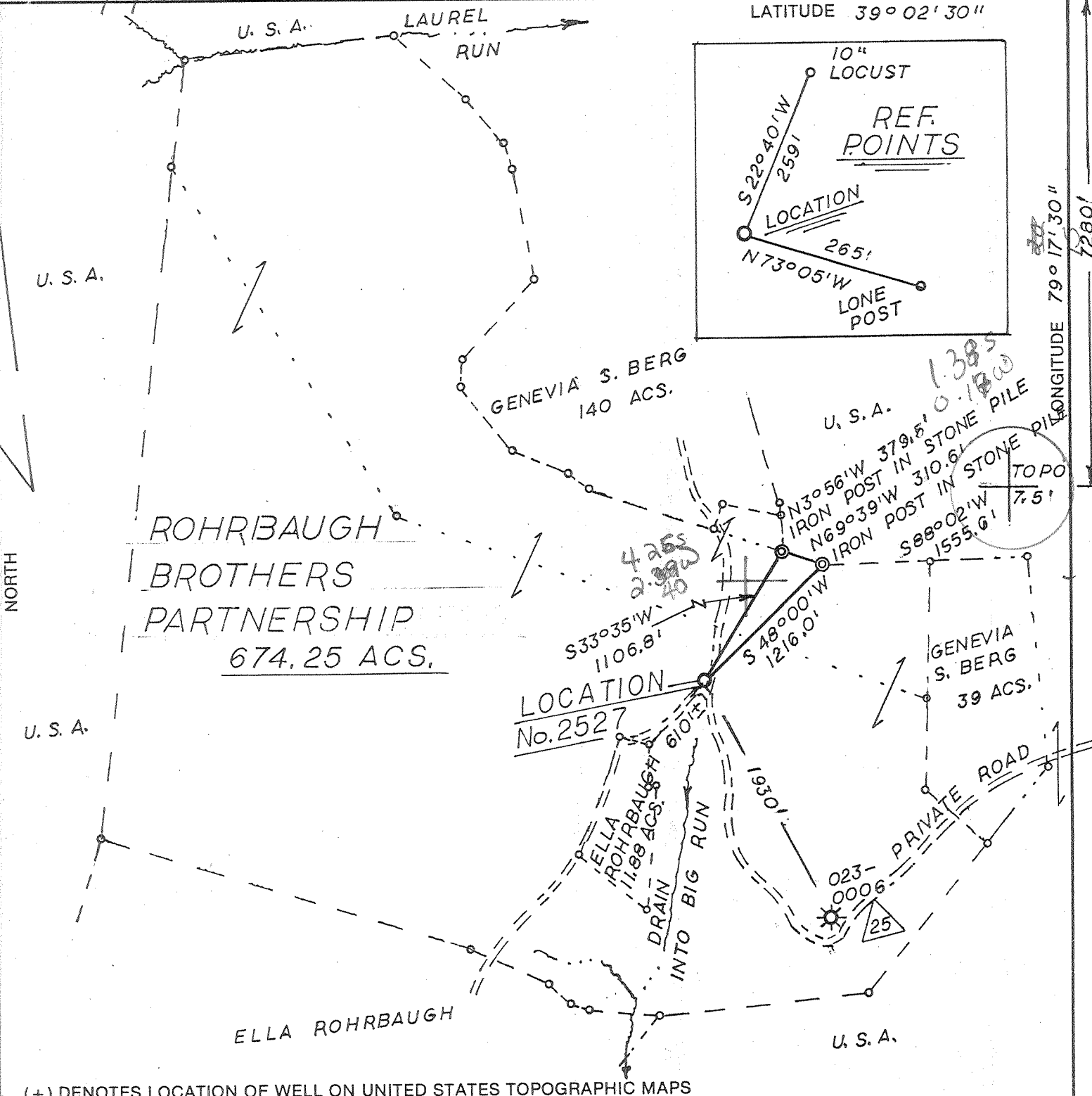


KS 3/5/87

3905

900'



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

FILE NO. U. D. I. - 4 - 57
 DRAWING NO. 86 - 28
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 IN 200
 PROVEN SOURCE OF ELEVATION SPOT, EL. AT GATE
1070' N.E. OF LOC.
EL. 2796

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) Thomas F. Weaver, Jr.
 R.P.E. _____ L.L.S. 410

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE DEC. 22, 1986
 OPERATOR'S WELL NO. 2-2527
 API WELL NO. CNR# 21655-P
47 - 023 - 0017
 STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP X SHALLOW ___
 LOCATION: ELEVATION 2848 WATERSHED BIG RUN OF JORDAN RUN
 DISTRICT UNION 3 COUNTY GRANT
 QUADRANGLE BLACKBIRD KNOB 255 034 SEG Davis
 SURFACE OWNER ROHRBAUGH BROTHERS PARTNERSHIP ACREAGE 674.25
 OIL & GAS ROYALTY OWNER ROHRBAUGH BROTHERS PARTNERSHIP LEASE ACREAGE 674.25
 LEASE NO. 561297 AMOCO
 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 ORISKANY ESTIMATED DEPTH 9300'
 WELL OPERATOR UNION DRILLING INC. DESIGNATED AGENT JOSEPH C. PETTEY
 ADDRESS P. O. DRAWER 40 893 ADDRESS SAME
BUCKHANNON, WV. 26201 deep well

COUNTY NAME GRANT

PERMIT MAR 09 1987



IV-35
(Rev 8-81)

Date June 4, 1987
Operator's Well No. 2 - 2527
Farm Berg Unit #2
API No. 47 - 023 - 0017
TO BE HELD CONFIDENTIAL

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 ___ / Underground Storage ___ / Deep XX / Shallow ___ /)

LOCATION: Elevation: 2848 Watershed Big Run of Jordan Run
District: Union County Grant Quadrangle Blackbird Knob

COMPANY Union Drilling, Inc.
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201
DESIGNATED AGENT Joseph C. Pettey
ADDRESS P.O. Drawer 40, Buckhannon, WV 26201
SURFACE OWNER Rohrbaugh Brothers Partnership
ADDRESS Box 224, Calverton, VA 22016
MINERAL RIGHTS OWNER same as surface
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK _____
Phil Tracy ADDRESS P.O. Box 2536, Elkins, WV 26241
PERMIT ISSUED 3/5/87
DRILLING COMMENCED 3/12/87
DRILLING COMPLETED 4/10/87
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"	40.00	40.00	
9 5/8	4166.65	4166.65'	1705 cf
8 5/8			
7			
5 1/2		8815.61'	851 cf
4 1/2			
3			
2 3/8"		8922.05'	
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Depth 8595/8664 feet
Depth of completed well 8845' feet Rotary XXX / Cable Tools _____
Water strata depth: Fresh 43' feet; Salt none feet
Coal seam depths: none Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Oriskany Pay zone depth 8595/8664 feet
Gas: Initial open flow 64 Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow 1,801 Mcf/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 2 hours
Static rock pressure 2850# psig (surface measurement) after 24 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

NOV 10 1988

(Continue on reverse side)

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

Halliburton - 1 stage Frac - 5/13/87

8595,8596,8597,8598,8599,8600,8601,8602,8608,8609,8610,8611,8612,8622,8623,8625,
8626,8628,8629,8630,8642,8645,8646,8659,8662,8663,8664

Oriskany - 466,800# sand, 65 ton CO2, and 5155 bbls fluid

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Ground Level			0	10	
Dirt			10	12	
Sand & Shale			12	56	
Red Shale			56	59	
Sand & Shale			59	340	
411 Top of Hamshire Group			340	2233	
408 Top of Fore Knobs			2233	4047	
409 Top of Scherr Group			4047	6613	
443 Sycamore			6613	6693	
438 Harrell Shale			7602	7932	
848 Tully			7932	7941	
856 Upper Marcellus			8195	8218	
859 Purcell			8218	8290	
857 Lower Marcellus			8290	8346	
465 Needmore Shale			8346	8470	
✓ Oriskany			8470	8845 TD	Gas Check @DC = 64 mcf.

(Attach separate sheets as necessary)

Union Drilling, Inc.

Well Operator

By: Joseph C. Pettey
Date: Joseph C. Pettey, Vice President of Production
6/4/87

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 ... encountered in the drilling of a well."

NOV 10 1987



TO BE HELD CONFIDENTIAL
 1) Date: February 17, 19 87
 2) Operator's Well No. 2527
 3) API Well No. 47 023 0017
 State County Permit

7/85
RECEIVED
 MAR 05 1987

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

APPLICATION FOR A WELL WORK PERMIT

- DIVISION OF OIL & GAS DEPARTMENT OF ENERGY**
- 4) WELL TYPE: A Oil Gas B (If "Gas", Production Underground storage Deep Shallow)
- 5) LOCATION: Elevation: 2848 Watershed: Big Run of Jordan Run District: Union 3 County: Grant 023 Quadrangle: Blackbird Run 255
- 6) WELL OPERATOR Union Drilling CODE: 50550 7) DESIGNATED AGENT Joseph C. Pettey
 Address Post Office Drawer 40 Address Post Office Drawer 40
Buckhannon, WV 26201 Buckhannon, WV 26201
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Donald Ellis Address 2604 Crab Apple Lane
Fairmont, WV 26554
- 9) DRILLING CONTRACTOR: Name Union Drilling, Inc. Address Post Office Drawer 40
Buckhannon, WV 26201
- 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, Oriskany
 12) Estimated depth of completed well, 9300 feet
 13) Approximate strata depths: Fresh, _____ feet; salt, _____ feet.
 14) Approximate coal seam depths: _____ 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"			X		as needed	as needed		Kinds
Fresh water	} 13" - to be run to 30' below deepest fresh water or mineable coal when (if encountered) encountered - C.T.S. NEAT								
Coal			40 #						
Intermediate	9 5/8	N-80	36	X		4150	4150	as required	Depths set
Production	5 1/2	N-80	17	X		9300	9300	to surface	
Tubing									
Liners									Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-023-0017 Date MARCH 5 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 MARCH 5, 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: <u>AS</u>	Casing: <u>MN</u>	Fee: <u>3376</u>	WBQP: <u>AS</u>	S&E: <u>AS</u>	Other: <u>AS</u>
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NOTE: Keep one copy of this permit posted at the drilling location.

John L. Johnston
 Director, Division of Oil and Gas

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