

8,950'

LATITUDE 39°15'00"

S. SPIKER  
872 ACRES

3,650'

80°42'30" LONGITUDE

NO. 1

0.70  
0.70

G. ADRIAN  
290 ACRES

WELL NO. 512

S55-38E 305.6'

N8-55W 677.7'

S34-51E 329.5'

S28-53E 208.3'

S20-32W 901.8'

S40E 147.4'

S6-55E 515.65'

S75-23E 189.5'

S61-06E 639.7'

WELL NO. 4078



NORTH

18' MAPLE

S82-59E 579.4'

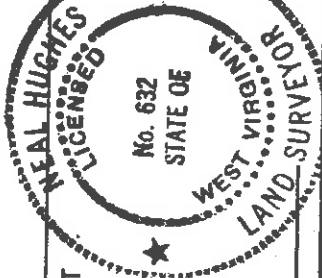


B. SWARTZMAN  
1690 ACRES

REFERENCE POINTS

I THE UNDERSIGNED, DO 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.

L.L.S. *Neal Hughes*  
632



(\*) INDOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE AUGUST 2, 19 94  
OPERATORS WELL NO. MAXWELL HRS. 2

WELL NO. 47 - 017 - 04212  
API NO. COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 94-66

PROVEN SOURCE OF ELEVATION KNOB 1358' SCALE 1"=500'

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

LOCATION ELEVATION 1085' WATERSHED LICK RUN

DISTRICT NEW MILTON COUNTY DODDRIDGE

SURFACE OWNER GEORGE ADRIAN, ET AL QUADRANGLE NEW MILTON

ROYALTY OWNER GEORGE PIERCE, JR., ET AL ACREAGE 290

LEASE ACREAGE 200

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 5400'

WELL OPERATOR KEY OIL CO.  
ADDRESS 22 GARTON PLAZA  
WESTON, WV 26452

DESIGNATED AGENT  
ADDRESS 6-6 99  
WESTON, WV 26452

JAN CHAPMAN  
22 GARTON PLAZA  
WESTON, WV 26452

24 1005

DODDRIDGE

COUNTY NAME PERMIT

SEP 27 1995

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

Permitting

Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: ADRIAN, GEORGE ETAL.

Operator Well No.: MAXWELL HRS. #2

LOCATION: Elevation: 1,085.00 Quadrangle: NEW MILTON

District: NEW MILTON

County: DODDRIDGE

Latitude: 3650 Feet South of 39 Deg. 15Min. 0 Sec.  
Longitude 8950 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: 08/23/95  
Well work Commenced: 09/09/95  
Well work Completed: 09/13/95

Verbal Plugging  
Permission granted on: \_\_\_\_\_  
Rotary X Cable \_\_\_\_\_ Rig  
Total Depth (feet) 5260  
Fresh water depths (ft) -0-

Salt water depths (ft) -0-

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

Warren & Speerhtey

OPEN FLOW DATA

Balltown 3121-3247  
Riley 3858-3898  
Benson 4320-4340  
4769-4776

Producing formation Alexander Pay zone depth (ft) 5048-5118  
Gas: Initial open flow 30 MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 1,517 MCF/d Final open flow Show Bbl/d  
Time of open flow between initial and final tests N/A Hours  
Static rock pressure 1425 psig (surface pressure) after 96 Hours

Second producing formation  
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

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	42	0	
8 5/8"	1096	1096	295 sks. to surface
4 1/2"		5180	470 sks.
2 3/8"		5036	

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:  President  
Date: September 25, 1995

SEP 27 1995

Maxwell Heirs #2 (47-017-4212)  
Five Stage Foam Frac - Halliburton

1st Stage: Alexander (11 holes) (5056.50' -5104.50') 60 Quality Foam, 750 gal. 15% HCl, 60,000 lbs. 20-40 sand, 490,000 SCF N<sub>2</sub>, 807 bbls. foamed fluid.

2nd Stage: Benson (10 holes) (4770.25' -4772.50') 75 Quality Foam, 750 gal. 15% HCl, 30,000 lbs. 20-40 sand, 423,000 SCF N<sub>2</sub>, 517 bbls. foamed fluid.

3rd Stage: Riley (8 holes) (4323.00' -4327.75') 60 Quality Foam, 750 gal. 15% HCl, 10,000 lbs. 80-100 sand, 30,000 lbs. 20-40 sand, 508,000 SCF N<sub>2</sub>, 613 bbls. foamed fluid.

4th Stage: Balltown (12 holes) (3871.75' -3896.75') 60 Quality Foam, 750 gal. 15% HCl, 10,000 lbs. 80-100 sand, 30,000 lbs. 20-40 sand, 508,000 SCF N<sub>2</sub>, 600 bbls. foamed fluid.

5th Stage: Warren (11 holes) (3142.25' -3200.00') 60 Quality Foam, 750 gal. 15% HCl, 10,000 lbs. 80-100 sand, 40,000 lbs. 20-40 sand, 558,000 SCF N<sub>2</sub>, 736 bbls. foamed fluid.  
Speechley (3 holes) (3236.25' -3236.75')

Formation	Well Log		Remarks
	Top Feet	Bottom Feet	
Fill	0	10	
Shale & Red Rock	10	199	No water reported on drillers log.
Shale	199	689	
Sand & Shale	689	1135	
Shale	1135	1710	
Little Lime	1710	1760	
Big Lime	1760	1864	Gas Checks:
Big Injun	1864	1892	
Shale	1892	2046	1660' N/S
Weir	2046	2130	1816' N/S
Shale	2130	2254	2000' N/S
Berea	2254	2261	2499' 4/10 thru 1" w/water
Shale	2261	2460	3028' 4/10 thru 1" w/water
Gordon	2460	2490	3525' 4/10 thru 1" w/water
Shale	2490	3124	4016' 6/10 thru 1" w/water
Warren & Speechley	3124	3244	4517' 6/10 thru 1" w/water
Shale	3244	3858	4918' 8/10 thru 1" w/water
Balltown	3858	3898	5260' 8/10 thru 1" w/water
Sand & Shale	3898	4320	
Riley	4320	4340	
Sand & Shale	4340	4769	
Benson	4769	4776	
Shale	4776	5048	
Alexander	5048	5118	
Shale	5118	5260	
T.D.	5260		

RECEIVED  
WV Division of  
Environmental Protection

FORM WW-2B

017-4212

Page      of     

STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

Permitting  
Office of Oil & Gas

WELL WORK PERMIT APPLICATION

1) Well Operator: Key Oil Company 25655 (C) 511

2) Operator's Well Number: Maxwell Heirs #2 1085'  
Well type: (a) Oil X / or Gas X / 3) Elevation:     

(b) If Gas: Production X / Underground Storage      /  
Deep      / Shallow X /  
439  
Proposed Target Formation(s): Alexander

21045

Proposed Total Depth: 5400 feet

Approximate fresh water strata depths: 70'

8) Approximate salt water depths: -0-

9) Approximate coal seam depths: None

10) Does land contain coal seams tributary to active mine? Yes      / No     

11) Proposed Well Work: Drill, Stimulate, Produce New Well

12)

CASING AND TUBING PROGRAM

TYPE	SIZE	Grade	Weight per ft.	For drilling	Left in well	FILL-u. (cu. ft.)	CEM
Conductor	11 3/4"	ERW	32	32	-0-	0.1 K MU	
Fresh Water	8 5/8"	ERW	23	1085'	1085'	295 SKS. to surface	
Coal							
Intermediate							
Production	4 1/2"	J-55	10.50		5300'	500 SKS.	
Tubing	1.5"						
Liners							

PACKERS : Kind  
Sizes  
Depths set

FOR DIVISION OF OIL AND GAS USE ONLY

Fees: Paid:      Well Work Permit      Reclamation Fund

RECEIVED

Permitting  
Office of Oil & Gas

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

1) Date: August 14, 1995  
2) Operator's well number  
Maxwell Heirs #2  
3) API Well No: 47 - 017 - 4212  
State - County - Permit

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
- (a) Name George Adrian, et al  
Address Rt. 1 Box 95A  
New Milton, WV 26411
- (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
- (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 5) (a) Coal Operator:  
Name None  
Address \_\_\_\_\_
- (b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- Name \_\_\_\_\_  
Address \_\_\_\_\_
- (c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Mike Underwood  
Address Rt. 2 Box 135  
Salem, WV 26426  
Telephone (304) - 782-1043

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

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 Key Oil Company  
By: Karen Cook  
Its: President  
Address 22 Garton Plaza  
Weston, WV 26452

Telephone 304-269-7102

subscribed and sworn before me this 14th day of August 1995

My commission expires March 24, 2003

19 95  
OFFICIAL SEAL NOTARY PUBLIC  
STATE of West Virginia Public  
KAREN COOK  
ROUTE 2, BOX 1  
JANE LEW, WV 26378  
My Commission Expires Mar. 24, 2003