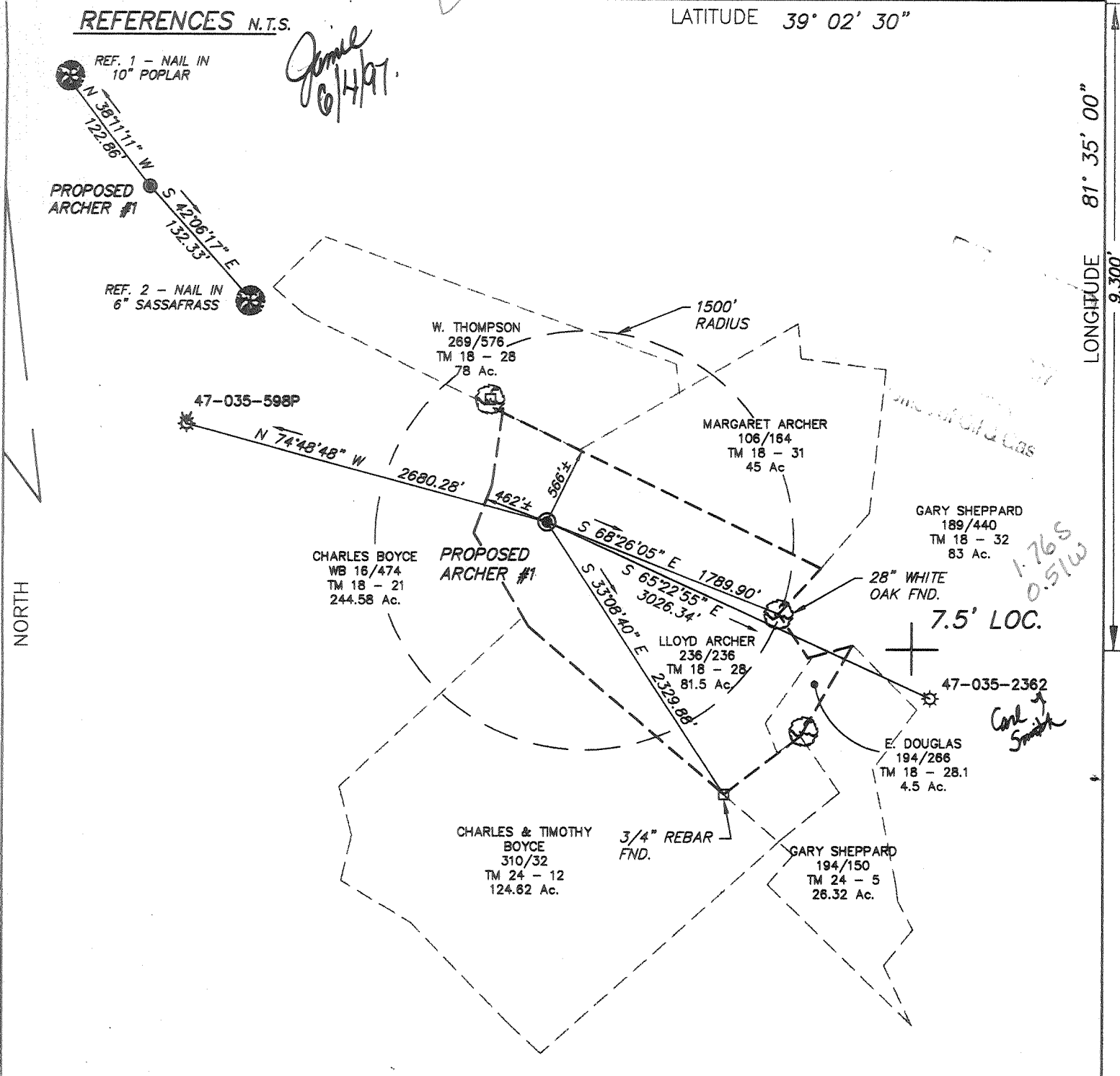
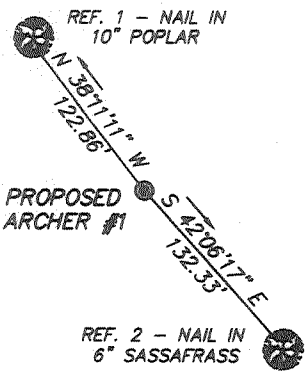


REFERENCES N.T.S.

LATITUDE 39° 02' 30"

2,750'

*June 6/4/97*



LONGITUDE 81° 35' 00"

NORTH

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

FILE No 8723-568  
 DRAWING No. ARCHER #1  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 : 2500  
 PROVEN SOURCE OF ELEVATION McGRAW TRI-STA.  
 ELEV. 1159'

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) William J. Whitman RPS  
 R.P.E. \_\_\_\_\_ R.P.S. 646



STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 NITRO, WV

DATE APRIL 14 19 97  
 OPERATOR'S WELL No. ARCHER #1  
 API WELL No. 47 035-02381

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

LOCATION: ELEVATION 912.40 WATER SHED LEFT FORK OF SANDY CREEK  
 DISTRICT GRANT COUNTY JACKSON  
 QUADRANGLE ROCKPORT, W. VA.

SURFACE OWNER LLOYD ARCHER ACREAGE 81.5  
 OIL & GAS ROYALTY OWNER LLOYD ARCHER LEASE ACREAGE 83.5  
 LEASE No. 47-10377

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

PLUG AND ABANDON CLEAN OUT AND REPLUG  
 TARGET FORMATION Onokanay ESTIMATED DEPTH 5100'  
 WELL OPERATOR CABOT OIL & GAS CORP. DESIGNATED AGENT JOHN ABSHIRE  
 ADDRESS P.O. BOX 1473 ADDRESS P.O. BOX 1473  
CHARLESTON, W. VA. CHARLESTON, W. VA.

JUN 6 1997

6-6 279

DEC 08 1997  
 Permitting  
 Office of Oil & Gas

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

Farm name: Llyod Archer Operator Well No.: L. Archer #1

LOCATION: Elevation: 912.40 Quadrangle: Rockport  
 District: Grant County: Jackson  
 Latitude: 9,300 Feet South of 39 Deg. 2 Min. 30 Sec.  
 Longitude: 2,750 Feet West of 81 Deg. 35 Min. 0 Sec.

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

Agent: John Abshire  
 Inspector: Homer Dougherty  
 Permit Issued: 6/4/97  
 Well Work Commenced: 6/17/97  
 Well Work Completed: 7/11/97  
 Verbal Plugging  
 Permission granted on:  
 Rotary X Cable Rig  
 Total Depth (feet) 5109'  
 Fresh Water Depths (ft) \_\_\_\_\_  
 Salt Water Depths (ft) 1200'  
 Is coal being mined in area (Y / N)? Y  
 Coal Depths (ft) \_\_\_\_\_

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill up Cu. Ft.
16"	30'	30'	
9-5/8"	924'	924'	325 sks Neat
7"	2031'	2031'	360 sks Neat
4-1/2"	5076'	5076'	115 sks RFC

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth (ft) 4964' - 4992'  
 Gas: Initial open flow 15 MCF/d Oil: Initial open flow N/A Bbl/d  
 Final open flow testing MCF/d Final open flow N/A Bbl/d  
 Time of open flow between initial and final tests -- Hours  
 Static rock pressure 800 psig (surface pressure after 84 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

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 Rudnick, Jr.  
 Date: 12-1-97

DEC 12 1997

## OPEN FLOW DATA

Perf'd Oriskany @ 4964'-4992'. Broke down with 250 gals 15% HCl acid and treated H<sub>2</sub>O. Breakdown pressure 3730 psi. ISIP 3600 psi. Water frac with 17,700# 20/40 mesh sand. ATP 4320 psi. MTP 5450 psi. AIR 19.7 bpm.

FORMATION	TOP	BOTTOM	REMARKS
Shale/Silt	0	1360	
Sand/Shale	1360	1700	
Sand	1700	1850	
B. Lime	1850	1920	
Injun	1920	1952	
Shale	1952	1990	
Weir	1990	2025	
Shale	2025	2370	
Berea	2370	2371	
Shale	2371	4840	
Onondaga	4840	4964	
Oriskany	4964	4992	
Limestone	4992	5109 - TD	

035-2381

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

- 1) Well Operator: Cabot Oil & Gas Corporation 8150 678 (2)
- 2) Operator's Well Number: L. Archer #1 3) Elevation: 912.40
- 4) Well Type: a) Oil \_\_\_ / or Gas X /  
b) If Gas: Production X /Underground Storage \_\_\_ /  
Deep X / Shallow \_\_\_ /
- 5) Proposed Target Formation(s): Oriskany 475
- ) Proposed Total Depth: 5100 feet
- ) Approximate fresh water strata depths: 738', 828'
- 8) Approximate salt water depths: 1825'
- 9) Approximate coal seam depths: N/A
- 10) Does land contain coal seams tributary to active mine? Yes \_\_\_ / No X /
- 11) Proposed Well Work: Drill and complete a gas well.
- 12) Based on Jackson 598, 2316 and coal company maps

Issued 06/04/97  
Expires 06/04/99

RECEIVED  
1097  
Office of Oil & Gas

*New Well*

*30CSR 1011.3  
30CSR 1011.2.2*

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS			CEMENT
	Size	Grade	Weight per ft.	For Drilling	Left in Well	Fill-up (cu. ft.)
Conductor	16"	L.S.	65#	30'	30'	10 sks (GFS)
Fresh Water	9-5/8"	L.S.	32#	900'	900'	310 sks (CTS)
Coal						
Intermediate	7"	J-55	20#	1900'	1900'	300 sks (CTS)
Production	4-1/2"	N-80	11.6#	5050'	5050'	50 sks
Tubing						
Liners						

*30CSR 1011.1*

PACKERS: Kind \_\_\_\_\_  
Sizes \_\_\_\_\_  
Depths set \_\_\_\_\_

For Office of Oil and Gas Use Only

- Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP
- Plat  WW-9  WW-2B  Bond \_\_\_\_\_  Agent

(Type)

23652

*1900.0  
3471  
14*

4

1) Date: \_\_\_\_\_  
2) Operator's well number \_\_\_\_\_  
L. Archer #1  
3) API Well No: 47 - 035 - 2381  
State County Permit

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS

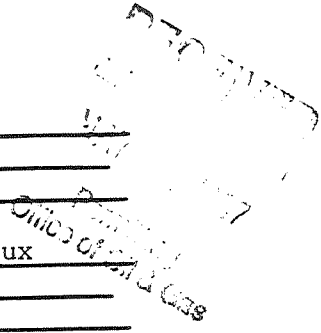
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served: 5) (a) Coal Operator:  
 (a) Name Lloyd J. Archer, et ux Name Not Operated  
 Address Route 1, Box 56 Address \_\_\_\_\_  
Elizabeth, WV 26143

(b) Name \_\_\_\_\_ (b) Coal Owner(s) with Declaration  
 Address \_\_\_\_\_ Name Lloyd J. Archer, et ux  
 Address Route 1, Box 56  
Elizabeth, WV 26143

(c) Name \_\_\_\_\_ Name \_\_\_\_\_  
 Address \_\_\_\_\_ Address \_\_\_\_\_

6) Inspector Homer Dougherty (c) Coal Lessee with Declaration  
 Address Linden Route, Box 3A Name \_\_\_\_\_  
Looneyville, WV 25259 Address \_\_\_\_\_  
 Telephone (304)- 543-0781



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:

- \_\_\_\_\_ Personal Service (Affidavit attached)
- X 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 Cabot Oil & Gas Corporation  
 By: [Signature]  
 Its: Geologist  
 Address 400 Fairway Drive Suite 400  
Coraopolis, PA 15108  
 Telephone (412)299-7000

Subscribed and sworn before me this 12<sup>TH</sup> day of MAY, 1997

[Signature] Notary Public  
 My commission expires APRIL 30, 2001

Notarial Seal  
 Susan K. Hayden, Notary Public  
 Moon Twp., Allegheny County  
 My Commission Expires April 30, 2001  
 Member, Pennsylvania Association of Notaries



STATE OF WEST VIRGINIA  
**OIL AND GAS CONSERVATION COMMISSION**  
#10 McJUNKIN ROAD  
NITRO, WEST VIRGINIA 25143-2506

May 27, 1997

Division of Environmental Protection  
Office of Oil and Gas  
Nitro, West Virginia

Re: Application for Permit #47-035-02381 drill deep well.

COMPANY: Cabot Oil and Gas Corporation

FARM: Lloyd Archer #1

COUNTY: Jackson DISTRICT: Grant QUAD: Rockport

The application of the above company is Approved for Oriskany.  
(Approved or Disapproved)

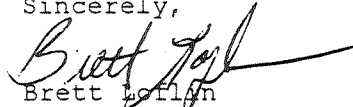
Applicant has complied with the provisions of Chapter twenty-two, eight (22-8), of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1.) Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owner; **yes**

2.) Provided a tabulation of all deep wells within one mile of the proposed location, including the Api number of the deep well, well name, and the name and address of operator and; **\*yes**

3.) Provided a plat showing that the proposed location is a distance of **462** feet from the nearest unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

  
Brett Loflin  
Engineer

\* 3,026 feet to 47-035-02362      2,680 feet to 47-035-00598P  
2,800 feet to 47-035-00571P      3,650 feet to 47-035-00659P