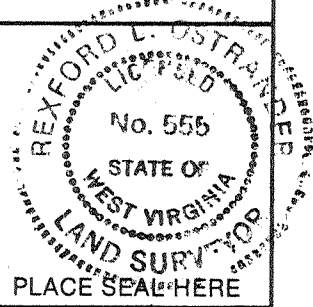


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. 865
 DRAWING NO. 87-1
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 in 200
 PROVEN SOURCE OF ELEVATION 3540 - Elev. 1200
Gas Well

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) Rayford L. Ostrander
 R.P.E. _____ L.L.S. 555
Buckhannon, WV



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
OIL AND GAS DIVISION

DATE September 15, 19 87
 OPERATOR'S WELL NO. BARNES-1
 API WELL NO. _____

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

LOCATION: ELEVATION 1160' WATERSHED Buckeye Creek
 DISTRICT Greenbrier COUNTY Doddridge
 QUADRANGLE Big Isaac 252 123 N22 VADIS

SURFACE OWNER Jeffery Mills ACREAGE 46.6
 OIL & GAS ROYALTY OWNER P.L. Barnes, Heirs LEASE ACREAGE 46.6
 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 ALEXANDER ESTIMATED DEPTH 5700'
 WELL OPERATOR EXCEL ENERGY, INC. DESIGNATED AGENT HARRY BARNETT
 ADDRESS 901 W. MAIN ST., SUITE 201 BRIDGEPORT, WV 26330 1629 ADDRESS - SAME -

NOV 30 1987

COUNTY NAME _____
 PERMIT _____



IV-35
(Rev 8-81)

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

State of West Virginia
Department of Mines
Oil and Gas Division

Date 1/20/87
Operator's
Well No. Barnes #1
Farm Jeffrey A. Mills
API No. 47 - 017 - 3616

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

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

LOCATION: Elevation: 1160 Watershed Buckeye Creek
District: Greenbrier County Doddridge Quadrangle Big Issac

COMPANY D.L. & W. Properties
ADDRESS P.O. Box 2752 Clarksburg
DESIGNATED AGENT L.A. Finley
ADDRESS same
SURFACE OWNER Jeffery A. Mills
ADDRESS Rt. 1 Salem, WV
MINERAL RIGHTS OWNER R.L. Barnes, heirs
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK Mike
Underwood ADDRESS RD 2 Box 135 Salem, WV
PERMIT ISSUED 47-017-3616
DRILLING COMMENCED Nov. 30, 1987
DRILLING COMPLETED Dec. 5, 1987

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. 113/4 | 30 | -- | |
| 13-10" | | | |
| 9 5/8 | | | |
| 8 5/8 | 1307 | 1307 | 380 sk |
| 7 | | | |
| 5 1/2 | | | |
| 4 1/2 | 5558 | 5558 | 500 sk |
| 3 | | | |
| 2 | | | |
| Liners used | | | |

GEOLOGICAL TARGET FORMATION Alex Depth 5630 feet
Depth of completed well 5560 feet Rotary X / Cable Tools _____
Water strata depth: Fresh 190 feet; Salt no feet
Coal seam depths: no Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Alex & Benson Alex 5415 to 5460
Pay zone depth _____ feet Benson 5128 to 5134
Gas: Initial open flow 189 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 1.9 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1810 psig (surface measurement) after 48 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
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

1,900 Mcf

MAY 13 1988
(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
 ALEXANDER: Perforations, 5,416-5,460 14ea. .39 holes
 Fractured using, 180 bps H₂O, 500 gallons acid, 45,000 #
 sand and 600,000 std. cft. N₂
 BENZEN: Perforations, 5,128-5,139 13ea. .39 holes
 Fractured using, 173 bps H₂O, 500 gallons acid, 45,000 #
 sand and 585,000 std. cft. N₂

WELL LOG

| FORMATION COLOR HARD OR SOFT | TOP FEET | BOTTOM FEET | REMARKS Including indication of all fresh and salt water, coal, oil and gas |
|------------------------------|----------|-------------|---|
|------------------------------|----------|-------------|---|

| | | | |
|-----------------|------|------|--------------------|
| top soil red | 0 | 10 | |
| sd & sh grey | 10 | 254 | |
| sand grey | 254 | 314 | |
| sd & sh grey | 314 | 408 | Water 1/2" at 190' |
| r r red | 408 | 467 | |
| sd. gray | 467 | 498 | |
| sh & rr red | 498 | 621 | |
| sd & sh gray | 621 | 1615 | |
| sd | 1615 | 1684 | |
| sd & sh | 1684 | 2174 | |
| sd & sh | 2174 | 2234 | |
| Big Lime | 2234 | 2327 | |
| Big Injun | 2327 | 2910 | |
| sh & sd | 2910 | 2925 | |
| Gordon sd | 2925 | 3498 | |
| sh & sd | 3498 | 3596 | |
| Speechley | 3596 | 3722 | |
| Baltown | 3722 | 5114 | |
| Shale | 5114 | 5125 | |
| Bensen sd Brown | 5125 | 5125 | |
| Shale gray | 5125 | 5375 | |
| Alex sd | 5375 | 5588 | |
| Shale | 5588 | 5630 | |
| TD | 5630 | 5630 | |

(Attach separate sheets as necessary)

D.L. & W Properties

Well Operator

By: L.A. Finley

Date: 1/20/88

L.A. Finley

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
 formations encountered in the drilling of a well."

MAY 13 1988

DEPARTMENT OF OIL & GAS

MAY 12 1988

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1) Date: September 14, 19 87
 2) Operator's Well No. Barnes E-34
 3) API Well No. 47 017 3616
 State County Permit

RECEIVED
NOV 10 1987

STATE OF WEST VIRGINIA

DEPARTMENT OF ENERGY, OIL AND GAS DIVISION

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

APPLICATION FOR A WELL WORK PERMIT

4) WELL TYPE: A Oil / Gas X /
 B (If "Gas", Production / Underground storage / Deep / Shallow X /)
 5) LOCATION: Elevation: 1160' Watershed: Buckeye Creek
 District: Greenbrier County: Doddridge Quadrangle: Big Issac
 6) WELL OPERATOR Excel Energy, Inc. CODE: 16570 7) DESIGNATED AGENT H. L. Barnett
 Address P.O.Box 1020 Address P.O.Box 1020
Bridgeport, WV 26330 Bridgeport, WV 26330
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:
 Name Steve Casey Name Unknown
 Address Rt. 2, Box 232-D R.D. 2, Box 135 Address
Jane Lew, WV 26378 SALEM, W.VA. 26210

10) PROPOSED WELL WORK: Drill X / Drill deeper / Redrill / Stimulate X /
 Plug off old formation / Perforate new formation /
 Other physical change in well (specify)

11) GEOLOGICAL TARGET FORMATION, Alexander
 12) Estimated depth of completed well, 5650' feet
 13) Approximate strata depths: Fresh, 80, 180, 860 feet; salt, 1950 feet.
 14) Approximate coal seam depths: 80, 210, 350, 860, 560 Is coal being mined in the area? Yes / No X

15) CASING AND TUBING PROGRAM 054' 900' From 1962, 2019, 2158, 2404, 3540

| 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 | | |
| Conductor | 11 3/4 | | | X | | 40' | | | Kinds |
| Fresh water | | | | | | | | | |
| Coal | | | | | | | | | |
| Intermediate | 8 5/8 | | 23 lb. | X | | 1200' | 1200' | | Sizes <u>38 CSR18-11.3</u> |
| Production | 4 1/2 | J55 | 10.5 | X | | 5650' | 5650' | To surface | Depths set <u>38 CSR18-11.2.2</u> |
| Tubing | | | | | | | | 500sks. | <u>38 CSR18-11.1</u> |
| Lin. | | | | | | | | | Perforations: |
| | | | | | | | | | Top Bottom |

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-017-3616 Date November 26 19 87

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 November 26, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

| | | | | | | | |
|---------------------|----------------------|---------------------|----------------------|------------------------------|--------------------|-------------------|---------------------|
| Bond: <u> </u> | Agent: <u> </u> | Plat: <u> </u> | Casing <u> </u> | Fee <u>237</u> <u>129</u> | WPCF <u> </u> | SEP <u> </u> | Other <u> </u> |
|---------------------|----------------------|---------------------|----------------------|------------------------------|--------------------|-------------------|---------------------|

NOTE: Keep one copy of this permit posted at the drilling location.
 Director, Division of Oil and Gas
 See the reverse side of the APPLICANT'S COPY for instructions to the well operator. File