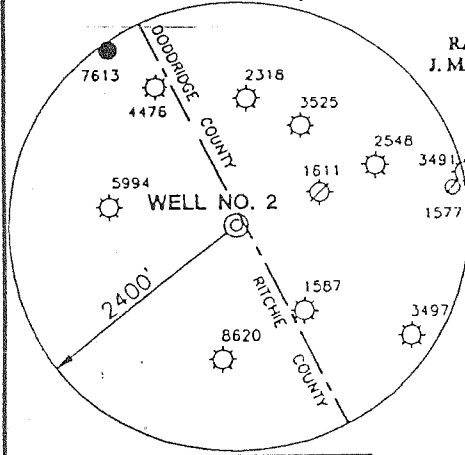
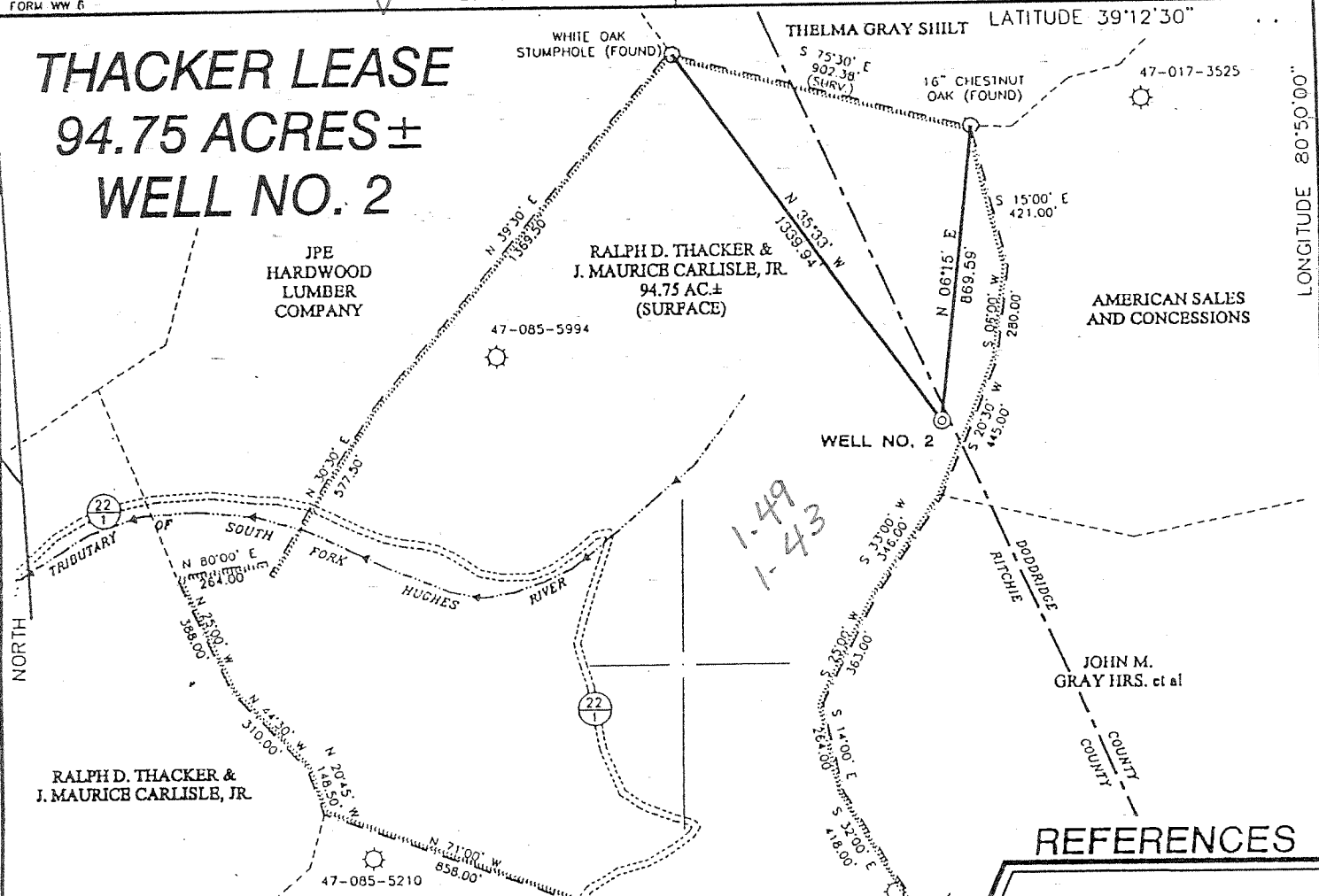
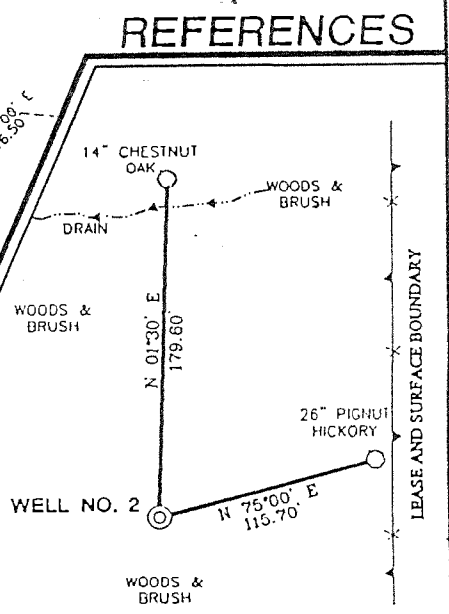


# THACKER LEASE 94.75 ACRES ± WELL NO. 2



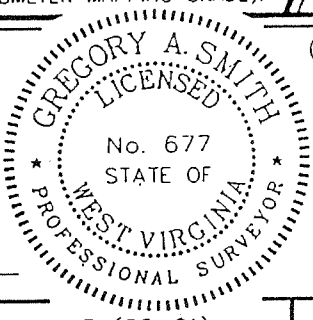
### NOTES ON SURVEY

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 1/24/00.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A PLAT DATED 10/19/82 AS PREPARED BY MARK C. ECHARD LLS 490 FOR A.P.I. NO. 47-085-5994.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF RITCHIE COUNTY IN MAY, 1999.
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 DEPARTMENT OF ENERGY.

P.S. 677 *Gregory A. Smith*



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE FEBRUARY 1, 20 00  
 OPERATORS WELL NO. THACKER #2  
 API WELL NO. 47-085-08688  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 4213P2R (80-61)  
 PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEVATION 1277' SCALE 1" = 500'

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

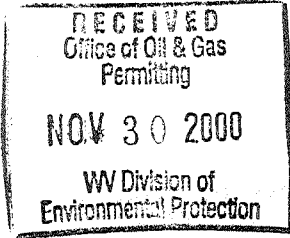
WELL TYPE : OIL  GAS  LIQUID WASTE IF  
 INJECTION  DISPOSAL  "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION :  
 ELEVATION 1121' WATERSHED TRIBUTARY OF SOUTH FORK HUGHES RIVER  
 DISTRICT UNION COUNTY RITCHIE QUADRANGLE OXFORD 7.5'  
 SURFACE OWNER RALPH D. THACKER & J. MAURICE CARLISLE, JR. ACREAGE 94.75  
 ROYALTY OWNER RALPH D. THACKER ET AL LEASE ACREAGE 94.75  
 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

6-6-132

COUNTY NAME RITCHIE PERMIT 8688



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

Well Operator's Report of Well Work

*[Handwritten signature]*

Farm name: RALPH D. THACKER & J. MAURICE CARLISLE, JR.

Operator Well No. : THACKER #2

LOCATION: Elevation: 1121.00      Quadrangle: OXFORD

District: UNION      County: RITCHIE  
Latitude: 7850      Feet South of 39 Deg. 12 Min. 30 Sec.  
Longitude: 7500      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: LARRY PARRISH  
Permit Issued: 07/21/00  
Well Work Commenced: 09/14/00  
Well Work Completed: 09/18/00  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth ( feet ) 5368'  
Fresh water depths ( ft ) 83'  
Salt water depths ( ft ) NONE

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
8 5/8"	1123'	1123'	255 sks To Surface
4 1/2"	5328'	5328'	460 sks
2 3/8"		5152'	

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

OPEN FLOW DATA  
Warren 3352' - 3406'  
Speechley 3412' - 3528'  
Balltown 3750' - 4430'  
Rileys 4472' - 4872'  
Benson 4902' - 4914'  
Producing formation Alexander Pay zone depth ( ft ) 5144' - 5230'  
Gas: Initial open flow Show MCF / d Oil: Initial open flow 0 Bbl / d  
Final open flow 1,500 MCF / d Oil: Final open flow show Bbl / d  
Time of open flow between initial and final tests N/A Hours  
Static rock pressure 1875 psig ( surface pressure ) after 96 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

**NOV 5 2001**

By: *[Signature]*  
Date: November 21, 2000

PRESIDENT

*[Vertical handwritten note: RIT 8688]*

Thacker #2 (47-085-8688)  
Four Stage Foam Frac - Halliburton

1 <sup>st</sup> Stage:	Alexander ( 17 holes ) ( 5172.25' to 5216.50' )	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 810 bbls foam.
2 <sup>nd</sup> Stage:	Benson ( 10 holes ) ( 4909' to 4911.25' ) Third Riley ( 4 holes ) ( 4841.50' to 4842.25' )	60 Quality Foam. 750 gal 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2, 616 bbls foam.
3 <sup>rd</sup> Stage:	Riley ( 11 holes ) ( 4503.25' to 4530.25 ) Balltown ( 4 holes ) ( 4039.75' to 4040.50' )	60 Quality Foam. 1,000 gal 15% HCL. 5,000# 80/100 sand, 45,000# 20/40 sand, 502,000 SCF N2, 743 bbls foam.
4 <sup>th</sup> Stage:	Balltown ( 4 holes ) ( 3809' to 3913.75' ) Speechley ( 5 holes ) ( 3423.75' to 3515.50' ) Warren ( 9 holes ) ( 3365.75' to 3392.25' )	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	10	
Sand	10	24	
Sand & Shale	24	113	½" H <sup>2</sup> O @ 83'
Red Rock	113	176	
Sand & Shale	176	375	
Sand	375	479	
Sand & Shale	479	622	
Sand	622	722	
Red Rock	722	792	
Sand & Shale	792	1257	
Sand	1257	1301	
Sand & Shale	1301	1333	
Sand	1333	1422	
Sand & Shale	1422	1942	
Little Lime	1942	1962	
Sand & shale	1962	1985	
Big Lime	1985	2044	
Big Injun	2044	2114	
Shale	2114	2282	
Weir	2282	2402	
Shale	2402	2472	
Berea	2472	2480	
Sand & Shale	2480	3352	
Warren	3352	3406	
Shale	3406	3412	
Speechley	3412	3528	<b>Gas Checks</b>
Shale	3528	3750	1923' - No Show
Balltown	3750	4430	2147' - No Show
Shale	4430	4472	3408' - No show
Riley	4472	4550	3811' - No show
Shale	4550	4816	4573' - 6/10 <sup>ths</sup> - ½" w/H <sup>2</sup> O
Third Riley	4816	4872	4916' - 6/10 <sup>ths</sup> - ½" w/H <sup>2</sup> O
Shale	4872	4902	5111' - 8/10 <sup>ths</sup> - ½" w/H <sup>2</sup> O
Benson	4902	4914	TD - 4/10 <sup>ths</sup> - ½" w/H <sup>2</sup> O
Shale	4914	5144	
Alexander	5144	5230	
Sand & Shale	5230	5368	
T.D.	5368		