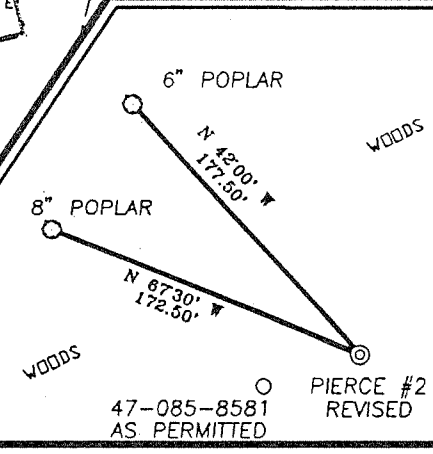


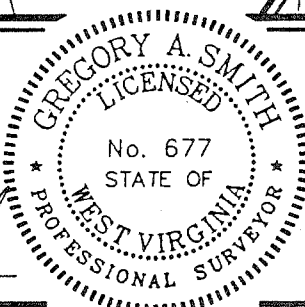
- NOTES ON SURVEY**
1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD '27.
 2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A TITLE REPORT PREPARED BY RICHARD M. REDDECLIFF DATED 7/29/98.
 3. SURFACE OWNERS AND ADJOINER INFORMATION OBTAINED FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN JULY 1998.
 4. WELL LAT./LONG. ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).
 5. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 11/06/98.

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 NOVEMBER 9, 19 98
 OPERATORS WELL NO. PIERCE # 2 REVISED
 API WELL NO. 47-085-8581
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 4045P2R2 (69-49)
 PROVEN SOURCE OF ELEVATION JUNCTION OF ROADS ELEVATION 798' SCALE 1" = 400'

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

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

LOCATION :
 ELEVATION 1003' 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

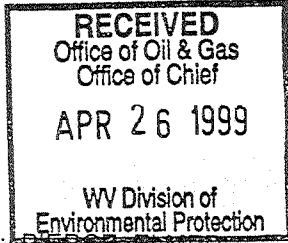
PROPOSED WORK : LEASE NO. _____
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION ALEXANDER
 ESTIMATED DEPTH 5600'

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

COUNTY NAME RITCHIE PERMIT 9581

WR-35



27 - Oct - 98
API # 47 - 85 - 8581

Reviewed 18

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

Well Operator's Report of Well Work

Farm name: PIERCE, ELMER

Operator Well No. : PIERCE #2

LOCATION: Elevation: 997.00

Quadrangle: OXFORD

District: UNION

County: RITCHIE

Latitude: 40 Feet South of 39 Deg. 10 Min. 00 Sec.

Longitude: 11380 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: 11/09/98
Well Work Completed: 11/14/98
Verbal Plugging _____
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 5385'
Fresh water depths (ft) 134', 194'
Salt water depths (ft) NONE

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"	127'	127'	70 sks To Surface
8 5/8"	1534.70'	1534.70'	440 sks To Surface
4 1/2"	5218'	5218'	470 sks
2 3/8"		5023'	

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

OPEN FLOW DATA

Warren	3259' - 3309'
Speechley	3319' - 3438'
Balltown	3618' - 4103'
Rileys	4376' - 4746'
Producing formation <u>Alexander</u>	Pay zone depth (ft) <u>5024' - 5105'</u>
Gas: Initial open flow <u>15</u> MCF / d	Oil: Initial open flow <u>0</u> Bbl / d
Final open flow <u>1,571</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>1950</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]

PRESIDENT

Date: April 21, 1999

MAY 2 1999

RIT 4581

Pierce #2 (47-085 - 8581)
Four Stage Foam Frac - Halliburton

1 st Stage:	Alexander (14 holes) (5043.25' to 5095.25')	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 808 bbls foam.
2 nd Stage:	Third Riley (12 holes) (4727.50' to 4733.75')	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 613 bbls foam.
3 rd Stage:	Riley (13 holes) (4416.75' to 4431.50')	60 Quality Foam. 1,000 gal 15% HCL. 5,000# 80/100 sand, 45,000# 20/40 sand, 502,000 SCF N2, 741 bbls foam.
4 th Stage:	Balltown (4 holes) (3685.75' to 4028') Speechley (2 holes) (3332' & 3332.25') Warren (8 hole) (3304' to 3298.75')	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

Dirt & Rocks	0	5	
Sand & Shale	5	36	
Red Rock	36	48	
Sand & Shale	48	108	
Sand & Shale & Red Rock	108	132	½" H ₂ O @ 130'
Shale & Sand	132	424	¼" H ₂ O @ 194'
Red Rock & Shale	424	502	
Sand & Shale	502	591	
Red Rock & Sand & Shale	591	802	
Sand	802	860	
Sand & Shale	860	1023	
Sand	1023	1148	
Sand & Shale	1148	1354	
Sand	1354	1450	
Sand & Shale	1450	1740	
Little Lime	1740	1790	
Sand & Shale	1790	1886	
Big Lime	1886	1938	
Big Injun	1938	2016	
Shale	2016	2189	
Weir	2189	2322	
Sand & Shale	2322	2597	
Gordon	2597	2606	
Shale	2606	3259	
Warren	3259	3309	Gas Checks
Shale	3309	3319	1900' - No Show
Speechley	3319	3438	2527' - No Show
Sand & Shale	3438	3618	3012' - No Show
Balltown	3618	4103	3662' - No Show
Shale	4103	4376	4692' - 2/10 ^{ths} - 1" w/H ₂ O
Riley	4376	4452	4848' - 2/10 ^{ths} - 1" w/H ₂ O
Shale	4452	4700	5160' - No Show
Third Riley	4700	4746	
Shale	4746	4792	
Benson	4792	4800	
Shale	4800	5024	
Alexander	5024	5105	
Sand & Shale	5105	5385	
T.D.	5385		