubeck WV-Ohio 7.5 Min.

COMPANY E. I. du Pont de Nemours
 ADDRESS Box 1217, Parkersburg, WV 26102
 DESIGNATED AGENT Peter B. Vining
 ADDRESS Same
 SURFACE OWNER John, Betty & John Wittman
 ADDRESS Rt. 1, Box 126A, Washington, WV 26181
 MINERAL RIGHTS OWNER Wittman
 ADDRESS Same
 OIL AND GAS INSPECTOR FOR THIS WORK Glen P. Robinson

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size <u>20-16</u> Cond.	40'	40'	
11-3/4"	254'	254'	Surface
9 5/8			
8 5/8	1584'	1584'	Surface
7			
5 1/2	4399'	4399'	4399'-2880'
4 1/2			
3			
2-3/8		4147'	
Liners used			

ADDRESS Rt. 1, #6 Mt. Pleasant Est
 PERMIT ISSUED July 28, 1986
 DRILLING COMMENCED August 4, 1986
 DRILLING COMPLETED August 11, 1986
 IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED

GEOLOGICAL TARGET FORMATION Oriskany Sandstone Depth 4182 feet
 Depth of completed well 4399 feet Rotary X / Cable Tools ___
 Water strata depth: Fresh ___ feet; Salt ___ feet
 Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA
 Producing formation Oriskany Pay zone depth 4182 feet
 Gas: Initial open flow 200 Mcf/d Oil: Initial open flow ___ Bbl/d
 Final open flow 100 Mcf/d Oil: Final open flow ___ Bbl/d
 Time of open flow between initial and final tests 5 hours
 Static rock pressure 1350 psig (surface measurement) after 12 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

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

Perforated Oriskany Sandstone at 4182' to 4198' with 8 shots per foot. Acidized with 1500 gallons 15% HCl.

WELL LOG

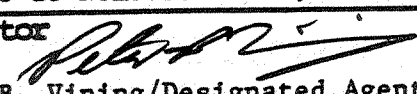
FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Surface Soil			0	30	
Shale and Sandstone			30	740	
Sandstone			740	900	
Shale and Sandstone			900	1400	
Sandstone			1400	1550	
Shale and Siltstone			1550	4100	
Limestone			4100	4200	
Sandstone			4200	4240	Oriskany
Limestone			4240	4400	T.D.

404 1592
461 4100
475 4180

(Attach separate sheets as necessary)

E. I. du Pont de Nemours & Co., Inc.

Well Operator

By:  Peter B. Vining/Designated Agent

Date: Sept. 11, 1986

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."