

HOLMES LEASE

70 ACRES ±

WELL NO. 911856 (a.k.a.) C-1 A.P.I. 47-077-0110

GLENN R. JR. & SUE S. HOLMES
178.07 ACRES±

WV UNIVERSITY BOARD
OF CONTROL
457.26 ACRES±

MICHAEL E. & DEBRA D.
SISLER
101.02 ACRES±

JOHN D. & REBECCA
PAVELKO
63.13 ACRES±

WELL NO. 911856 (a.k.a.) C-1
A.P.I. 47-077-0110

ROBERT C. &
BEVERLY Y. WOLFE
5.05 ACRES±

WELL NO. 911856 (a.k.a.) C-1
A.P.I. 47-077-0110
STATE PLANE
COORDINATES

(N) 359,289
(E) 1,900,202

NOTES ON SURVEY

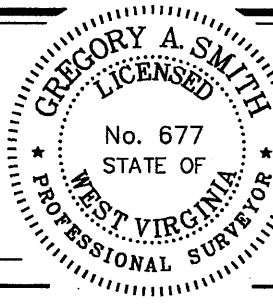
1. TIES TO WELLS AND CORNERS ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM A PLAT DATED 04/18/1963 AS PREPARED FOR A.P.I. NO. 47-077-0110.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF PRESTON COUNTY IN JULY, 2008.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).



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 NOVEMBER 20, 20 08

OPERATORS WELL NO. 911856 (a.k.a.) HOLMES C-1

API WELL NO. 47-077-0110
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7029PC-1 (270-32)
PROVEN SOURCE OF ELEVATION DGPS (SUBMETER MAPPING GRADE) SCALE 1" = 500'

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 1,815' WATERSHED TRIBUTARY OF BOYD RUN

DISTRICT VALLEY COUNTY PRESTON QUADRANGLE NEWBURG 7.5'

SURFACE OWNER JOHN D. & REBECCA PAVELKO ACREAGE 70±

ROYALTY OWNER MINTIE HOLMES HEIRS LEASE ACREAGE 70±

PROPOSED WORK: LEASE NO. 7004555-000

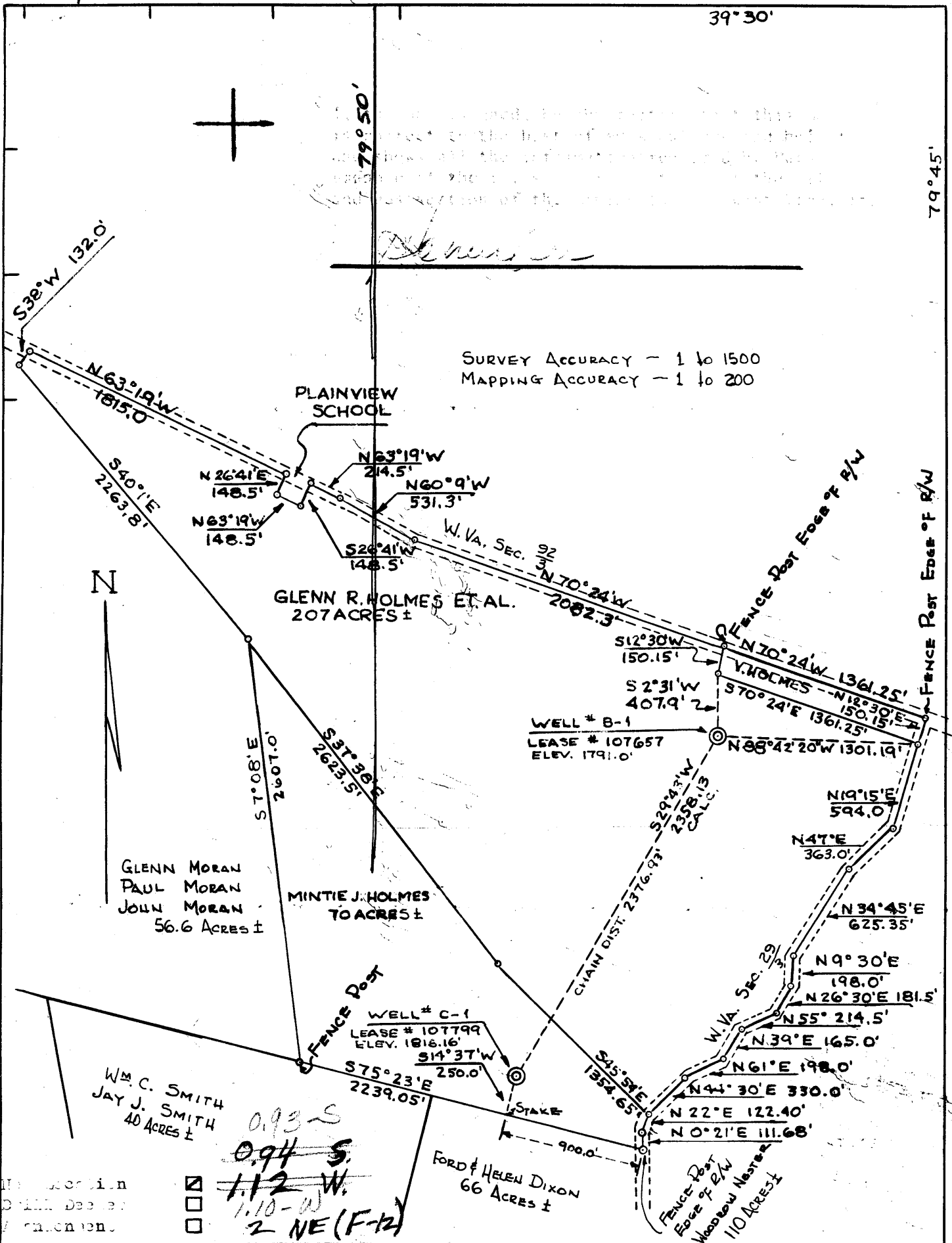
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD
FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION _____
ESTIMATED DEPTH _____

WELL OPERATOR CHESAPEAKE APPALACHIA, LLC. DESIGNATED AGENT MIKE JOHN MAR 20 2009
ADDRESS 900 PENNSYLVANIA AVENUE ADDRESS 900 PENNSYLVANIA AVENUE
CHARLESTON, WV 25302 CHARLESTON, WV 25302

South Burnus Chapel Co

COUNTY NAME PRE
PERMIT 0110 W



Company **PHILLIPS PETROLEUM**
 Address **BARTLESVILLE, OKLAHOMA**
 From **MINTIE J. HOLMES**
 Lease TO Lease No. **107799**
 Well (Frac) No. **HOLMES C-1** Serial No. _____
 Elevation (in level) **1816.16'**
 Location **THORNTON-NC**
 County **PRESTON** District **VALLEY**
 Engineer's Registration No. **3165**
 File No. _____ Drawn No. _____
 Date **4-18-63** Scale **1" = 800'**

State of West Virginia
 Department of Mines
 Oil and Gas Division
 Charleston

WELL LOCATION MAP
 File No. **PRES-110**

Denotes location of well on United States Geological Map, scale 1 to 62,500, and indicates in which line bearing the well is located by corner lines as shown.
 Denotes the line of lease on which the well is located.

Samples not removed 6-6 313 Deep Well



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

Quadrangle Thornton

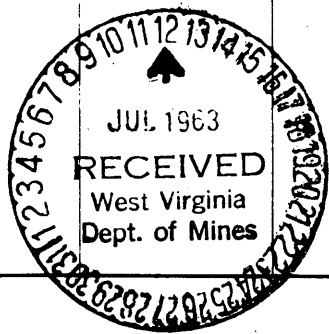
WELL RECORD

Permit No. PRES-110

Oil or Gas Well Gas
(KIND)

Company Phillips Petroleum Company
 Address Drawer B, Bartlesville, Oklahoma
 Farm Holmes "C" Acres 70
 Location (waters) Field Creek
 Well No. One Elev. 1835.20' RKB
 District Valley County Preston
 The surface of tract is owned in fee by Mintie J. Holmes
 Address Reedsville, West Va.
 Mineral rights are owned by Mintie J. Holmes
 Address Reedsville, West Va.
 Drilling commenced June 1, 1963
 Drilling completed June 29, 1963
 Date Shot - From - To -
 With -
 Open Flow - /10ths Water in - Inch
- /10ths Merc. in - inch
 Volume Show of gas 7580' & 7622' Cu. Ft.
 Rock Pressure Pressure & Volume not measured hrs.
 Oil - bbls., 1st 24 hrs.
 WELL ACIDIZED -
 CASING CEMENTED 3 3/8" SIZE 54.24' No. Ft. 6-1-63 Date
8 5/8"-1000', 6-6-63; 5 1/2"-7515, 6-25-63
 COAL WAS ENCOUNTERED AT - FEET - INCHES
- FEET - INCHES - FEET - INCHES
- FEET - INCHES - FEET - INCHES
 WELL FRACTURED 6-30-63, Pumped 250 Gal. 15% acid down 5 1/2" Csg. followed by 174 Bbls. fresh water.
Fraced W/ 18,000# 20-40 sand 18,000 Gal. galled water. Flushed W/ 115 Bbls. fresh water.
 RESULT AFTER TREATMENT Tested at rate of 1,800 MCF gas per day
 ROCK PRESSURE AFTER TREATMENT 3100# after 48 Hrs.
 Fresh Water - Feet - Salt Water - Feet -

| Formation | Color | Hard or Soft | Top | Bottom | Oil, Gas or Water | Depth | Remarks |
|----------------------|------------|----------------|------|--------|-------------------|-------|--------------------|
| Shale & Lime | | | 0 | 156 | | | 13 3/8" Csg. @ |
| Sand & Shale | | | 156 | 638 | | | 54.24' RKB W/ |
| Shale | | | 638 | 674 | | | 35 Sx Cmt. |
| Shale & Sand | | | 674 | 1701 | | | |
| Shale | Red & Gray | Dev. sh. 1600 | 1701 | 1858 | | | |
| Shale & Sand | | | 1858 | 5256 | Small Show Gas | 2220 | 8 5/8" Csg. @ |
| Shale | | | 5256 | 5556 | | | 1000' RKB W/ |
| Shale & Sand | | | 5456 | 5703 | | | 100 Sx Cmt. Top |
| Shale | | | 5703 | 5785 | | | Cmt. outside of |
| Shale & Sand | | | 5785 | 5848 | | | 8 5/8" - 150' |
| Shale | | | 5848 | 6032 | | | |
| Shale & Sand | | | 6032 | 6114 | | | |
| Shale | | | 6114 | 6646 | | | |
| Shale & Lime Streaks | | | 6646 | 6722 | | | |
| Shale | | | 6722 | 7025 | Small Show Gas | 7050 | Top Tully 7096 |
| Shale & Lime | | | 7025 | 7166 | | | Top Onondaga |
| Shale | | Ham. Hon 7166 | 7166 | 7484 | | | 7487 Hadersville |
| Shale & Chert | | Marcellos 7400 | 7484 | 7515 | | | Top Chert 7507 |
| Chert | | | 7515 | 7539 | | | Top Oriskany |
| Chert & Shale | | | 7539 | 7580 | Good Show Gas | 7580 | Sand 7679 |
| Chert | | | 7580 | 7661 | Small Show Gas | 7622 | |
| Chert & Sand | | | 7661 | 7700 | | | 5 1/2" Csg. @ 7515 |
| Chert | | | 7700 | 7705 | | | W/ 63 Sx Bulk |
| Chert & Lime | | | 7705 | 7783 | | | Cmt. 47 Sx Diacel |
| Sand | | | 7783 | 7785 | TD | | D, 16# Flocele, |
| | | | | 7487 | 7679 | | 50 Sx Neat Cmt. |
| | | | | 1835 | 1835 | | Top Cmt. outside |
| | | | | 5652 | 5844 | | 5 1/2" Csg. 5974' |
| | | | | | | | Top Helderberg |
| | | | | | | | 7763' |



WR -35 RECEIVED
Office of Oil & Gas
SEP 29 2010

Date August 30, 2010
API # 4707700110 W

WV Department of
Environmental Protection

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: Holmes C-1

Operator Well No.: 911856

LOCATION Elevation: 1816'
District: Valley
Top Hole Latitude: 5710 ft South of 39° 30' 00"
Top Hole Longitude: 5120 ft West of 79° 50' 00"
Btm Hole Latitude: xx ft South of xx° xx' xx"
Btm Hole Longitude: xx ft West of xx° xx' xx"

Quadrangle: Newburg
County: Preston

Company: Chesapeake Appalachia, LLC
P.O. Box 18496
Oklahoma City, OK 73154-0496

| Casing & Tubing | Used in Drilling | Left in Well | Cement Fill-Up Cu.Ft. |
|-----------------|------------------|--------------|-----------------------|
| 13 3/8" | 31 | 31 | 31 |
| 8 5/8" | 983 | 983 | 599 |
| 5 1/2" | 7,515' | 7,515' | 1,541 |
| 2 3/8" | 7,345 | 7,345 | xx |
| xx | xx | xx | xx |
| | | | |

Agent: Eric Gillespie
Inspector: Bryan Harris
Date Permit Issued: 03/19/2009
Date Well work commenced: ~~06/01/1963~~ 10/6/09
Date Well Work completed: 06/29/1963 10/9/09
Verbal Plugging Permission
Granted on / /
Rotary Cable Rig
Total Depth (ft): 7785'
Fresh Water Depth (ft): none
Salt Water Depth (ft.): none
Is coal being mined in area (Yes No
Coal Depths (ft): none

Open Flow Data

1st Producing Formation Marcellus Pay Zone Depth 7,507 ft to 7,763 ft
Gas: Initial Open Flow _____ Mcf/day Oil: Initial Open Flow _____ bbl/day
Final Open Flow xx Mcf/day Final Open Flow _____ bbl/day
Time of Open Flow between Initial and Final Tests xx hours
Static Rock Pressure xx psig after xx hours
Static Rock Pressure _____ psig 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.

Signed: [Signature]
CHEESAPEAKE APPALACHIA, LLC
By: Compliance & Legal Dept.
Date: 9-24-10

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JAN 28 2011
WV Department of
Environmental Protection

#911856

| Step Rate Test | | | | | |
|----------------|----------------|----------------|--------|-----------------|--------|
| Time | Rate (bbl/min) | Volume (BBL'S) | | Pressure (PSIA) | |
| | | Starting | Ending | Starting | Ending |
| 10:44 | 0.25 | 0 | 27 | 9 | 37 |
| 11:36 | 0.5 | 27 | 57 | 243 | 1181 |
| 12:35 | 0.75 | 57 | 99 | 1680 | 2142 |
| 13:31 | 1 | 99 | 158 | 2357 | 2737 |
| 14:33 | 1.25 | 158 | 235 | 2760 | 2797 |
| 15:30 | 1.75 | 235 | 340 | 3017 | 3058 |
| 16:29 | 2.25 | 340 | 411 | 3209 | 3516 |
| 17:00 | 2.75 | 411 | 506 | 3520 | 3896 |
| 18:08 | 3.75 | 506 | 757 | 4330 | 4353 |

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02/04/2011