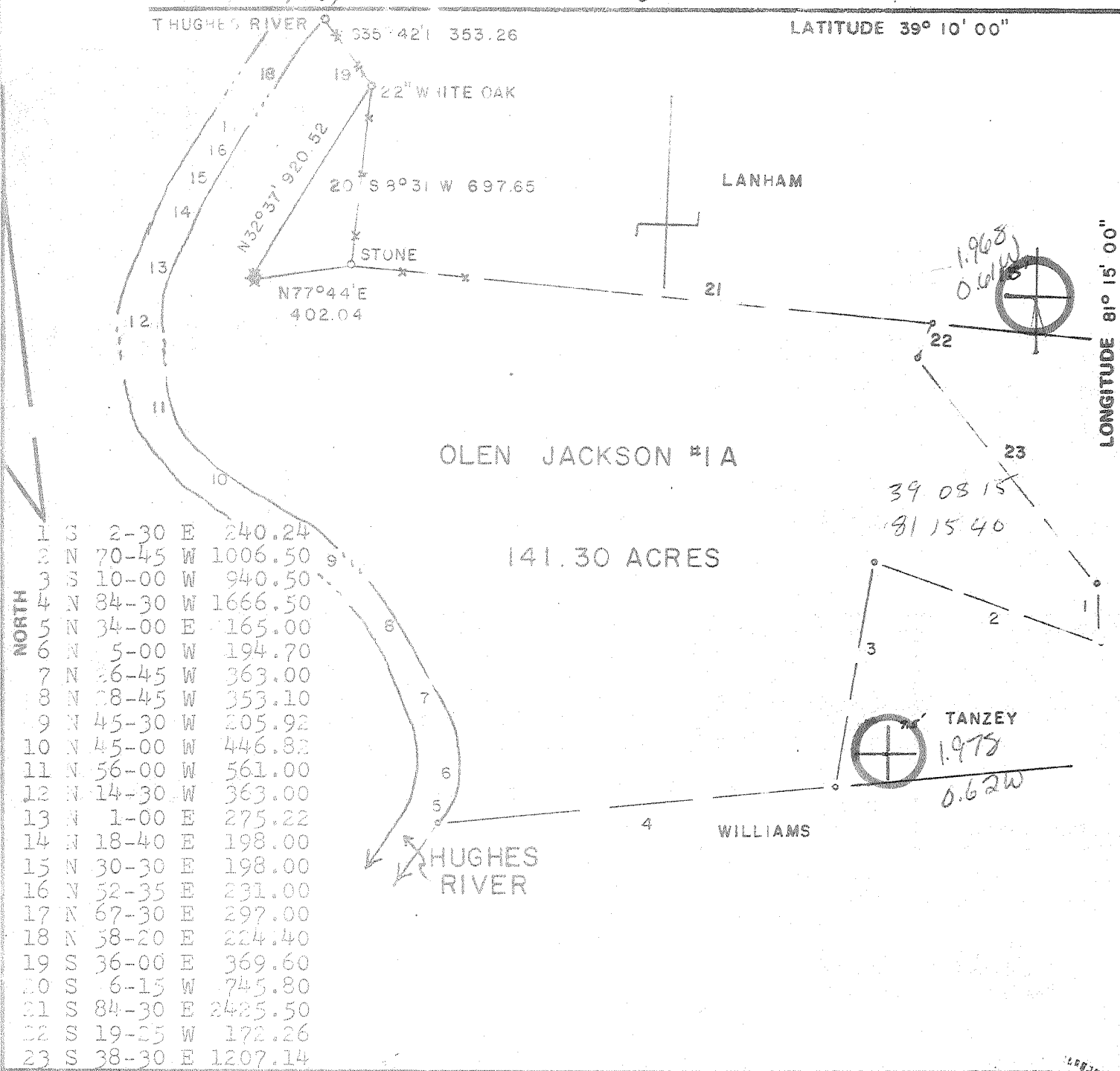


T HUGHES RIVER 335°42' 353.26

LATITUDE 39° 10' 00"



1	S	2-30	E	240.24
2	N	70-45	W	1006.50
3	S	10-00	W	940.50
4	N	84-30	W	1666.50
5	N	34-00	E	165.00
6	N	5-00	W	194.70
7	N	26-45	W	363.00
8	N	08-45	W	353.10
9	N	45-30	W	205.92
10	N	45-00	W	446.82
11	N	56-00	W	561.00
12	N	14-30	W	363.00
13	N	1-00	E	275.22
14	N	18-40	E	198.00
15	N	30-30	E	198.00
16	N	52-35	E	231.00
17	N	67-30	E	297.00
18	N	58-20	E	224.40
19	S	36-00	E	369.60
20	S	6-15	W	745.80
21	S	84-30	E	2425.50
22	S	19-25	W	172.26
23	S	38-30	E	1207.14

OLEN JACKSON #1A

141.30 ACRES

HUGHES RIVER

WILLIAMS

LANHAM

1.968  
0.6115  
39 05 15  
81 15 40

TANZEY  
1.975  
0.6220

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1"/600'  
 MINIMUM DEGREE OF ACCURACY 1/300'  
 PROVEN SOURCE OF ELEVATION SPOT ELEV. ON KNOB 2000' NE OF PROP. ELEVATION 902'

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) Gregory A. Smith  
 R.P.E. \_\_\_\_\_ L.L.S. 677

PLACE SEAL HERE

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



STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE MAY 19, 19 80  
 OPERATOR'S WELL NO. \_\_\_\_\_  
 API WELL NO. 47-085-4847  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS,") PRODUCTION  STORAGE \_\_\_\_\_ DEEP  SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 746' WATER SHED HUGHES RIVER NORTH FORK  
 DISTRICT GRANT COUNTY RITCHIE  
 QUADRANGLE PETROLEUM 7.5' ELIZABETH 15' 2C  
 SURFACE OWNER OLIN JACKSON ACREAGE 141.30  
 OIL & GAS ROYALTY OWNER OLIN JACKSON LEASE ACREAGE 141.30  
 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 BENSON & ELK ESTIMATED DEPTH 5700'  
 WELL OPERATOR WACO OIL & GAS DESIGNATED AGENT JERRY MASONER  
 ADDRESS BOX 4, GLENVILLE, W.V. ADDRESS BOX 4, GLENVILLE, W.V.  
26351 26351

3-0 6-Q BURNING SPRINGS DEEP 112

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's Well No. Olen Jackson 1A

API Well No. 57 - 085 - 484  
State County Form

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

LOCATION: Elevation: 746 Watershed: Hughes River  
District: Grant County: Ritchie Quadrangle: Petroleum 7.5

WELL OPERATOR Waco Oil & Gas Co.  
Address Box 4  
Glenville, W. Va.

DESIGNATED AGENT Jerry Masoner  
Address Box 4  
Glenville, W. Va.

OIL & GAS ROYALTY OWNER Olen Jackson Etals  
Address Harrisville, W. Va.  
Acreage 141.3

COAL OPERATOR N/A  
Address     

SURFACE OWNER Olen Jackson Etals  
Address Harrisville, W. Va.  
Acreage 141.3

COAL OWNER(S) WITH DECLARATION ON RECORD:  
Name N/A  
Address       
Name       
Address     

FIELD SALE (IF MADE) TO:  
Name Unknown  
Address     

COAL LESSEE WITH DECLARATION ON RECORD:  
Name N/A  
Address     

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Paul Goodnight  
Address Smithville, W. Va.  
477-3660

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed      / lease X / other contract      / dated November 6, 1979, to the undersigned well operator from Olen Jackson Etals

[If said deed, lease, or other contract has been recorded:]

Recorded on December 5, 1979, in the office of the Clerk of the County Commission of      County, West Virginia, in Lease Book 129 at page 479. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill deeper      / Redrill      / Fracture or stimulate      /  
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 objection they wish to make or are required to make by Code § 22-4-3 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.

**RECEIVED**

JUN 4 1980

Waco Oil & Gas Co. **BLANKET BOND**  
Well Operator

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) 342-3092

OIL & GAS DIVISION  
DEPT. OF MINES

By Jerry Masoner  
Agent

[08-78]

PROPOSED WORK ORDER

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

DRILLING CONTRACTOR (IF KNOWN) Fox Drilling Co.

Address \_\_\_\_\_

Glennville, W. Va.

GEOLOGICAL TARGET FORMATION, Benson & Elk

Estimated depth of completed well, 5700 feet Rotary X / Cable tools \_\_\_\_\_ /

Approximate water strata depths: Fresh, N/A feet; salt, N/A feet.

Approximate coal seam depths: N/A Is coal being mined in the area? Yes \_\_\_\_\_ / No X /

CASING AND TUBING PROGRAM

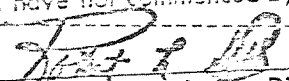
CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor								Kinds
Fresh water								
Coal								Sizes
Intermediate	8 5/8	ERW	20	X		500	500	150 sks.
Production	4 1/2	5.55	10.5	X			5700	150 sks.
Tubing								
Liners								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 § 22-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not 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.

**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 2-6-81.

  
The Deputy Director - Oil & Gas Division, is hereby notified 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 \_\_\_\_\_

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

2000-10-19, 1981

FORM IV-35  
(REVISED)

Operator's  
Well No. Olan Jackson #

[08-78]

WELL OPERATOR'S REPORT  
OF

API Well No. 47-085  
State County  
4847

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil  / Gas  / Liquid Injection  / Waste Disposal  4847  
(If "Gas", Production  / Underground storage  / Deep  / Shallow )  
LOCATION: Elevation: 746 Watershed: Hughes River  
District: Grant County: Ritchie Quadrangle: Petroleum 7.5

WELL OPERATOR \_\_\_\_\_ DESIGNATED AGENT \_\_\_\_\_  
Address \_\_\_\_\_ Address \_\_\_\_\_

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

PERMIT ISSUED ON June 6, 1980 OIL & GAS INSPECTOR FOR THIS WORK:  
IF APPLICABLE: PLUGGING OF DRY HOLE ON CONTINUOUS PROGRESSION FROM DRILLING OR REWORKING. VERBAL PERMISSION OBTAINED Name Paul Goodnight  
Address Smithville, WV  
477-3660

LOGICAL TARGET FORMATION: Benson & Elk Depth 5700 feet  
Depth of completed well, 4596 feet Rotary  / Cable Tools \_\_\_\_\_  
Water strata depth: Fresh, 30/154 feet; salt, \_\_\_\_\_ feet.  
Coal seam depths: N/A Is coal being mined in the area? NO  
Work was commenced December 9, 1980, and completed February 4, 1981

LOGGING AND TUBING PROGRAM

LOGGING 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	20	I-55	94		X	25	-0-	-0-	Kinds
Fresh water	8 5/8	J55	20	X		1636	1636	Surface	
Gal									Sizes
Intermediate									
Production	4 1/2	CW	10.5	X		4598	4598	300 sks.	Deaths set
ng	2 3/8	CW	4.5	X		3860	3860		
rs									Perforations:
									Top Bottom
									2722 3845

OPEN FLOW DATA

Producing formation Brown Shale HURON Pay zone depth 2722-3729 feet  
Gas: Initial open flow, -0- Mcf/d Oil: Initial open flow, -0- Bbl/d  
Final open flow, 10 Mcf/d Final open flow, -0- Bbl/d  
Time of open flow between initial and final tests, 48 hours  
Static rock pressure, 680 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 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

OCT 04 1982

WELLS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.  
 Holes: 33 - 5" holes at 3845, 3824, 3774, 3763, 3729, 3727, 3725, 3704, 3696, 3688, 3616, 3592, 3591, 3526, 3498, 3492, 3490, 2828, 2808, 2806, 2793, 2789, 2774, 2770, 2748, 2746, 2744, 2742, 2728, 2726, 2724, 2722.

Volume: 20,000 gals 15% HCl; 1,080,000 SCF N<sub>2</sub>.

WELL LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fossils and salt water, coal, oil and gas
Surface Fill			0	15	
Shale & Red Rock			15	25	
Shale & Shale			25	30	
Shale & Sand			30	35	
Red Rock & Shale			35	50	
Sandy Shale			50	103	
Red Rock-Shale-Sand			103	120	
Sandy Shale			120	130	
Red Rock & Shale			130	135	
Red Rock			135	145	
Shale & Shale			145	150	
Red Rock			150	165	
Shale			165	240	
Shale & Shale			240	275	
Red Rock & Shale			275	285	
Shale			285	350	
Red Rock & Shale			350	460	
Shale & Shale			460	535	
Red Rock			535	565	
Shale & Shale			565	600	
Red Rock			600	620	
Shale			620	700	
Shale & Shale			700	1010	
Light Grey Sand			1010	1120	
Shale & Shale			1120	1190	
Lime & Shale			1190	1200	
Shale & Shale			1200	1225	
Shale			1225	1340	
Shale			1340	1400	
Shale			1400	1468	
Lime & Sand			1468	1529	
Big Lime & Big Injun			1529	1642	Top E Log @ 1630
Shale			1642	4258	
Shale			4258	4306	
Shale			4306	4482	
Shale			4482	4496	
Shale			4496	4971	
Black/Alexander			4971	5163	
Shale			5163	5726	
Total Depth			5726		

SONYEA

Onondaga = 5550

(Attach separate sheets to complete as necessary)

Well Operator \_\_\_\_\_  
 By \_\_\_\_\_  
 Its \_\_\_\_\_

**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 coal, encountered in the drilling of a well."

FORM BY-35

[08-78]

WELL OPERATOR'S REPORT  
OF

API Well No. 47 - 085

State Court  
48

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

4847

WELL TYPE: Oil  / Gas  / Liquid Injection  / Waste Disposal   
(If "Gas", Production  / Underground storage  / Deep  / Shallow )  
LOCATION: Elevation: 746 Watershed: Hughes River  
District: Grant County: Ritchie Quadrangle: Petroleum 7.5

WELL OPERATOR Eastern American Energy Corporation DESIGNATED AGENT Donald C. Supcoe  
Address P. O. Box N Address P. O. Box N  
Glenville, West Virginia 26351 Glenville, West Virginia 263

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

PERMIT ISSUED ON June 6, 1980

OIL & GAS INSPECTOR FOR THIS WORK:

IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED

Name Paul Goodnight

Address Smithville, WV

477-3660

LOGICAL TARGET FORMATION: Benson & Elk Depth 5700 feet

Depth of completed well, 4596 feet Rotary  / Cable Tools

Water strata depth: Fresh, 30/154 feet; salt, \_\_\_\_\_ feet.

Coal seam depths: N/A Is coal being mined in the area? NO

Work was commenced December 9, 1980, and completed February 4, 1981

LOGGING AND TUBING PROGRAM

LOGGING 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	20	I-55	94		X	25	-0-	-0-	Kinds
Fresh water	8 5/8	J55	20	X		1636	1636	Surface	
Intermediate									Sizes
Production	4 1/2	CW	10.5	X		4598	4598	300 sks.	Depths set
Perforations	2 3/8	CW	4.5	X		3860	3860		Perforations:
									Top Bot
									2722 384

PRODUCTION FLOW DATA

Producing formation Brown Shale Pay zone depth 2722-3729

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

Final open flow, 10 Mcf/d Final open flow, -0- Bbl/d

Time of open flow between initial and final tests, 48 hours

Static rock pressure, 680 psig (surface measurement) after 48 hours shut in

[If applicable due to multiple completion--]

OCT 18 1982

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

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 measurement)

OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.  
 33 - .5" holes at 3645, 3824, 3774, 3763, 3729, 3727, 3725, 3704, 3696, 3616, 3592, 3591, 3526, 3498, 3492, 3490, 2828, 2808, 2806, 2793, 2789, 2774, 2770, 2748, 2746, 2744, 2742, 2728, 2726, 2724, 2722.

20,000 gals 15% HCL; 1,080,000 SCF N<sub>2</sub>

LOG

FORMATION	Color	Hard or Soft	Top Feet	Bottom Feet	Remarks Including indication of all fossils and salt water, coal, oil and gas
Face Fill			0	15	
le & Red Rock			15	25	
i & Shale			25	30	
le & Sand			30	35	
Rock & Shale			35	50	
iy Shale			50	103	
Rock-Shale-Sand			103	120	
iy Shale			120	130	
Rock & Shale			130	135	
Rock			135	145	
i & Shale			145	150	
Rock			150	165	
i			165	240	
i & Shale			240	275	
Rock & Shale			275	285	
d			285	350	
Rock & Shale			350	460	
i & Shale			460	535	
Rock			535	565	
i & Shale			565	600	
Rock			600	620	
d			620	700	
d & Shale			700	1010	
ht Grey Sand			1010	1120	
d & Shale			1120	1190	
e & Shale			1190	1200	
d & Shale			1200	1225	
d			1225	1340	
le			1340	1400	
d			1400	1468	
e & Sand			1468	1529	
Lime & Big Injun			1529	1642	Top E Log @ 1630
le			1642	4258	
ey			4258	4306	
le			4306	4482	
son			4482	4496	
le			4496	4971	
/Alexander			4971	5163	
le			5163	5726	
al Depth			5726		

(Attach separate sheets to complete as necessary)

Eastern American Energy Corporation  
 Well Operator.

By F. H. McCullough, III  
 Its Vice President

REG: Regulation 2.02(i) 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."