



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL

March 31, 2014

ANTERO RESOURCES CORPORATION
1625 17TH STREET, SUITE 300
DENVER, CO 80202

Re: Permit Modification Approval for API Number 8510078 , Well #: MIRACLE UNIT 1H
Updated Bottom Hole Coordinates

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

for

Gene Smith

Regulatory/Compliance Manager

Office of Oil and Gas



Antero Resources
1625 17th Street
Denver, Colorado 80202
Office 303.357.7310
Fax 303.357.7315

February 7, 2014

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: Ms. Laura Cooper
601 57th Street
Charleston, WV 25304

Ms. Laura Cooper:

Antero Resources Corporation (Antero) would like to submit the following updated mylar plat for the Miracle Unit 1H (API# 47-085-10078) well work permit that was approved on December 30, 2013. We are requesting to update the bottom hole coordinates. Please note that all other information will remain the same as originally permitted.

Attached you will find the following documents:

- REVISED Mylar Plat, which shows the correct bottom hole coordinates

If you have any questions please feel free to contact me at (303) 357-7323.

Thank you in advance for your consideration.

Sincerely,

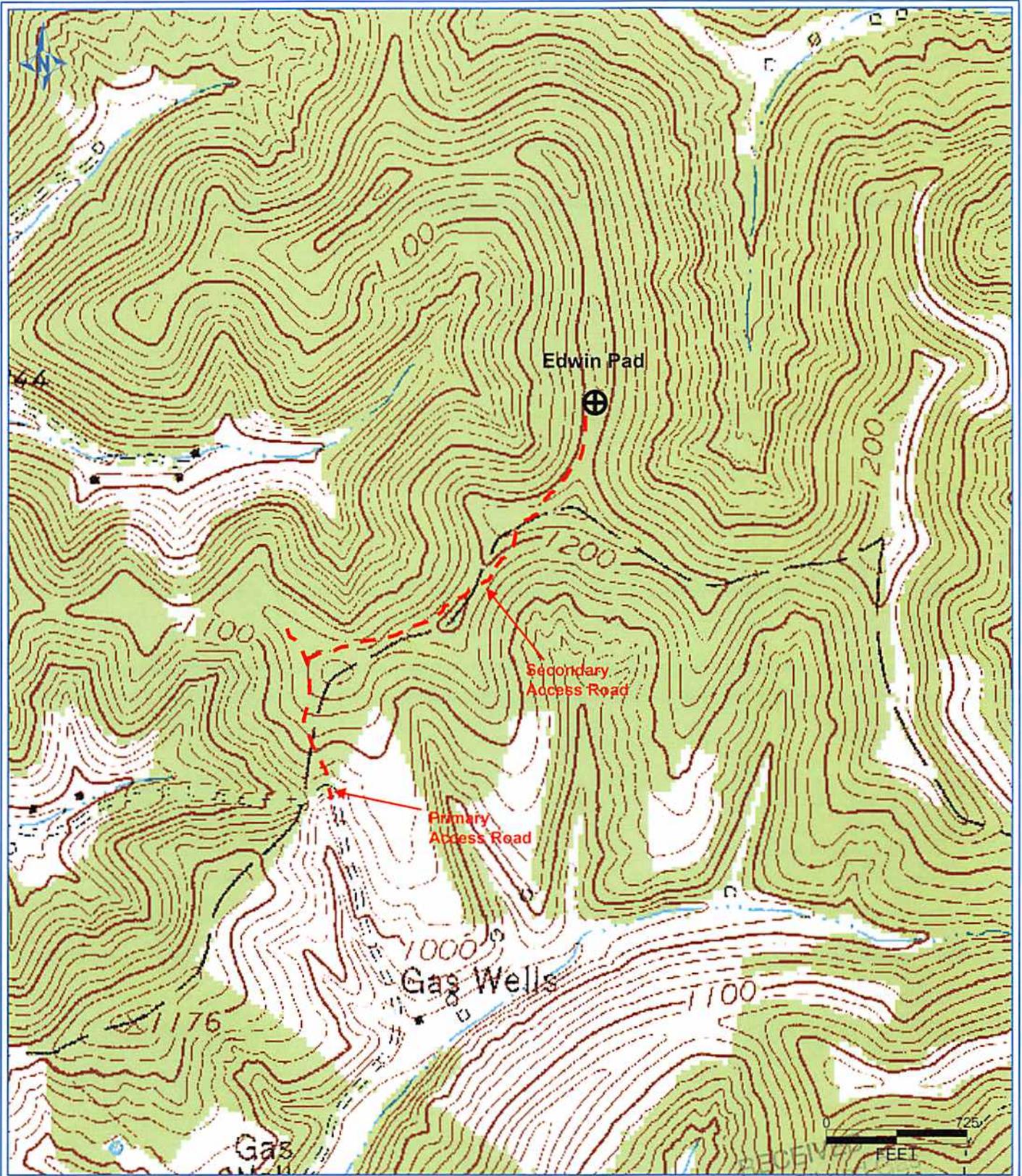
Ashlie Mihalcin
Permit Representative
Antero Resources Corporation

Enclosures

Received

FEB 14 2014

Office of Oil and Gas
WV Dept. of Environmental Protection



DETRA 8/6/2013 9:27:16 AM

Antero Resources Corporation
 Appalachian Basin
 Miracle Unit 1H
 Ritchie County

Office of Oil and Gas
 WV Department of Environmental Protection
 RECEIVED
 MAY 23 2013

Quadrangle: Pullman
 Watershed: Little Kanawha
 District: Clay
 Date: 8-9-2013

LATITUDE 39°15'00"

7,928'

3,961' TO BOTTOM HOLE

LATITUDE 39°12'30"

LONGITUDE 80°52'30"

7.134'

13,742' TO BOTTOM HOLE

LONGITUDE 80°52'30"

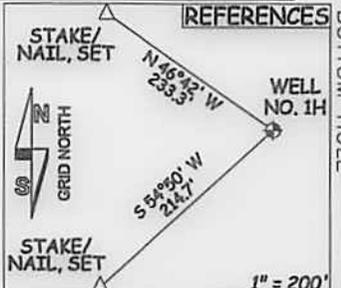
Antero Resources Corporation Well No. Miracle Unit 1H

WM. VANCAMPEN ET AL LEASE JACK D. MACRAY ET AL D.B. 280 PG. 972 T.A.L. 37 PAR. 3 23.03 AC. ±

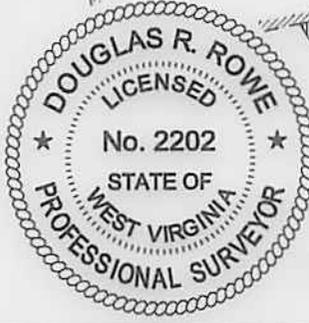
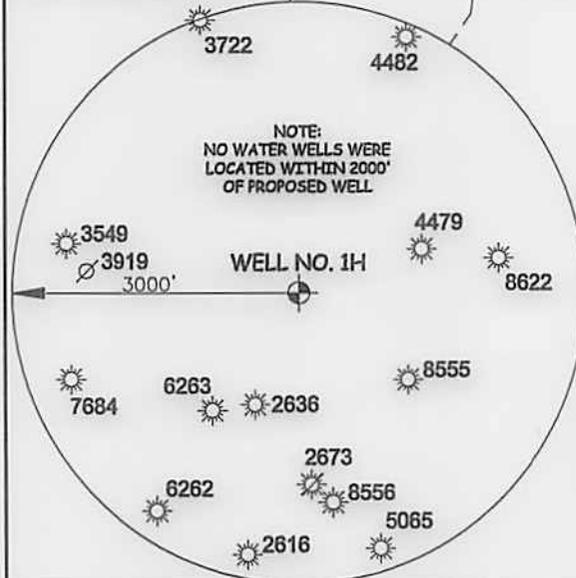
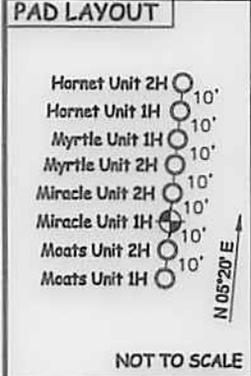
LANDING POINT N:269330 E:1603671 4479

NOTES: WELL 1H TOP HOLE INFORMATION: N: 269,135ft E: 1,602,578ft LAT: 39°13'49.49" LON: 80°54'10.75" BOTTOM HOLE INFORMATION: N: 262,467ft E: 1,606,444ft LAT: 39°12'44.18" LON: 80°53'20.33" WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS: WELL 1H TOP HOLE INFORMATION: N: 4,342,360m E: 508,388m BOTTOM HOLE INFORMATION: N: 4,340,348m E: 509,599m



NOTE: NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY REGULARLY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.



JOB # 13-050WA
DRAWING # MIRACLE1H
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ (IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,191' WATERSHED TRIBUTARY OF CABIN RUN
QUADRANGLE PULLMAN 7.5' DISTRICT CLAY (TH) UNION (BH) COUNTY RITCHIE
SURFACE OWNER FRANKLIN P. QUIMBY ACREAGE 23 ACRES +/-
OIL & GAS ROYALTY OWNER LAWRENCE C. HEIM ET AL; WM. VANCAMPEN ET AL; LEASE ACREAGE 53 AC±; 312 AC±;
EASTERN AMERICAN ENERGY CORP.; MARJORIE CROOKS ET AL; C.W. BALL HEIRS; IRENE MOATS; JACK LANGFORD ET UX; DENNIS FERGUSON ET AL 145 AC±; 117 AC±; 49.27 AC±; 14.71 AC±; 74 AC±; 88 AC±
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X
PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,900' TVD 14,800' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1625 17TH STREET DENVER, CO 80202 ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

LEGEND
- - - Surface Owner Boundary Lines +/-
- - - Interior Surface Tracts +/-
X Existing Fence
Rebar, Found
DATE 02/04/14
OPERATOR'S WELL# MIRACLE UNIT #1H
API WELL # 47 - 085 MOD - 10078 H6A
STATE COUNTY PERMIT