

Well References for Surface Location:

N16W, 118' to 8" Iwin Serviceberry  
S22W, 111' to 14" Red Oak

LATITUDE 38-32-30

Surface Coordinates: 6860' West  
3340' South

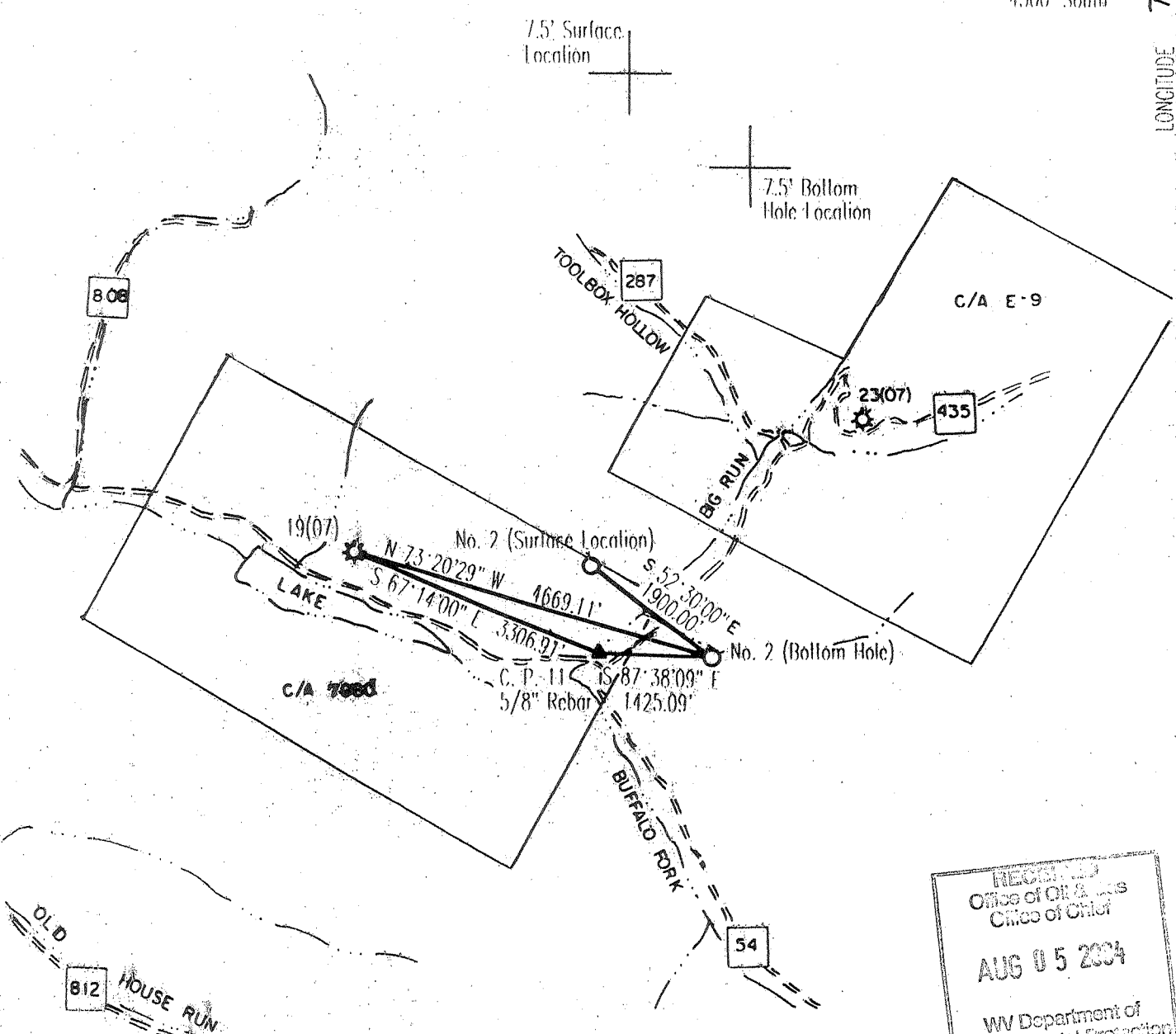
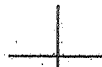
Bottom Hole coordinates: 5350' West  
4500' South

LONGITUDE 79-40-00

7.5' Surface Location



7.5' Bottom Hole location



RECORDED  
Office of Oil & Gas  
Chief of Office  
**AUG 05 2004**  
WV Department of  
Environmental Protection

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

FILE NUMBER: \_\_\_\_\_  
DRAWING NUMBER: \_\_\_\_\_  
SCALE: 1" = 2000'  
MINIMUM DEGREE OF ACCURACY: 1 in 200  
PROVIN. SOURCE OF ELEVATION: Exist. Well No. 19  
Elevation = 3199.90'

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN 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.

(SIGNED) Stephen D. Losh  
STEPHEN D. LOSH, P.S. #674



FORM WW 6  
STATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS  
110 McJUNKIN ROAD  
NITRO, WV 25143 2506

LAND SURVEYING SERVICES  
21 CEDAR LANE, BRIDGEPORT, WV 26330  
PHONE: 304-842-2018 OR 842-5162

DATE: February 27, 1998  
OPERATORS WELL NO.: Federal MNI 12  
API WELL NO. 11-075-00049P  
STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
(If "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
LOCATION: ELEVATION 3358.58 WATERSHED Buffalo Fork  
DISTRICT Greenbank COUNTY Pocahontas  
QUADRANGLE Thornwood 7.5 min. LEASE NUMBER BLM A 022928  
SURFACE OWNER U. S. A. ACREAGE 9674.26  
OIL & GAS ROYALTY OWNER U. S. A. - Bureau of Land Management LEASE ACREAGE 2430.63  
PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULANT \_\_\_ PLUG OFF OLD FORMATION \_\_\_  
PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE (SPECIFY) \_\_\_  
PLUG & ABANDON \_\_\_ CLEAN OUT & REPLUG \_\_\_  
TARGET FORMATION Oriskany ESTIMATED DEPTH 5155' JVD 5793 MD  
WELL OPERATOR Cabot Oil & Gas Corporation DESIGNATED AGENT John Abshire  
ADDRESS Rt. 3, Box 583, Clarksburg, WV 26301 ADDRESS 400 Fairway Drive, Suite 400, Coraopolis, PA 15108 4308

COUNTY NAME PERMIT 0049P

LATITUDE 38-32-30

Well References for Surface Location:

N16W, 118' to 8" Twin Serviceberry  
S22W, 111' to 14" Red Oak

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3340' South

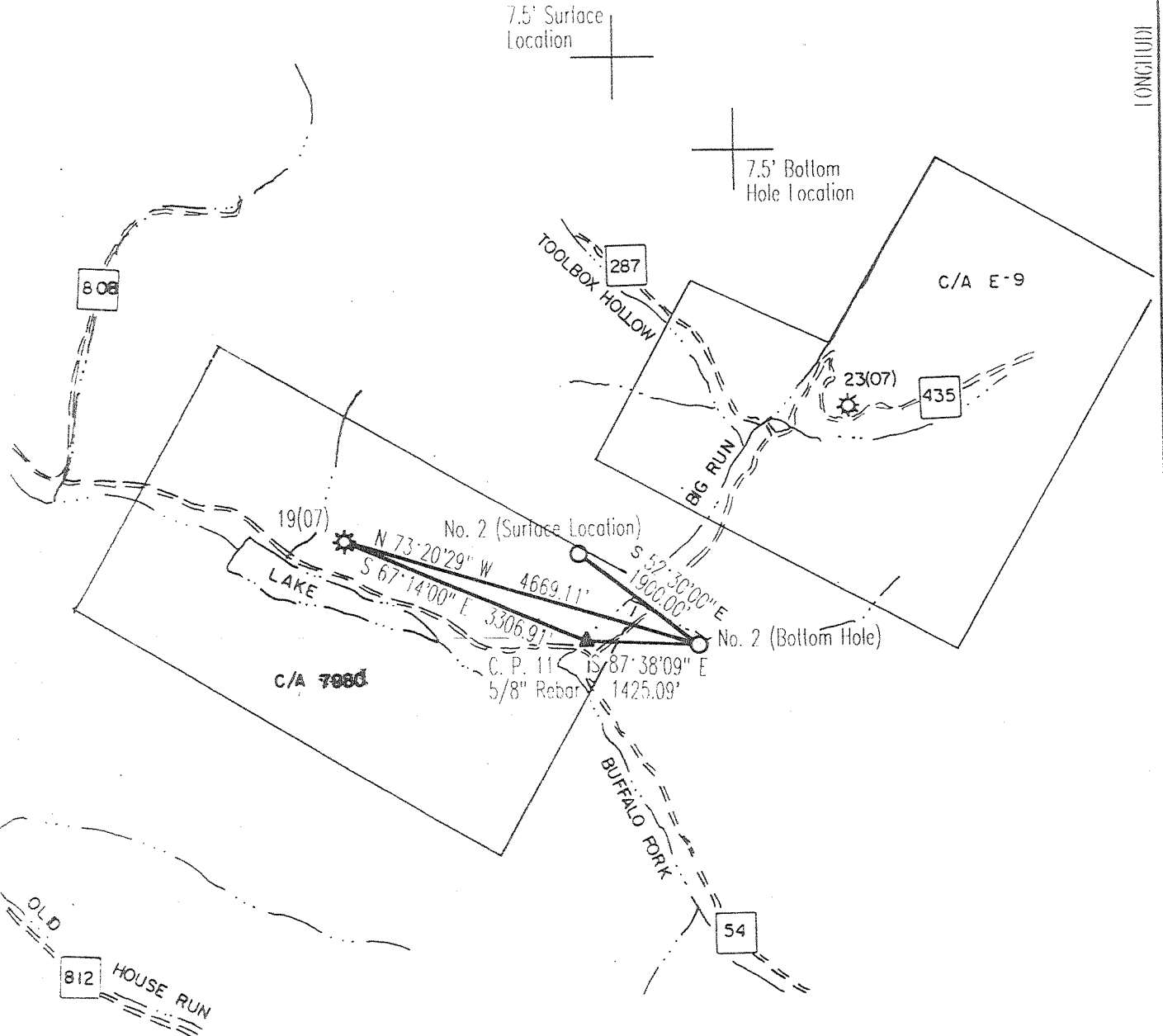
Bottom Hole coordinates: 5350' West  
4500' South

LONGITUDE 79-40-00

0.645  
1300W

7.5' Surface Location

7.5' Bottom Hole Location



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

FILE NUMBER: \_\_\_\_\_  
 DRAWING NUMBER: \_\_\_\_\_  
 SCALE: 1 - 2000'  
 MINIMUM DEGREE OF ACCURACY: 1 in 200  
 PROVEN SOURCE OF ELEVATION: Exist. Well No. 19  
 Elevation = 3199.90'

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.

(SIGNED) \_\_\_\_\_  
 STEPHEN D. LOSH, P.S. #674



STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 #10 McJUNKIN ROAD  
 NITRO, WV 25143-2506

FORM WW-6

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X

LOCATION: ELEVATION 3358.58 WATERSHED Buffalo Fork  
 DISTRICT Greenbank COUNTY Pocahontas  
 QUADRANGLE Thornwood 7.5 min.

SURFACE OWNER U. S. A.  
 OIL & GAS ROYALTY OWNER U. S. A. - Bureau of Land Management

PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_  
 PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE (SPECIFY) \_\_\_\_\_

TARGET FORMATION Oriskany

WELL OPERATOR Cabot Oil & Gas Corporation DESIGNATED AGENT John Abshire  
 ADDRESS Rt. 3, Box 583 Clarksburg, WV 26301 ADDRESS 400 Fairway Drive, Suite 400 Coraopolis, PA 15108 4308

LAND SURVEYING SERVICES  
 21 CEDAR LANE, BRIDGEPORT, WV 26330  
 PHONE: 304 842 2018 OR 842 5762

DATE: February 27, 1998  
 OPERATORS WELL NO.: Federal MNF #2  
 API WELL NO. 47 - 075 - 00049  
 STATE COUNTY PERMIT

LEASE NUMBER BLM-A-022928  
 ACREAGE 9674.26  
 LEASE ACREAGE 2430.63

ESTIMATED DEPTH 5155' IVD 5793 MD

DEEP WELL

6-6 322

COUNTY NAME  
 PERMIT

POC  
 0049

WR-35

Date: 18-Jan-99  
API # 47-075-00049

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas  
Well Operator's Report of Well Work

Farm name: U.S. Dept. of Agriculture Operator Well No.: MNF #2

LOCATION: Elevation: 3,358' Quadrangle: Thornwood  
District: Greenbank County: Pocahontas  
Latitude: 3,340 feet South of 38 DEG. 32 MIN. 30 SEC.  
Longitude: 6,860 feet West of 79 DEG. 40 MIN. 0 SEC.

Company: Cabot Oil & Gas Corporation  
400 Fairway Drive: Suite 400  
Coraopolis, PA 15108-4308

Agent: John Abshire  
Inspector: Craig Duckworth  
Permit Issued: 5/6/98  
Well Work Commenced: 9/11/98  
Well Work Completed: 11/2/98  
Verbal Plugging  
Permission granted on:  
Rotary X Cable  
Total Depth (feet) 6234'  
Fresh Water Depths (ft) 91', 189', 987'  
Salt Water Depths (ft)

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
16"	37.4'	37.4'	
9-5/8"	831.05'	831.05'	325 sks Class "A"
7"	2677.55'	2677.55'	320 sks Class "A"
4-1/2"	6273.3'	6273.3'	100 sks D 804-AA

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

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth (ft) 6222' - 6232'

Gas: Initial open flow TSTM MCF/d Oil: Initial open flow N/A Bbl/d  
 Final open flow 4,500 MCF/d Final open flow N/A Bbl/d  
 Time of open flow between initial and final tests 4 Hours

Static rock pressure 1160 psig (surface pressure after 48 Hours)

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
 Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
 Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock pressure \_\_\_\_\_ psig (surface pressure after \_\_\_\_\_ Hours)

RECEIVED  
Office of Oil & Gas  
Permitting  
JAN 27 1999  
WV Division of  
Environmental Protection

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: CABOT OIL & GAS CORPORATION

By: Ray Prudnick, Jr.  
Date: 1-21-99

Poca 0049

OPEN FLOW DATA

Perf'd Oriskany from 6222'-6232'. Broke down with 3% KCl water @ 4300 psi. ISIP: 3000 psi. Frac'd with 6000 gals of 15% HCl acid followed by 1,856 bbls of 25# x-link gel with 164,000# sand. ATP: 4100 psi. MTP: 5000 psi. ATR: 30 bpm. ISIP: 4055 psi.

FORMATION	TOP	BOTTOM	REMARKS
KB	0	12	
Sand/Shale	12	1422	
Igneous	1422	1506	
Sand/Shale	1506	2253	
Igneous	2253	2276	
Sand/Shale	2276	2796	
Shale	2796	2882	
Sand	2882	2902	
Shale	2902	2999	
Sand/Shale	2999	3259	
Shale/Sand	3259	3826	
Sand	3826	3844	
Shale	3844	3881	
Sand/Shale	3881	3988	
Shale	3988	4204	
Igneous	4204	4209	
Shale	4209	4250	
Igneous	4250	4259	
Shale/Sand	4259	4845	
Sand/Shale	4845	4935	
Shale	4935	5160	
Tully	5160	5237	
Sand/Lime	5237	5322	
Shale	5322	5466	
Upper Marcellus	5466	5510	
Purcell	5510	5584	
Lower Marcellus	5584	5666	
Onondaga	5666	5790	
Huntersville	5790	5876	
Needmore	5876	5950	
Oriskany	5950	6234 - TD	