



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

April 10, 2014

CHESAPEAKE APPALACHIA, L.L.C.
POST OFFICE BOX 6070
CHARLESTON, WV 25362

Re: Permit Modification Approval for API Number 10302973, Well #: JAMES MESSENGER W
Lengthened intermediate casings **JAMES MESSENGER WTZ 3H U**

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



Danielle Southall
Regulatory Analyst II

April 10, 2014

VIA UPS

Ms. Laura Cooper
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

Re: Modification for James Messenger WTZ 3H U API# 47-103-02973

Dear Ms. Cooper

Enclosed please find a revised WW-6B and wbs for the above captioned well. We would like to modify the 10 3/4" & 7 5/8" casing. This well is situated on the James Messenger property, in Proctor District, Wetzel County, West Virginia.

If you have any questions or require additional information, please contact me at 304-517-1416 ext 86024.

Sincerely,

Chesapeake Appalachia, LLC



Danielle Southall

Enclosure(s)

Received

APR 10 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

WW - 6B
(3/13)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Chesapeake Appalachia, LLC 49447757 103- Wetzel 7-Proctor 681- Wileyville
API# 47-103-02973 Operator ID County District Quadrangle

2) Operator's Well Number: James Messenger WTZ 3H U Well Pad Name: James Messenger WTZ Pad

3 Elevation, current ground: 1495' Elevation, proposed post-construction: 1495'

4) Well Type: (a) Gas Oil Underground Storage
Other
(b) If Gas: Shallow Deep
Horizontal

5) Existing Pad? Yes or No: yes DMH 4-9-14

6) Proposed Target Formation(s), Depth(s), Anticipated Thicknesses and Associated Pressure(s):

Target formation- Point Pleasant. Target top TVD- 12,139', Target base TVD- 12,265', Anticipated thickness- 126', Associated Pressure- 10,925'

7) Proposed Total Vertical Depth: 12,215'

8) Formation at Total Vertical Depth: Point Pleasant

9) Proposed Total Measured Depth: 19,200'

10) Approximate Fresh Water Strata Depths: 465'

11) Method to Determine Fresh Water Depth: From an analysis of water wells in the area

12) Approximate Saltwater Depths: 1,432'

13) Approximate Coal Seam Depths: 1335'

14) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.

15) Does proposed well location contain coal seams directly overlying or adjacent to an active mine? If so, indicate name and depth of mine: No.

16) Describe proposed well work: Drill and stimulate any potential zones between and including the Benson to the Utica. **If we should encounter a void, place basket above and below void area - balance cement to bottom of void and grout from basket to surface. Run casing not less than 20' below void nor more than 50' below void.
(*If freshwater is encountered deeper than anticipated it must be protected, set casing 50' below and cts)

17) Describe fracturing/stimulating methods in detail:
Well will be perforated within the target formation and stimulated with a slurry of water, sand, and chemical additives at a high rate. This will be performed in stages with the plug and perf method along the wellbore until the entire lateral has been stimulated within the target formation. All stage plugs are then drilled out and the well is flowed back to surface.
The well is produced through surface facilities consisting of high pressure production units, vertical separation units, water and oil storage tanks.

18) Total area to be disturbed, including roads, stockpile area, pits, etc, (acres): 12.5

19) Area to be disturbed for well pad only, less access road (acres): 8.2

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WW - 6B
(3/13)

20)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft.	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	24"	New	J-55	95#	100'	100'	CTS
Fresh Water	16"	New	H40	65#	800'	800'	320 sx/CTS
Coal	10 3/4"	New	HCN-80	45.5#	2,940'	2,940'	1940 sx/CTS
Intermediate	7 5/8"	New	HCP-110	39#	9,362'	9,362'	480 sx/CTS
Production	5 1/2"	New	P-110	23#	19,200'	19,200'	Lead 1,712 ex Tail 1,715 ex/100' inside Intermediate
Tubing	2 3/8"	New	N-80	4.7#	Approx. 12,488'	Approx. 12,488'	
Liners							

DMH 4-9-14

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield
Conductor	24"	30"	0.25	2120	15.6 ppg	1.19/50% Excess
Fresh Water	16"	22"	0.380	1640	15.6 ppg	1.19/50% Excess
Coal	10 3/4"	14 3/4"	0.395	5210	15.6 ppg	1.19/40% Excess
Intermediate	7 5/8"	9 7/8"	.0317	12640	15.6 ppg	1.20/40% Excess
Production	5 1/2"	6 3/4"	0.361 .415	14530	15.6 ppg	1.20/15% Excess
Tubing	2 3/8"	4.778"	0.190			
Liners						

PACKERS

Kind:	10K Arrowset AS1-X		
Sizes:	5 1/2"		
Depths Set:	Approx. 6,197'		

GO

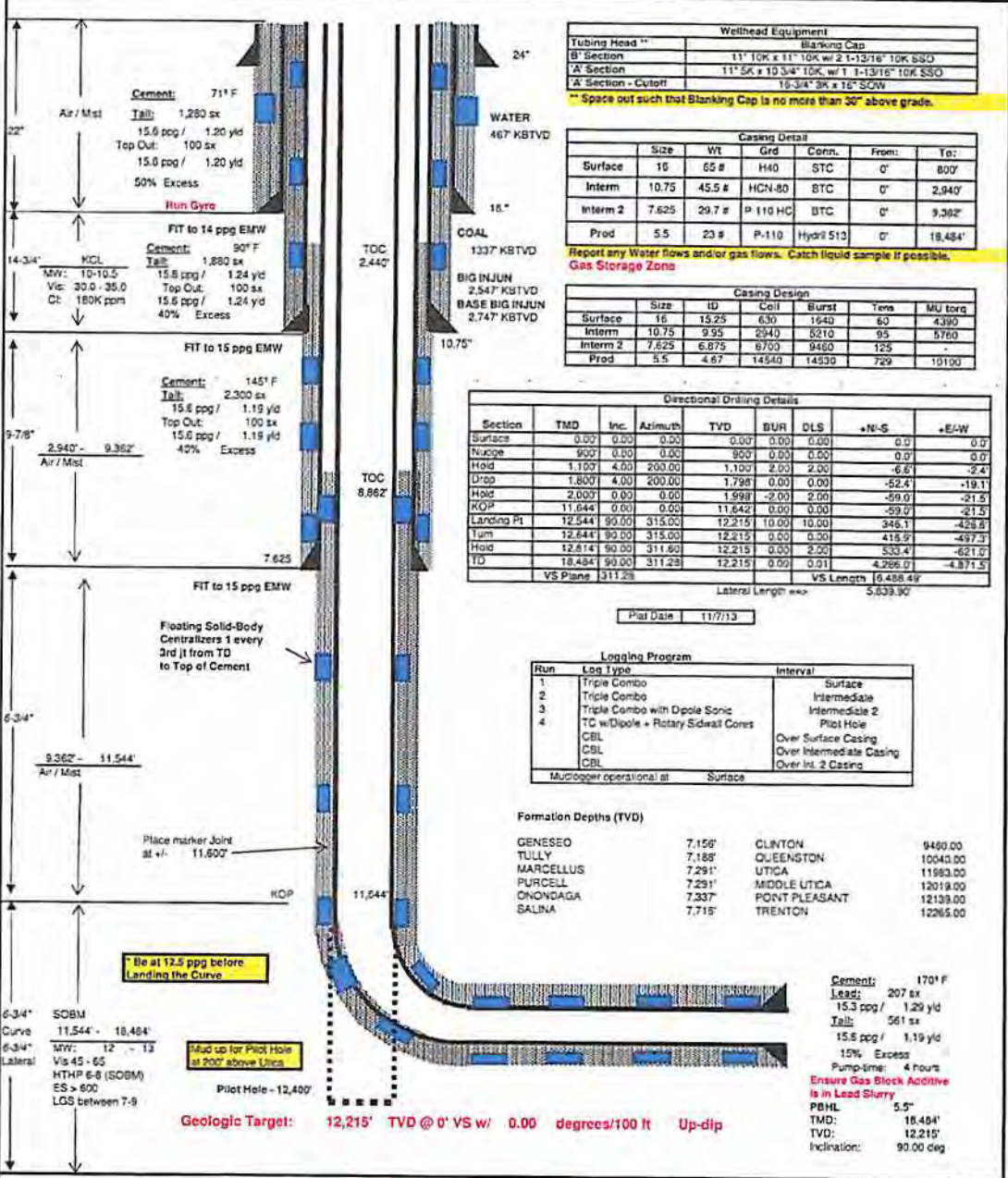
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Office of Oil and Gas
WV Dept. of Environmental Protection

04/11/2014

		Well Name: James Messenger WTZ 3H U	Drilling Rig: Nomac 337
Drilling Engineer: Jeremy Pys	Formation: Utica	Directional Drilling: Wearford	Drilling Mud: MI Swaco
Superintendent: J. McVite	County, State: Wetzel, WV	Cement Surface: Schlumberger	Cement Longstrings: Schlumberger
Asset Manager: Alex Johnson	Surface Latitude: 39.673693	Surface Longitude: -80.690861	Wellhead: Sweco
Geologist: Nick Downs	BH Latitude: 39.685261	BH Longitude: -80.70837	AFE #: 174670 Well #: 636457
Land: Bryan Lohoff	KB Elevation: 1517	Ground Elevation: 1495'	



Gyro the 1st well on the pad at KOP.
 Ensure all Surveys are referenced to Grid North!!

Drawn by: **Jeremy Pys**
 Date: **4/7/14**

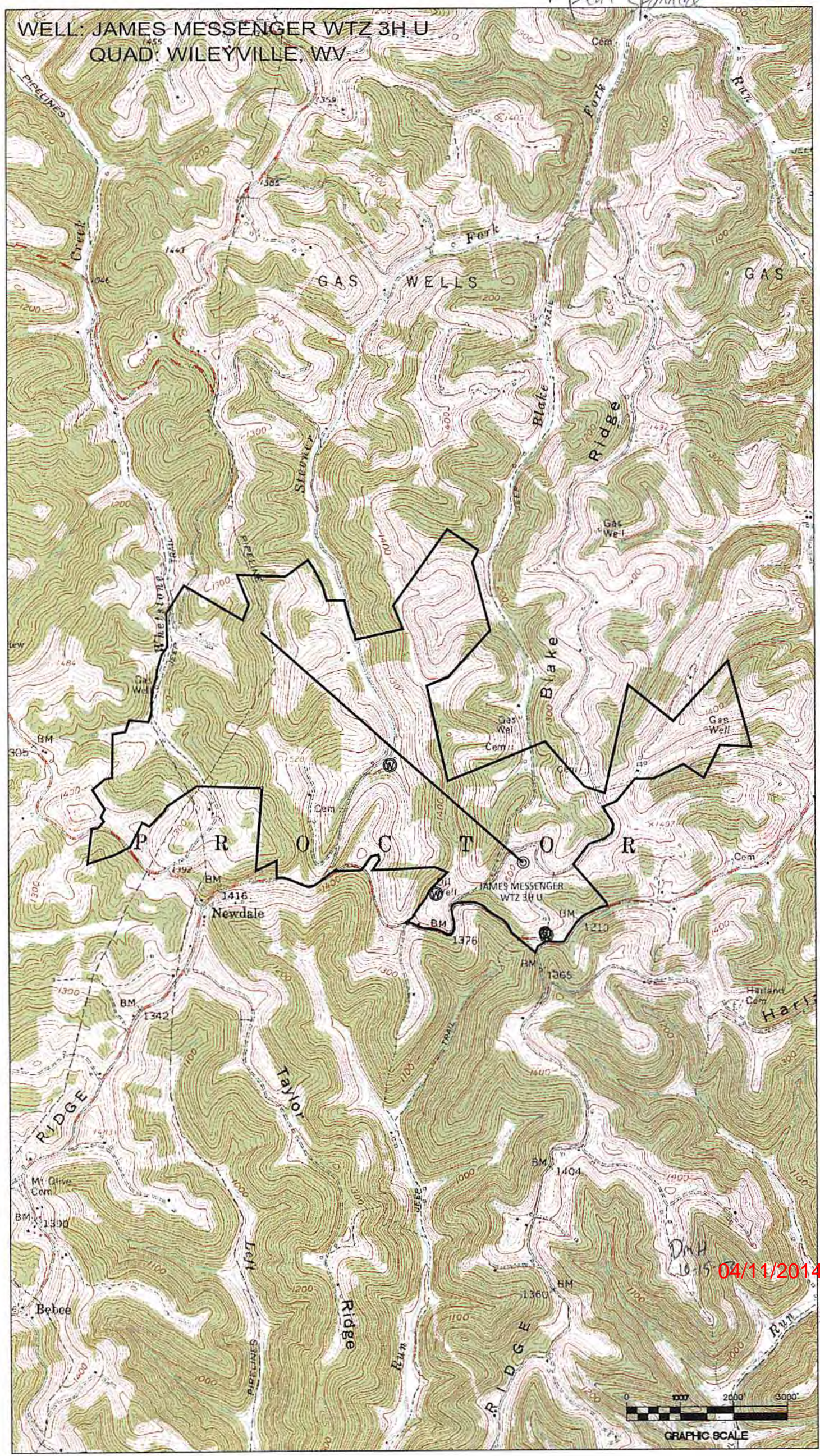
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Office of Oil and Gas
 WV Dept. of Environmental Protection
 04/11/2014

✓ Plat cont'd 3 02973H W

WELL: JAMES MESSENGER WTZ 3H U
QUAD: WILEYVILLE, WV



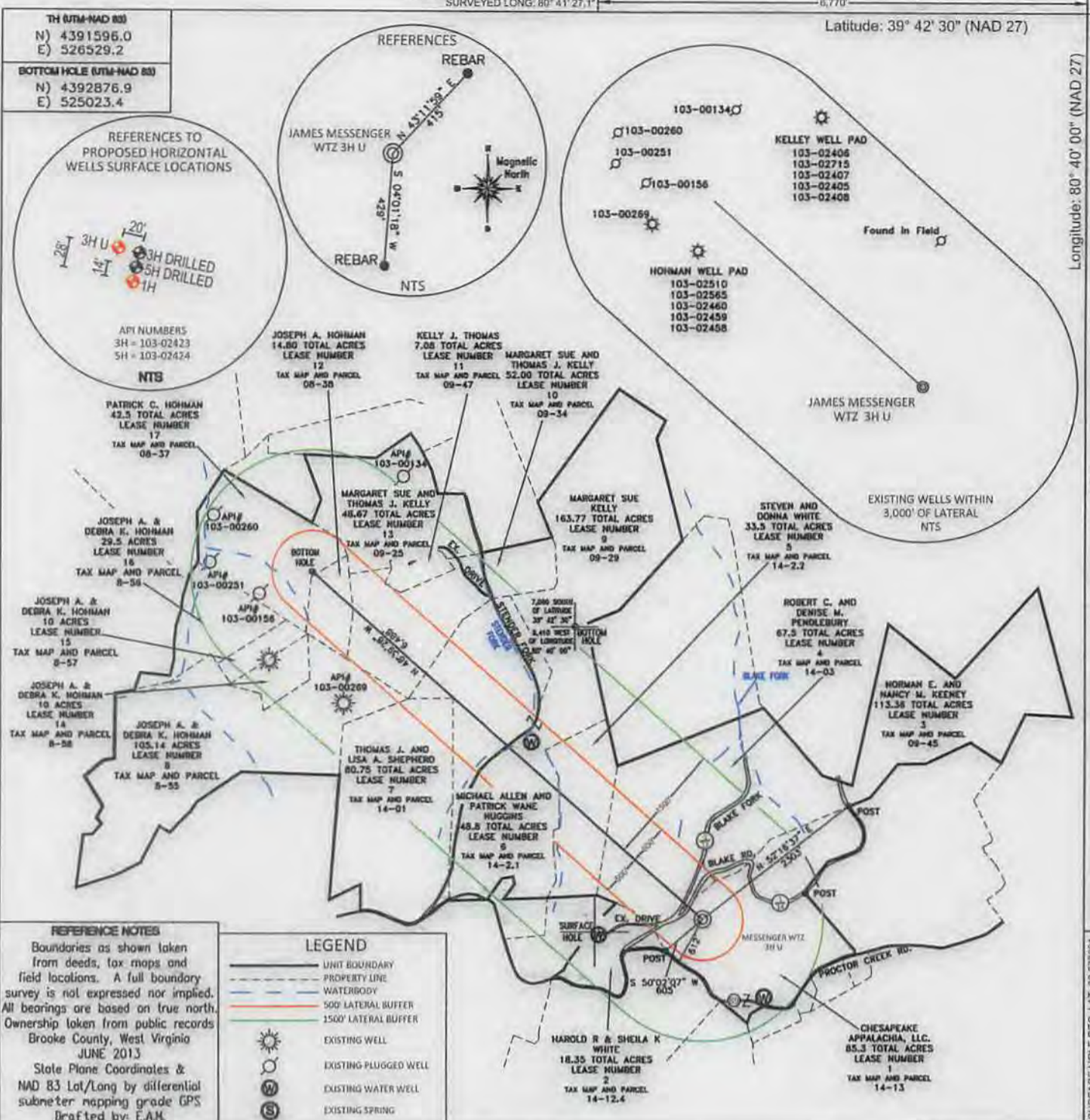
DNH 10-15 04/11/2014



SURFACE HOLE DEC. LONG: 80.690861
 SURVEYED LONG: 80° 41' 27.1"

Latitude: 39° 42' 30" (NAD 27)

Longitude: 80° 40' 00" (NAD 27)



REFERENCE NOTES
 Boundaries as shown taken from deeds, tax maps and field locations. A full boundary survey is not expressed nor implied. All bearings are based on true north. Ownership taken from public records Brooke County, West Virginia JUNE 2013
 State Plane Coordinates & NAD 83 Lat/Long by differential submeter mapping grade GPS
 Drafted by: E.A.M.

LEGEND
 — UNIT BOUNDARY
 - - - PROPERTY LINE
 --- WATERBODY
 --- 500' LATERAL BUFFER
 --- 1500' LATERAL BUFFER
 ☀ EXISTING WELL
 ☉ EXISTING PLUGGED WELL
 Ⓜ EXISTING WATER WELL
 Ⓢ EXISTING SPRING

FILE #: CHE 117
 DRAWING #: 2272
 SCALE: PLAT - 1" = 1800'
 TICK MARK - 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1/200
 PROVEN SOURCE: SUBMETER MAPPING
 OF ELEVATION: GRADE GPS

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 ENVIRONMENTAL PROTECTION.
 Signed: *[Signature]*
 L.L.S. #2124 : Ernest J. Benchek III



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

DATE: NOVEMBER 7, 2013
 OPERATOR'S WELL #: James Messenger WTZ 3H U
 API WELL #: 47 103 02973 H U
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep Shallow AS-BUILT
 Gas Liquid Injection Storage

WATERSHED: FISH CREEK PAD ELEVATION: 1495'

COUNTY/DISTRICT: WETZEL / PROCTOR QUADRANGLE: WILEYSVILLE, WV.
 SURFACE OWNER: CHESAPEAKE APPALACHIA, LLC. ACREAGE: 85.3 +/-
 OIL & GAS ROYALTY OWNER: CHESAPEAKE APPALACHIA, LLC. ACREAGE: 931.02 +/-

LEASE NUMBERS: _____

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: UTICA ESTIMATED DEPTH: TVD: 12,215' TMD: 18,990'
 WELL OPERATOR: CHESAPEAKE APPALACHIA, LLC. DESIGNATED AGENT: ERIC GILLESPIE
 ADDRESS: PO BOX 18496 ADDRESS: PO BOX 6070
 CITY: OKLAHOMA CITY STATE: OK ZIP CODE: 73154-0496 CITY: CHARLESTON STATE: WV ZIP CODE: 25362

04/11/2014