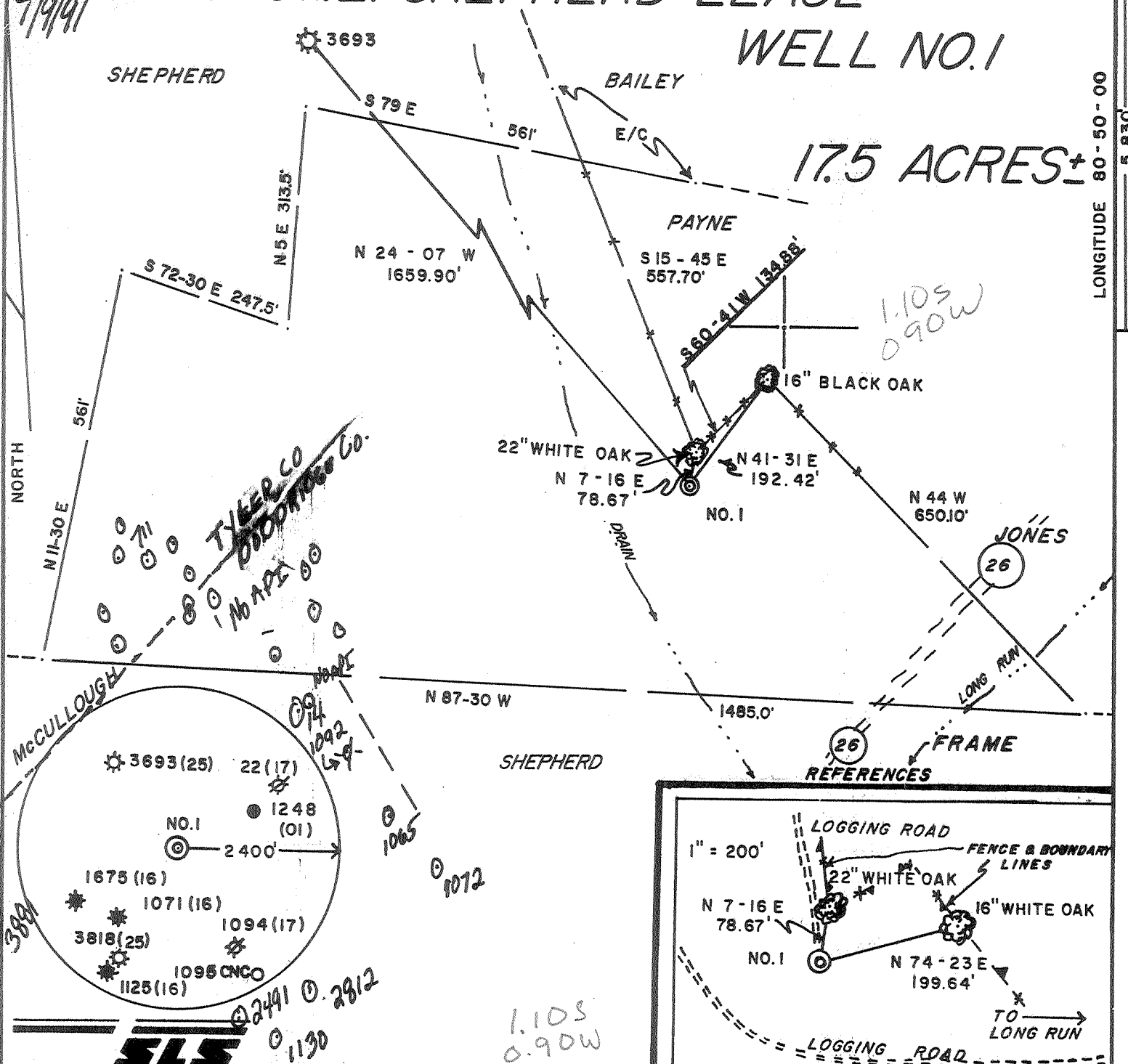


Jamil
7/9/91

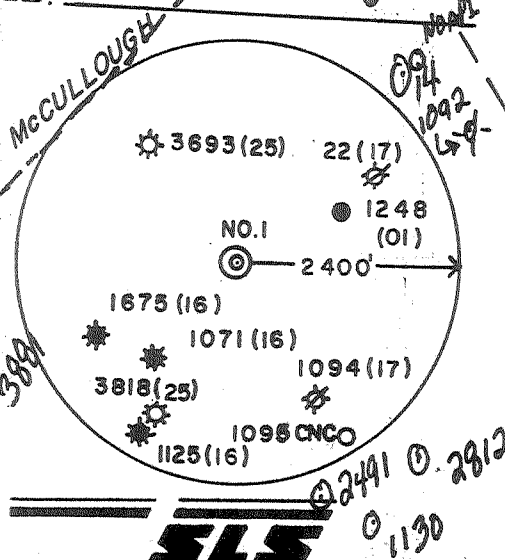
KEYSTONE/SHEPHERD LEASE

WELL NO. 1

17.5 ACRES ±

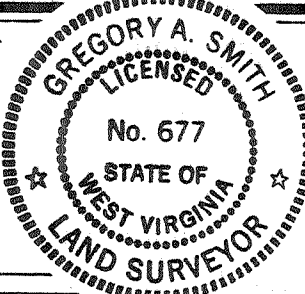


TYLER CO
DODDRIDGE CO
MAPLE



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. 677 Gregory A. Smith



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JUNE 18, 1991
 OPERATORS WELL NO. KEYSTONE/SHEPHERD
 NO. 1
 API WELL NO. 47-017-3895
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 2659 (38-14)
 PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEV. 1130' SCALE 1" = 200'

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION

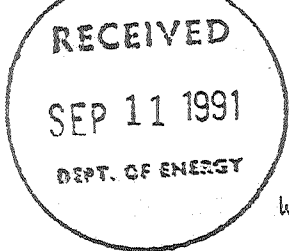


WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 833' WATERSHED LONG RUN
 DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5' 30
 SURFACE OWNER CARROLL C. SHEPHERD ACREAGE 17.5
 ROYALTY OWNER CARROLL C. SHEPHERD LEASE ACREAGE 17.5
 PROPOSED WORK: LEASE NO. WV02027-+
 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 ALEXANDER
 ESTIMATED DEPTH 5170'

WELL OPERATOR EASTERN AMERICAN ENERGY CORP. DESIGNATED AGENT JOHN M. PALETTI
 ADDRESS BOX N GLENVILLE, WV 26351 ADDRESS 501 56th ST. CHARLESTON, WV 25304

JUL 16 1991

00-05-80 EQUILIBRIUM 5.83' S



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

Well Operator's Report of Well Work

Farm name: SHEPHERD, CARROLL E. Operator Well No.: KEYS/SHEPHERD#1

LOCATION: Elevation: 833.00 Quadrangle: WEST UNION

District: CENTRAL County: DODDRIDGE
Latitude: 5830 Feet South of 39 Des. 20Min. 0 Sec.
Longitude: 4740 Feet West of 80 Des. 50 Min. 0 Sec.

Company: EASTERN AMERICAN ENERGY C
P. O. BOX N
GLENNVILLE, WV 26351-0000

Agent: DONALD C. SUPCOE

Inspector: MIKE UNDERWOOD
Permit Issued: 07/10/91
Well work Commenced: 07/15/91
Well work Completed: 07/30/91

Verbal Plugging
Permission granted on: _____

Rotary X Cable Rig
Total Depth (feet) 5190'
Fresh water depths (ft) 70', 255'

Salt water depths (ft) 1300'

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 13'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11-3/4"	201'	201'	C.T.S.
8-5/8"	1013'	1013'	C.T.S.
4-1/2"	---	5146'	294
1-1/2"	---	5006'	

OPEN FLOW DATA

(Commingled)

Producing formation Alexander, Benson, Riley Pay zone depth (ft) 5058'-4315'

Gas: Initial open flow 377 MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 267 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests 12 Hours

Static rock Pressure 1200 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: EASTERN AMERICAN ENERGY CORP.

By: RONALD L. RECH, Regional Drilling Manager

Date: August 19, 1991

SEP 10 1991

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

3-STAGE FOAM FRAC:

Stage 1: Alexander - 18 holes (5057.5'-5028') Fraced w/70 Quality foam, 30 lbs Gel/1000 gals, 50,000 lbs 16/30 sand, 500 gals 15% HCl acid and 792,000 scf of N₂

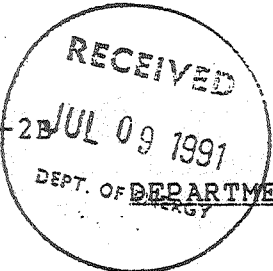
Stage 2: Benson - 16 holes (4746.5'-4739.5') Fraced w/70 Quality foam, 30 lbs Gel/1000 gals, 18,500 lbs 16/30 sand, 500 gals 15% HCl acid and 889,800 scf of N₂

Stage 3: Riley - 16 holes (4359'-4315') Fraced w/70 Quality foam, 30 lbs Gel/1000 gals, 40,000 lbs 16/30 sand, 500 gals 15% HCl acid and 652,000 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
K B & GL			0	10	1/2" stream water @ 70'
Fill			10	13	1/2" stream water @ 255'
Coal			13	14	Hole Damp @ 1300'
Sand			14	50	
Sand, Shale and Red Rock			50	340	
Sand			340	360	
Shale and Red Rock			360	495	<u>GAS CHECKS:</u>
Sand			495	535	1608' - No show
Shale and Red Rock			535	821	1704' - No show
Sand			821	840	1799' - No show
Sand and Shale			840	938	1923' - No show
Sand and Shale			938	980	2208' - No show
Shale and Red Rock			980	1012	2522' - No show
Sand			1012	1060	3122' - No show
Sand and Shale			1060	1230	3217' - No show
Sand			1230	1250	3502' - No show
Sand and Shale			1250	1293	3705' - No show
Sand			1293	1327	4006' - No show
Sand and Shale			1327	1704	4292' - No show
Little Lime			1704	1714	4419' - No show
Sand and Shale			1714	1740	4576' - No show
Big Lime			1740	1822	4702' - No show
Sand and Shale			1822	1885	4766' - No show
Big Injun			1885	1917	4956' - No show
SSand and Shale			1917	2068	D.C. - 6/10 thru 1" w/water
Weir			2068	2185	
Sand and Shale			2185	2262	
Berea			2262	2265	
Sand and Shale			2265	2805	
Sand and Shale			2805	3147	
Warren			3147	3210	
Sand and Shale			3210	4310	
Riley			4310	4376	
Sand and Shale			4376	4738	
Benson			4738	4774	
Sand and Shale			4774	5026	
Alexander			5026	5061	
Sand and Shale			5061	5080	
Sand			5080	5190 T.D.	

(Attach separate sheets as necessary)



017-3895
Issued 07/10/91

FORM WW-2B JUL 09 1991

Page 3 of 8

STATE OF WEST VIRGINIA

DEPT. OF ENERGY DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

Expires 07/10/93

WELL WORK PERMIT APPLICATION

259

- 1) Well Operator: Eastern American Energy Corporation 14980 (1) 670
- 2) Operator's Well Number: Keystone/Shepherd #1 WVDOD002901 3) Elevation: 833'
- 4) Well type: (a) Oil / or Gas XX/
(b) If Gas: Production XX/ Underground Storage /
Deep / Shallow XX/
439
- 5) Proposed Target Formation(s): Alexander
- 6) Proposed Total Depth: 5170' feet
- 7) Approximate fresh water strata depths: 66', 305', 341'
- 8) Approximate salt water depths: 1265'
- 9) Approximate coal seam depths: None
- 10) Does land contain coal seams tributary to active mine? Yes / No XX/
- 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	11-3/4"	F-25	32.0	200'	200'	
Fresh Water	8-5/8"	F-25	20.0	1000'	1000'	C.T.S. 38CSR18-11.3 38CSR18-11.2.2
Coal			—			
Intermediate			—			
Production	4-1/2"	J-55	10.5	5085'	5085'	38CSR18-11.1
Tubing						
Liners						

2557

PACKERS : Kind _____
Sizes _____
Depths set _____

For Division of Oil and Gas Use Only

20334
3169

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

1) Date: June 27, 1991
2) Operator's well number
Keystone/Shepherd #1 WVDOD002901
3) API Well No: 47 - 017 - 3895
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>Carroll E. Shepherd</u> Address <u>Rt. 1, Box 94</u> <u>Greenwood, WV 26360</u></p> <p>(b) Name _____ Address _____</p> <p>(c) Name _____ Address _____</p>	<p>5) (a) Coal Operator:</p> <p>Name <u>N/A</u> Address _____</p> <p>(b) Coal Owner(s) with Declaration Name <u>N/A</u> Address _____</p> <p>Name _____ Address _____</p> <p>(c) Coal Lessee with Declaration Name <u>N/A</u> Address _____</p>
<p>6) Inspector <u>Mike Underwood</u> Address <u>Rt. 2, Box 135</u> <u>Salem, WV 26426</u> Telephone <u>(304)-782-1043</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

XXX 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)
- XXX Certified Mail (Postmarked postal receipt attached) Hand Delivery
- _____ 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 501 56th Street
Charleston, WV 25304
 Telephone (304) 925-6100

Subscribed and sworn before me this 27th day of June, 19 91

Edna Marie Huff Notary Public
 My commission expires August 2, 1993