

James
7/11/96

LATITUDE 39°15'00"

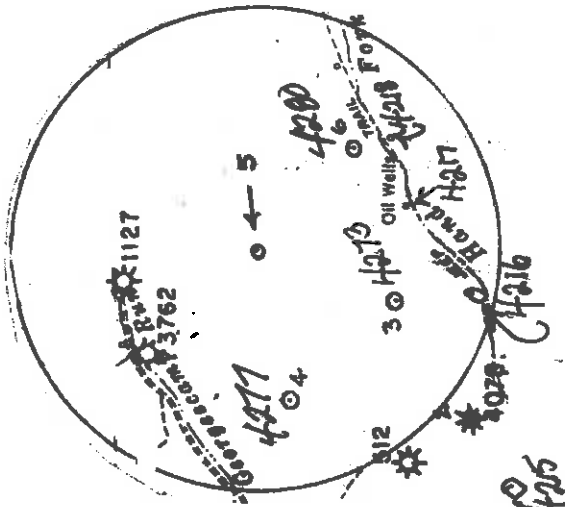
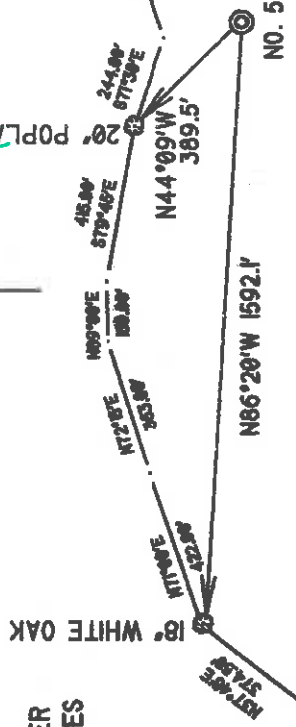
LONGITUDE 80°42'30"

0.255
0.350

S. SPIKER
872 ACRES

G. ADRIAN
290 ACRES

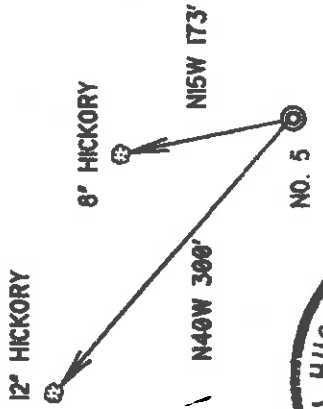
R. MAXWELL
82 ACRES



NO. 2

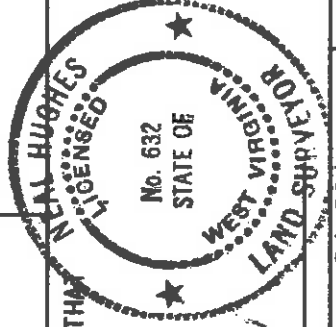
425

REFERENCE POINTS



I THE UNDERSIGNED, DO HEREBY CERTIFY THAT THIS PLAN 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



I-DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE MARCH 25 19 96
OPERATORS WELL NO. MAXWELL HEIRS 5

API WELL NO. 47 - 017 04276
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 94-66
 PROVEN SOURCE OF ELEVATION KNOB 1358' SCALE 1" = 500'
 STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL 'GAS' PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1181' WATERSHED LICK RUN
 DISTRICT NEW MILTON COUNTY DODDRIDGE QUADRANGLE NEW MILTON ACREAGE 290
 SURFACE OWNER GEORGE ADRIAN, ET AL LEASE ACREAGE 400 OF 1100
 ROYALTY OWNER LEWIS MAXWELL HEIRS
 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' 5400'

WELL OPERATOR KEY OIL CO. 475 DESIGNATED AGENT JAN CHAPMAN JUL 7 1996
 ADDRESS 22 GARTON PLAZA WESTON, WV 26452
 COUNTY NAME PERMIT

6-6-99

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

Well Operator's Report of Well Work

Farm name: ADRIAN, GEORGE ETAL. Operator Well No.: MAXWELL HRS. #5

LOCATION: Elevation: 1,181.00 Quadrangle: NEW MILTON

District: NEW MILTON County: DODDRIDGE
Latitude: 1500 Feet South of 39 Deg. 15Min. 0 Sec.
Longitude 7100 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: 07/01/96
Well work Commenced: 7/27/96
Well work Completed: 7/31/96
Verbal Plugging
Permission granted on: _____ Rig
Rotary X Cable _____
Total Depth (feet) 5355'
Fresh water depths (ft) 25'

Salt water depths (ft) _____

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

OPEN FLOW DATA

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	40	0	
8 5/8"	1178	1178	320 SKS. TO SURFACE
4 1/2"		5314	470 SKS.
2 3/8"		5031	

SPEECHLEY & WARREN
BALLTOWN SANDS
RILEY SANDS
BENSON
ALEXANDER

Producing formation _____
Gas: Initial open flow 45 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 1,563 MCF/d Final open flow SHOW Bbl/d
Time of open flow between initial and final tests N/A Hours
Static rock Pressure 1750 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

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: *Jan Chapman*
Date: AUGUST 15, 1996

PRESIDENT

FEB 14 1997

Maxwell Heirs #5 (47-017-4276)
Four Stage Foam Frac - Halliburton

1st Stage: Alexander (10 holes) (5177.25'-5228.75') 60 Quality Foam, 500 gal, 15% HCl, 60,000 lbs. 20-40 sand, 550,000 SCF N₂, 808 bbls. foam.
Leopold (2 holes) (5051'-5051.25')

2nd Stage: Benson (5 holes) (4894.50'-4895.50') 60 Quality Foam, 750 gal, 15% HCl, 30,000 lbs. 20-40 sand, 354,000 SCF N₂, 578 bbls. foam.
3rd Riley (2 holes) (4816.50'-4816.75')
2nd Riley (3 holes) (4685'-4685.50')

3rd Stage: Riley (5 holes) (4444.25'-4458') 60 Quality Foam, 750 gal, 15% HCl, 5,000 lbs. 80-100 sand, 30,000 lbs. 20-40 sand, 406,000 SCF N₂, 599 bbls. foam.
Lower Balltown (7 holes) (4005.50'-4187.75')

4th Stage: Warren & Speechley (10 holes)(3321.50'-3361') 60 Quality Foam, 750 gal, 15% HCl, 10,000 lbs. 80-100 sand, 40,000 lbs. 20-40 sand, 473,000 SCF N₂, 736 bbls. foam.

Well Log			
Formation	Top Feet	Bottom Feet	Remarks
F-111	0	5	
Shale & Sand	5	50	
Red Rock & Shale	50	170	Damp at 25'
Sand	170	179	
Shale	179	212	
Sand	212	237	
Shale & Red Rock	237	286	
Sand & Shale	286	505	
Sand	505	547	1823' N/S
Shale & Red Rock	547	739	2010' 12/10 thru 1" w/water
Sand & Red Rock	739	778	2507' 6/10 thru 1" w/water
Shale	778	866	2998' 6/10 thru 1" w/water
Sand & Red Rock	866	894	3521' 18/10 thru 1" w/water
Sand, Shale & Red Rock	894	1832	4205' 18/10 thru 1" w/water
Little Lime	1832	1862	4604' 18/10 thru 1" w/water
Pencil Cave	1862	1886	5001' 16/10 thru 1" w/water
Big Lime	1886	1970	5350' T.D. 18/10 thru 1" w/water
Big Injun	1970	2020	Gas at dr-111 collars 8/10 thru 1" w/water
Sand & Shale	2020	2170	
Weir	2170	2260	
Sand & Shale	2260	2380	
Berea	2380	2388	
Shale	2388	2586	
Gordon	2586	2616	
Shale	2616	3248	
Warren/Speechley	3248	3391	
Shale	3391	3992	
Balltown Sands & Shale	3992	4194	
Shale	4194	4398	
Riley Sands & Shale	4398	4842	
Sand & Shale	4842	4891	
Benson	4891	4902	
Shale	4902	5030	
Leopold	5030	5070	
Shale	5070	5136	
Alexander	5136	5242	
Shale	5242	5355	
T.D.	5355		

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WELL WORK PERMIT APPLICATION

- 1) Well Operator: KEY OIL COMPANY ⁴²⁵ 25655 0 511
- Operator's Well Number: MAXWELL HEIRS #5 3) Elevation: 1181'
- Well type: (a) Oil X / or Gas X / Issued 07/01/96
 (b) If Gas: Production X / Underground Storage 1 Expires 07/01/98
 Deep 1 / Shallow X / ⁴³⁹
- Proposed Target Formation(s): ALEXANDER
- Proposed Total Depth: 5400 feet
- 7) Approximate fresh water strata depths: 90'
- 8) Approximate salt water depths: -0-
- 9) Approximate coal seam depths: NONE
- 10) Does land contain coal seams tributary to active mine? Yes No X /
- 11) Proposed Well Work: DRILL, STIMULATE, PRODUCE My Well
- 12)

RECEIVED
 WV Division of
 Environmental Protection
 JUN 17 1996
 Permitting
 Office of Oil & Gas

CASING AND TUBING PROGRAM

TYPE	SIZE	GRADE	WEIGHT PER FT.	FOOTAGE	INTERVALS	CEMENT
Conductor						
Fresh Water	8 5/8	ERW	23	1180	1180	Fill-up (cu. ft.) <u>348 SKS. TO SURFACE</u> <u>BOOK 18-113</u>
Coal						
Intermediate						
Production	4 1/2	J-55	10.5	5280	5280	<u>385 SR 1811.1</u>
Tubing	1.5					
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

For Office of Oil and Gas Use Only

Fee(s) paid: Well Work Permit Reclamation Fund WPCP

Plat WW-9 Bond Agent

(Type)

RECEIVED
WV Division of
Environmental Protection

JUN 17 1996

Permitting
Office of Oil & Gas

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

25655/6/510

1) Date: APRIL 29, 1996
2) Operator's well number MAXWELL #5
3) API Well No: 47 - 017 - 276
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 _____

6) Inspector MIKE UNDERWOOD
Address RT. 2 BOX 135
SALEM, WV 26426
Telephone (304) - 782-1043

5) (a) Coal Operator:
Name NONE
Address _____

(b) Coal Owner(s) with Declaration
Name _____
Address _____

(c) Coal Lessee with Declaration
Name _____
Address _____

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

X Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 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:

X Personal Service (Affidavit attached)

_____ Certified Mail (Postmarked postal receipt attached)

_____ Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 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: _____
It is: _____
Address 22 GARTON PLAZA
WESTON, WV 26452
Telephone 304-269-7102

Subscribed and sworn before me this 29TH day of APRIL, 1996

My commission expires MARCH 24, 2003

Karen Cook
Notary Public
My Commission Expires March 24, 2003