

# FLORA FREEMAN LEASE

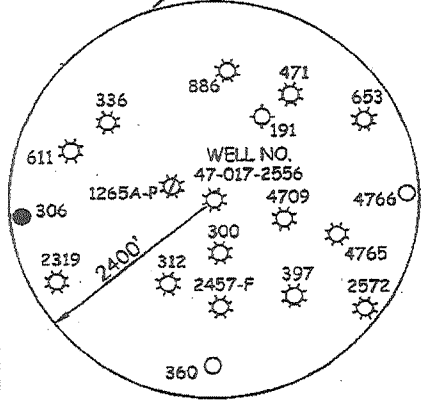
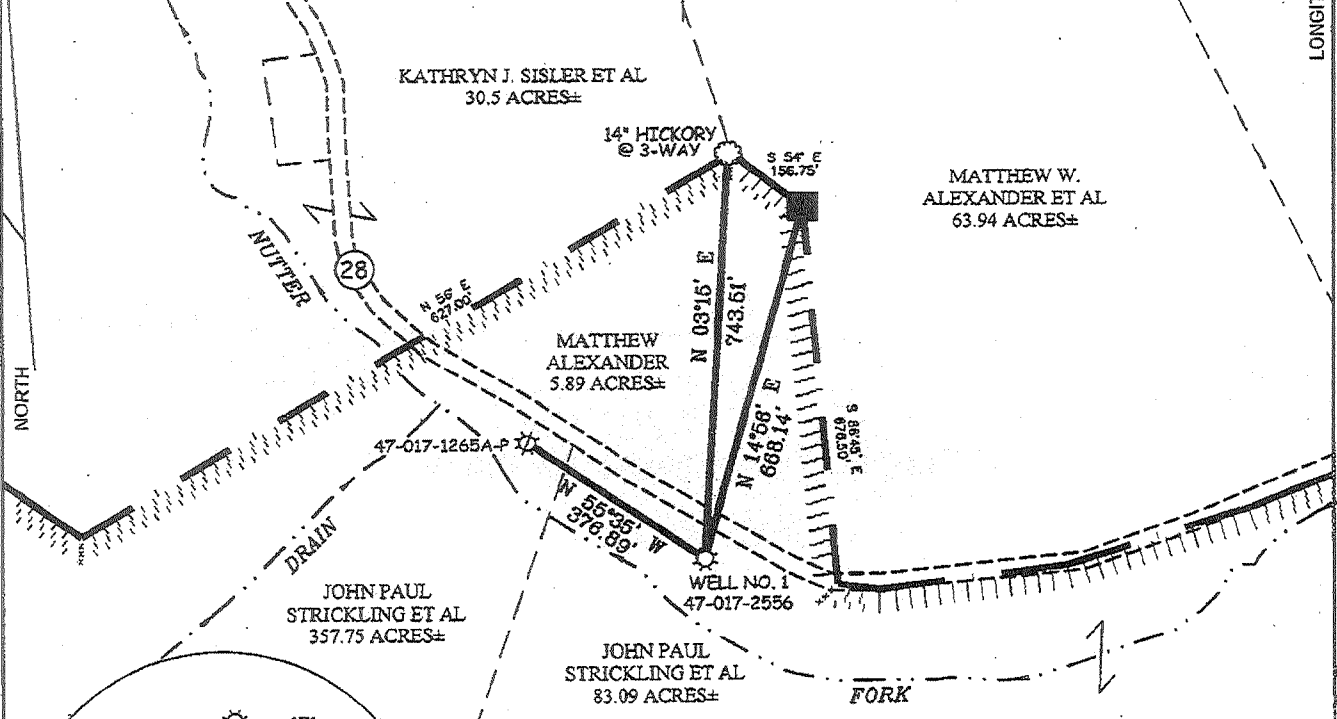
## 83 ACRES±

### WELL NO. 1

### 47-017-2556

7,570' LATITUDE 39°20'00"

LONGITUDE 80°45'00"



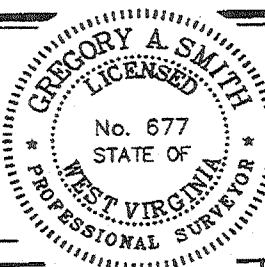
#### NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A DEED RECORDED IN DEED BOOK 276 AT PAGE 12.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN JULY, 2010.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

WELL NO. 47-017-2556  
 STATE PLANE COORDINATES  
 NORTH ZONE (NAD '27)  
 N. 305,088  
 E. 1,638,340  
 LAT=(N) 39.33060  
 LONG=(W) 80.77680  
 UTM (NAD'83)  
 N. 4,358,498  
 E. 519,252



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 DIVISION OF ENVIRONMENTAL PROTECTION.



P.S. 677 *Gregory A. Smith*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.  
 DATE MARCH 15, 20 11  
 OPERATORS WELL NO. FLORA FREEMAN NO. 1  
 API WELL NO. 47 - 017 - 2556 F  
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 7487P1 (303-64)  
 PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 300'

STATE OF WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS

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

LOCATION: ELEVATION 812' WATERSHED NUTTER FORK  
 DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5'

SURFACE OWNER JOHN PAUL STRICKLING ET AL ACREAGE 83.09±  
 ROYALTY OWNER JOHN PAUL STRICKLING LEASE ACREAGE 83±  
 PROPOSED WORK: LEASE NO. \_\_\_\_\_

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 MARCELLUS  
 ESTIMATED DEPTH 6,600'

WELL OPERATOR TAPO DESIGNATED AGENT JERRY POLING  
 ADDRESS P.O. BOX 235 WEST UNION, WV 26456  
 ADDRESS P.O. BOX 235 WEST UNION, WV 26456

COUNTY NAME PERMIT

17-02550 F

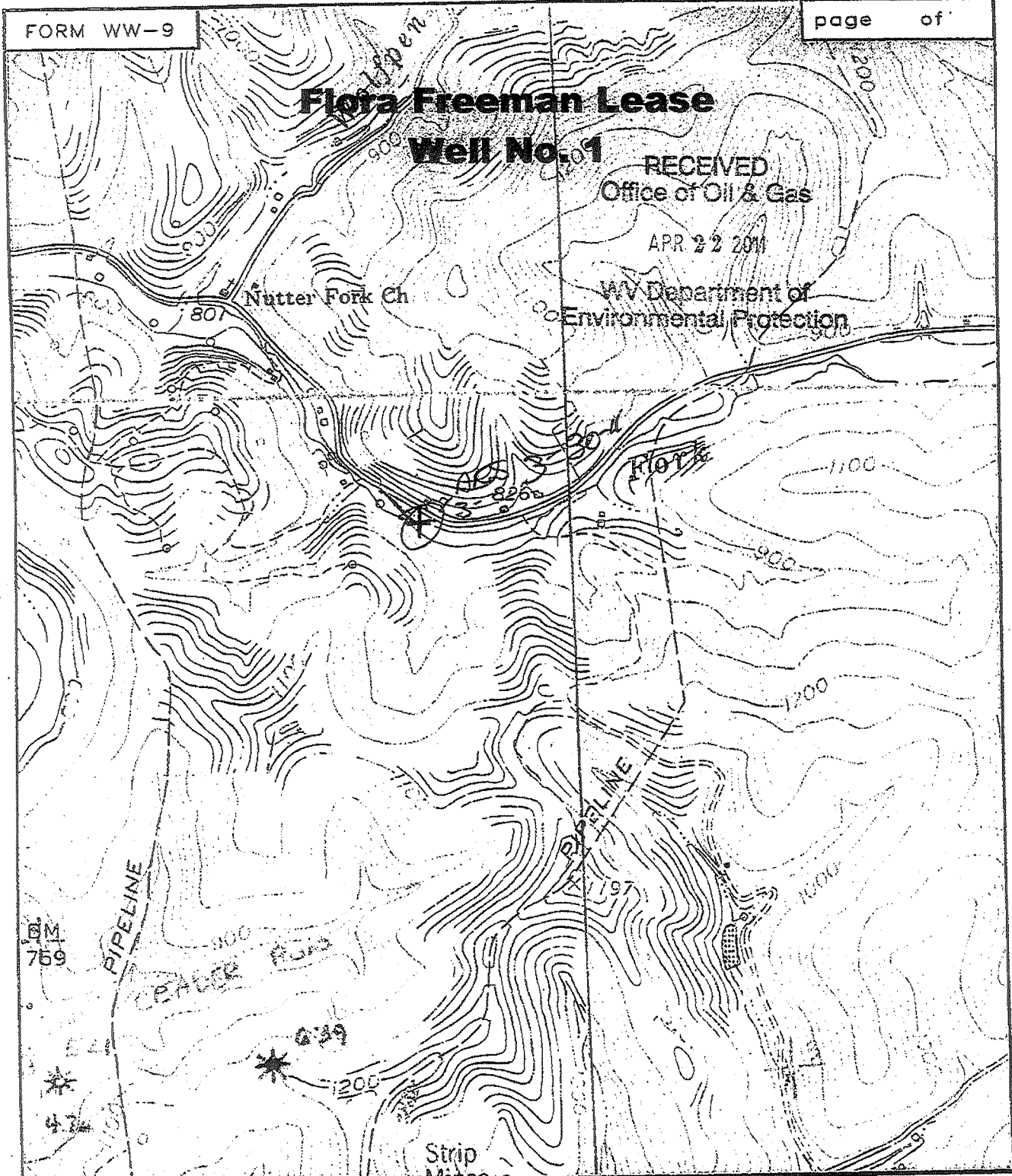
FORM WW-9

page of

# Flora Freeman Lease Well No. 1

RECEIVED  
Office of Oil & Gas  
APR 22 2011

WV Department of  
Environmental Protection

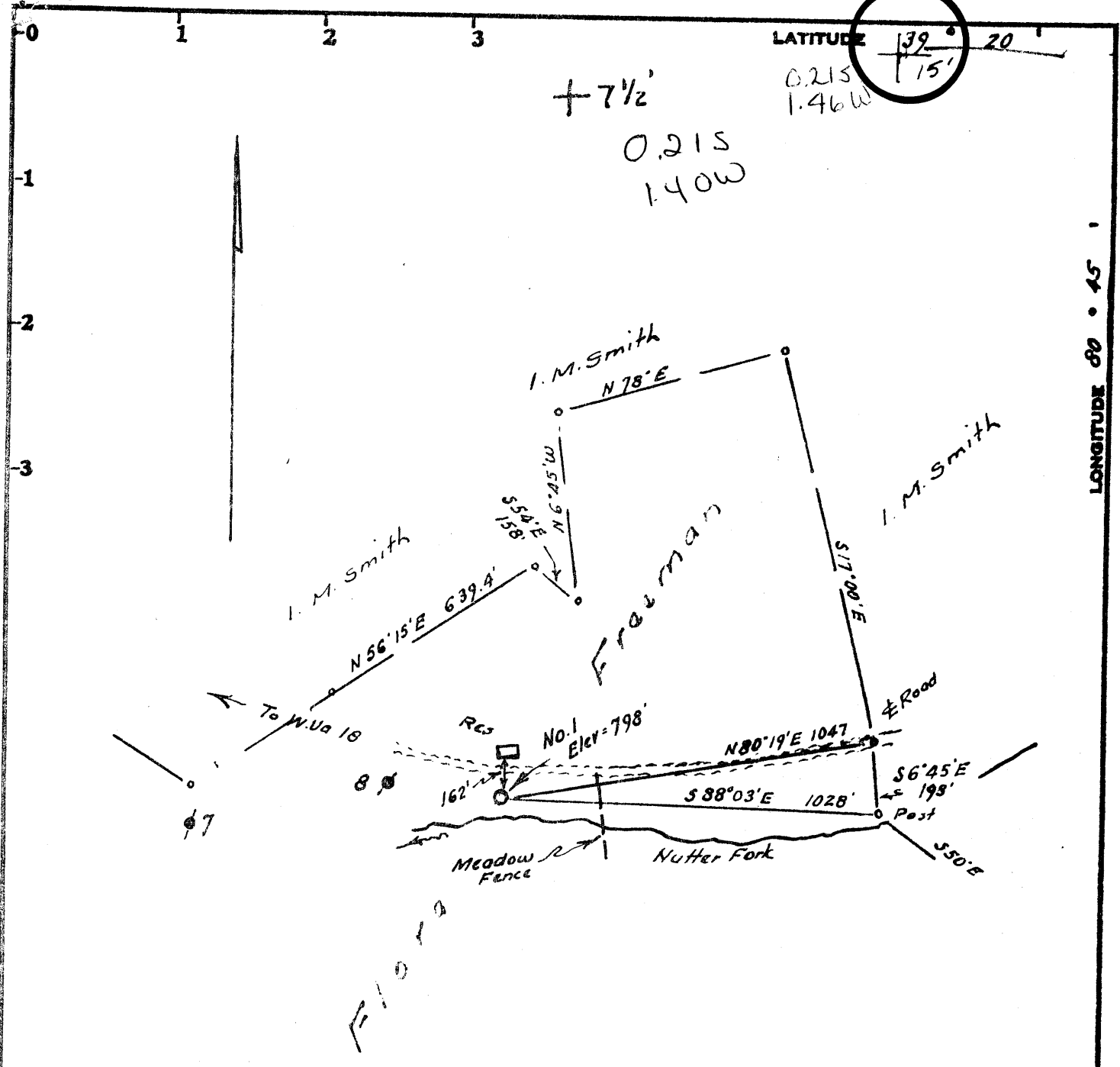


**SLS**  
SMITH LAND SURVEYING  
P.O. BOX 150 GLENVILLE, WV. 26351

TOPO SECTION OF WEST UNION 7.5'  
FILE NO. 7487 DATE 3/15/11 SCALE 1"=1000'

LATITUDE  $39^{\circ} 20'$   
 0.215  
 1.46W

+ 7 1/2'  
 0.215  
 1.40W



LONGITUDE 80 45'

REVISED LOCATION

Minimum Error of Closure 1 in 200

Source of Elevation Elev Well No 8 = 791

\* PROD. turned in by:  
 Caltek Minerals Corp.

- Fracture  P. 91
- New Location
- Drill Deeper
- Abandonment

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: [Signature]  
 Squares: N S E W

Map No. \_\_\_\_\_

Company Lauderman Oil & Gas Co. \*  
 Address P.O. Box 266, Puton City, W. Va.  
 Farm Flora Freeman  
 Tract \_\_\_\_\_ Acres 3.2 Lease No. \_\_\_\_\_  
 Well (Farm) No. One Serial No. \_\_\_\_\_  
 Elevation (Spirit Level) 791  
 Quadrangle West Union, 7 1/2, 15' SE  
 County Putnam District West Union  
 Engineer [Signature]  
 Engineer's Registration No. 1227  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date 22 12, 1980 Scale 1" = 400'

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

WELL LOCATION MAP

FILE NO. 47-017-2556  
 CORRECTED PLAT

+ Denotes location of well on United States Topographic Maps, scale 1 to <sup>24,000</sup> 62,500 latitude and longitude lines being represented by border lines as shown.

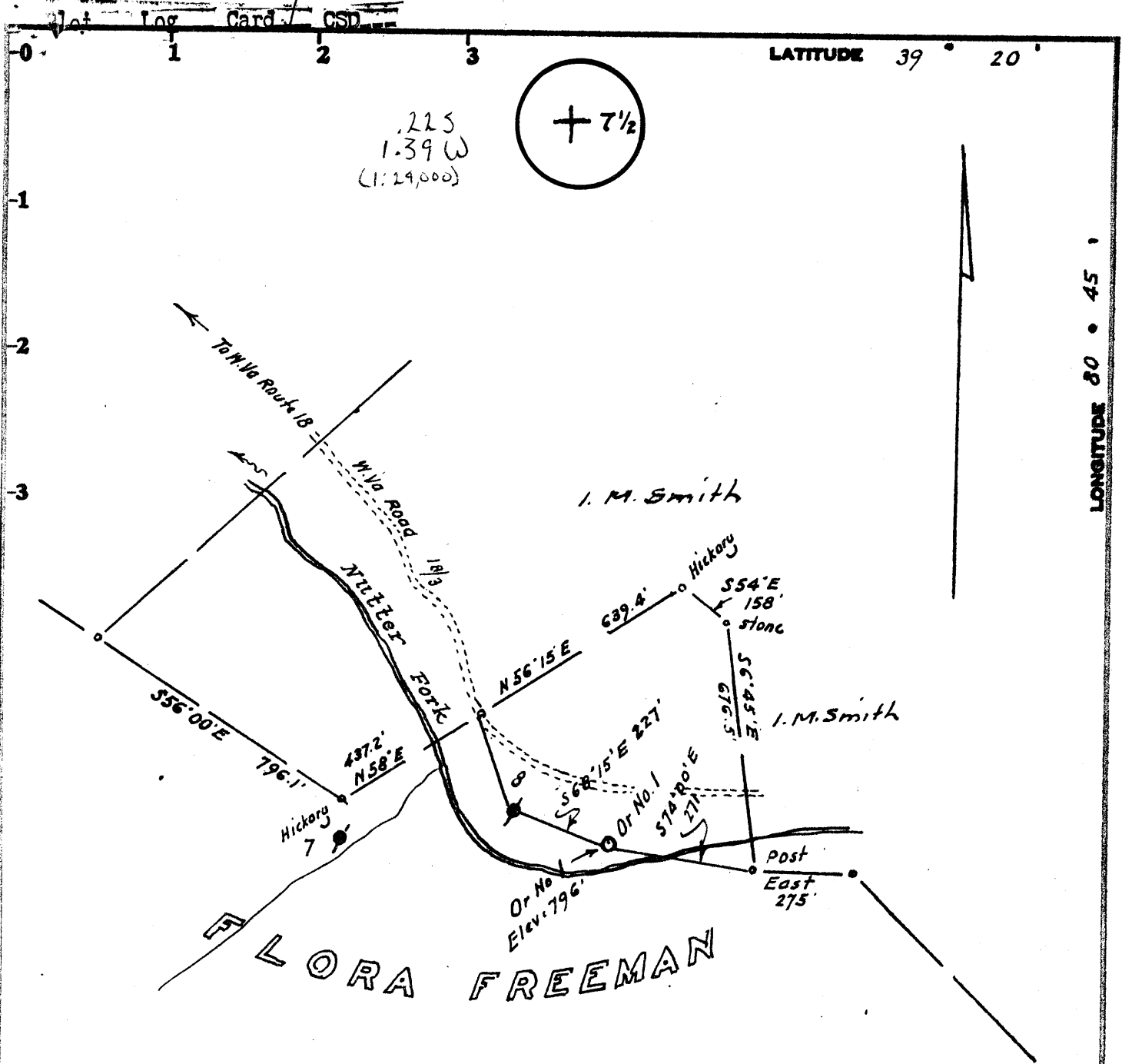
- Denotes one inch spaces on border line of original tracing.

deep well

Arickans n.c.m. DPD-Onon.

FEB 25 1980

3-3 Smithton Flint-Sedalia (90)



Minimum Error of Closure 1 in 200'

Source of Elevation Elev. Well No. 8 - shown - plugged = 791'

- Fracture.....
- New Location.....
- Drill Deeper.....
- Abandonment.....

I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia.

Signed: *W. H. H. H.*

Map No. \_\_\_\_\_

Squares:    N    S    E    W

**DRILLING**

Company LAUDERMAN OIL & GAS CO.

Address Paden City, West Va.

Farm Flora Freeman (MARTIN)

Tract \_\_\_\_\_ Acres 83 Lease No. \_\_\_\_\_

Well (Farm) No. Or-1 Serial No. \_\_\_\_\_

Elevation (Spirit Level) SEE 796' SE

Quadrangle West Union 7 1/2, 15'

County Doddridge District West Union

Engineer *W. H. H. H.*

Engineer's Registration No. 1227

File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

Date October 12, 1979 Scale 1" = 400'

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

**WELL LOCATION MAP**

FILE NO. 017-2556

+ Denotes location of well on United States Topographic Maps, scale 1 to <sup>25,000</sup> ~~62,500~~ latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

Deep Well 7800 Oriskany

JAN 15 1980

# RECEIVED

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

JAN 19 1984

## OIL & GAS DIVISION and Gas Division DEPT. OF MINES WELL RECORD

Quadrangle 7 1/2 W.D.  
Permit No. 47-017-2556

Rotary  Oil   
Cable \_\_\_\_\_ Gas \_\_\_\_\_  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal Open Pit (Kind)

Company Lauderman Oil & Gas Drilling  
Address P.O. Box 266, Paden City, W.Va.  
Farm Flora Freeman Acres 575  
Location (waters) Nutters Fork Watershed  
Well No. 1 Elev. 796  
District West Union County Doddridge  
The surface of tract is owned in fee by Paul Strickling  
Address Nutters Fork Road  
Mineral rights are owned by Paul Strickling  
Address \_\_\_\_\_  
Drilling Commenced 1/30/80  
Drilling Completed 2/25/80 ✓  
Initial open flow Testing cu. ft. Testing bbls.  
Final production Testing cu. ft. per day \_\_\_\_\_ bbls.  
Well open Testing hrs. before test \_\_\_\_\_ RP.  
Well treatment details:

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	2250	2250	8 5/8 Cement Btm. to surf
7			
5 1/2			
4 1/2	6988	6988	200 sacks of Cement
3			
2			
Liners Used			

Attach copy of cementing record.

1800 20/40 Mesh Sand 3000 BBLs Water 350 gallons of Acid

*see other sheet*

Coal was encountered at No Coal Feet No Coal Inches  
Fresh water 80 Feet 90 Salt Water 1600 Feet 1650  
Producing Sand Oriskany *see other sheet* Depth 6900

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Shale	Gray	Soft	0	45		
Sand	Gray	Soft	45	65		
Lime	Gray	Soft	65	190		
Slate	Gray	Soft	190	280		
Slate	Black	Soft	280	300		
Lime	Gray	Soft	300	420		
Rock	Red		420	510		
Lime	Gray	Hard	510	685		
Rock	Red		685	775		
Shale	Gray	Hard	775	890		
Sand	White	Hard	890	910		
Shell	Gray		910	1080		
Rock	Red	Hard	1080	1300		
Slate	Gray	Hard	1300	1460		
Shell	Gray		1460	1530		
Lime Gray			1530	1585		

(over)

\* Indicates Electric Log tops in the remarks section.

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Shell	Blue	Hard	1585	1625	Line Shell	5100-5660
Salt Sand I		Soft	1625	1680	Shell Gray	5600-6200
Shell	Gray		1680	1740	Lime Shell	6200-6430
Shell	Black		1740	1755	Hamilton, Line (Brown)	6430-6600
Salt Sand II		Soft	1755	1790	Onondaga Lime	
Salt Sand III			1790	1810	Stone	6600-6890
Shale	Gray		1810	1870	Oriskany Sand	6890-6985
Shale	Sandy Gray		1870	1890		
Maxon Sand			1890	1935		
Big Lime		Hard	1935	2070		
Keener	Sand		2070	2090		
Big Injun			2090	2140		
Shell	Gray		2140	2235		
Welch Stray			2235	2265		
Shell	Gray		2265	2395		
Lime	Gray		2395	2470		
Shell	Brown	Soft	2470	2490		
Berea Sand		Soft	2490	2505		
Gray Shell			2505	2750		
Lime Shell			2750	2880		
Gray Shell			2880	2920		
Gordon	Sand		2920	2945		
Lime Shell	Gray		2945	3080		
Shell	Gray		3080	3150		
Fifth Sand		Soft	3150	3180		
Shell	Gray		3180	3280		
Byard Sand			3280	3290		
Shell	Gray	Hard	3290	3510		
Lime Shell			3510	3780		
Gray Shell			3780	3800		
Lime	Shell		3800	3840		
Balltown Sand		Soft	3840	3865		
Lime Shell		Hard	3865	3960		
Gray Shell			3960	4080		
Sheffield Sand			4080	4100		
Gray Shell			4100	4225		
Lime Shell			4225	4340		
Elks Sand			4340	4370		
Lime Shell			4370	4600		
Gray Shell			4600	4770		
Riley Sand			4770	4780		
Lime Shell			4780	5040		
Alexander Sand			5040	5100		

TO 6988  
 Note This Well is still Being Re worked And as of this date No End Results have Been Obtained

Hub Morgan  
 Aug 1, 1980

6988  
 5400  
 1588 expl ftg

Date Aug 1, 1980  
 APPROVED: Hub Morgan Owner  
 By Land Agent (Title)

Completion Records ✓  
Flora Freeman No. 1  
Permit No. 47-17-2556

Frac:

80/100 Sand	300 sks.
20/40 Sand	500 sks.
HCL 20%	8,000 gal.
HC <sub>2</sub>	250 gal.
1 5 N	71 gal.
W G-12	200 sks.
Lime	15 sks.
Breakdown	4,600 PSI
Avg. treatment	4,500 PSI
Avg. rate	28.7 BPM
HHP used	3,165
Insip	3,200
Total Fluid	1,320 BBL
Treatment	1,163 BBL

Perforations: 6657' to 6704' - 13 shots *Onondaga.*

Initial open flow: 420, cubic feet-0 BBLS

Final production: 105 m cubic feet per day-0 BBLS

Well open: 72 Hours before test-2150 RP

[08-78]

OIL AND GAS WELL PERMIT APPLICATION

Operator's of  
Well No. No. 1  
API Well No. 47 - 017 25  
State County Pe

WELL TYPE: Oil      / GAS X  
(If "Gas", Production      / Underground storage      / Deep X / Shallow      /)  
LOCATION: Elevation: 796 Watershed: Nutters Fork  
District: West Union County: Doddridge Quadrangle: West Union 7 1/2

WELL OPERATOR Lauderman Oil & Gas Drilling  
Address 311 S. 4th Avenue  
Paden City, W.Va. 26159

DESIGNATED AGENT Phillip Morgan  
Address Same

OIL & GAS  
ROYALTY OWNER Flora Freeman (Martin)  
Address RFD 1 West Union

COAL OPERATOR Same  
Address     

Acres 83  
SURFACE OWNER Paul Stickling  
Address RFD West Union  
Acres 83

COAL OWNER(S) WITH DECLARATION ON RECORD  
Name None  
Address     

FIELD SALE (IF MADE) TO:  
Name       
Address     

Name None OIL & GAS DIVISION  
Address DEPT. OF MINES

OIL & GAS INSPECTOR TO BE NOTIFIED  
Name Paul Garrett  
Address Clarksburg, W.Va.  
Phone # 622-3871

COAL LESSEE WITH DECLARATION ON RECORD:  
Name None  
Address     

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 12 Aug, 19 79, to the undersigned well operator from Williston Oil & Development Corp.

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

Recorded on     , 19     , in the office of the Clerk of the County Commission of Doddridge County, West Virginia, in West Union Book 27 at page 233. 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.

PLEASE SUBMIT COPIES OF ALL  
GEOPHYSICAL LOGS DIRECTLY TO:  
WEST VIRGINIA OIL AND GAS  
CONSERVATION COMMISSION  
1615 WASHINGTON STREET EAST  
CHARLESTON, WV 25311

Lauderman Oil & Gas Drilling  
Well Operator  
By Phillip Morgan  
Its      Agent

BLANKET BOND

COOPY



[08-78]

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:  
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-2 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) Applachian Drilling

Address P.O. Box 2669

Charleston, W.Va. 25301

GEOLOGICAL TARGET FORMATION, Oriskany

Estimated depth of completed well, 7800 feet Rotary  Cable tools

Approximate water strata depths: Fresh, 90 feet; salt, 1800 feet.

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

CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS				FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKS
	Size	Grade	Weight per ft	New	Used	For drilling		
Conductor	16"			X		100 ft.		Kinds
Fresh water								
Coal						422	covered by	8 5/8
Intermediate	8 5/8					2200	2200	Top to Bottom
Production	5" or 4 1/2"				X	7800		Deaths set
Tubing								Thru Pay
Lines								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 drilling 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 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 8-20-80.

*[Signature]*  
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 \_\_\_\_\_