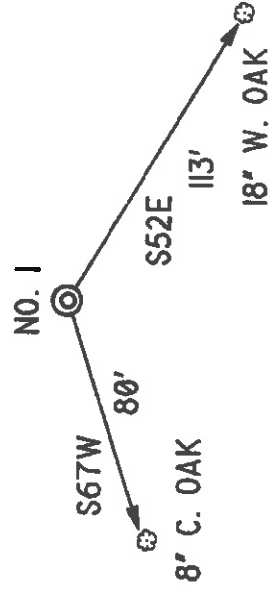


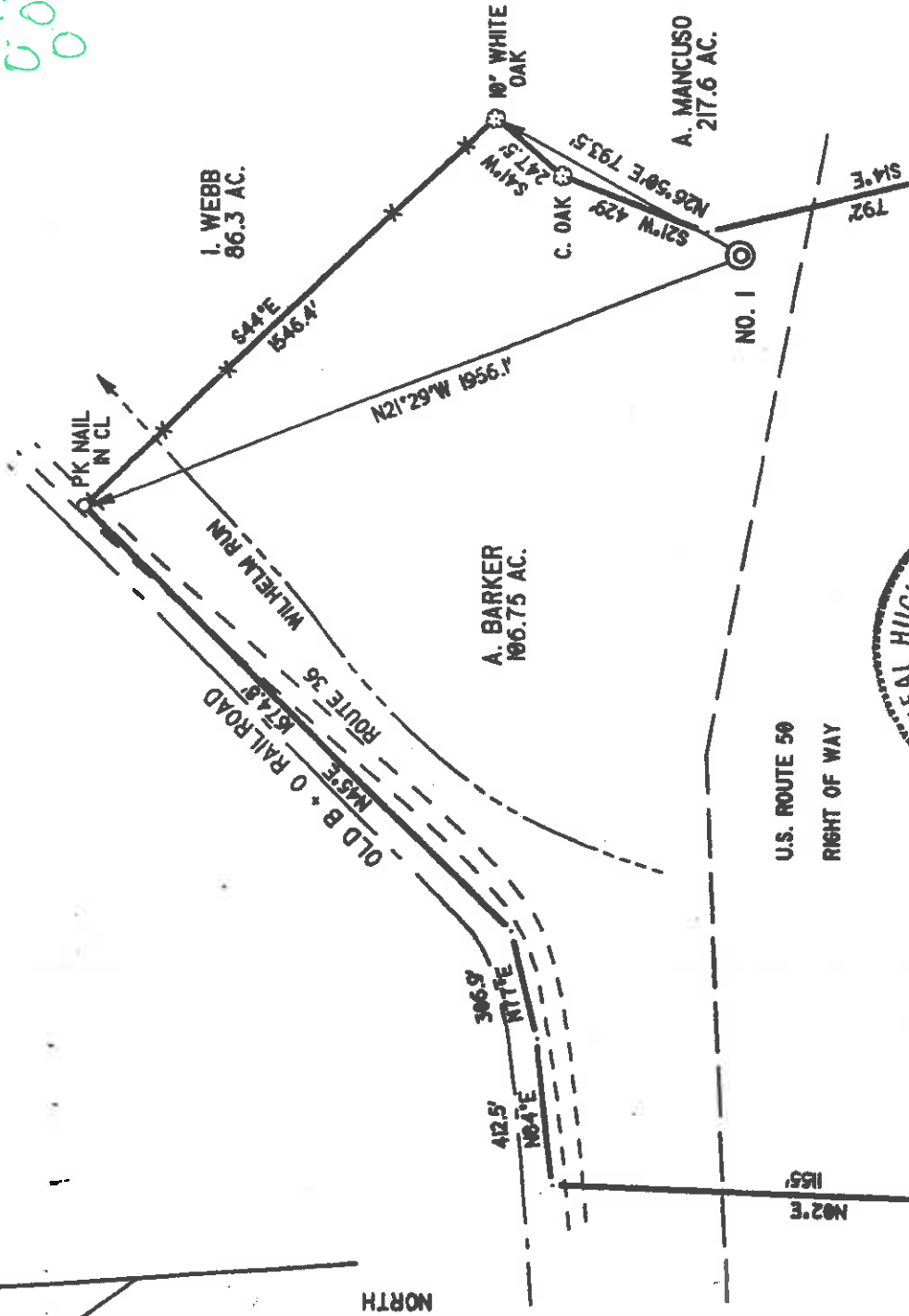
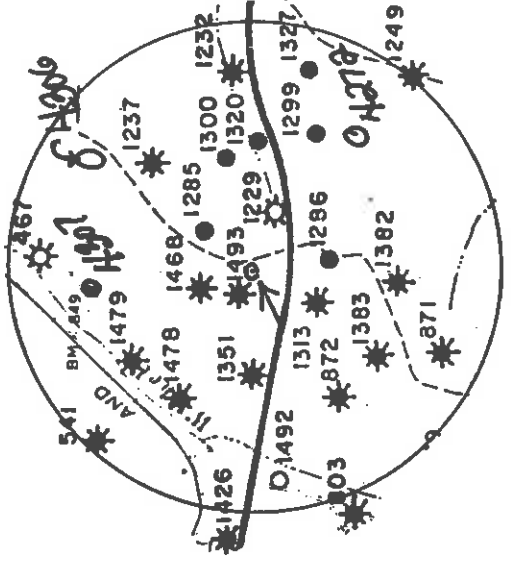
REFERENCE POINTS



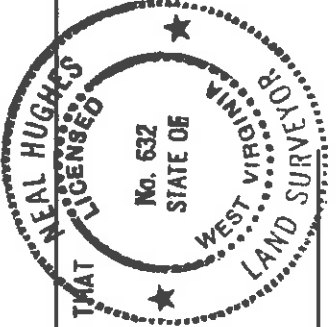
Janice
 10/3/96

LATITUDE 39°17'30"

LONGITUDE 80°50'00"



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

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 DATE SEPTEMBER 16 19 96
 OPERATORS WELL NO. DUCKWORTH I

API WELL NO. 47 - 017-04308
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200
 FILE NO. 96-75
 PROVEN SOURCE OF ELEVATION KNOB 1202'
 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 1120' WATERSHED WILHELM RUN
 DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE WEST UNION
 SURFACE OWNER ANNA BARKER, ET AL ACREAGE 106.75
 ROYALTY OWNER ANNA BARKER, ET AL LEASE ACREAGE 146

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
 ADDRESS 22 GARTON PLAZA WESTON, WV 26452
 DESIGNATED AGENT JAN CHAPMAN
 ADDRESS 22 GARTON PLAZA WESTON, WV 26452
 COUNTY NAME COUNTY PERMIT
 6-6-89

0.00
 0.00

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

FEB 18 1997

Permitting
Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: BARKER, ANNA B. ETAL

Operator Well No.: DUCKWORTH #1

LOCATION: Elevation: 1,120.00

Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE
Latitude: 5000 Feet South of 39 Deg. 17 Min. 30 Sec.
Longitude: 300 Feet West of 80 Deg. 50 Min. 0 Sec.

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

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD

Permit Issued: 09.30/96

Well Work Commenced: 10/27/96

Well Work Completed: 11/05/96

Verbal Plugging

Permission granted on: _____ Rig

Rotary X Cable _____ 5579'

Total Depth (feet) _____

Fresh water depths (ft) NONE

Salt water depths (ft) 742'

Is coal being mined in area (Y/N)? N

Coal Depths (ft): None Reported

OPEN FLOW DATA

Warren
Speechley
Balltown
Riley
Benson

3484' - 3552'
3560' - 3848'
3872' - 4610'
4638' - 5041'
5084' - 5096'

Producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow 23 MCF / d Oil: Initial open flow 0 Bbl / d
Final open flow 1,602 MCF / d Oil: Final open flow show Bbl / d
Time of open flow between initial and final tests N/A Hours
Static rock pressure 1700 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 PERFORMED 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
FEB 14 1997

Date: JANUARY 22, 1997

Casing & Tubing Size	Used In Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"			
8 5/8"	1137'	1137'	305 sks To surface
4 1/2"	5504"	5504	450 sks
2 3/8"		5355'	

Duckworth #1 (47-017-04308)
Four Stage Foam Frac - Halliburton

1st Stage: Alexander (10 holes) (5375' - 5392.5') 60 Quality Foam. 500 gal. 15% HCL.
60,000# 20/40 sand, 550,000 SCF N2,
812 bbbs foam.

2nd Stage: Benson (5 holes) (5088.5' - 5089.5') 60 Quality Foam. 750 gal 15% HCL.
Third Riley (6 holes) (4983.75' - 5009.25') 40,000# 20/40 sand, 417,000 SCF N2,
617 bbbs foam.

3rd Stage: Riley (9 holes) (4665.75' - 4699.25') 60 Quality Foam. 1000 gal 15% HCL.
Balltown (6 holes) (4450.75' - 4573.75') 10,000# 80/100 sand, 35,000# 20/40 sand,
438,000 SCF N2, 648 bbbs foam.

4th Stage: Balltown (6 holes) (3923.75' - 4070.5') 60 Quality Foam, 1000 gal 15% HCL.
Speechley (3 holes) (3663.75' - 3664.25') 5,000# 80/100 sand, 35,000# 20/40 sand,
Warren (2 holes) (3530' - 3530.25') 390,000 SCF N2, 589 bbbs foam.

WELL LOG

Clay & Fill	0	15	
Shale & Red Rock	15	40	
Sand	40	63	
Red Rock	63	71	
Sand & Shale	71	143	
Red Rock	143	180	
Sand & Shale	180	586	
Red Rock	586	720	
Sand	720	745	
Sand & Shale	745	1955	
Shale	1955	2080	
Little Lime	2080	2107	
Shale	2107	2115	
Big Lime	2115	2180	
Big Injun	2180	2264	
Shale	2264	2416	
Weir	2416	2542	
Sand & Shale	2542	3484	
Warren	3484	3552	
Shale	3552	3560	
Speechley	3560	3848	
Shale	3848	3872	
Balltown	3872	4610	
Shale	4610	4638	
Riley	4638	4710	
Shale	4710	4976	
3rd Riley	4976	5041	
Shale	5041	5084	
Benson	5084	5096	
Sand & Shale	5096	5329	
Alexander	5329	5414	
Silt & Shale	5414	5579	
T.D.	5579		

Damp @ 742'

Gas Checks

2515	OIL ODOR
3013	2/10 1/4" H ² O
3820	NO SHOW
4412	2/10 1" H ² O
4815	5/10 1" H ² O
5221	5/10 1" H ² O

STATE OF WEST VIRGINIA 017-4300
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

Well Operator: KEY OIL COMPANY 25655 (D) 475 671

Operator's Well Number: DUCKWORTH #1 3) Elevation: 1120'

Well type: (a) Oil X / or Gas X / Saved 09/30/96

(b) If Gas: Production X / Underground Storage Shallow X / Deep 439 Expire 09/30/98

Proposed Target Formation(s): ALEXANDER

Proposed Total Depth: 5600' feet

7) Approximate fresh water strata depths: 100'

8) Approximate salt water depths: -0-

9) Approximate coal seam depths: N/A

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

11) Proposed Well Work: DRILL, STIMULATE, PRODUCE Handwritten signature

12)

CASING AND TUBING PROGRAM

TYPE SPECIFICATIONS FOOTAGE INTERVALS CEMENT

TYPE	Size	Grade	Weight per ft. drilling	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11 3/4	ERW	42	40	0	<u>Handwritten signature</u>
Fresh Water	8 5/8	ERW	23	1120	1120	305 SKS. TO SURFACE
Coal						<u>Handwritten signature</u>
Intermediate						
Production	4 1/2	J-55	10.5	5420	5420	450 SKS.
Tubing	1.5					<u>Handwritten signature</u>
Liners						

PACKERS : Kind _____
Sizes _____
Depths set _____

For Office of Oil and Gas Use Only
Fee(s) paid: Well Work Permit Reclamation Fund WPC2
Plat WW-2B Bond Handwritten signature (Type) Agent

1) Date: SEPTEMBER 17 1996
2) Operator's well number DUCKWORTH #1
3) API well No: 47-017 - 4308
State _____ County _____ Permit _____

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
- (a) Name ANNA B. BARKER, ET AL
Address 99 WOOD STREET
WEST UNION, WV 26456
- (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 _____
Address _____
- (b) Coal Owner(s) with Declaration
Name _____
Address _____
- 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

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:

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 _____
By: [Signature] KEY OIL COMPANY
Its: [Signature] PRESIDENT
Address 22 GARTON PLAZA
WESTON, WV 26452
Telephone 304-269-7102

Subscribed and sworn before me this 17TH day of SEPTEMBER, 1996

[Signature] Notary Public
My commission expires MARCH 24, 2003

