

W.W. McDONALD LAND CO. LEASE 8,890.505 ACRES±

COLE & CRANE REAL ESTATE TRUST
1,061.79 AC±

McDONALD LAND CO. & ALDERSON HEIRS, LLC ET AL

WELL NO. A-43 A.P.I. #47-045-1267

WELL NO. A-43
A.P.I. #47-045-1267
STATE PLANE COORDINATES
SOUTH ZONE (NAD '27)

N. 259,354
E. 1,736,803

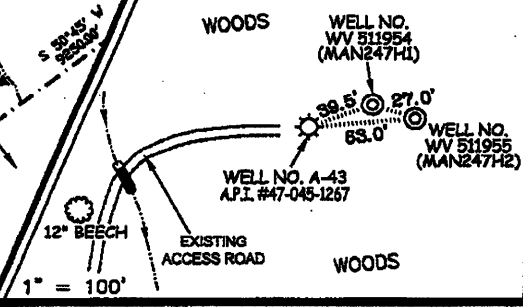
LAT=(N) 37.70868
LONG=(W) 81.91395

UTM (NAD'83)
N. 4,173,899
E. 419,455

W.W. McDONALD LAND CO.
5,990.47 ACRES±

- NOTES ON SURVEY**
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM SOUTH ZONE NAD '27.
 2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 39 PAGE 143.
 3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN JULY, 2010.
 4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

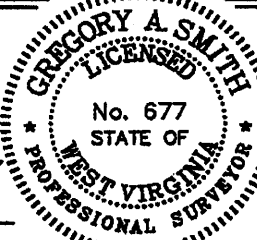
REFERENCES



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 SEPTEMBER 03, 20 10
 OPERATORS WELL NO. A-43
 API WELL NO. 47-045-01267P
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/2500 FILE NO. 3850PA-43 (63-55)
 PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1"=2,000'

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 1,270' WATERSHED ROCKHOUSE CREEK
 DISTRICT TRIADELPHIA COUNTY LOGAN QUADRANGLE MAN 7.5'
 SURFACE OWNER W.W. McDONALD LAND COMPANY ACREAGE 5,990.47±
 ROYALTY OWNER W.W. McDONALD LAND COMPANY LEASE ACREAGE 8,890.55±
 PROPOSED WORK: LEASE NO. 080608
 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 LOWER HURON
 ESTIMATED DEPTH 4,920' (TOTAL VERTICAL DEPTH)

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 1710 PENNSYLVANIA AVENUE ADDRESS 1710 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302 CHARLESTON, WV 25302

W.W. McDONALD LAND CO. LEASE

GEORGE P., JR. & LYDIA ALDERSON, TRS. ET AL.

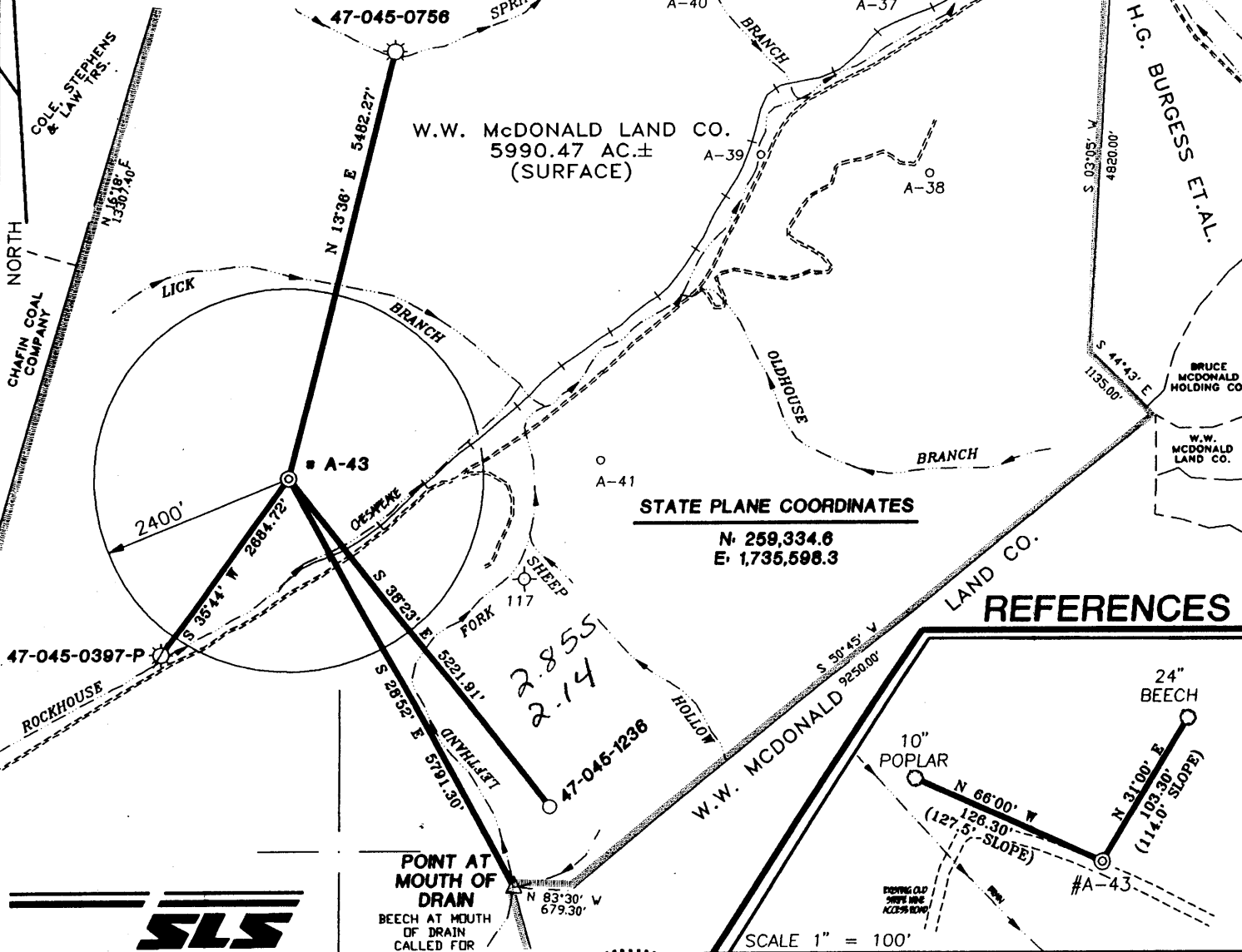
N. LATITUDE 37°45'00"

GEORGE P., JR. & LYDIA ALDERSON, TRS. ET AL.

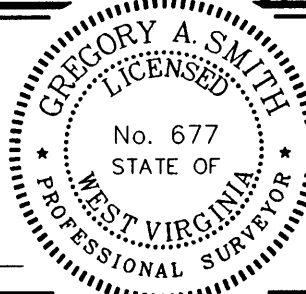
COLE, STEPHENS & LAW TRS.

8890.505 ACRES ± WELL #A-43

NOTES:
 1. TIES TO CORNER AND WELLS ARE BASED ON GRID NORTH WV SOUTH ZONE NAD '27.
 2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 1-6-98



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.



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE JANUARY 13, 19 98
 OPERATORS WELL NO. # A-43
 API WELL NO. 47-045-01-267
 STATE COUNTY PERMIT

P.S. 677 Gregory A. Smith

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 3850P43 (63-55)
 PROVEN SOURCE OF ELEVATION SCALE 1" = 2000'
 JUNCTION OF ROADS ELEVATION 873'

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

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

LOCATION : ELEVATION 1268' WATERSHED ROCKHOUSE CREEK
 DISTRICT TRIADDELPHIA COUNTY LOGAN QUADRANGLE MAN 7.5'
 SURFACE OWNER W.W. McDONALD LAND COMPANY ACREAGE 5990.47
 ROYALTY OWNER W.W. McDONALD LAND COMPANY LEASE ACREAGE 8890.505

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 DEVONIAN SHALE
 ESTIMATED DEPTH 6500'

WELL OPERATOR EASTERN STATES OIL AND GAS, INC. DESIGNATED AGENT ROBERT ALLEY
 ADDRESS P.O. BOX 2347 CHARLESTON, WV 25328 ADDRESS P.O. BOX 2347 CHARLESTON, WV 25328

6-6 265

COUNTY NAME PERMIT

WR-35

20-Feb-98

API # 47- 45-01267

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Reviewed MS

Well Operator's Report of Well Work

Farm name: McDONALD, W.W. LAND CO. Operator Well No.: McDONALD A-43

LOCATION: Elevation: 1,268.00 Quadrangle: MAN

District: TRIADELPHIA County: LOGAN
Latitude: 15050 Feet South of 37 Deg. 45Min. 0 Sec.
Longitude 11280 Feet West of 81 Deg. 52 Min. 30 Sec.

Company: EASTERN STATES OIL & GAS,
2900 EISENHOWER AVE STE 300
ALEXANDRIA, VA 22314-0000

Agent: ROBERT G. ALLEY

Inspector: OFIE HELMICK
Permit Issued: 02/23/98
Well work Commenced: 08/05/98
Well work Completed: 09/14/98

Verbal Plugging
Permission granted on: _____
Rotary Cable _____ Rig
Total Depth (feet) 5420'
Fresh water depths (ft) 51'

Salt water depths (ft) 1140'

Is coal being mined in area (Y/N)? _____
Coal Depths (ft): 55'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13-3/8"	33'	33'	GRTD
9-5/8"	848'	848'	346 FT ³
7"	2534'	2534'	473 FT ³
4-1/2"	5402'	5402'	432 FT ³

OPEN FLOW DATA

U/L Shale, Weir, Berea
Producing formation Gordon, Big Lime Pay zone depth (ft) _____
Gas: Initial open flow 103 MCF/d Oil: Initial open flow _____ Bbl/c
Final open flow 1950 MCF/d Final open flow _____ Bbl/c
Time of open flow between initial and final tests _____ Hours
Static rock Pressure 795 psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/c
Final open flow _____ MCF/d Final open flow _____ Bbl/c
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 PERFORATEL 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.

RECEIVED
Office of Oil & Gas
Permitting

MAR 01 1993

WV Division of
Environmental Protection

For: EASTERN STATES OIL & GAS, INC.

By: Barbara A. Hubbard / Admin. Assist
Date: 2/26/99

MAR 16 1999

106
1267

EASTERN STATES OIL & GAS, INC.
WR-35 COMPLETION REPORT - Attachment
Well Treatment Summary

Well: W. W. McDONALD LAND CO. A-43

47-045-01267

Date	1 st Stage	2 nd Stage	3 rd Stage	4 th Stage	5 th Stage
Type Frac					
Acid, N ₂ , Foam, Water	N ²	N ²	N ²	Acid	
Zone Treated	L. Shale	U. Shale	Weir, Berea, Gordon	Big Lime	
# Perfs	20	40	39	21	
From - To:	5161-5385	4407-4807	2900-3770	2707-2745	
BD Pressure @ psi	3020	2728	2432	1342	
ATP psi	3175	2379	2092	1306	
Avg. Rate, B=B/M, S= SCF/M	57,994 S	54,750 S	56,100 S	6950 S & 4.9 B	
Max. Treat Press psi	3205	2640	2267	1352	
ISIP psi	2400	1550	1500	100	
Frac Gradient	.53	.38	.45	.50	
10 min S-I Pressure	1841	1451	1187	1177	
Material Volume					
Sand-sks					
Water-bbl					
SCF N ₂	320,000	919,000	721,		
Acid-gal	13 B 7-1/2%	12.5 B 7-1/2%	18 B 7-1/2%	2500 15%	
NOTES:					

Formation Record

TOP	BOTTOM	FORMATION	Remarks
0	25	Fill	
25	55	Sand Shale	½" stream water @ 51'
55		Coal	
59	120	Sand	
120	295	Sand Shale	
295	470	Sand	
470	610	Sand Shale	
610	672	W. Sand	
672	845	Sand Shale	
922	1685	Sand	Hole wet @ 1140'
1981	2040	Upper Maxton	
2384	2425	Lower Maxton	
2458	2507	Little Lime	
2507	2759	Big Lime	GT @ 2577' N/S GT @ 2607' N/S GT @ 2669' N/S GT @ 2731' 145 mcf. GT @ 2762' 145 mcf. GT @ 2823' 133 mcf.
2876	3000	Weir	

RECEIVED
Office of Oil & Gas
Permitting
MAR 01 1993
WV Division of
Environmental Protection

045 1267

3335	3358	Sunbury	GT @ 2852' 103 mcf.
3358	3379	Berea	GT @ 3344' 103 mcf.
3379	4405	Upper Huron	GT @ 3407' 103 mcf.
3494		Gordon	
4405	4806	Lower Huron	
4806		Java	
4943		Angola	
5180		Rhinestreet	
5420		TD	

RECEIVED
Office of Oil & Gas
Permitting

MAR 01 1999

WV Division of
Environmental Protection

MAR 16 1999

206 1267