



(X) DENOTES LOCATION ON UNITED STATES TOPOGRAPHIC MAPS

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 ENVIRONMENTAL PROTECTION

FILE NUMBER 040052
DRAWING NUMBER WP5(W1-51)
SCALE 1"=400'
ANNUAL DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEVATION 1295'

P.S. 2008



Terry A. Shreve



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

DATE: JANUARY 27, 2004

OPERATORS WELL NO. BARNES NO. 5

API WELL NO. 47-017

STATE COUNTY PERMIT 04802

WELL TYPE OIL GAS LIQUID INJECTION WASTE DISPOSAL

LOCATION ELEVATION 1258' WATERBORN DISTRICT WEST UNION QUADRANGLE WEST UNION 7.5'

SURFACE OWNER KEY OIL COMPANY AND FRANKLIN BUTLER ACREAGE 15.25±

OIL & GAS ROYALTY OWNER THOMAS E. MOBLEY HRS & LEWIS MAXWELL HRS LEASE ACREAGE 15.25±

PROPOSED WORK DRILL COMBENT DRILL DEEPER REFRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION

TARGET FORMATION GORDON

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 PERMIT

PLUG ABANDON CLEAN OUT & REFLUD ESTIMATED DEPTH 3000'

0000 4802

6-6 (99)

DATE 1-27-2004

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

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Well Operator's Report of Well Work

Farm Name: KEY OIL COMPANY & FRANKLIN BUTLER

Operator Well No.: BARNES NO. 5

LOCATION: Elevation: 1258'

Quadrangle: WEST UNION

District: WEST UNION

County: DODDRIDGE

Latitude: 1440 Feet South of 39 Deg. 17 Min. 30 Sec.

Longitude: 430 Feet West of 80 Deg. 45 Min. 00 Sec.

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

Agent: JAN CHAPMAN

Inspector: MIKE UNDERWOOD
Permit Issued: 05/05/04
Well Work Commenced: 08/12/04
Well Work Completed: 08/15/04

Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) 2930'
Fresh water depths (ft) 450'
Salt water depths (ft) NONE

Is coal being mined in area (Y / N) ? N
Coal Depths (ft): 173' (3')

OPEN FLOW DATA

Maxton Keener
Big Injun Gordon

1883' - 1908'
2075' - 2123'
2123' - 2155'
2727' - 2788'

Producing formation _____
Gas: Initial open flow 133 MCF / d Oil: Initial open flow 0 Bbl / d
Final open flow 2,398 MCF / d Oil: Final open flow show Bbl / d
Time of open flow between initial and final tests N/A Hours
Static rock pressure 335 psig (surface pressure) after 96 Hours

Second producing formation _____
Gas: Initial open flow Commingled MCF / d Oil: Initial open flow _____ Bbl / d
Final open flow Commingled 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

0000 4802
RECEIVED
Office of Oil & Gas
Office of Chief
FEB 22 2005
WV Department of Environmental Protection

By: *Jan Chapman*
Date: February 12, 2005

MAY 27 2005

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
8 5/8"	1251'	1251'	270 sks To Surface
4 1/2"	2907'	2907'	250 sks.

**Barnes #5 (47-017-4802)
Three Stage Foam Frac – Universal Well Services**

1st Stage:	Gordon (15 holes) (2782' to 2847')	60 Quality Foam, 500 gal. 15% HCL., 25,000# 20/40 sand, 217,000 SCF N₂, 255 bbls foam
2nd Stage:	Big Injun (12 holes) (2138' to 2160') Keener (12 holes) (2090' to 2109')	60 Quality Foam, 500 gal 15% HCl, 30,000# 20/40 sand, 295,000 SCF N₂, 330 bbls foam
3rd Stage:	Maxton (15 holes) (1908' to 1916')	60 Quality Foam, 500 gal 15% HCl 25,000# 20/40 sand, 235,000 SCF N₂, 275bbls foam

WELL LOG

KB	0	10	
Fill	10	12	
Sand	12	31	
Sand & Shale	31	80	
Shale & Red Rock	80	98	
Sand & Shale	98	173	
Coal	173	176	
Sand & Shale	176	467	Damp @ 450'
Red Rock	467	480	
Sand & Shale	480	640	
Red Rock	640	670	
Sand & Shale	670	914	
Red Rock	914	921	
Sand & Shale	921	978	
Red Rock	978	1010	
Sand & Shale	1010	1042	
Red Rock	1042	1074	
Sand & Shale	1074	1229	
Sand	1229	1354	
Sand & Shale	1354	1883	
Maxton	1883	1908	
Sand & Shale	1908	1950	
Little Lime	1950	1995	
Big Lime	1995	2075	
Keener	2075	2123	
Big Injun	2123	2155	
Shale	2155	2156	
Squaw	2156	2180	
Shale	2180	2327	
Weir	2327	2418	
Shale	2418	2530	
Berea	2530	2551	
Shale	2551	2728	
Gordon	2728	2789	
Sand & Shale	2789	2930	
TD	2930		

Gas Checks
 1951' - 20/10^{ths} - 2" w/water
 2045' - 20/10^{ths} - 2" w/water
 2232' - 30/10^{ths} - 2" w/water
 2359' - 26/10^{ths} - 2" w/water
 2548' - 10/10^{ths} - 2" w/water

MAY 27 2009