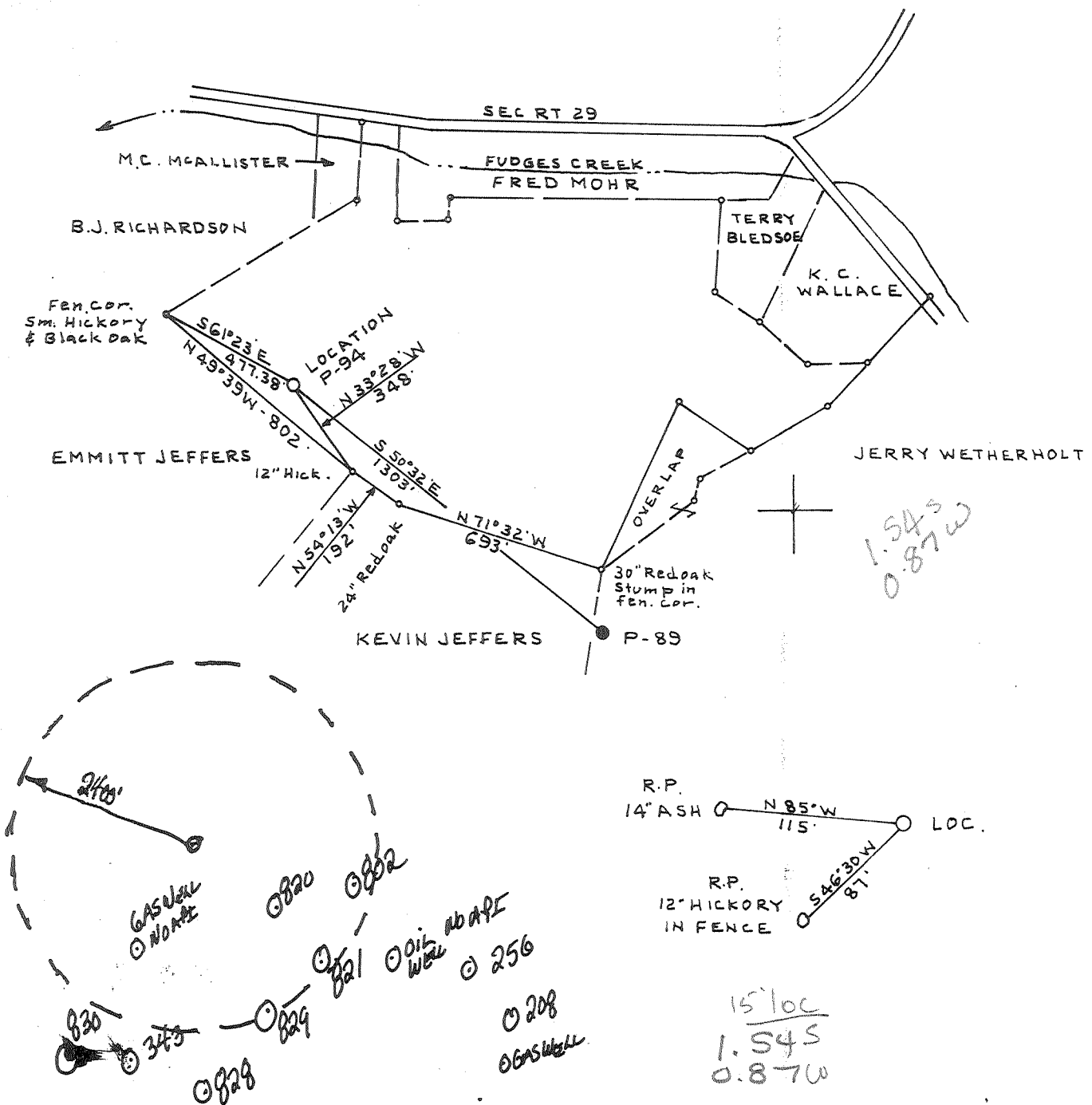


Janie 8/30/90

LONGITUDE 82°01'28"

NORTH



FILE NO. BK 120 PG 34  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1:2500'  
 PROVEN SOURCE OF ELEVATION USGS BM 149JJS EL 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 ENERGY.  
 (SIGNED) C. J. Valley Jr.  
 R.P.E. \_\_\_\_\_ U.S. 92 \_\_\_\_\_

PLACE SEAL HERE

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



DATE MAY 22, 1990  
 OPERATOR'S WELL NO. P-94  
 API WELL NO. 47 011 0846  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS \_\_\_\_\_ LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW   
 LOCATION: ELEVATION 946.93 WATERSHED FUDGES CREEK OF MUD RIVER  
 DISTRICT GRANT 3 COUNTY CABELL  
 QUADRANGLE MILTON 9A15' WC  
 SURFACE OWNER LOVENA Z. MITCHELL ACREAGE 35.81  
 OIL & GAS ROYALTY OWNER RANDEL S. WETHERHOLT ET AL LEASE ACREAGE 46  
 LEASE NO. 2645  
 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 2700'  
 WELL OPERATOR SOUTHEASTERN GAS CO DESIGNATED AGENT FRED RADFORD  
 ADDRESS P.O. BOX 2347 CHARLESTON WY 25328 ADDRESS P.O. BOX 2347 CHARLESTON WY 25328

SEP 6 1990

FORM WW-6 H.T. HALL 48673

COUNTY NAME PERMIT

6-6 Merritt Creek - Salt Rock (206)

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

RECEIVED  
Division of Energy

FEB 20 91

Permitting  
Oil and Gas Section

Farm name: MITCHELL, LOVENA Z. Operator Well No.: P-94  
LOCATION: Elevation: 946.93 Quadrangle: MILTON  
District: GRANT County: CABELL  
Latitude: 8200 Feet South of 38 Deg. 25Min. 0 Sec.  
Longitude 4700 Feet West of 82 Deg. 10 Min. 0 Sec.

Company: SOUTHEASTERN GAS CO.  
P. O. BOX 2347  
CHARLESTON, WV 25328-2347

Agent: FRED A. RADFORD

Inspector: JERRY HOLCOMB  
Permit Issued: 08/30/90  
Well work Commenced: 09/14/90  
Well work Completed: 10/02/90  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig  
Total Depth (feet) 2681'  
Fresh water depths (ft) 238'

Salt water depths (ft) 1645' & 2075'

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): N/A

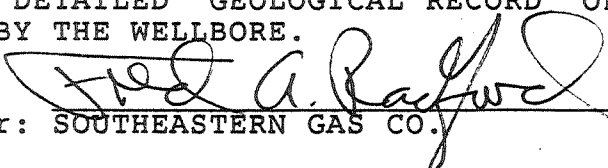
Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	846 ft.	846 ft.	225 sks.
4 1/2"		2677 ft.	150 sks.

OPEN FLOW DATA

Producing formation Berea Sand Pay zone depth (ft) 2571'-2584'  
Gas: Initial open flow Show MCF/d Oil: Initial open flow Show Bbl/d  
Final open flow 20 MCF/d Final open flow 18 Bbl/d  
Time of open flow between initial and final tests 15 Hours  
Static rock Pressure 490 psig (surface pressure) after 24 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

  
For: SOUTHEASTERN GAS CO.  
By: Fred A. Radford Vice President-General Manager  
Date: October 8, 1990

FEB 25 1991

Perforations: Berea Sand 14 holes (2573'-2582')  
 Breakdown Berea w/500 gallons 15% HCl @ 2273 psi.

75Q Foam Frac w/N<sub>2</sub>

40,000 lbs 20/40 sand, N<sub>2</sub> 403,000 sft.<sup>3</sup>  
 Total Sand Laden Fluid 258 bbls.

Avg. Pressure 2200#

Max. Pressure 2800#

Min. Sand Con. 2 lb/gal.

Max. Sand Con. 8 lb/gal

ISIP 1874 psi

5 min. SIP 1774 psi

10 min. SIP 1731 psi

**DRILLER'S RECORD**

<u>Formation</u>	<u>Top</u>	<u>Bottom</u>	<u>Remarks</u>
Sand & Shale	0	362	
Sand	362	508	Fresh Water @238 ft.
Sand & Shale	508	906	
Sand	906	980	
Sand & Shale	980	1466	
Salt Sand	1466	1655	
Shale	1655	1686	Salt Water @1645 ft.
Maxton Sand	1685	1709	
Shale	1709	1792	
Little Lime	1792	1808	
Pencil Cave Shale	1808	1835	
Big Lime	1835	1988	
Shaley Lime	1988	2054	
Injun Sand	2054	2139	
Weir Shale	2139	2530	Salt Water @2075 ft.
Sunbury (Coffee) Shale	2530	2571	
Berea Sandstone	2571	2584	Show of Oil @2575 ft.
Devonian Shale	2584	2681	
		2681'	Driller's Total Depth
		2682'	Logger's Total Depth

11174

1) Date: August 27, 1990  
2) Operator's well number P-94  
3) API Well No: 47 - 011 - 0846  
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:  
(a) Name Lovena Z. Mitchell  
Address Rt. 1, Box 159  
Barboursville, WV 25504  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_

5) (a) Coal Operator:  
Name N/A  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name See Attachment "A"  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_

6) Inspector Tim Bennett  
Address Rt. 2, Box 61-B  
Chapmansville, WV 25508  
Telephone (304)- 855-7705

(c) Coal Lessee with Declaration  
Name N/A  
Address \_\_\_\_\_

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR

X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_\_\_ on the above named parties, by:

- \_\_\_\_\_ Personal Service (Affidavit attached)
- \_\_\_\_\_ Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Southeastern Gas Company  
By: [Signature]  
Its: Vice President  
Address P O Box 2347  
Charleston, WV 25328-2347  
Telephone 304-343-9566

Subscribed and sworn before me this 27th day of August, 1990

[Signature] Notary Public  
My commission expires May 24, 1993

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS**  
**WELL WORK PERMIT APPLICATION**

- 1) Well Operator: SOUTHEASTERN GAS COMPANY 4640 (3) 476
- 2) Operator's Well Number: P-94 3) Elevation: 946.93
- 4) Well type: (a) Oil X / or Gas    /  
(b) If Gas: Production    / Underground Storage    /  
Deep    / Shallow    /
- 5) Proposed Target Formation(s): Berea 305
- 6) Proposed Total Depth: 2730 feet
- 7) Approximate fresh water strata depths: 200' , 270'
- 8) Approximate salt water depths: 1500' 1340'
- 9) Approximate coal seam depths:
- 10) Does land contain coal seams tributary to active mine? Yes    / No X /
- 11) Proposed Well Work: Drill and complete. New Well
- 12)

**CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	8-5/8	K	24	720	720 <u>HS</u>	180
Fresh Water						<u>30CS1811.3</u>
Coal						
Intermediate						
Production	4-1/2	K	10.5	2730	2730	200
Tubing						<u>30CS1811.1</u>
Liners						

**PACKERS** : Kind     
 Sizes     
 Depths set   

For Division of Oil and Gas Use Only

1154  
 Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond Surety  Agent  
 (Type)