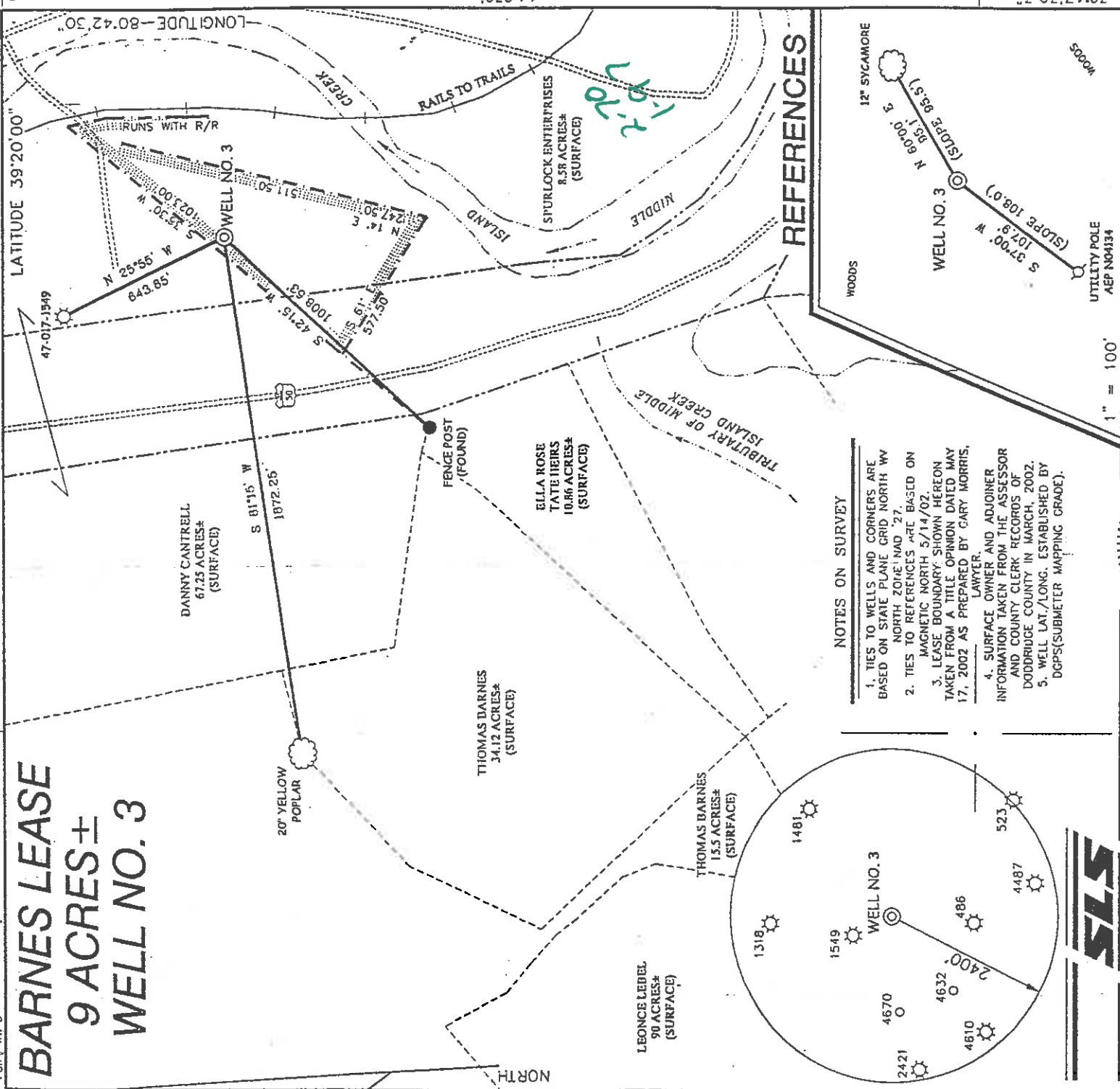


# BARNES LEASE 9 ACRES ± WELL NO. 3



## REFERENCES

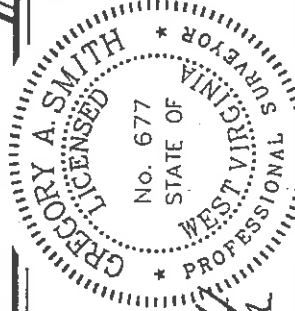
### NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE; NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 5/14/02.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A TITLE OPINION DATED MAY 17, 2002 AS PREPARED BY GARY MORRIS, LAWYER.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN MARCH, 2002.
5. WELL LAT./LONG. ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).



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 DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. *Gregory A. Smith*  
677



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

DATE JUNE 7 20 02  
 OPERATORS WELL NO. BARNES NO. 3  
 API WELL NO. 47-17 COUNTY 04695 PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 4975P3 (123-29)  
 PROVEN SOURCE OF ELEVATION BENCHMARK ELEVATION 797' SCALE 1" = 500'

STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS

WELL TYPE : OIL  GAS  INJECTION  WASTE  LIQUID  IF  "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION : ELEVATION 930' WATERSHED MIDDLE ISLAND CREEK  
 DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE SMITHBURG 7.5'  
 SURFACE OWNER THOMAS L. AND ELLEN L. BARNES ACREAGE 7.45±  
 ROYALTY OWNER THOMAS L. BARNES ET AL LEASE ACREAGE 9±

PROPOSED WORK : LEASE NO. \_\_\_\_\_  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  PLUG AND ABANDON  CLEAN OUT AND REPLUG  OTHER \_\_\_\_\_  
 PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ TARGET FORMATION ALEXANDER  
 ESTIMATED DEPTH 5,600'

WELL OPERATOR KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN  
 ADDRESS 22 GARTON PLAZA WESTON, WV 26452 ADDRESS 22 GARTON PLAZA WESTON, WV 26452

6-6 99

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

*ME*

Well Operator's Report of Well Work

Farm Name: THOMAS L. and ELLEN L. BARNES

Operator Well No. : BARNES #3

LOCATION: Elevation: 930.00

Quadrangle: SMITHBURG

District: WEST UNION

County: DODDRIDGE

Latitude: 14,230 Feet South of 39 Deg. 20 Min. 00 Sec.

Longitude: 10,380 Feet West of 80 Deg. 42 Min. 30 Sec.

Company: KEY OIL COMPANY  
22 GARTON PLAZA  
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD  
Permit Issued: 07/18/02  
Well Work Commenced: 9/10/02  
Well Work Completed: 09/13/02

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth ( feet ) 5275  
Fresh water depths ( ft ) 220'  
Salt water depths ( ft ) NONE

Is coal being mined in area ( Y / N )? N  
Coal Depths ( ft ) : NONE

OPEN FLOW DATA

Warren  
Speechley  
Rileys  
Shale

Producing formation Alexander  
Gas: Initial open flow Show MCF / d  
Final open flow 1,237 MCF / d  
Time of open flow between initial and final tests N/A  
Static rock pressure 1900 psig ( surface pressure ) after 96 Hours

Second producing formation Commingle  
Gas: Initial open flow \_\_\_\_\_ MCF / d  
Final open flow \_\_\_\_\_ MCF / d  
Time of open flow between initial and final tests \_\_\_\_\_  
Static rock pressure \_\_\_\_\_ psig ( surface pressure ) after \_\_\_\_\_ Hours

Pay zone depth ( ft )  
Oil: Initial open flow \_\_\_\_\_ Bbl / d  
Oil: Final open flow show \_\_\_\_\_ Bbl / d  
Hours  
Hours  
3100' - 3144'  
3154' - 3238'  
4270' - 4739'  
4780' - 4820'  
5013' - 5119'

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
8 5/8"	930'	930'	215 sks To Surface
4 1/2"	5198'	5198'	480 sks

Oil and Gas  
Producing  
SEP 21 2002  
WVP Department of  
Environmental Protection

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: KEY OIL COMPANY

By:   
Date: October 1, 2002

PRESIDENT

D000 4695

Barnes #3 (47-017 - 4695)  
 Four Stage Foam Frac - BJ Services

1 <sup>st</sup> Stage:	Alexander ( 15 holes ) ( 5022.25' to 5109' )	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 814 bbls foam.
2 <sup>nd</sup> Stage:	Shale ( 2 holes ) ( 4818' & 4818.25' ) Third Riley ( 7 holes ) ( 46787' to 4714.50' ) Second Riley ( 4 holes ) ( 4538.75' to 4584.50' )	60 Quality Foam. 1,000 gal 15% HCL. 35,000# 20/40 sand, 390,000 SCF N2, 572 bbls foam.
3 <sup>rd</sup> Stage:	Riley ( 13 holes ) ( 4300' to 4324.50' )	60 Quality Foam 750 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 440,000 SCF N2, 649 bbls foam.
4 <sup>th</sup> Stage:	Speechley ( 9 holes ) ( 5157.50' to 3229.50' ) Warren ( 4 holes ) ( 3118' to 3127' )	60 Quality Foam. 1,000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 464,000 SCF N2, 601 bbls foam.

WELL LOG

KB-GL	0	10	
Clay	10	12	
Sand	12	106	
Shale & Red Rock	106	235	
Sand & Shale	235	300	
Red Rock	300	326	
Sand & Shale & Red Rock	326	650	
Sand & Shale	650	1002	
Sand & Shale	1002	1620	
Little Lime	1620	1640	
Big Lime	1640	1735	
Keener	1640	1735	
Shale	1735	1766	
Big Injun	1766	1776	
Shale	1776	1800	
Squaw	1800	1828	
Sand & Shale	1828	1864	
Weir	1864	2010	
Shale	2010	2103	
Gordon	2103	2412	
Shale	2412	2471	
Warren	2471	3100	
Shale	3100	3144	
Speechley	3144	3154	
Silt & Shale	3154	3238	
Riley	3238	4270	
Shale	4270	4344	
Second Riley	4344	4531	
Shale	4531	4619	
Third Riley	4619	4670	
Shale	4670	4739	
Benson	4739	4767	
Shale	4767	4776	
Alexander	4776	5013	
Sand & Shale	5013	5119	
T.D.	5119	5275	
	5275		

1/2" stream water @ 220'

Gas Checks

- 1600' - No Show
- 1915' - Odor
- 2418' - Odor
- 3109' - Odor
- 3641' - Odor
- 4302' - Odor
- 4775' - Odor
- 5025' - Odor