

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY 1 PART IN 200
 PROVEN SOURCE OF ELEVATION J. AND J. ENTERPRISES INC.
WELL # K-II #1 ELEVATION 1156'

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) Cecil R. Main
 R.P.E. _____ L.L.S. 711

PLACE SEAL HERE

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



DATE JANUARY 9th, 19 81
 OPERATOR'S WELL NO. J-294
 API WELL NO. _____
47 - 017 - 2751
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
 LOCATION: ELEVATION 1120' WATER SHED CLAYLICK RUN
 DISTRICT CENTRAL COUNTY DODDRIDGE
 QUADRANGLE WEST UNION 7.5813 SC
 SURFACE OWNER GLEN KNIGHT ACREAGE 128 Ac.
 OIL & GAS ROYALTY OWNER M.J. CUNNINGHAM LEASE ACREAGE 228 Ac.
 LEASE NO. H-23
 PROPOSED WORK: DRILL X 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 5500'
 WELL OPERATOR J. AND J. ENTERPRISES, INC. DESIGNATED AGENT HARRY BARNETT
 ADDRESS P.O. BOX 48 ADDRESS P.O. BOX 48
BUCKHANNON, WEST VIRGINIA 26201 BUCKHANNON, WEST VIRGINIA 26201

6-6 Greenwood (89)

FEB 13 1981

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

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: 1120 Watershed: Clay Lick Run
District: Central County: Doddridge Quadrangle: West Union 7.5'

WELL OPERATOR J & J Enterprises, Inc. DESIGNATED AGENT Roger Rolston
Address P.O. Box 48 Address P.O. Box 48
Buckhannon, WV 26201 Buckhannon, WV 26201

PERMITTED WORK: Drill X / Convert / Drill deeper / Redrill / Fracture or stimulate X
Plug off old formation / Perforate new formation
Other physical change in well (specify)

PERMIT ISSUED ON 1/16, 1981 OIL & GAS INSPECTOR FOR THIS WORK:
Name Stephen Casey
IF APPLICABLE: PLUGGING OF DRY HOLE OR CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED Address Rt. # 2, Box 232-D
 , 19 Jane LEW, WV

GEOLOGICAL TARGET FORMATION: Alexander Depth 5368-5395 feet
Depth of completed well, 5525 feet Rotary X / Cable Tools
Water strata depth: Fresh, 45,690 feet; salt, 0 feet.
Coal seam depths: 844-47 Is coal being mined in the area? No
Work was commenced 6/10, 1981, and completed 6/16, 1981

CASING AND TUBING PROGRAM

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	H-40	42	x		30	0	0 sks.	Wands
Fresh water	8 ⁵ / ₈	ERW	23	x		1812.30	1812.30	440 sks.	
Coal	8 ⁵ / ₈	ERW	23	x		1812.30	1812.30	440 sks.	Sizes
Intermediate									
Production	4 ¹ / ₂	J-55	10.5	x		5465.80	5465.80	155 sks.	Depths set
Tubing									
Liners									Perforations:
									Top Bottom
									5076 5078
									5368 5395

OPEN FLOW DATA

Producing formation Alexander Pay zone depth 5368-95 feet
Gas: Initial open flow, Mcf/d Oil: Initial open flow, Bbl/d
Combined Final open flow, 582 Mcf/d Final open flow, Bbl/d
Time of open flow between initial and final tests, 6 hours
Static rock pressure, 1800 psig (surface measurement) after 96 hours shut in
[If applicable due to multiple completion--]
Second producing formation Benson Pay zone depth 5076-78 feet
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

Bottom Hole Pressure static rock pressure, psig (surface measurement) after hours shut in
pf=PweXGLS
 $=1800 e=2.72-T=60+(0.0075 \times 5466) + 459.7=561 X= \frac{1}{53.34} \times 561 = \frac{1}{29923} =0.0000334 G=0.679 L=5236$
 $=0.9 Pf=1800 \times 2.72 \times 0.0000334 \times 0.679 \times 5236 \times 0.9 =1800 \times 2.72 \times 0.107 =1800 \times 1.113 =2003$
=2003

[08-78]

DETAILS OF PERFORATED INTERVALS, FRACTURING OR OTHER TREATING, PHYSICAL CHANGE, ETC.

Alexander; Perforations: 5368-5395 (1- holes)
Fracturing: 150 sks. 80/100 sand: 350 sks. 20/40 sand:350 lbs. Citric Acid:
545 Bbls. fluid.

Benson; Perforations: 5076-5078 (9 holes)
Fracturing:100 sks. 80/100 sand; 280 sks. 20/40 sand: 500 gals Acid:445 Bbls. fluid

RECEIVED
SEP - 1 1981
OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including Indication of all Fresh and salt water, coal, oil and gas
Conductor			0	20	Damp @ 45'
Sand & shale			20	230	Damp @ 690'
Sand & shale			230	317	
Red rock and shale			317	326	Oil odor @ 2213'
Sand, shale & red rock			326	844	
Coal			844	847	Gas ck @ 2407' 48/10-1 1/4" w/water 81,544 cu.ft.
Sand & shale			847	979	
Shale, sand & red rock			979	1065	Gas ck @ 2928' 33/10-1 1/4" w/water 67,515 cu.ft.
Shale & sand			1065	2020	
Lime			2020	2040	Gas ck @ 3699 25/10-1 1/4" w/water 53,234 cu.ft.
Lime & shale			2040	2079	
Li-e			2079	2105	Gas ck @ 4019 24/10-1 1/4" w/water 57,543 cu.ft.
Lime & shale			2105	2122	
Big Lime			- 2122	2207	Gas ck @ 4338 21/10-1 1/4" w/water 53,923 cu. ft.
Big Injun			2207	2260	
Sand & shale			2260	3475	
Sand & shale			3475	5065	Gas ck @ 4724 26/10-1 1/4" w/water 60,000 cu.ft.
Benson			- 5065	5075	
Sand & shale			5075	5300	Gas ck @ 5140 25/10-1 1/4" w/water 53,834 cu.ft.
Brown sand & shale			5300	5325	
Brown sand			5325	5330	Gas ck @ 5525 10/10-1 1/4" w/water 37,210 cu.ft.
Sand & shale			5330	5368	
Alexander			5368	5395	
Shale			5395	5525	
				TD	

(Attach separate sheets to complete as necessary.)

J & J Enterprises, Inc.
Well Operator
By Peter Battles
Peter Battles
Geologist

NOTE: Regulation 2.02(d) provides as follows:
"The term 'log' or 'well log' shall mean a systematic, detailed geological record of all formations, including coal, encountered in the drilling of a well."

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. J-294
API Well No. 47 - 017-2951
State County Per

WELL TYPE: Oil / Gas X /
(If "Gas", Production X / Underground storage / Deep / Shallow X /)

LOCATION: Elevation: 1120 Watershed: Claylick Run
District: Central County: Doddridge Quadrangle: West Union 7.5

WELL OPERATOR J&J Enterprises, Inc.
Address P.O. Box 48
Buckhannon, WV 26201

DESIGNATED AGENT H.L. Barnett
Address P.O. Box 48
Buckhannon, WV 26201

OIL & GAS ROYALTY OWNER Richard J. Cunningham
Address 8284 Klusman
Cucamota, CA
Acreage 288

COAL OPERATOR None
Address

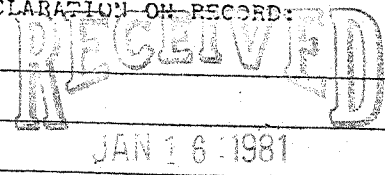
SURFACE OWNER Glen Knight
Address Rt. 1
West Union, WV 26456
Acreage 128

COAL OWNER(S) WITH DECLARATION ON RECORD:
Name Richard Cunningham
Address 8284 Klusman
Cucamota, CA
Name
Address

FIELD SALE (IF MADE) TO:
Name unknown
Address

COAL LESSEE WITH DECLARATION ON RECORD:
Name None
Address

OIL & GAS INSPECTOR TO BE NOTIFIED
Name Paul Garrett
Address 321 Beech St.
Clarksburg, WV 26301



OIL & GAS DIVISION
DEPT. OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed / lease / other contract X / dated 4-16, 1980, to the undersigned well operator from Justin Henderson

[If said deed, lease, or other contract has been recorded:]
Recorded on 5-16, 1980, in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in Deed Book 115 at page 74. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate X /
Plug off old formation / Perforate new formation /
Other physical change in well (specify)

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any obligation they wish to make or are required to make by Code § 20-4-3 must be filed with the Department of Mines within fifteen (15) days after the receipt of this Application by the Department.

Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:
WEST VIRGINIA OIL AND GAS
CONSERVATION COMMISSION
1615 WASHINGTON STREET EAST
CHARLESTON, WV 25311
TELEPHONE: (304) 368-3090

MARKET BOND

J&J Enterprises
Well Operator

Peter Battler
Geologist

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY: ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) S.W. Jack Drilling Co.

Address P.O. Box 48 Buckhannon, WV 26201

GEOLOGICAL TARGET FORMATION, Alexander

Estimated depth of completed well, 5500 feet Rotary X / Cable tools /

Approximate water strata depths: Fresh, 50 feet; salt, 1550 feet.

Approximate coal seam depths: - Is coal being mined in the area? Yes No X

CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight, New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACHERS (Kinds, Sizes, Depths set, Perforations: Top, Bottom)

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code § 22-4-2, (iii) Form IV-9, "Reclamation Plan", applicable to the reclamation required by Code § 22-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code § 22-4-12a, and (v) if applicable, the consent required by Code § 22-4-2a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

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 9-20-81

Signature of Deputy Director - Oil & Gas Division

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code § 22-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator / owner / lessee / of the coal under this well location, has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: , 19

By Its