

47-045-1177

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

W.W. McDONALD
LAND CO.
1090.82 AC.±
(SURFACE)

D.L. FRANCIS TRUST
295 AC.±
(SURFACE)

W.W. McDONALD
LAND CO.
956.23 AC.±
(SURFACE)

GEORGIA-PACIFIC
CORPORATION

BRUCE
McDONALD
EST.
77.96 AC.±
(SURFACE)

CHRISTIAN FORK
LAND COMPANY, INC.

WELL NO. A-56
STATE PLANE
COORDINATES
(N) 256,159
(E) 1,755,782

WELL NO. A-56 REFERENCES

NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 10/21/99.
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DB 39 PAGE 133.
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF LOGAN COUNTY IN SEPTEMBER, 1999.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

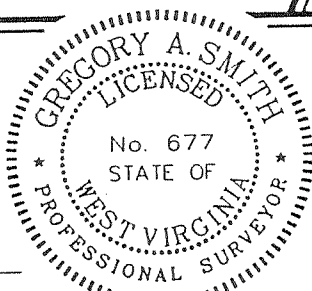
DATE OCTOBER 22, 19 99

OPERATORS WELL NO. ##A-56

API WELL NO. 47-045-01373
STATE COUNTY PERMIT

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.

P.S. Gregory A. Smith
677



MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 3850PA56 (84-23)
PROVEN SOURCE OF ELEVATION BENCH MARK ELEVATION 758' SCALE 1" = 1000'

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 1421' WATERSHED BILLS BRANCH OF GUYANDOTTE RIVER
DISTRICT TRIADELPHIA COUNTY LOGAN QUADRANGLE MALLORY 7.5'

SURFACE OWNER W.W. McDONALD LAND COMPANY ACREAGE 956.23
ROYALTY OWNER W.W. McDONALD LAND COMPANY LEASE ACREAGE 8,890.505
PROPOSED WORK : LEASE NO. 80608

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 5950'

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

DEEP WELL

6-6 266 OCT 13 2000

COUNTY NAME LOGAN
PERMIT 1373

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

RECEIVED
Office of Oil & Gas
Permitting
DEC 22 2000
WV Division of
Environmental Protection

Well Operator's Report of Well Work

Farm Name: McDonald, W.W. Land Co.

Operator Well No.: A-56

LOCATION: Elevation: 1421'

Quadrangle: Mallory

District: Triadelphia

County: Logan

Latitude: 2860 Feet South of 37 Deg. 42 Minutes 30 Seconds
Longitude: 3120 Feet West of 81 Deg. 50 Minutes 0 Seconds

Company: Eastern States Oil & Gas
P.O. Box 2347, 1710 Pennsylvania Avenue
Charleston, WV 25328

Agent: Robert Alley

Inspector: Ofie Helmick

Permit Issued: 10/10/2000

Well work commenced: 10/23/00

Well work completed: 11/26/00

Verbal Plugging

Permission granted on: _____

Rotary Rig Cable Rig _____

Total Depth 5653 feet 5674'

Fresh water depths (ft) 218', 229'

Salt water depths (ft) 1512'

Is coal being mined in area? _____

Coal Depths (ft): 55'-58'; 84'-86'; 250'-255';

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13 3/8"	48'	48'	grouted
9 5/8"	896'	896'	359.9
7"	2720'	2720'	528.8
4 1/2"	5661'	5661'	421.6

OPEN FLOW DATA

Producing formation Lower Shale; Upper Shale; Berea; Big Lime

Pay Zone Depth (ft): _____

See Attach for details

Gas: Initial open flow 15 MCF/d

Oil: Initial open flow _____ Bbl/d

Final open flow: 1530 MCF/d

Final open flow: _____

Time of open flow between initial and final tests _____ Hours

Static rock pressure 480 psig (surface pressure) after _____ 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: _____

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.

Kathy L. Murray
For: Eastern States Oil & Gas

By: *Robert Alley*
Date: 12/21/00

JAN 5 2001

DEEP WELL

LOG 1373

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

Well: McDonald A-56

API# 47-045-01373

Date	11/16/00	11/16/00	11/16/00	11/16/00		
Type Frac Acid, N ₂ , Foam, Water	N ²	N ²	N ²	Acid w/ N ²		
Zone Treated	Lower Shale	Upper Shale	Berea	Big Lime		
# Perfs	30	40	21	34		
From - To:	4829'-5572'	3719'-4731'	3574'-3594'	2784'-3117.5'		
BD Pressure @ psi	3466	3101	3023	533		
ATP psi	3230	2716	2951	1915		
Avg. Rate, B=B/M, S= SCF/M	51,602 S	52,644 S	51,896 S	10 B 50,000 S		
Max. Treat Press psi	3827	2880	3260	3599		
ISIP psi	2795	2314	2559	175		
Frac Gradient	.64	.64	.81	1.05		
10 min S-I Pressure	1736	1693	1457	1261		
Material Volume						
Sand-sks						
Water-bbl						
SCF N ₂	820,266	824,906	477,864	400,902		
Acid-gal	1000 gal 7 1/2%	900 gal 8%	300 gal 15.7%	2500 gal 15.7 %		
NOTES:						

TOP	BOTTOM	FORMATION	REMARKS
0	20'	Top Soil & Shale	Water @ 218' & 229'
20'	46'	Sand	
46'	55'	Sandy Shale	
55'	58'	Coal	
58'	84'	Sandy Shale	
84'	86'	Coal	
86'	250'	Sand	
250'	255'	Coal	
255'	443'	Sand	
443'	479'	Sandy Shale	
479'	770'	Sand	
770'	815'	Sandy Shale	
815'	910'	Sand	
910'	1210'	Sandy Shale	
1210'	1838'	Salt Sand	GT @ 1979' = NS
2110'	2220'	Upper Maxton	
2324'	2446'	Middle Maxton	GT @ 2383' = NS
2544'	2584'	Lower Maxton	
2624'	2684'	Little Lime	GT @ 2663' = NS
2688'	2990'	Big Lime	GT @ 2725' = NS
3087'	3121'	Upper Weir	GT @ 2924' = NS
3158'	3205'	Lower Weir	GT @ 3049' = odor
3548'	3569'	Sunbury	GT @ 3297' = NS
3569'	3599'	Berea	GT @ 3670' = NS
3900'	3930'	Gordon	GT @ 3950' = NS
4635'	5090'	Lower Huron	GT @ 4852' = NS
5090'	5463'	Java / Angola	GT @ 5445' = NS
5463'	5662'	Rhinestreet	
5662'		Onondaga	
	5674'	TD	GT @ TD 5674' = NS