

Plot Cord GSD 1/24

4780' WEST

LATITUDE 39° 42' 30"  
39° 15' -15'

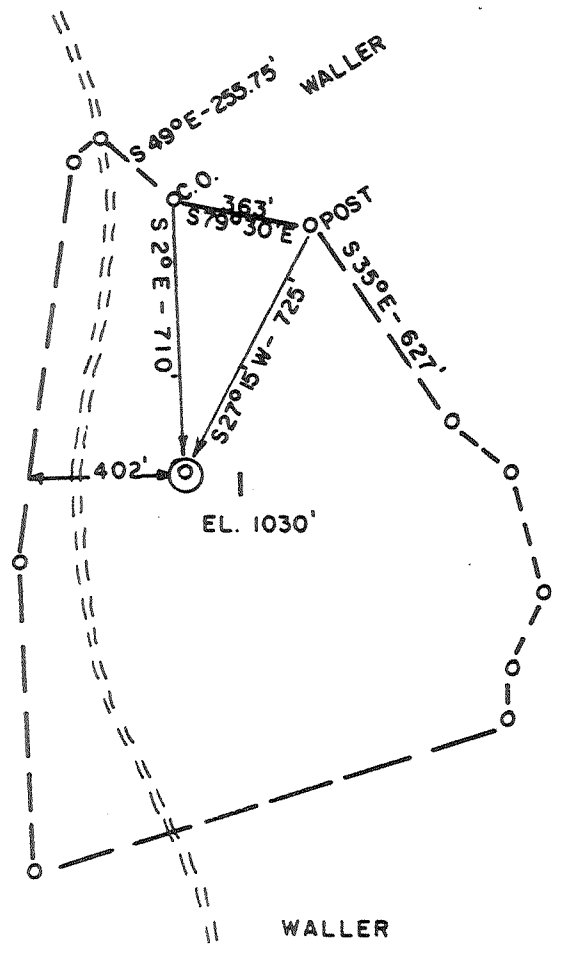
LONGITUDE 81° 15' 00"

NORTH

SIMS

KARNS

EL. 1030'



39 10 00  
81 16 00

5.67 S  
0.90 W

2.79 S  
0.90 W

FILE NO. 81-493  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1/200'  
 PROVEN SOURCE OF ELEVATION B.M. - RIDGE ROAD (1018')

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) Chas. Waterman  
 R.P.E. 3788 L.L.S. \_\_\_\_\_

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6 (8-78)



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE 9/14, 19 81  
 OPERATOR'S WELL NO. 1  
 API WELL NO. \_\_\_\_\_  
47 - 085 - 5290  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_ DEEP \_\_\_ SHALLOW \_\_\_  
 LOCATION: ELEVATION 1030 WATER SHED HICKORY RUN  
 DISTRICT GRANT COUNTY RITCHIE  
 QUADRANGLE PETROLEUM 7.5 9 1/2 15' NE  
 SURFACE OWNER J. W. BOSTON ACREAGE 43  
 OIL & GAS ROYALTY OWNER J. W. BOSTON LEASE ACREAGE 43  
 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 ORISKANY ESTIMATED DEPTH 5900'  
 WELL OPERATOR WAYMAN W. BUCKHANNON DESIGNATED AGENT JIM P. MORRIS  
 ADDRESS SAN ANTONIO, TX ADDRESS CHARLESTON, WV

H. T. HALL DEEP WELL 206 3-3



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

RECEIVED

SEP 25 1981

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,  
Charleston, W. Va.

DATE September 15, 1981

Surface Owner John W. Boston, et al

Company Wayman W. Buchanan

Address Cairo, West Virginia

Address San Antonio, Texas

Mineral Owner John W. Boston, et al

Farm Boston Acres 43

Address Cairo, West Virginia

Location (waters) Hickory Run

Coal Owner N/A

Well No. #1 Elevation \_\_\_\_\_

Address \_\_\_\_\_

District Grant County Ritchie

Coal Operator N/A

Quadrangle Petroleum 7.5

Address \_\_\_\_\_

PERMIT MUST BE POSTED AT THE WELL SITE

All conditions being in accordance with Chapter 22,  
of the W. Va. Code, the location is hereby approved  
for drilling. This permit shall expire if  
operations have not commenced by 6-5-82

INSPECTOR  
TO BE \_\_\_\_\_

ADDRESS MR. DEO MACE \_\_\_\_\_

Rt. 1, Box 65

PHONE 1 Sand Ridge, W.Va. 25274

Sand Ridge, W.Va. 25274

Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated April 1, 1981 by John W. Boston, et al made to Magnum Oil Corporation and recorded on the 6th day of April 1981, in Ritchie County, Book 135 Page 291

NEW WELL \_\_\_\_\_ DRILL DEEPER \_\_\_\_\_ REDRILL \_\_\_\_\_ FRACTURE OR STIMULATE  
\_\_\_\_\_ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. \*

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address \_\_\_\_\_ day \_\_\_\_\_ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND  
ECONOMIC SURVEY  
P. O. BOX 879  
MORGANTOWN, WEST VIRGINIA 26505  
AC-304 - 292-6331

Address  
of  
Well Operator

Very truly yours,  
(Sign Name) \_\_\_\_\_

MORRIS EXPLORATION, CO.

JAMES P. MORRIS

414 PEOPLES BUILDING

Street

CHARLESTON

City or Town

WEST VIRGINIA

State

\*SECTION 3 . . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

47-085-5290 \_\_\_\_\_ PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by \_\_\_\_\_

THIS IS AN ESTIMATE ONLY  
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

PROPOSED WORK ORDER TO X DRILL \_\_\_\_\_ DEEPEN \_\_\_\_\_ FRACTURE-STIMULATE \_\_\_\_\_  
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:  
 NAME Gene Stalnaker, Inc. NAME James P. Morris  
 ADDRESS Glenville, West Virginia 26351 ADDRESS Charleston, West Virginia  
 TELEPHONE 1-462-5701 TELEPHONE 1-345-6631  
 ESTIMATED DEPTH OF COMPLETED WELL: 5900' ROTARY X CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Devonian Shale  
 TYPE OF WELL: OIL X GAS X COMB. X STORAGE \_\_\_\_\_ DISPOSAL \_\_\_\_\_  
 RECYCLING \_\_\_\_\_ WATER FLOOD \_\_\_\_\_ OTHER \_\_\_\_\_

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LIFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
<del>11 3/4</del> 11 3/4, O.D.	100'	100'	Circulate
9 - 5/8			
8 - 5/8 23# & 24#	1900'	1900'	Circulate
7			
5 1/2			
4 1/2	5900'	5900'	<sup>590</sup> 375 sks.
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 65 FEET \_\_\_\_\_ SALT WATER \_\_\_\_\_ FEET \_\_\_\_\_  
 APPROXIMATE COAL DEPTHS None \_\_\_\_\_  
 IS COAL BEING MINED IN THE AREA? No BY WHOM? \_\_\_\_\_

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for \_\_\_\_\_ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the \_\_\_\_\_ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

\_\_\_\_\_  
For Coal Company

\_\_\_\_\_  
Official Title

RECEIVED



IV-35  
(Rev 8-81)

AUG - 9 1982

OIL AND GAS DIVISION  
WV DEPARTMENT OF MINES

State of West Virginia  
Department of Mines  
Oil and Gas Division

Date \_\_\_\_\_  
Operator's \_\_\_\_\_  
Well No. \_\_\_\_\_  
Farm J. W. Boston #1  
API No. 47 - 085 - 5290

WELL OPERATOR'S REPORT  
OF  
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1030 Watershed Hickory Run  
District: Grant County Ritchie Quadrangle Petroleum

COMPANY Wayman W. Buchanan  
ADDRESS San Antonio, Texas  
DESIGNATED AGENT Jim P. Morris  
ADDRESS 414 Peoples Bldg., Charles, W. Va.  
SURFACE OWNER J. W. Boston, et al  
ADDRESS Cairo, W. Va.  
MINERAL RIGHTS OWNER John W. Boston, et al  
ADDRESS Cairo, W. Va.

OIL AND GAS INSPECTOR FOR THIS WORK Paul Goodnight  
ADDRESS Smithville, W. Va. 26175

PERMIT ISSUED 10/5/81

DRILLING COMMENCED 10/7/81

DRILLING COMPLETED 10/16/81

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.			
<del>13-3/8</del> 11-3/4"	205	205	Surface
9 5/8			
8 5/8	2003	2003	Surface
7			
5 1/2			
4 1/2	5850	5850	580 sks
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus shale Depth 5786 feet

Depth of completed well 5903 feet Rotary X / Cable Tools \_\_\_\_\_

Water strata depth: Fresh \_\_\_\_\_ feet; Salt \_\_\_\_\_ feet

Coal seam depths: \_\_\_\_\_ Is coal being mined in the area? \_\_\_\_\_

OPEN FLOW DATA

Producing formation <sup>upper</sup> Devonian shale to Rhinestreet Pay zone depth 3090-5780 feet

Gas: Initial open flow 15 Mcf/d Oil: Initial open flow Show Bbl/d

Final open flow 722 MCF Final open flow 25 bbls Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ hours

Static rock pressure 760 psig (surface measurement) after 24 hours shut in

(If applicable due to multiple completion--)

Second producing formation \_\_\_\_\_ Pay zone depth \_\_\_\_\_ feet

Gas: Initial open flow \_\_\_\_\_ Mcf/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

AUG 16 1982

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.  
 Perforated 5780 to 5378 with 25 holes, Frac w/500 gal. 15% HCl, 260 bbl H<sub>2</sub>O, 600,000 SCFN<sub>2</sub>, 15,000 #80/100 Sand, 45,000# 20/40 Sand. Perforated 4885 to 4348 with 22 holes, Frac w/ 500 gal. 15% HCl, 260 bbl H<sub>2</sub>O, 615,000 SCF N<sub>2</sub>, 15,000# 80/100 Sand, 45,000# 20/40 sand. Perforated 3962 to 3622 with 25 holes, Frac 2/ 500 gal. 15% HCl, 260 bbl H<sub>2</sub>O, 504,000 SCF N<sub>2</sub>, 15,000# 80/100 sand, 45,000# 20/40 Sand. Perforated 3366 to 3090 with 20 holes, Frac 2/ 500 gal.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all sh and salt water, coal, oil and as
Sand & Shale			-0-	361	
shale			361	387	
sand			387	405	
shale			405	606	
sand			606	647	
shale			647	807	
sand			807	836	
shale			836	960	
sand			960	994	
shale			994	1298	
sand			1298	1391	
shale			1391	1413	
sand			1413	1432	
shale			1432	1600	
sand			1600	1773	
Big Lime			1773	1820	
Injun			1820	1876	
shale			1876	1896	gas shows:
Squaw			1896	1946	2515, 3200, 3350,
shale			1946	2318	3680, 3878 (15 MCF)
Sunbury shale			2318	2330	3090 - 3366 = U. Devonian
Shaly Berea			2330	2340	3622 - 3962 = Huron (upper pt.)
Shale			2340	5325	4348 - 4885 = Huron to Angola
Rhinestreet shale			5325	5500	perf 5378 - 5780 = Rhinestreet
shale			5500	5700	
Marcellus shale			5700	5786	
Onondaga ls.			5786	5903	

(Attach separate sheets as necessary)

Wayman Buchanan  
 Well Operator

By: Guy W. Wright (Geologist)  
 Date: 12/10/81

5903  
 5500 deepest "pay"  
 403 expl. ft.

576  
 550  
 3956

provides a systematic record of all formations, including the drilling of a well."