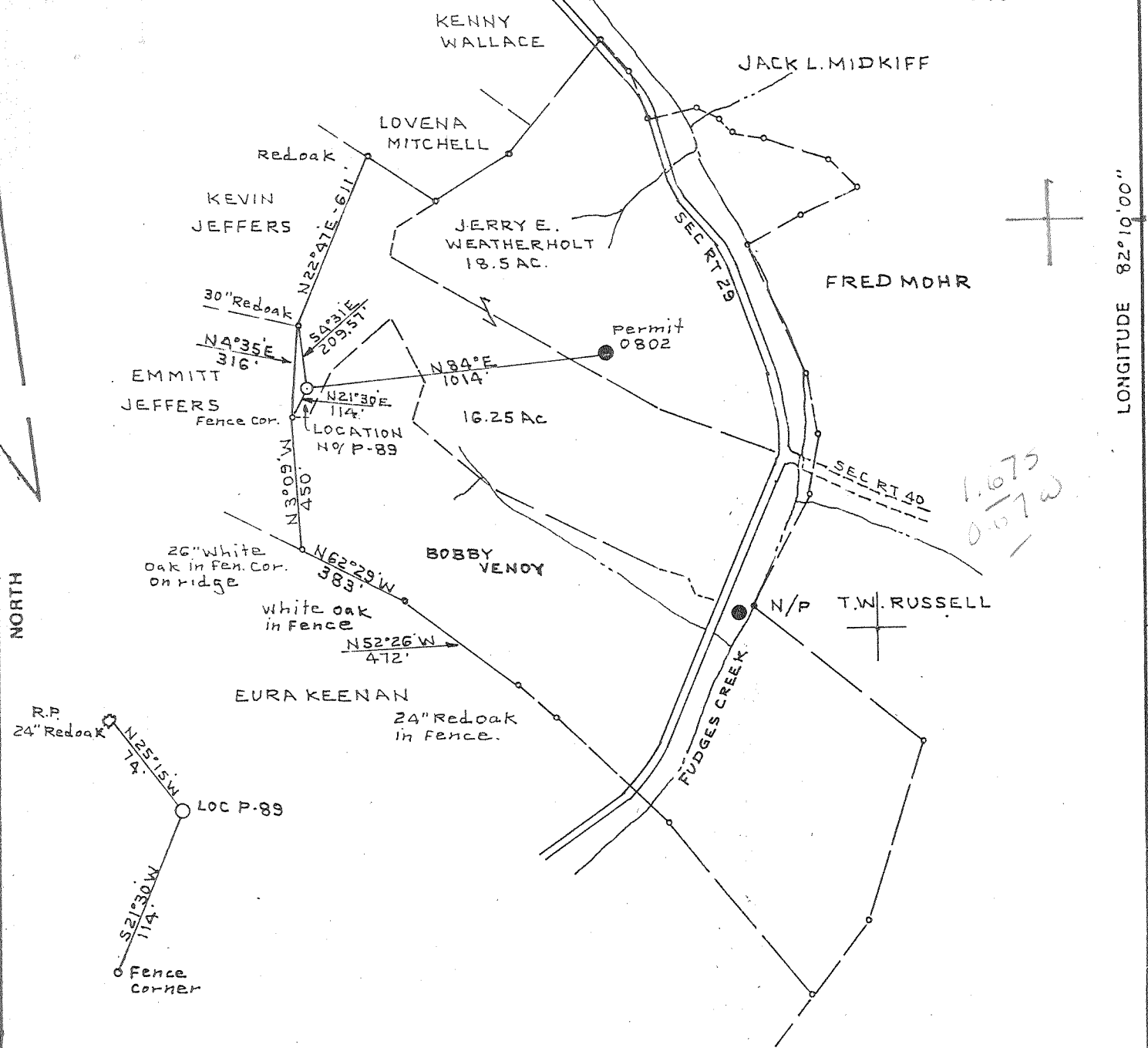


8-78 4/20/87

3625'

LATITUDE 38°25'00"



LONGITUDE 82°10'00"

8925'

FILE NO. BK 102 P 22
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1:200'
 PROVEN SOURCE OF ELEVATION USGS B.M-149 JJ5
E. 1. 676

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) C. S. Volley Jr.
 R.P.E. _____ L.L.S. 92

PLACE SEAL HERE.

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



DATE NOV 12, 1986
 OPERATOR'S WELL NO. P-89
 API WELL NO. 47-011-0820
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS _____ LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION STORAGE _____ DEEP _____ SHALLOW
 LOCATION: ELEVATION 949.43' WATER SHED FUDGES CREEK
 DISTRICT GRANT 3 COUNTY CABELL
 QUADRANGLE MILTON 476 081 WCF
 SURFACE OWNER JERRY E. WEATHERHOLT ACREAGE 16.25 AC TR
 OIL & GAS ROYALTY OWNER JERRY E. WEATHERHOLT LEASE ACREAGE 80
 LEASE NO. LWC-20
 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 BEREA ESTIMATED DEPTH 2550'
 WELL OPERATOR SOUTHEASTERN GAS CO DESIGNATED AGENT FRED RADFORD
 ADDRESS PO BOX 2347 ADDRESS PO BOX 2347
CHARLESTON WV 25328 CHARLESTON WVA 25328

T HALL

6.6 Ball Gap (207)

(207)

APR 27 1987



Date 9-30-87
 Operator's _____
 Well No. P-89
 Farm J.E. Wetherholt
 API No. 47- 011 - 0820

WR-35

RECEIVED
 OCT 05 1987

State of West Virginia
 DEPARTMENT OF ENERGY
 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 X / Gas X / Liquid Injection / Waste Disposal /
 (If "Gas," Production / Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 949.43' Watershed Fudges Creek
 District: Grant County Cabell Quadrangle Milton

COMPANY Southeastern Gas company

ADDRESS P O Box 2347, Charleston, WV 25328

DESIGNATED AGENT Fred A. Radford

ADDRESS Same as Above

SURFACE OWNER J. E. Wetherholt

ADDRESS Box 501, Rt. 2, Milton, WV 25541

MINERAL RIGHTS OWNER J. E. Wetherholt

ADDRESS Same As Above

OIL AND GAS INSPECTOR FOR THIS WORK Jerry

Tephabock ADDRESS Rt 1, Box 101-A, Ripley, WV

PERMIT ISSUED 4/21/87

DRILLING COMMENCED 5/6/87

DRILLING COMPLETED 5/12/87

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 Cond.			
13-10"			
9 5/8			
8 5/8	709.7	709.7	To Surface
7			
5 1/2			
4 1/2	2642.0	2642.0	to 1000'
3			
2	2634.45	2634.45	none
Liners used			

GEOLOGICAL TARGET FORMATION Berea Sandstone Depth 2585-2599 feet

Depth of completed well 2659 feet Rotary X / Cable Tools _____

Water strata depth: Fresh 383' - 950' feet; Salt 1500' feet

Coal seam depths: Coal not present Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Berea Sandstone Pay zone depth 2584-2599 feet

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

Final open flow 50 Mcf/d Final open flow 20 Bbl/d

Time of open flow between initial and final tests 8 hours

Static rock pressure 200# 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

OCT 12 1987

(Continue on reverse side)

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

Well perforated from 2584' to 2594' with 12 holes. Well was fractured 5-18-87. 75 Quality Foam Frac with 500 gals, 15% HCL; 40,000# 20/40 sand; 255 Bbls. water, 360,000 SCF nitrogen; BD.2200#; ISIP 1400#; 15 min. 1240#.

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

WELL LOG
DRILLER'S LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Soil			0	5	
Sandstone			5	80	
Red Rock			90	130	
Sandstone			130	195	
Shale			195	220	
Sandstone			220	300	
Shale			300	370	
Sandstone			370	440	Fresh Water @ 383'
Shale			440	510	
Sandstone			510	680	
Shale			680	705	
Sand			705	740	
Shale			740	822	
Sandy Shale			822	1452	Fresh Water @ 950'
Salt Sand			1452	1707	Salt Water @ 1500'
Shale			1707	1759	
Red Rock			1759	1766	
Little Lime			1766	1789	
Pencil Cave			1789	1799	
Big Lime			1799	1992	
Sandy Shale			1992	2024	
Injun Sand			2024	2114	
Shaley Sand			2114	2532	
Shale			2532	2574	
Coffee Shale			2574	2585	
Berea Sandstone			2585	2599	Show Oil @ 2586'
Shale			2599	2659	
				T.D. 2659'	

(Attach separate sheets as necessary)

SOUTHEASTERN GAS COMPANY

Well Operator

By: James A. Radford, Vice President

Date: September 30, 1987

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 ⁴⁹⁸minerals, encountered in the drilling of a well."

RECEIVED
APR 17 1987



1) Date: April 16, 19 87
 2) Operator's Well No. P-89
 3) API Well No. 47 - 011 - 0820
 State County Permit

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: 949.43 Watershed: Fudges Creek
 District: Grant 3 County: Cabell 011 Quadrangle: Milton 7.5' 476
 6) WELL OPERATOR SOUTHEASTERN GAS CODE: 017598 7) DESIGNATED AGENT Fred A. Radford
 Address P O Box 2347 46400 Address P O Box 2347
Charleston, WV 25328-2347 Charleston, WV 25328-2347
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Jerry Tephahock Name Unknown
 Address Rt1, Box 101-4 Address _____
Ripley, WV 25271
 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, Berea Sandstone
 12) Estimated depth of completed well, 2660 feet
 13) Approximate trata depths: Fresh, 382 feet; salt, 1467 feet.
 14) Approximate coal seam depths: 692 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	13-3/8	N/A	48		X	20'	20'	To Surface	Kinds
Fresh water	8-5/8	N/A	24			730'	730'	To Surface	
Coal									Sizes
Intermediate									<u>By rule 15.01</u>
Production	4-1/2	J-55	10.5		X	2660'	2660'	140 Sks	Depths set <u>1000' Fill Up</u>
Tubing	2-3/8	N/A	4.6			2600'	2600'		
Liners									Perforations:
									Top Bottom

47-011-0820

April 21

87

OFFICE USE ONLY
 DRILLING PERMIT

April 21, 1989

19

Permit number _____

Date

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 _____ unless well work is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plot	Casing	Fee	NPCB	Other
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>SFB</u>	<u>SFB</u>	<u>3440</u> <u>195</u>	<u>SFB</u>	<u>SFB</u>

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.