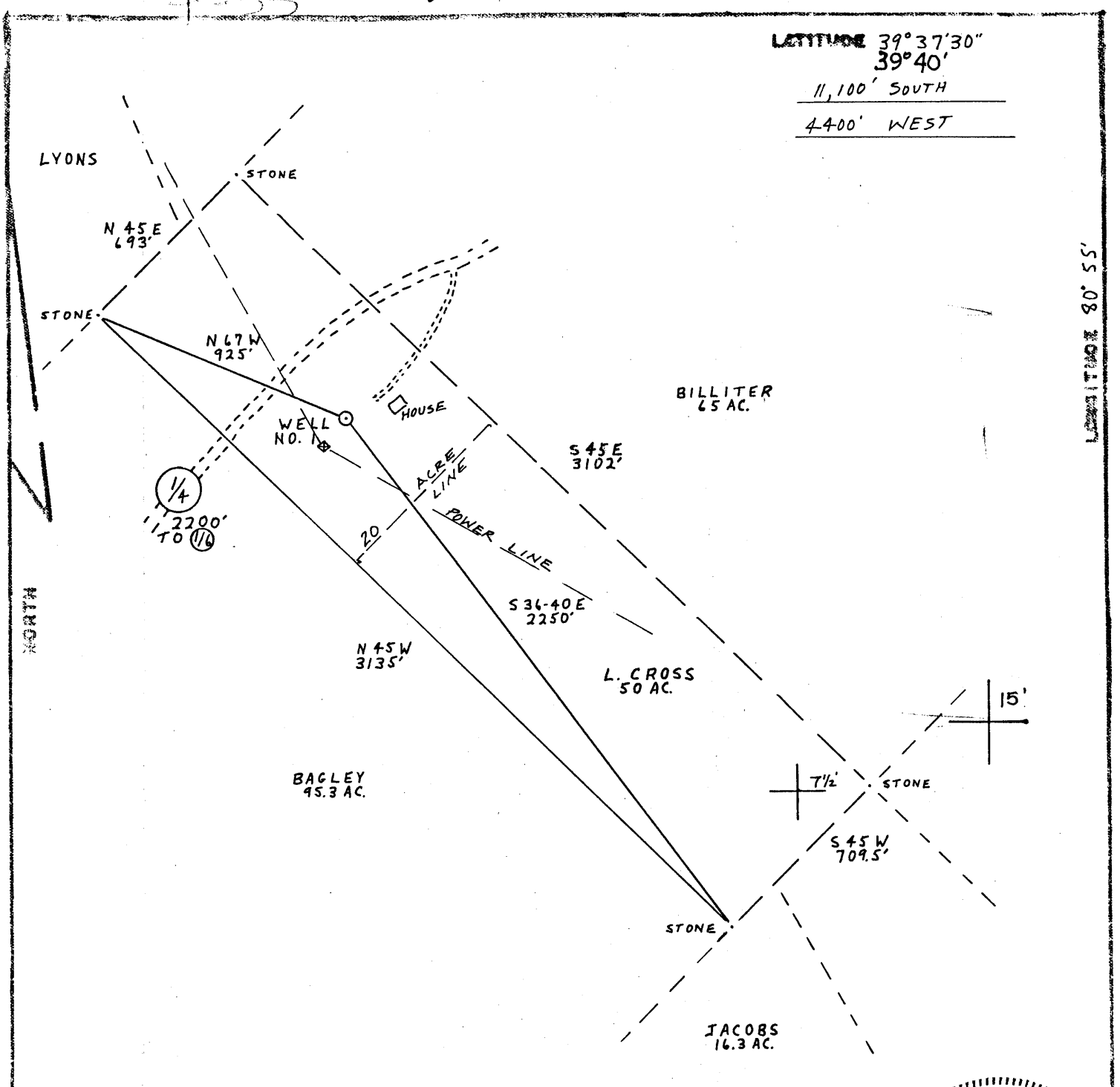


LATITUDE 39° 37' 30"
39° 40'

11,100' SOUTH

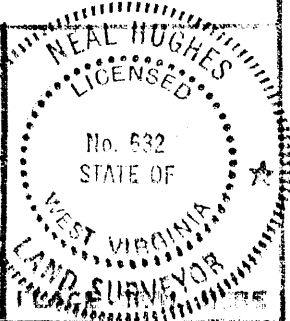
4400' WEST



55 08 2011 1001

L+M
 FILE NO. L. CROSS
 DRAWING NO. 1
 SCALE 1"=500'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION BUCK KNOB 1345'

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) Neal Hughes
 R.F.E. _____ L.L.S. 632



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



DATE July 3, 19 80
 OPERATOR'S WELL NO. 1
 API WELL NO. 47-095-0823-Frac
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS", PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____)
 LOCATION: ELEVATION 1225' WATER SHED GAMBLE RUN
 DISTRICT LINCOLN COUNTY TYLER
 QUADRANGLE PADEN CITY 7 1/2' NEW MARTINSVILLE 15'
 SURFACE OWNER LLOYD W. CROSS ACREAGE 50
 OIL & GAS ROYALTY OWNER LLOYD W. CROSS LEASE ACREAGE 50
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUS OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUS AND ABANDON _____ CLEAN OUT AND REPLUS _____
 TARGET FORMATION Devonian ESTIMATED DEPTH 3400'
 WELL OPERATOR JAMES DOAN DESIGNATED AGENT JAMES DOAN
 ADDRESS RT. 1 Box 141A ADDRESS SAME
MIDDLEBOURNE, W.Va.

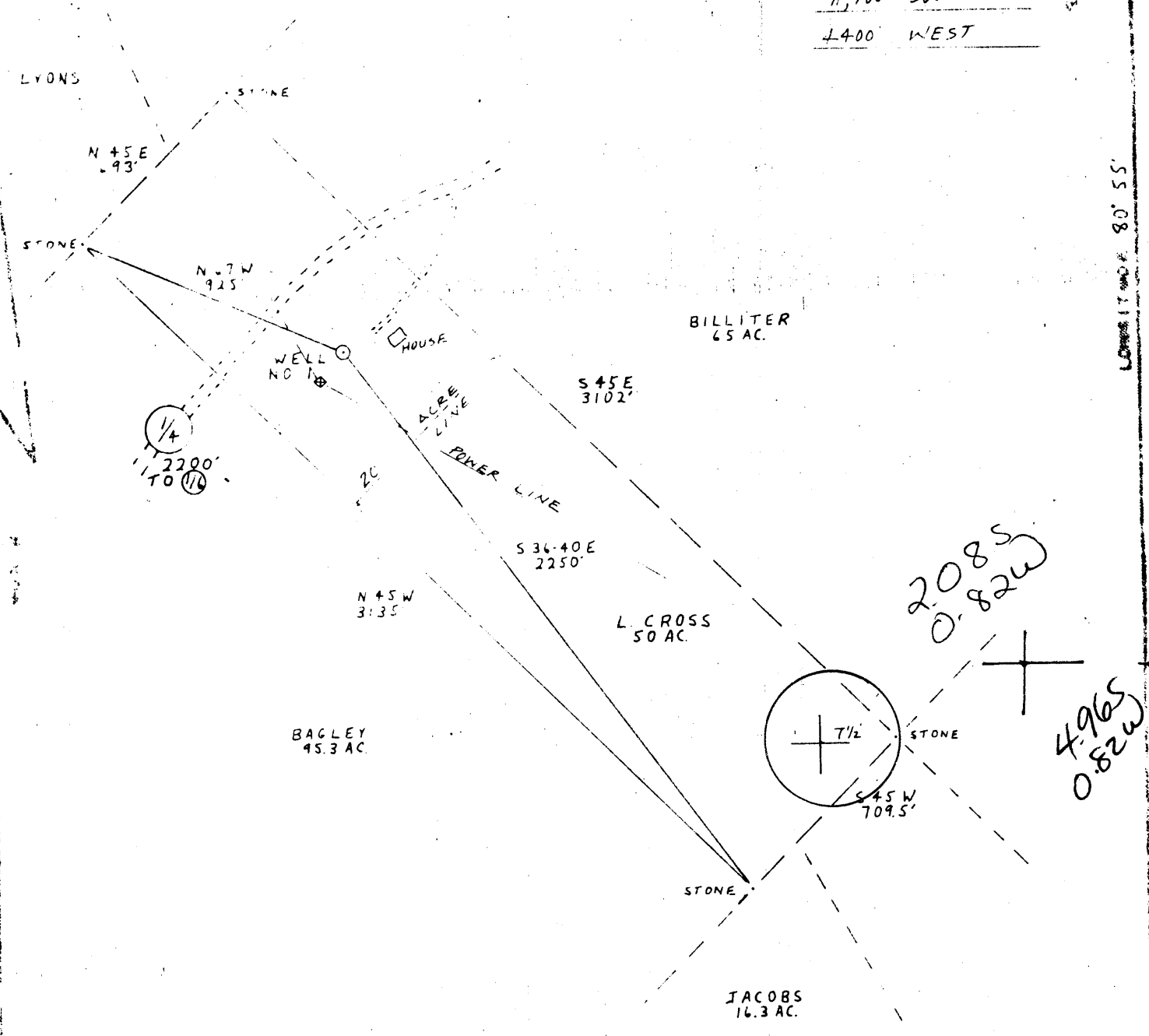
APR 27 1987

4/20/87

TYLER 0823-FRAC

CODE _____ UNIT _____ PLUM _____ LATITUDE 39° 37' 30"

11,100 SOUTH
1400 WEST



LONGSIGHT NO. 80.55

L+M
FILE NO. L. CROSS
DRAWING NO. 1
SCALE 1"=500'
MINIMUM DEPTH OF ACCURACY 4200
PROVEN SOURCE OF ELEVATION BUCK KNOB 1395'

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.
DRAWN BY Neal Hughes
DATE LLS 632

PLACE 251 13115

INDICATES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
FORM NO. 3
1978



DATE _____
OPERATOR'S WELL NO. _____
API WELL NO. 47-095-0823-F
STATE COUNTY _____

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

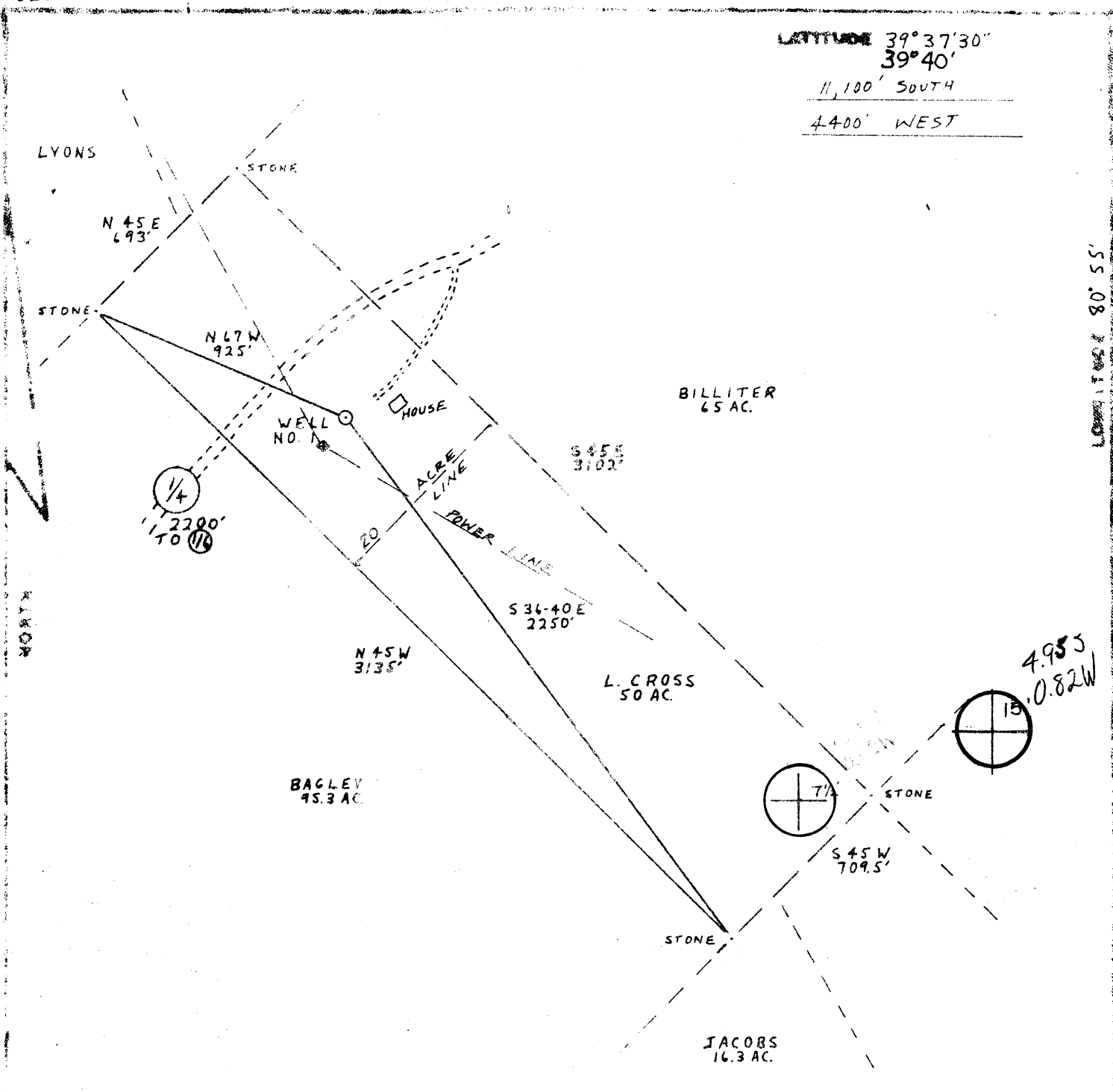
WELL TYPE GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
OR "GAS" PRODUCTION _____ STORAGE _____ DEEP _____ SHALLOW _____
LOCATION ELEVATION 1225' WATER SHEET GAMBLE RUN
DISTRICT LINCOLN 3 COUNTY TYLER
QUADRANGLE PADEN CITY 7 1/2' S28 091 Wc4
THAT THE OWNER LLOYD W. CROSS ALIENAGE 50
OIL & GAS ACTUALLY OWNED BY LLOYD W. CROSS LEASE NUMBER 50
LEASE NO. _____
PROPOSED WORK DRILL CONVERT _____ DRILL DEEPEN _____ DRILL _____ DRILL _____ OR
STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW
FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON _____ CLEAR OUT AND REPLUG _____
TARGET FORMATION _____ ESTIMATED DEPTH _____
WELL OPERATOR James F. Doan DESIGNATED AGENT _____
ADDRESS Rt. 1 - Box 141A ADDRESS Same
Middlebourne WV 26149 419
JUL 28 1986

LATITUDE 39°37'30"
39°40'

11,100' SOUTH

4,400' WEST



LONGIT. 80° 55'

L+M
FILE NO L.CROSS
DRAWING NO 1
SCALE 1"=500'
MINIMUM DEGREE OF ACCURACY 1/200
PROVEN SOURCE OF ELEVATION BUCK KNOB 1345'

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) Neal Hughes
R.P.N. LLS 632



NOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
FORM IV-B
(8-78)

DATE July 3 1980
OPERATOR'S WELL NO 1
API WELL NO 47-095 0823
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE OIL GAS LIQUID INJECTION WASTE DISPOSAL
 "GAS" PRODUCTION STORAGE DEEP SHALLOW
LOCATION ELEVATION 1225' WATER SHED GAMBLE RUN
DISTRICT LINCOLN COUNTY TYLER
QUADRANGLES FADEN CITY 7 1/2' NEW MARTINSVILLE 15' WC
LAND OWNER LLOYD W. CROSS ACREAGE 50
LESSOR'S INTEREST OWNER LLOYD W. CROSS LEASE ACREAGE 50
LEASE NO. _____
PROPOSED WORK DRILL COMPLETION OTHER _____ DEPTH 3400'
STRUCTURE OR EQUIPMENT _____ PERFORATE NEW COIL TUBING _____ CHANGE IN WELL (SPECIFY) _____
PLUG AND ABANDON _____
TARRANT FORM NO. _____ ESTIMATED DEPTH _____
WELL OPERATOR Lim Petroleum Co. DESIGNATED AGENT Richard Hudson
ADDRESS Marietta, Ohio ADDRESS PARKERSBURG, WVA.

AUG 26 1980



WR-35

State of West Virginia
DEPARTMENT OF ENERGY
Oil and Gas Division

Date Jan 14, 1987
Operator's Well No. Cross #1
Farm Lloyd Cross
API No. 47 - 095 - 0823F

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 4m of Underground Storage / Deep / Shallow /)

LOCATION: Elevation: 1225 Watershed Gamble Run
District: Lincoln County Tyler Quadrangle Paden City

COMPANY James Doan
ADDRESS Rt. 1, Box 141A Middlebourne, W. Va.
DESIGNATED AGENT Same
ADDRESS
SURFACE OWNER Lloyd Cross
ADDRESS Paden City, W. Va.
MINERAL RIGHTS OWNER Same
ADDRESS
OIL AND GAS INSPECTOR FOR THIS WORK
R. Lowther ADDRESS Middlebourne, W. Va.
PERMIT ISSUED July 22, 1986
DRILLING COMMENCED Refracture
DRILLING COMPLETED 7/28/86
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
CN

Table with 4 columns: Casing & Tubing, Used in Drilling, Left in Well, Cement fill up Cu. ft. Rows include sizes 20-16, 13-10, 9 5/8, 8 5/8, 7, 5 1/2, 4 1/2, 3, 2, and Liners used.

GEOLOGICAL TARGET FORMATION Gordon Depth 3092-98 feet
Depth of completed well 3114 Plug set feet Rotary / Cable Tools
Water strata depth: Fresh feet; Salt feet
Coal seam depths: Is coal being mined in the area?

OPEN FLOW DATA

Producing formation Gordon Pay zone depth 3081-98 feet
Gas: Initial open flow 0 Mcf/d Oil: Initial open flow 0 Bbl/d
Final open flow 4 Mcf/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 48 hours
Static rock pressure 650 psig (surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)

Crpss #1 47-095-0823F

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

Well was perforated 10/12/82 using Densi - Jet X shots as follows,

3352-68 9shots
3314-22 5
3180-81 2
3119-23 9
3092-98 13
3081-84 7

On 6/12/86 a 4½" solid plug, Alpha, was set at 3114', then the well was refracked with 386,000 SCF Nitrogen.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
This information already on file in report filed on Oct. 20, 1982 Copy attached.					

(Attach separate sheets as necessary)

James Doan
Well Operator

By: James Doan
Date: Jan 14, 1987

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."

Incomplete



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division
WELL RECORD

Quadrangle Paden City
Permit No. 47-095-0823

Rotary X Oil _____
Cable _____ Gas _____
Recycling _____ Comb. X
Water Flood _____ Storage _____
Disposal _____ (Kind)

Company L&M Petroleum Co.
Address P.O. Box 89, Reno, OH 45773
Farm Lloyd Cross Acres 50
Location (waters) Gamble Run
Well No. 1 Elev. 1225
District Lincoln County Tyler
The surface of tract is owned in fee by _____
Lloyd W. Cross
Address Box 188, New Martinsville, WV
Mineral rights are owned by same as above
_____ Address _____
Drilling Commenced 8/27/80
Drilling Completed 9/1/80
Initial open flow 75 cu. ft. 0 bbls.
Final production 50 cu. ft. per day 0 ? bbls.
Well open 8 hrs. before test _____ RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size			
20-16			
Cond.			
13-10"			
9 5/8			
8 5/8	250	250	125 sx
7			
5 1/2			
4 1/2	3804.81	3804.81	150 sx cmt
3			
2			
Liners Used			

Well treatment details: SEE ATTACHED

Attach copy of cementing record.

FOF: 50mcf

Driller: 3890'
Logger: 3890'

Coal was encountered at NA Feet _____ Inches _____
Fresh water NA Feet _____ Salt Water NA Feet _____
Producing Sand Gordon/Devonian Shale Depth 3081-3368'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Clay			0	21		
Blue Rock			21	60		
Red Rock			60	80		
Lime			80	100		
Sand Rock			100	120		
Lime			120	135		
Lime			135	145		
Red Rock			145	195		
Slate			195	210		
Red Rock & Shale			210	305		
Big Red			315	400		
Sand			400	441		
Pink Rock			441	500		
Slate			500	540		
Sand			540	560		
Lime & Slate			560	635		
Red Rock			635	645		
Lime			645	665		
Slate			665	678		
Pink Rock			678	720		
Lime			720	743		
Slate			743	817		
Sand			817	890		
Slate			890	1025		

SEP 17 1983

See record as in 7/23/84

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	• Remarks
Sand			1025	1033		
Slate			1033	1065		
Slate			1065	1109		
Sand			1109	1035		
Slate			1035	1072		
Sand			1072	1101		
Slate			1101	1155		
Sand			1155	1200		
Slate			1200	1230		
Sand			1230	1260		
Slate			1260	1273		
Sand			1273	1290		
Sand			1290	1343		
Slate			1343	1400		
Slate			1400	1500		
Sandstone			1500	1547		
Shale			1547	1560		
Limestone			1560	1590		
Shale			1590	1640		
Sandstone			1640	1700		
Shale			1700	1730		
Sandstone			1730	1771		
Shale			1771	1790		
Sandstone			1790	1812		
Shale			1812	2030		
Big Lime			2030	2086		
Limestone			2086	2136		
Big Injun			2136	2254		

SEE ATTACHED SHEET *Where*

T.D. @ least ~~3804~~ ²⁶ 3890 upper Devonian undiff.

Joanne Cogan, Corp. Secretary

Joanne Cogan

Date October 20 19 82

APPROVED I&M Petroleum Co. Owner

DEVONIAN SHALE GAMMA RAY LOG ANALYSIS
APPLICATION FOR DETERMINATION OF THE MAXIMUM LAWFUL
PRICE UNDER THE NATURAL GAS POLICY ACT

Operator: L&M Petroleum Co. Agent: David Clovis

Type Determination being sought - 107 (Devonian Shale)

API Well No.: 47-095-2-0823 Well Name: Lloyd Cross #1

West Virginia Office of Oil and Gas County: Tyler
References: SJA File No.

Vol. Page Line

I. NOTE: A Gamma Ray Log has been marked with the (a) Shale Base Line, (b) a line representing 0.7 x (Shale Base Line), (c) intervals with Gamma Ray units less than 0.7 x (Shale Base Line) and that log is included with this analysis.

II. Gamma Ray elevation indices:

A. Shale Base Line (API Units)

1. GR Value at Base Line = 145 * API Units
2. Remarks:

B. Gamma Ray Log Value at 0.7 x Value at Base Line

1. GR Value = 101.5 * API Units
2. Calculation; $\frac{0.7}{0.7} \text{ (GR Value at Base Line)}$
 $\frac{0.7}{0.7} \text{ (145 *)} = \underline{101.5}$ API Units

III. Intervals with GR index less than 0.7 x (Value at Base Line):

Interval		Thickness of Interval Feet	Feet of less than* 0.7 (Shale Base Line) Feet
From**	To***		
2665	3889	1224	41

Total Devonian Interval 1224 41

Total Less Than 0.7 (Shale Base) 41

% Less Than 0.7 (Shale Base Line) = $\frac{41}{1224} \times 100 = \underline{\underline{3.3\%}}$

*Marked on log included with analysis.
**Top of Devonian Section Recorded on First Interval in this Column.
***Lesser of TD or Bottom of Devonian Section Recorded as last Interval in this Column.

To refrack Gordon

FORM WW-2(B) FILE COPY
(Obverse)
7/85

RECEIVED
JUL 22 1985



1) Date: June 1, 1986
2) Operator's Cross # 1 Well No. W
3) API Well No. 47-095-0823 -F State County Permit

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

- 4) WELL TYPE: A Oil / Gas XX
B (If "Gas", Production 20mcf/d / Underground storage / Deep / Shallow X)
- 5) LOCATION: Elevation: 1225 Watershed: Gamble Run
District: Lincoln County: Tyler Quadrangle:
- 6) WELL OPERATOR James Doan 419 CODE: 13825 7) DESIGNATED AGENT Same
Address Rt. 1 Box 141A Address
Middlebourne, W. Va.
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Robert Lowther
Address Middlebourne, W. Va.
- 9) DRILLING CONTRACTOR: Name None
Address
- 10) PROPOSED WELL WORK: Drill / Drill deeper / Redrill / Stimulate
Plug off old formation / Perforate new formation
Other physical change in well (specify) Restimulate same formation(Gordon)
- 11) GEOLOGICAL TARGET FORMATION, Gordon 419
- 12) Estimated depth of completed well, 3804 feet
- 13) Approximate strata depths: Fresh, n/a feet; salt, n/a feet.
- 14) Approximate coal seam depths: none shown Is coal being mined in the area? Yes / No XXX
- 15) 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	8 5/8						250'	250 SX.	Kinds
Fresh water									Sizes
Coal									Depths set
Intermediate									Perforations: 3081-98'
Production	4 1/2						3804.81	150 SX	Top Bottom
Tubing									
Lin.									

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-095-0823-F

July 22 1986
Date

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 July 22, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <u>ALB</u>	Plat: <u>KS</u>	Casing: <u>KS</u>	Fee: <u>331</u>	WPCP: <u>NITROGEN</u>	S&E: <u>AS</u>	Other: <u>R.H.L.</u>
---	-------------------	-----------------	-------------------	-----------------	-----------------------	----------------	----------------------

NOTE: Keep one copy of this permit posted at the drilling location.

John H. Johnston
Director, Division of Oil and Gas
Margaret J. Hass File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

RECEIVED



RECEIVED

AUG - 1 1980

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

JUL 23 1980

OIL & GAS DIVISION
DEPT. OF MINES and Gas Division

OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE July 14, 1980

Surface Owner Lloyd W. Cross

Company L & M Petroleum Co.

Address Box 188, New Martinsville, WV

Address Rt. #1, Box 18-B, Marietta, OH

Mineral Owner Same

Farm Lloyd W. Cross Acres 50

Address _____

Location (waters) Gamble Run

Coal Owner Same

Well No. 1 Elevation 1225'

Address _____

District Lincoln County Tyler

Coal Operator None

Quadrangle Paden City

Address _____

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 4-4-81.

INSPECTOR
TO BE NOTIFIED Phillip Lee Tracy

ADDRESS Rt. #2, Alma, WV

PHONE 758-4573

Fred B. Burdette
Deputy Director - Oil & Gas Division

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated 12/21 1979 by L.W. Cross made to Loren Bagley and recorded on the 18 day of Jan. 1980 in Tyler County, Book 223 Page 110
XX NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE
_____ OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days.

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND
ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address
of
Well Operator

Rt. #1, Box 18-B
Street
Marietta
City or Town
Ohio 45750
State

Very truly yours, L & M Petroleum, Co.

(Sign Name) [Signature]
Well Operator

*SECTION 3 If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator shall be permitted to proceed.

BLANKET BOND

47-095-0823

PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by _____

