



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 84-381
DRAWING NO. _____
SCALE 1" = 600'
MINIMUM DEGREE OF ACCURACY 1/200'
PROVEN SOURCE OF ELEVATION 103-612
(1320.50')

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 MINES
(SIGNED) *Chad Watman*
R.P.E. 3788 L.L.S. _____

PLACE SEAL HERE

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE 7/6 19 84
OPERATOR'S WELL NO. SAMANTHA #1
API WELL NO. 47-103-1313
STATE COUNTY PERMIT

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW ___
LOCATION: ELEVATION 1260' WATER SHED HAYNES RUN
DISTRICT MAGNOLIA 6 509 COUNTY WETZEL
QUADRANGLE NEW MARTINSVILLE 7.5' x 15' EC-6 091
SURFACE OWNER WETZEL CO. FUR, FIN & FEATHER CLUB ACREAGE 72.4 of 122.40
OIL & GAS ROYALTY OWNER ROXANNA HAFFER ET. AL. LEASE ACREAGE 122.40

LEASE NO. _____
PROPOSED WORK: DRILL CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION MARCELLUS SHALE ESTIMATED DEPTH 5990'
WELL OPERATOR CLAY RESOURCES, INC. DESIGNATED AGENT STEVE KUHOCT
ADDRESS 172 204 UNION SQUARE ADDRESS SAME
MARIETTA, OHIO 45750

COUNTY NAME
PERMIT

FORM IV-6 (8-78)
H.T. HALL

6-6 unnamed (b) / 7/85-04DD-6-6 unnamed (b)



IV-35
(Rev 8-81)

RECEIVED

1984

State of West Virginia

Department of Mines
Oil and Gas Division

Date December 3, 1984

Operator's Well No. #1 (Samantha)

Farm Yost Heirs (Fur, Finn & Feather)

API No. 47 - 103 - 1313

OIL & GAS DIVISION
DEPT. OF MINES

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

RECEIVED
JAN 9 - 1985

WELL TYPE: Oil ___ / Gas x / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production x / Underground Storage ___ / Deep ___ / Shallow ___)

OIL & GAS DIVISION
DEPT. OF MINES

LOCATION: Elevation: 1260' Watershed Haynes Run
District: Magnolia County Wetzel Quadrangle New Martinsville

COMPANY Clay Resources, Inc.
ADDRESS 204 Union Square
DESIGNATED AGENT Steve Kuhl
ADDRESS 1004 41st Street, Vienna, W. Va.
SURFACE OWNER Wetzel County Fur, Finn & Feather
ADDRESS 350 Pike St., New Martinsville, W. Va.
MINERAL RIGHTS OWNER Yost Heirs
ADDRESS New Martinsville, W. Va. & others
OIL AND GAS INSPECTOR FOR THIS WORK Robert Lowther
ADDRESS General Delivery Middlebourne, W. Va.
PERMIT ISSUED 9/24/84
DRILLING COMMENCED 10/6/84
DRILLING COMPLETED 11/27/84
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED ON _____

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	500'	0	
9 5/8			
8 5/8	1450'	1450'	CTS
7			
5 1/2			
4 1/2			
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Injun Depth 2300 feet
Depth of completed well 2220 feet Rotary ___ / Cable Tools XX
Water strata depth: Fresh 185 feet; Salt N/A feet
Coal seam depths: 583-590, 942-949 Is coal being mined in the area? NO

OPEN FLOW DATA
Producing formation Keener Sand Pay zone depth 2215 feet
Gas: Initial open flow 160 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 190 Mcf/d Natural well Final open flow 0 Bbl/d
Time of open flow between initial and final tests 48 hours
Static rock pressure 650 psig (surface measurement) after 12 hours shut in
(If applicable due to multiple completion--)
Second producing formation N/A Pay zone depth ___ feet
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 measurement) after ___ hours shut in

JAN 21 1985
(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

No perforations, fractures, stimulations etc. Natural well. ✓

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Yellow Clay			0	15	Water
Gray Shale			15	53	
Red Shale			53	73	
Gray Shale			73	168	
Limestone			168	175	
Red Shale			175	182	
Gray Shale			182	195	
Red Shale			195	210	
Gray Shale			210	215	
Red Shale			215	233	
Gray Shale			233	240	
Sandstone			240	250	
Gray Shale			250	253	
Red Shale			253	255	
Gray Shale			255	300	
Red Shale			300	310	
Gray Shale			310	367	
Red Shale			367	380	
Gray Shale			380	405	
Red Shale			405	440	
Gray Shale			440	450	
Sandstone			450	465	
Red Shale			465	485	
Gray Shale			485	490	
Sandstone			490	515	
Gray Shale			515	545	
Limestone			545	550	
Gray Shale			550	583	
Coal			583	590	
Gray Shale			590	668	
Dark Gray Shale			668	672	
Gray Shale			672	760	
Red Shale			760	770	
Gray Shale			770	795	
Sandstone			795	810	
Gray Shale			810	850	
Red Shale			850	857	
Gray Shale			857	942	

(See Attached)

(Attach separate sheets as necessary)

Clay Resources, Inc.

Well Operator

By: Sandra L. Schafer Sandra L. Schafer, Manager
Date: 12/3/84

Note: Regulation 2.02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

Pg. 2

FORMATION	COLOR	HARD/SOFT	TOP FEET	BOTTOM FEET	REMARKS
Coal			942	949	
Gray Shale			949	1095	
Red Shale			1095	1118	
Gray Shale			1118	1165	
Red Shale			1165	1235	
Gray Shale			1235	1325	
Limestone			1325	1328	
Gray Shale			1328	1351	
Sandstone			1351	1360	
Gray Shale			1360	1400	
Sandstone			1400	1415	
Gray Shale			1415	1480	
Red Shale			1480	1525	
Gray Shale			1525	1550	
Sandstone			1550	1585	
Limestone			1585	1630	
Sandstone			1630	1650	
Dark Gray Shale			1650	1652	
Gray Shale			1652	1680	
Sandstone			1680	1730	
Dark Gray Shale			1730	1850	
Sandstone			1850	1875	
Dark Gray Shale			1875	1900	
Sandstone			1900	1975	Maxon #1
Gray Shale			1975	2065	
Sandstone			2065	2075	Maxon #2
Gray Shale			2075	2125	
Limestone			2125	2200	Big Lime
Sandstone			2200	2220	Keener GAS

TP. ←

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated 10 shots 3010' - 3022'
 Perforated 12 shots 3050' - 3070' } Gordon

Slick water frac

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Well Operator's report filed Drill down Information			December	3, 1984	
Engine Sand			2220	2317	Water - engine
Slate Blk.			2317	2320	
Sand Engine			2320	2385	
Gray Shale			2385	2680	
Berea Sand			2680	2690	Berea
Slate and Shale			2690	2830	
Brown Shale			2830	2900	
Blue Shale			2900	3010	
Sandy Shale			3010	3030	
Gray Shale			3030	3050	
Sandy Shale			3050	3060	
Blue Shale			3060	3131 T.D.	Gordon Oil & Gas
Gordon @ TD					
					3131 - new TD 2220 - old TD <hr/> 911 - DDGtg

(Attach separate sheets as necessary)

Clay Resources, Inc.
Well Operator

By: Sandra L. Schaffer

Date: June 11, 1985

Note: Regulation 2.02(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."



1) Date: August 2, 1984
 2) Operator's Well No. Samantha #1
 3) API Well No. 47 - 103 - 1313
 State County Permit

RECEIVED
 AUG 10 1984

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
 APPLICATION FOR A WELL WORK PERMIT

OIL & GAS DIVISION
 DEPT. OF MINES

- 4) WELL TYPE: A Oil / Gas
 B (If "Gas", Production / Underground storage / Deep / Shallow)
 5) LOCATION: Elevation: 1260' / Watershed: Haynes Run of Ohio River - 0
 District: Magnolia / County: Wetzel / Quadrangle: New Martinsville 75
 6) WELL OPERATOR Clay Resources
 Address 204 Union Square
 Marietta, Ohio 45750
 7) DESIGNATED AGENT Steve Kuhl
 Address 204 Union Square
 Marietta, Ohio 45750
 8) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Robert Lowther
 Address General Delivery
 Middlebourne, W. Va. 26149
 9) DRILLING CONTRACTOR:
 Name Unknown
 Address _____
 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify) _____
 11) GEOLOGICAL TARGET FORMATION, Marcellus Shale
 12) Estimated depth of completed well, 5000' feet
 13) Approximate strata depths: Fresh, 550 feet; salt, 500 feet.
 14) Approximate coal seam depths: 900-1000' Is coal being mined in the area? Yes / No
 15) CASING AND TUBING PROGRAM

RECEIVED
 OIL & GAS DIVISION
 DEPT. OF MINES
 SEP 19 1984

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS	
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		Kinds	
Conductor										
Fresh water	8-5/8					300'	300'	CTS		Per rule 15.05
Coal										Sizes
Intermediate										
Production	4-1/2					5000'	5000'	500+ sks		Per rule 15.01
Tubing										
Liners										Perforations: Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-103-1313 Date September 24, 19 84

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector, (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires September 24, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: 38 BLANKET	Agent: MW	Plat: MW	Casing: MW	Fee: 318
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Margaret Hesse
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

File