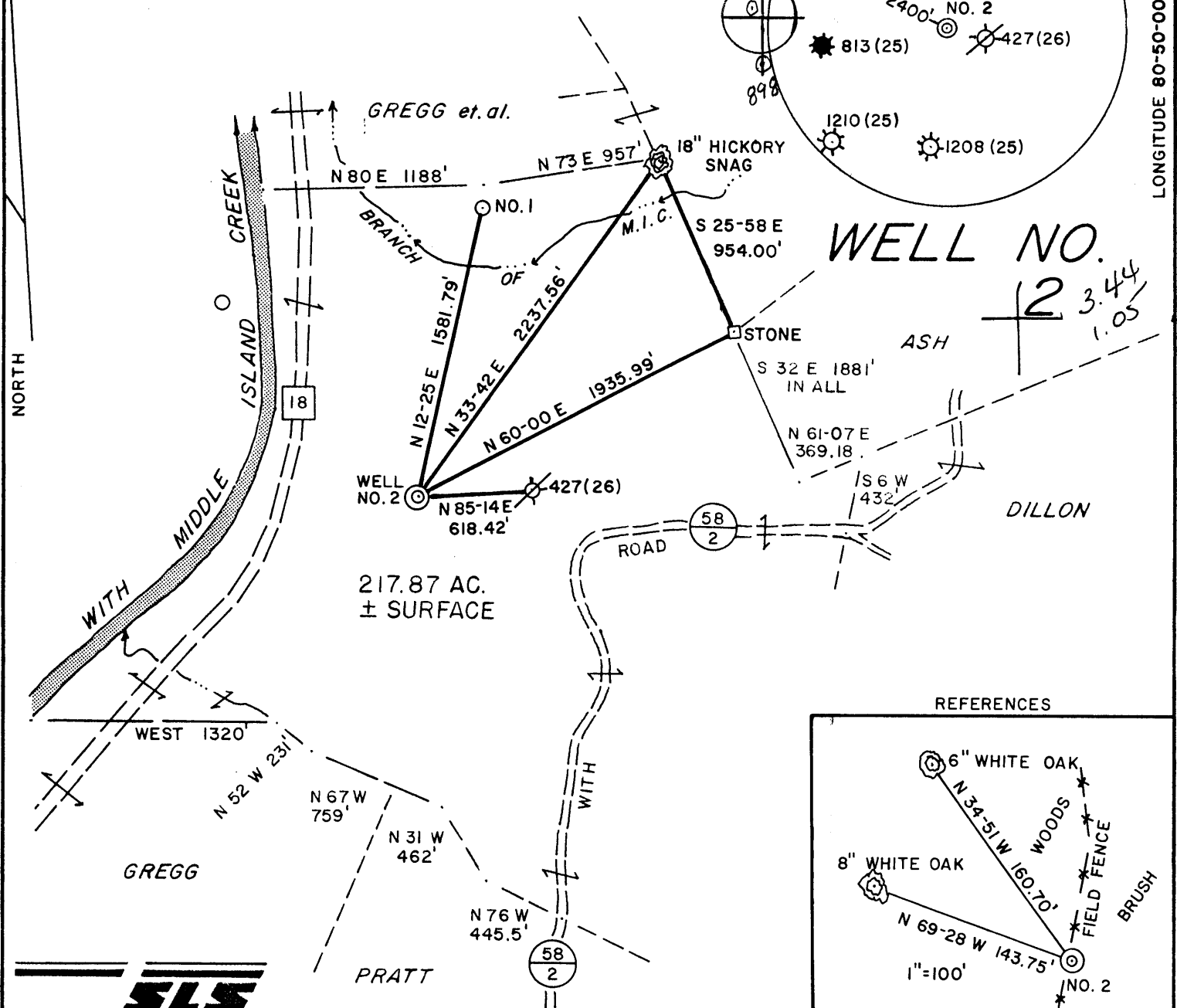
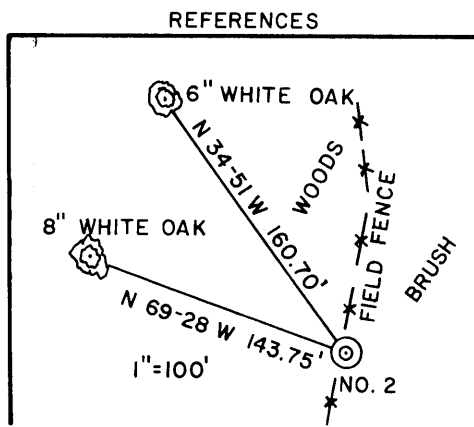


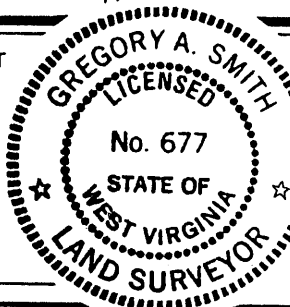
Janie 7/15/89
COTTRILL LEASE
217.87 AC. ± TOTAL



WELL NO.
123.44
1.05



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.



L.L.S. *Gregory A. Smith*
 677

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JUNE 26, 19 89
 OPERATORS WELL NO. COTTRILL NO. 2
 WVTYL000902
 API WELL NO. 47 - 095 - 1315
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 2092 (28-24)
 PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEV. 996' SCALE 1"=800'

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
OIL AND GAS DIVISION

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

LOCATION: ELEVATION 917' WATERSHED MIDDLE ISLAND CREEK 45°C
 DISTRICT CENTERVILLE COUNTY TYLER QUADRANGLE WEST UNION 7.5'

SURFACE OWNER MARY E. ROBERTS & MARY J. KAHLER ACREAGE 217.87 133
 ROYALTY OWNER JACOB C. COTTRILL et. al. LEASE ACREAGE 217.87 5

PROPOSED WORK: LEASE NO. WVO1784-3
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION BENSON
 ESTIMATED DEPTH 4975'

WELL OPERATOR EASTERN AMERICAN ENERGY CORP. DESIGNATED AGENT JOHN M. PALETTI
 ADDRESS BOX N GLENVILLE, WV. 26351 ADDRESS 501 56th. ST. CHARLESTON, WV. 25304
259 6-6 Wilbur (092)

S75

COUNTY NAME
 PERMIT

JUL 21 1989

WR-35

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SEP 19 1989

20-Jul-89
API # 47- 95-01315

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas

DIVISION OF OIL & GAS
DEPT. OF ENERGY

Operator's Report of Well Work

Farm name: ROBERTS, MARY E. ETAL. Operator Well No.: COTTRILL #2

LOCATION: Elevation: 917.00 Quadrangle: WEST UNION

District: CENTERVILLE County: TYLER
Latitude: 2970 Feet South of 39 Deg. 22Min. 30 Sec.
Longitude 5590 Feet West of 80 Deg. 50 Min. 0 Sec.

Company: EASTERN AMERICAN ENERGY C
501 56TH ST.
CHARLESTON, WV 25304-0000

Agent: DONALD C. SUPCOE

Inspector: GLEN P. ROBINSON
Permit Issued: 07/20/89
Well work Commenced: 08/10/89
Well work Completed: 08/25/89
Verbal Plugging
Permission granted on:
Rotary X Cable Rig
Total Depth (feet) 5014'
Fresh water depths (ft) 56', 430'

Salt water depths (ft) 1765'

Is coal being mined in area (Y/N)? N
Coal Depths (ft): None

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11-3/4"	174.15'	174.15'	C.T.S.
8-5/8"	1449.15'	1449.15'	C.T.S.
4-1/2"	4888.70'	4888.70'	260
1-1/2"	---	4787.30'	--

OPEN FLOW DATA

Producing formation Benson, Riley (Commingled) Pay zone depth (ft) 4810.5'
Gas: Initial open flow 377 MCF/d Oil: Initial open flow N/A Bbl/d
Final open flow 253 MCF/d Final open flow N/A Bbl/d
Time of open flow between initial and final tests 15 Hours
Static rock Pressure 1125 psig (surface pressure) after 24 Hours

Second producing formation Pay zone depth (ft) _____
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 pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: Rich Heffelfinger
EASTERN AMERICAN ENERGY CORP.
Rich Heffelfinger
By: Vice President - Operations Manager
Date: September 15, 1989

SEP 25 1989

(REVERSE)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.
2-STAGE FOAM FRAC

STAGE 1: Benson: 8 holes (4810.5'-4807.5') Breakdown 1800 psi, 60 Quality foam, 30 lbs/1000 gals Gel, 5,000 lbs 80/10 sand, 35,000 lbs 20/40 sand, 500 gals 15% HCl, 658,000 scf of N₂

STAGE 2: Riley: 13 holes (4432.5'-4387.5') Breakdown 3050 psi, 60 Quality foam, 30 lbs/1000 gals Gel, 5,000 lbs 80/1000 sand, 30,000 lbs 20/40 sand, 500 gals 15% HCl, 380,000 scf of 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
Clay and Fill			0	17	
Sand and Shale			17	56	1/2" stream water @ 56'
Shale and Red Rock			56	75	
Sand, Shale and Red Rock			75	193	
Sand and Shale			193	280	
Shale and Red Rock			280	325	
Sand, Shale and Red Rock			325	1037	1/2" stream water @ 430'
Sand and Shale			1037	1720	
Little Lime			1720	1736	
Shale			1736	1760	
Big Lime			1760	1826	Damp @ 1765'
Big Injun			1826	1957	
Shale			1957	2124	
Weir			2124	2235	Oil odor @ 2125'
Warren			3222	3284	
Sand and Shale			3284	4384	
Riley			4384	4436	<u>GAS CHECKS:</u>
Sand and Shale			4436	4804	4751' - No show
Benson			4804	4814	4856' - 20/10 thru 1/2" w/water
Shale			4814	5014 T.D.	T.D. - 2/10 thru 1/2" w/water D.C. - 2/10 thru 1/2" w/water

095 1315

(Attach separate sheets as necessary)

19 47-095-1315
 Issued 7/20/89 Expires 7/20/91

FORM WW-2B

Page 3 of 8

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
 WELL WORK PERMIT APPLICATION

- 1) Well Operator: Eastern American Energy Corporation 14980 (1) 670
- 2) Operator's Well Number: COTTRILL #2 - WVTYL000902 3) Elevation: 917'
- 4) Well type: (a) Oil / or Gas /
 (b) If Gas: Production / Underground Storage /
 Deep / Shallow /
- 5) Proposed Target Formation(s): Benson
- 6) Proposed Total Depth: 4975 feet
- 7) Approximate fresh water strata depths: 76', 468'
- 8) Approximate salt water depths: 1370'
- 9) Approximate coal seam depths: None
- 10) Does land contain coal seams tributary to active mine? Yes / No /
- 11) Proposed Well Work: Drill and complete new well.
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11"	F-25	37.5	120'	120'	C.T.S.
Fresh Water	8 5/8"	J-55	20.0	1445'	1445'	C.T.S.
Coal						38CSR18-11.3
Intermediate						38CSR18-11.2 2
Production	4 1/2"	J-55	10.5	4900'	4900'	38CSR18-11.1
Tubing	1 1/2"	H-40	2.75			
Liners						

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PACKERS : Kind _____
 Sizes _____
 Depths set _____

DIVISION OF OIL & GAS
 DEPARTMENT OF ENERGY

460515
 For Division of Oil and Gas Use Only

Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Blanket one Agent
 (Type)

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JUL 03 1989

Page 1 of 8
Form WW2-A
(09/87)
File Copy

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

1) Date: June 30, 1989
2) Operator's well number
COTTRILL #2 - WVTYL000902
3) API Well No: 47 - 095 - 1315
State - County - Permit

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

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>Mary E. Roberts & Mary J. Kahle</u> Address <u>Middlebourne, WV 26149</u></p> <p>(b) Name _____ Address _____</p> <p>(c) Name _____ Address _____</p>	<p>5) (a) Coal Operator:</p> <p>Name <u>None</u> Address _____</p> <p>(b) Coal Owner(s) with Declaration Name _____ Address _____</p> <p>(c) Coal Lessee with Declaration Name _____ Address _____</p>
<p>6) Inspector <u>Glen P. Robinson</u> Address <u>Rt. 1, #6 Mt. Pleasant Est. Mineralwells, WV 26150</u> Telephone (304)-<u>489-9162</u></p>	

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

_____ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
XX Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 8 on the above named parties, by:

_____ Personal Service (Affidavit attached)
XX Certified Mail (Postmarked postal receipt attached)
_____ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Eastern American Energy Corporation
By: John M. Paletti *John M. Paletti*
Its: Designated Agent
Address P.O. Box N
Glenville, WV 26351
Telephone (304) 462-5781

Subscribed and sworn before me this 30th day of June, 1989

Jo Lorraine Rowe Notary Public
My commission expires July 2, 1996