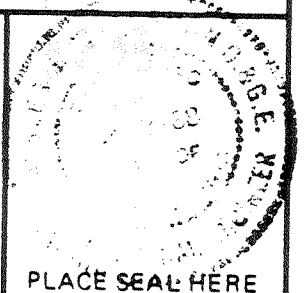


FILE NO. 81-519
 DRAWING NO. _____
 SCALE 1" = 400'
 MINIMUM DEGREE OF ACCURACY 1/200'
 PROVEN SOURCE OF ELEVATION B.M. (754')

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) [Signature]
 R.P.E. 3788 L.L.S. _____



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



DATE 9/23, 19 81
 OPERATOR'S WELL NO. 1
 API WELL NO. 47-085-5325
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 840 WATER SHED BIG RUN
 DISTRICT GRANT COUNTY RITCHIE
 QUADRANGLE CAIRO 7.5' Harrisville 15' NW
 SURFACE OWNER JAMES R. MORTON ACREAGE 40.75
 OIL & GAS ROYALTY OWNER NANCY GRANT ET. AL LEASE ACREAGE 40.75
 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 SHALE ESTIMATED DEPTH 5950'
 WELL OPERATOR WAYMAN W. BUCKHANNON DESIGNATED AGENT JIM P. MORRIS
 ADDRESS SAN ANTONIO, TX ADDRESS CHARLESTON, WV

NOV 9 1981



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

OCT 23 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.

Surface Owner James R. Morton
Address _____
Mineral Owner Nancy C. Grant, et al
Address Port Charlotte, Florida 33952
Coal Owner N/A
Address _____
Coal Operator N/A
Address _____

DATE September 30, 1981
Company Wayman W. Buchanan
Address San Antonio, Texas 78205
Farm Grant Acres 40.75
Location (waters) Big Run
Well No. #1 Elevation 840'
District Grant County Ritchie
Quadrangle Cairo 7.5'

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions 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 6-27-82.

INSPECTOR
TO BE NOTIFIED Paul K. Goodnight
ADDRESS Smithville, West Virginia 26178
PHONE 1-477-3660

Deputy Director - Oil and 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 March 1, 1981 by Nancy C. Grant et al made to Magnum Oil Corporation and recorded on the 6th day of April 1981, in Ritchie County, Book 135 Page 294
 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

MORRIS EXPLORATION COMPANY
Very truly yours,

(Sign Name) Jim P. Morris

Well Operator
JIM 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

47-085-5325

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 DRILL _____ DEEPEN _____ FRACTURE-STIMULATE _____
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME Gene Stalnaker, Inc. NAME Jim P. Morris
 ADDRESS Glenville, West Virginia 26351 ADDRESS Charleston, West Virginia
 TELEPHONE 1-462-5701 TELEPHONE 1-345-6631
 ESTIMATED DEPTH OF COMPLETED WELL: 5950' ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Devonian Shale/Oriskany
 TYPE OF WELL: OIL GAS COMB. STORAGE _____ DISPOSAL _____
 RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT PUT UP OR SACKS - CUBIC FT.
20 - 16			
XXXX 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			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



Date September 28, 1982
Operator's
Well No. Morton #1
Farm James R. Morton
API No. 47-085 - 5325

State of West Virginia
Department of Mines
Oil and Gas Division

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

RECEIVED

MAR 9 - 1983

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

LOCATION: Elevation: 840 Watershed Big Run
District: Grant County Ritchie Quadrangle Cairo 7.5'

COMPANY Wayman W. Buchanan
ADDRESS 444 Petroleum Commerce Building
San Antonio, Texas 78205

DESIGNATED AGENT Jim P. Morris
ADDRESS 401 Peoples Building
Charleston, WV 25301

SURFACE OWNER James R. Morton
ADDRESS Grant Dist., Ritchie Co., WV

GENERAL RIGHTS OWNER Nancy C. Grant, etal
ADDRESS Port Charlotte, FL 33952

OIL AND GAS INSPECTOR FOR THIS WORK Deo
Mace ADDRESS Rt. 1, Box 5

PERMIT ISSUED 9/27/81 Sandridge, WV 25274

DRILLING COMMENCED 12/7/81

DRILLING COMPLETED 12/14/81

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.			
13-10"			
9 5/8		285'	Circ.
8 5/8			
7		1867'	Circ.
5 1/2			
4 1/2		5698'	250 sks.
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Marcellus Shale Depth 5950 feet

Depth of completed well 5722 feet Rotary X / Cable Tools

Water strata depth: Fresh 65 feet; Salt 1730 feet

Coal seam depths: None Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3516-3850 feet

Gas: Initial open flow N/T Mcf/d Oil: Initial open flow 0 Bbl/d

Final open flow 40 Mcf/d Final open flow 0 Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 360 psig (surface measurement) after 72 hours shut in
(If applicable due to multiple completion--)

Second producing formation Muron + Java Pay zone depth 4189-4705 feet

Gas: Initial open flow 0 Mcf/d Oil: Initial open flow 0 Bbl/d

Final open flow 210 Mcf/d Oil: Final open flow 0 Bbl/d

Time of open flow between initial and final tests _____ hours

Static rock pressure 840 psig (surface measurement) after 48 hours shut in

250 mcf FOP

Upper and diff. up zone temp. abnd - product later zone

4189-4500 Muron; 4500-4705 Java

MAR 14 1983

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

Perforations from 3850 to 3516 with 30 holes.
 Fractured with 500 gals. 15% HCL acid and 36,000 scf nitrogen pad;
 used 2,000,000 scf nitrogen in 4 stages of 500,000 scf per stage.
 9/9/82 Blew well down. Pulled tubing. Selectively perforated 4189 to 4705.
 9/10/82 Frac'd w/750 gal. 15% HCl acid & 45 ball sealers. Frac'd w/1,000,000
 SCF N₂ in 2 stages. Flwd well back to clean up.
 9/15/82 Blew well down; ran tbg. & Baker Mdl "R" Packer set @ 4135' in
 10,000# tension.
Upper zone temporarily 'abn'd. in favor of producing lower zones.

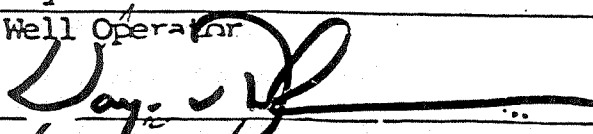
WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all free and salt water, coal, oil and gas
Shale & red rock			0	280	
Shale			280	366	
Sand			366	396	
Shale			396	557	
Sand			557	570	
Shale			570	685	
Sand			685	716	
Shale			716	843	
Sand			843	869	
Shale			869	910	
Sand			910	947	
Shale			947	1072	
Sand			1072	1123	
Shale			1123	1199	
Sand			1199	1244	
Shale			1244	1286	
Sand			1286	1358	
Shale			1358	1382	
Sand			1382	1416	
Shale			1416	1450	
Sand			1450	1529	
Shale			1529	1584	
Sand			1584	1640	
Pencil Cave			1640	1654	
Big Lime			1654	1730	
Injun			1730	1758	
Squaw			1758	1808	
Shale			1808	2170	
Coffee Shale			2170	2182	
Shale			2182	4164	
Huron Shale			4164	4500	
Shale			4500	5170	
Rhinestreet Shale			5170	5470	
Shale			5470	5600	
Marcellus Shale			5600	5674	
Onondage Limestone			5674	5722	
TD			5722		

5722
 5470
 252' expl tbg.

(Attach separate sheets as necessary)

Wayman W. Buchanan
 Well Operator

By: 
 Date: September 28, 1982

Note: Regulation 2.25(d) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic
 detailed geological record of all formations, including
 strata, encountered in the drilling of a well."