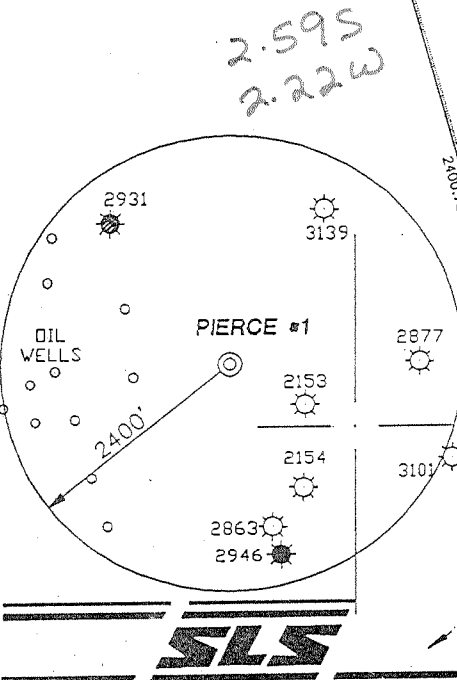
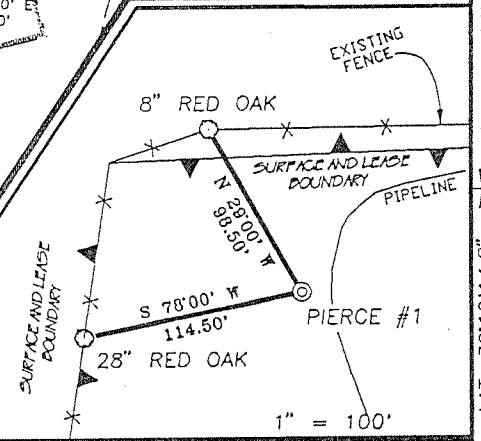


# PIERCE LEASE 51.58 ACRES± WELL NO. 1

**NOTES ON SURVEY**

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A TITLE REPORT PREPARED BY RICHARD M. REDDECLIFF DATED 7/29/98.
3. SURFACE OWNERS AND ADJOINER INFORMATION OBTAINED FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN JULY 1998.
4. WELL LAT./LONG. ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).
5. TIES TO REFERENCES ARE BASED MAGNETIC NORTH 8/20/98.

## REFERENCES



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.


P.S. 677 Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE SEPTEMBER 1, 19 98  
 OPERATORS WELL NO. PIERCE # 1  
 API WELL NO. 47-085-08580  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 4045P1 (69-29)  
 PROVEN SOURCE OF ELEVATION JUNCTION OF ROADS ELEVATION 798' SCALE 1\"/>

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



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

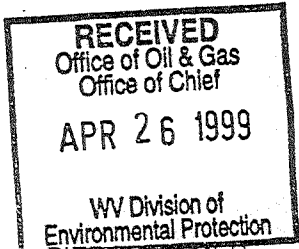
LOCATION :  
 ELEVATION 1142' WATERSHED BEAR RUN OF MIDDLE FORK  
 DISTRICT UNION COUNTY RITCHIE QUADRANGLE OXFORD 7.5'  
 SURFACE OWNER ELMER WOODYARD PIERCE ET AL ACREAGE 51.58  
 ROYALTY OWNER ELMER WOODYARD PIERCE ET AL LEASE ACREAGE 51.58  
 PROPOSED WORK :  
 DRILL  CONVERT  DRILL DEEPER  REDRILL  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 5600'

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

LONGITUDE 80°50'00" 13,680' LAT. 39°10'14.8" COUNTY NAME RIT PERMIT 6580

16-6131

WR-35



27 - Oct - 98  
API # 47 - 85 - 8580  
Reviewed [Signature]

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

Well Operator's Report of Well Work

Operator Well No. : PIERCE #1

Farm name: PIERCE, ELMER

LOCATION: Elevation: 1,142.00

Quadrangle: OXFORD

District: UNION

County: RITCHIE

Latitude: 13680 Feet South of 39 Deg. 12 Min. 30 Sec.

Longitude: 11700 Feet West of 80 Deg. 50 Min. 00 Sec.

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

Agent: JAN E. CHAPMAN

Inspector: SAM HERSMAN  
Permit Issued: 10/27/98  
Well Work Commenced: 11/15/98  
Well Work Completed: 11/19/98  
Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth ( feet ) 5438'  
Fresh water depths ( ft ) 120', 230'  
Salt water depths ( ft ) 1983'

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"	132.50'	132.50'	70 sks To Surface
8 5/8"	1656'	1656'	485 sks To Surface
4 1/2"	5335'	5335'	460 sks
2 3/8"		5189'	

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

OPEN FLOW DATA

Warren	3400' - 3476'
Speechley	3485' - 3770'
Balltown	3822' - 4470'
Rileys	4556' - 4916'
Benson	4956' - 4964'
Producing formation <u>Alexander</u>	Pay zone depth ( ft ) <u>5188' - 5280'</u>
Gas: Initial open flow <u>0</u> MCF / d	Oil: Initial open flow <u>0</u> Bbl / d
Final open flow <u>1,563</u> MCF / d	Oil: Final open flow <u>show</u> Bbl / d
Time of open flow between initial and final tests <u>N/A</u> Hours	
Static rock pressure <u>1800</u> psig ( surface pressure ) after <u>96</u> Hours	

Second producing formation Commingled Pay zone depth ( ft ) \_\_\_\_\_

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 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: KEY OIL COMPANY

By: [Signature]  
Date: April 21, 1999

PRESIDENT

MAY 3 1999

RIT 4580

Pierce #1 (47-085 - 8580)  
Four Stage Foam Frac - Halliburton

1 <sup>st</sup> Stage:	Alexander ( 12 holes ) ( 5209.25' to 5250.25' )	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 811 bbls foam.
2 <sup>nd</sup> Stage:	Benson ( 5 holes ) 4957.75' to 4958.75' ) Third Riley ( 7 holes ) ( 4894' to 4895.50' )	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 618 bbls foam.
3 <sup>rd</sup> Stage:	Riley ( 10 holes ) ( 4578.25' to 4594.50' ) Balltown ( 3 holes ) ( 4203.25' to 4203.75' )	60 Quality Foam. 1,000 gal 15% HCL. 5,000# 80/100 sand, 45,000# 20/40 sand, 502,000 SCF N2, 744 bbls foam.
4 <sup>th</sup> Stage:	Balltown ( 3 holes ) ( 3878.75' to 3879.25' ) Speechley ( 2 holes ) ( 3494.25' & 3494.50' ) Warren ( 7 hole ) ( 3447.50' to 3466.25' )	60 Quality Foam. 1,000 gal 15% HCL. 5,000# 80/100 sand, 45,000# 20/40 sand, 502,000 SCF N2, 684 bbls foam.

WELL LOG

Fill	0	5	
Sand & Shale	5	15	
Sand	15	157	
Sand & Shale	157	525	¼" H <sub>2</sub> O @ 120'
Red Rock	525	570	½" H <sub>2</sub> O @ 230'
Shale & Sand	570	845	
Red Rock	845	988	
Sand	988	1023	
Red Rock	1023	1075	
Sand	1075	1100	
Sand & Shale	1100	1380	
Shale	1380	1574	
Sand	1574	1642	
Sand & Shale	1642	1989	½" H <sub>2</sub> O @ 1983'
Little Lime	1989	2024	
Sand & Shale	2024	2046	
Big Lime	2046	2140	
Big Injun	2140	2186	
Shale	2186	2349	
Weir	2349	2482	
Sand & Shale	2482	3400	
Warren	3400	3476	
Shale	3476	3485	
Speechley	3485	3770	<b>Gas Checks</b>
Shale	3770	3822	2006' – No Show
Balltown	3822	4470	No gas checks due to wet hole
Shale	4470	4556	
Riley	4566	4608	
Shale	4608	4858	
Third Riley	4858	4916	
Shale	4916	4956	
Benson	4956	4964	
Shale	4964	5188	
Alexander	5188	5280	
Sand & Shale	5280	5438	
T.D.	5438		