

J.B. MARKEY LEASE 197 AC± OF 404 AC± WELL #3A

DANIEL R. MITCHELL ET.AL. 2819

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CHAS E. POWELL EST. P/O 224.85 ACRES± (SURFACE) 197.75 ACRES± SHOWN

P/O 224.85 AC± SURFACE±

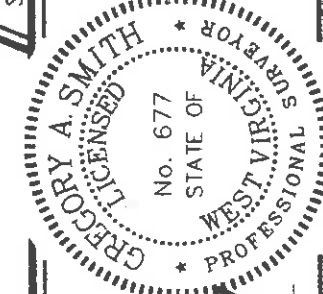
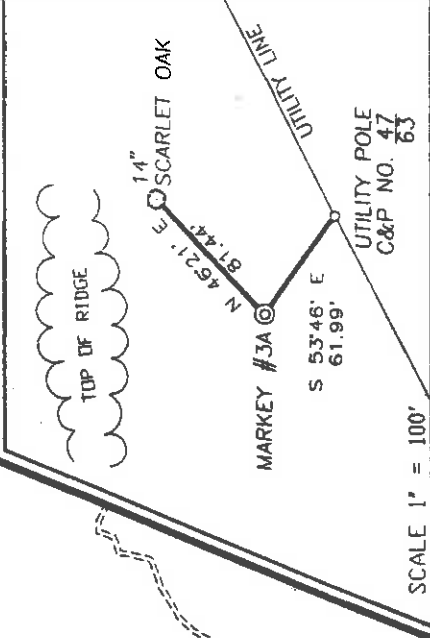
PHILLIP D. MCGILL JR.

47-017-2529

BLACK GUM

MARKEY #3A

REFERENCES



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. *Gregory A. Smith*
677

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 3776P3 (65-65)
PROVEN SOURCE OF ELEVATION SCALE 1" = 800'
JUNCTION OF ROADS ELEVATION 1037'

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

LOCATION : ELEVATION 1134' WATERSHED TRIBUTARY TO MIDDLE ISLAND CREEK

DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5' ACRES 197.75 OF 224.85

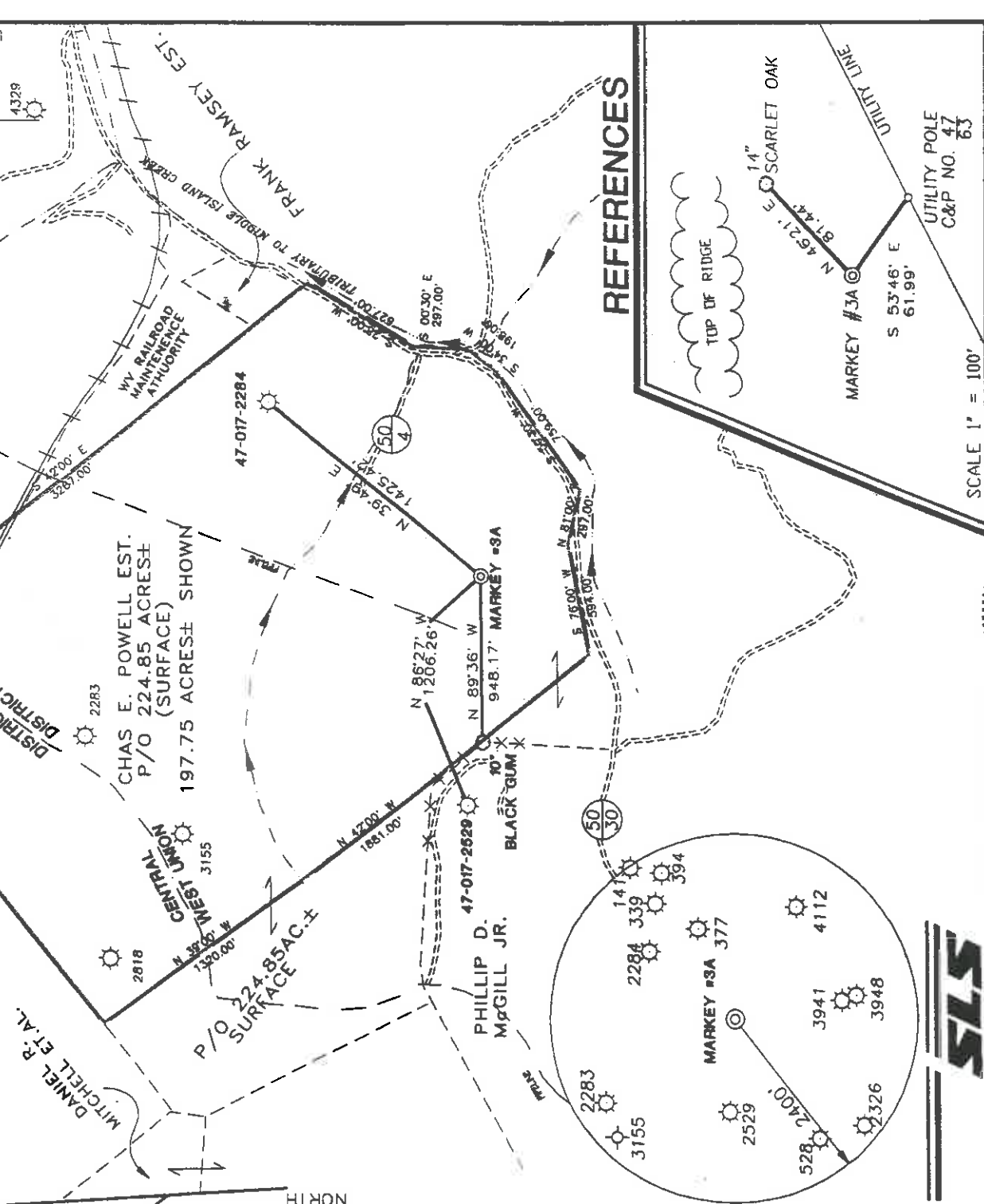
SURFACE OWNER CHARLES E. POWELL EST. ROYALTY OWNER J.B. MARKEY HRS. LEASE NO. 197.75 OF 404

PROPOSED WORK : DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER PERFORATE NEW FORMATION TARGET FORMATION ALEXANDER

PHYSICAL CHANGE IN WELL (SPECIFY) ESTIMATED DEPTH 5600' PERMIT AUG 28 1997

WELL OPERATOR KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN ADDRESS 22 GARTON PLAZA, WESTON WV 26452 6-6 99 COUNTY NAME PERMIT ADDRESS 22 GARTON PLAZA, WESTON, WV 26452

LATITUDE 39°17'30" LONGITUDE 80°47'30"



SCALE 1" = 100'
DATE AUGUST 5, 19 97
OPERATORS WELL NO. MARKEY #3A
API WELL NO. 47-017-04388
STATE COUNTY PERMIT

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

WR-35

21 - Aug - 97
API # 47 - 17 - 04388

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

Well Operator's Report of Well Work

Farm name: POWELL, DENNIS H.

Operator Well No. : MARKEY #3A

LOCATION: Elevation: 1,134.00

Quadrangle: WEST UNION

District: WEST UNION
Latitude: 2000 Feet South of 39 Deg. 17 Min. 30 Sec.
Longitude: 1290 Feet West of 80 Deg. 47 Min. 30 Sec.

County: DODDRIDGE

Company: KEY OIL COMPANY
22 Garton Plaza
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD
Permit issued: 08/29/97
Well Work Commenced: 10/21/97
Well Work Completed: 11/04/97

Verbal Plugging
Permission granted on: _____ Rig
Rotary X Cable _____
Total Depth (feet) 5520'
Fresh water depths (ft) 756'
Salt water depths (ft) NONE

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

OPEN FLOW DATA

Warren
Speechley
Balltown
Rileys
Benson

Producing formation Alexander
Gas: Initial open flow 60 MCF / d
Final open flow 1,492 MCF / d
Time of open flow between initial and final tests N/A
Static rock pressure 1750 psig (surface pressure) after 96 Hours
Pay zone depth (ft)
Oil: Initial open flow 0 Bbl / d
Oil: Final open flow show Bbl / d
Hours
Hours

Second producing formation Commingled
Gas: Initial open flow _____ MCF / d
Final open flow _____ MCF / d
Time of open flow between initial and final tests _____
Static rock pressure _____ psig (surface pressure) after _____
Pay zone depth (ft) _____
Oil: Initial open flow _____ Bbl / d
Oil: Final open flow _____ Bbl / d
Hours
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: 

PRESIDENT

Date: March 27, 1998

MAY 04 1998

DODD. 4388

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
8 5/8"	1147.65'	1147.65'	305 sks To Surface
4 1/2"	5446'	5446'	480 sks
2 3/8"		5303'	

Markey #3A (47-017-04388)
Four Stage Foam Frac - Halliburton

1st Stage: Alexander (15 holes) (5303.50' to 5369.50') 60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 813 bbls foam.

2nd Stage: Benson (6 holes) (5050.50' to 5051.75') 60 Quality Foam. 750 gal. 15% HCL. 50,000# 20/40 sand, 481,000 SCF N2, 714 bbls foam.
 Second Riley (6 holes) (4882.75' to 4884')

3rd Stage: Riley (9 holes) (4647' to 4665') 60 Quality Foam. 1000 gal. 15% HCL. 5,000# 80/100 sand, 45,000# 20/40 sand, 502,000 SCF N2, 745 bbls foam.
 Balltown (4 holes) (4224.50' to 4210.50')

4th Stage: Balltown (3 holes) (4004.75' to 4005.25') 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.
 Speechley (3 holes) (3572.25' to 3572.75')
 Warren (8 holes) (3416.25' to 3452.50')

WELL LOG

Fill and clay	0	13	
Sand & Shale	13	180	1/2" H ² O @ 100'
Shale & Red Rock	180	588	
Sand	588	618	
Sand & Shale	618	750	
Sand	750	764	1/2" H ² O @ 756'
Sand & Shale	764	1620	
Sand	1620	1769	
Sand & Shale	1769	2017	
Little Lime	2017	2047	
Shale	2047	2054	
Big Lime	2054	2130	
Big Injun	2130	2200	
Shale	2200	2344	
Weir	2344	2451	
Sand & Shale	2451	2548	
Berea	2548	2554	
Sand & Shale	2554	3408	
Warren	3408	3468	
Shale	3468	3486	
Speechley	3486	3582	
Shale & Sand	3582	3782	
Balltown	3782	4532	
Shale	4532	4578	
Riley	4578	4660	
Sand & Shale	4660	4868	
Second Riley	4868	4910	
Shale	4910	5044	
Benson	5044	5055	
Sand & Shale	5055	5286	
Alexander	5286	5379	
Shale	5379	5520	
T.D.	5520		

GAS CHECKS

2014' - No Show
 2511' - Odor
 3007' - Odor
 3814' - Odor
 4523' - Odor
 4930' - Odor
 5206' - 2/10th - 2"^w/H²O

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

1) Well Operator: KEY OIL COMPANY 25255 (8) 671
 2) Operator's Well Number: MARKEY 3A 3) Elevation: 1134'

4) Well type: (a) Oil X / or Gas X / dated 08/29/97
 (b) If Gas: Production X / Underground Storage / expires 08/29/99
 Deep / Shallow X /

Proposed Target Formation(s): ALEXANDER
 Proposed Total Depth: 5600 feet
 Approximate fresh water strata depths: 90'
 Approximate salt water depths: -0-
 Approximate coal seam depths: N/A

9) Does land contain coal seams tributary to active mine? Yes / No X /
 11) Proposed Well Work: DRILL, STIMULATE, PRODUCE
 12)

CASING AND TUBING PROGRAM

TYPE	SIZE	GRADE	WEIGHT PER FT. DRILLING	FOOTAGE INTERVALS	CEMENT
Conductor					
Fresh Water	11 3/4	ERW	42	132	70 SKS TO SURFACE
Coal					BY CSPI/AM 2x
Intermediate	8 5/8	ERW	23	1134	305 SKS TO SURFACE
Production	4 1/2	J-55	10.5	5500	490 SKS.
Tubing	1.5				BY CSPI/AM 1.1
Liners					

PACERS : Kind _____ Sizes _____ Depths sec _____

004742
 For Office of Oil and Gas Use Only
 Fee(s) paid: Well Work Permit Reclamation Fund WPCF
 Plat WW-9 WW-2B Bond _____ (Type) Agency

24173

1) Date: AUGUST 15, 1997
2) Operator's well number
3) API Well No: 47 - 017 - 4388
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: 5) (a) Coal Operator:
(a) Name DENNIS H. POWELL Name SAME
Address 304 STUART STREET Address
WEST UNION, WV 26456
(b) Name _____ (b) Coal Owner(s) with Declaration
Address _____
(c) Name _____ Name _____
Address _____
Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration
Address RT. 2 BOX 135 Name _____
SALEM, WV 26426 Address _____
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
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: [Signature] PRESIDENT
Address 22 GARTON PLAZA
WESTON, WV 26452
Telephone 304-269-7102

Subscribed and sworn before me this 15th day of AUGUST 1997
My commission expires March 24, 2003
[Signature] Clerk

