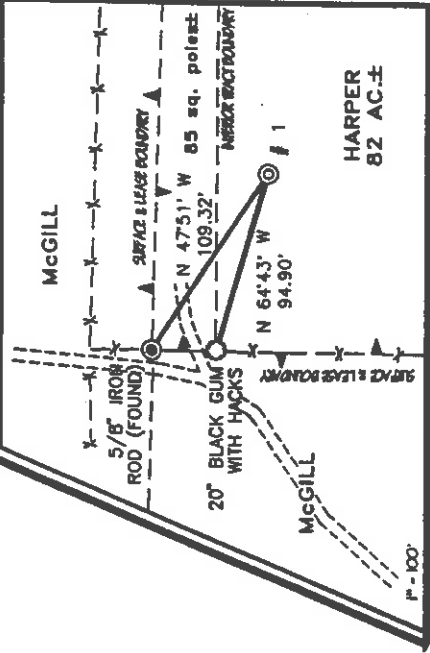


REFERENCES



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

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE DECEMBER 8, 19 97
OPERATORS WELL NO. MCGILL # 1
API WELL NO. 47 - 017 - 4415
STATE COUNTY PERMIT

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

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 3845P1 (64-51)
PROVEN SOURCE OF ELEVATION SCALE 1" = 500'
TOP OF KNOB ELEVATION 1152'

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

LOCATION : ELEVATION 1110' WATERSHED TRIBUTARY OF WILHELM RUN
DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5'

SURFACE OWNER ANNABELLE J. HARPER ACREAGE 82 OF 107.93
ROYALTY OWNER FLOYD JR., & BILLIE LEE MCGILL LEASE ACREAGE 107.93

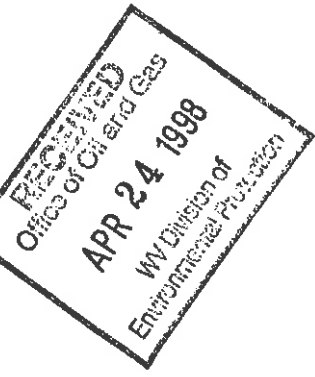
PROPOSED WORK :
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5600'

WELL OPERATOR KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN
ADDRESS 22 GARTON PLAZA, WESTON, WV 26452 ADDRESS 22 GARTON PLAZA, WESTON, WV 26452

6-6-89

WR-35

10 - Dec - 97
API # 47 - 17 - 04415



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

Well Operator's Report of Well Work

Farm name: RIFFLE, ANNABELL J. Operator Well No. : McGILL #1

LOCATION: Elevation: 1,110.00 Quadrangle: WEST UNION
District: CENTRAL County: DODDRIDGE
Latitude: 2070 Feet South of 39 Deg. 17 Min. 30 Sec.
Longitude: 8520 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: 12/11/97
Well Work Commenced: 12/16/97
Well Work Completed: 12/30/97

Verbal Plugging
Permission granted on: _____ Rig
Rotary X Cable _____ 5549'
Total Depth (feet) _____ 762'
Fresh water depths (ft) _____ 1960'
Salt water depths (ft) _____

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

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
11 3/4"	129.95'	129.95'	70 sks To Surface
8 5/8"	1668.05'	1668.05'	480 sks To Surface
4 1/2"	5376'	5376'	365 sks
2 3/8"		5243'	

OPEN FLOW DATA

Producing formation _____
 Gas: Initial open flow _____ Show _____ MCF / d Pay zone depth (ft)
 Final open flow 1,245 MCF / d Oil: Initial open flow _____ Bbl / d
 Time of open flow between initial and final tests _____ N/A Oil: Final open flow _____ Bbl / d
 Static rock pressure 1850 psig (surface pressure) after 96 Hours

Balltown 3876' - 4515'
 Rileys 4536' - 4932'
 Benson 4970' - 4982'

Second producing formation _____
 Gas: Initial open flow _____ MCF / d Commingled Pay zone depth (ft)
 Final open flow _____ MCF / d Oil: Initial open flow _____ Bbl / d
 Time of open flow between initial and final tests _____ Oil: Final open flow _____ Bbl / d
 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: *[Signature]*
Date: April 20, 1998

PRESIDENT
MAY 04 1998

Dodd 4415

McGill #1 (47-017-4415)
 Three Stage Foam Frac - Halliburton

1st Stage: Alexander (12 holes) (5264.50' to 5280.75') 60 Quality Foam. 500 gal. 15% HCL.
 60,000# 20/40 sand, 550,000 SCF N2,
 812 bbis foam.

2nd Stage: Benson (5 holes) (4975' to 4976') 60 Quality Foam. 750 gal 15% HCL.
 Third Riley (7 holes) (4921.25' to 4922.75') 50,000# 20/40 sand, 481,000 SCF N2,
 718 bbis foam.

3rd Stage: Riley (7 holes) (4561' to 4579.50') 60 Quality Foam. 750 gal 15% HCL.
 Balltown (6 holes) (3996.50' to 4357.50') 5,000# 80/100 sand, 45,000# 20/40 sand,
 502,000 SCF N2, 684 bbis foam.

WELL LOG

Fill & Clay	0	14	
Sand & Shale & Red Rock	14	155	
Sand & Shale	155	175	
Sand & Shale & Red Rock	175	378	
Sand	378	390	
Shale & Red Rock	390	504	
Sand & Shale	504	1234	1/4" H ₂ O @ 762'
Sand & Shale & Red Rock	1234	1570	
Sand & Shale	1570	1695	
Sand & Shale	1695	1985	
Sand	1985	2005	
Little Lime	2005	2024	
Shale	2024	2094	
Big Lime	2094	2160	
Big Injun	2094	2160	
Shale	2160	2324	
Weir	2324	2450	
Sand & Shale	2450	2514	
Berea	2514	2519	
Sand & Shale	2519	3391	
Warren	3391	3462	
Shale	3462	3476	
Speechley	3476	3597	
Shale	3597	3876	
Balltown	3876	4515	
Shale	4515	4536	
Riley	4536	4612	
Sand & Shale	4612	4892	
Third Riley	4892	4932	
Shale	4932	4970	
Benson	4970	4982	
Shale	4982	5215	
Alexander	5215	5300	
Sand & Shale	5300	5549	
T.D.	5549		

Gas Checks
 2005' - No Show
 2355' - Show of oil
 2504' - Show
 3621' - Show
 4526' - Show
 5208' - Show

1) Well Operator: KEY OIL COMPANY 25655

2) Operator's Well Number: MC GILL #1 3) Elevation: 1110'

Well type: (a) Oil X / or Gas X / *Issued 12/11/97*

(b) If Gas: Production X / Underground Storage / Shallow X / *Expires 12/11/97*

Proposed Target Formation(s): ALEXANDER ⁴³⁹

Proposed Total Depth: 5600 feet

Approximate fresh water strata depths: 90'

Approximate salt water depths: N/A

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

12)

CASING AND TUBING PROGRAM

TYPE	SIZE	GRADE	WEIGHT PER FT.	FOOTAGE FOR DRILLING	LEFT IN WELL	FILL-UP (CU. FT.)
Conductor						
Fresh Water	11 3/4	ERW	42	132	132	70 SKS. TO SURFACE
Coal						<i>b.k. Mutoy</i>
Intermediate	8 5/8	ERW	23	1710	1710	460 SKS. TO SURFACE
Production	4 1/2	J-55	10.5		5500	490 SKS.
Tubing	1.5					
Liners						

PACKERS : Kind _____
 Sizes _____
 Depths set _____

For Office of Oil and Gas Use Only

2/3/94

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

Plat WW-9 WW-2B Bond _____ Agent _____
 (Type)

