



west virginia department of environmental protection

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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Wednesday, March 29, 2017
WELL WORK PERMIT
Vertical / Plugging

CABOT OIL & GAS CORPORATION (A)
2000 PARK LANE, SUITE 300

PITTSBURGH, PA 15275

Re: Permit approval for 1
47-015-00997-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

Operator's Well Number: 1
Farm Name: MORRIS, E. R.
U.S. WELL NUMBER: 47-015-00997-00-00
Vertical / Plugging
Date Issued: 3/29/2017

Promoting a healthy environment.

03/31/2017

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

- 1) Date February 20, 2017
- 2) Operator's
Well No. E.R. Morris #1
- 3) API Well No. 47-015 - 00997

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil / Gas / Liquid injection / Waste disposal /
(If "Gas, Production or Underground storage) Deep / Shallow

5) Location: Elevation 1,539.63' Watershed Right Fork of Sycamore Creek
District Pleasant County Clay Quadrangle Bentree

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Phillip Hill - Cabot Oil & Gas Corporation
Address 2000 Park Lane, Suite 300 Address 900 Lee Street, East, Suite 1500
Pittsburgh, PA 15275 Charleston, WV 25301

8) Oil and Gas Inspector to be notified Name Jeremy James 9) Plugging Contractor
- Address P.O. Box 36 Name Contractor Services, Inc.
Clendenin, WV 25045 Address 929 Charleston Road
Spencer, WV 25276

10) Work Order: The work order for the manner of plugging this well is as follows:

See Attached Sheet

RECEIVED
Office of Oil and Gas

MAR 7 2017

WV Department of
Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector  Date 2-28-17

Morris, E.R. #1 API # 47 - 015 - 00997 PLUGGING PROCEDURE

Current Configuration

TD @ 2740'
8-5/8", 24#/ft, H-40 casing @ 142' GL (CTS, 100 sx)
4 1/2", 10.5 #/ft, casing @ 2737' GL (35 sx, TOC @ 2360' per CBL 1974)
2 3/8", 4.6 #/ft, 10RD tubing @ 2690' GL
Fresh water @ none listed → 45' SALT WATER 1170'
Coal @ none listed
Injun/Squaw @ 2670' - 2730'
Perforations @ 2670'-2686' (16h) & @ 2723' - 2727' (4h) (frac'd w/ 330 sx sand)
Elevation - 1533'

PROCEDURE

1. Contact Pineville Office a minimum of 48 hours prior to starting work.
2. Contact State Inspector a minimum of 24 hours prior to starting work.
3. MIRU service rig and blow down well.
4. Lay 2" line from wellhead to tank and stake down securely.
5. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
6. Unpack wellhead.
7. Latch on to 2-3/8" tubing.
8. MIRU Cementing Company.
9. Pump 3 bbls 6% gel followed by 15 sks (3 bbls) of Class A cement for plug 1 from 2690' to 2490'.
10. Displace w/ 10 bbls of 6% Gel.
11. Pull tubing to +/- 2200', safely above cement top. WOC for a minimum of eight hours.
12. RIH w/ work string - tag TOC to confirm.
13. TOOH with tubing.
14. Run freepoint on 4 1/2" casing, cut above freepoint, and POOH. (NOTE: cement top is stated @ 2360' per McCullough CBL 1974).
15. TIH with 2-3/8" work string to 2400'
16. Pump 18 bbls 6% gel followed by 71 sks (15 bbls) of Class A cement for cement plug 2 from 2400' to 2000'. Cement must cover the 4 1/2" casing cut.
17. Displace w/ 8 bbls of 6% Gel.
18. Pull tubing to +/- 1800', safely above cement top. WOC for a minimum of eight hours.
19. RIH w/ work string - tag TOC to confirm.
20. PU tubing to 1600'.
21. Pump 53 bbls 6% gel followed by ~~42 sks (9 bbls)~~ of Class A cement for cement plug 3 from 1600' to 1400'.
22. Displace w/ 5 1/2 bbls of 6% Gel.
23. PU tubing to 200'.
24. Pump 55 sks (12 bbls) of Class A cement for cement plug 4 from 200' to surface.
25. TOOH with work string and lay down.
26. RDMO Cementing Company.
27. Place monument as required by law on top of well bore.
28. Reclaim well site.

SEE NOTE ★

RECEIVED
Office of Oil and Gas

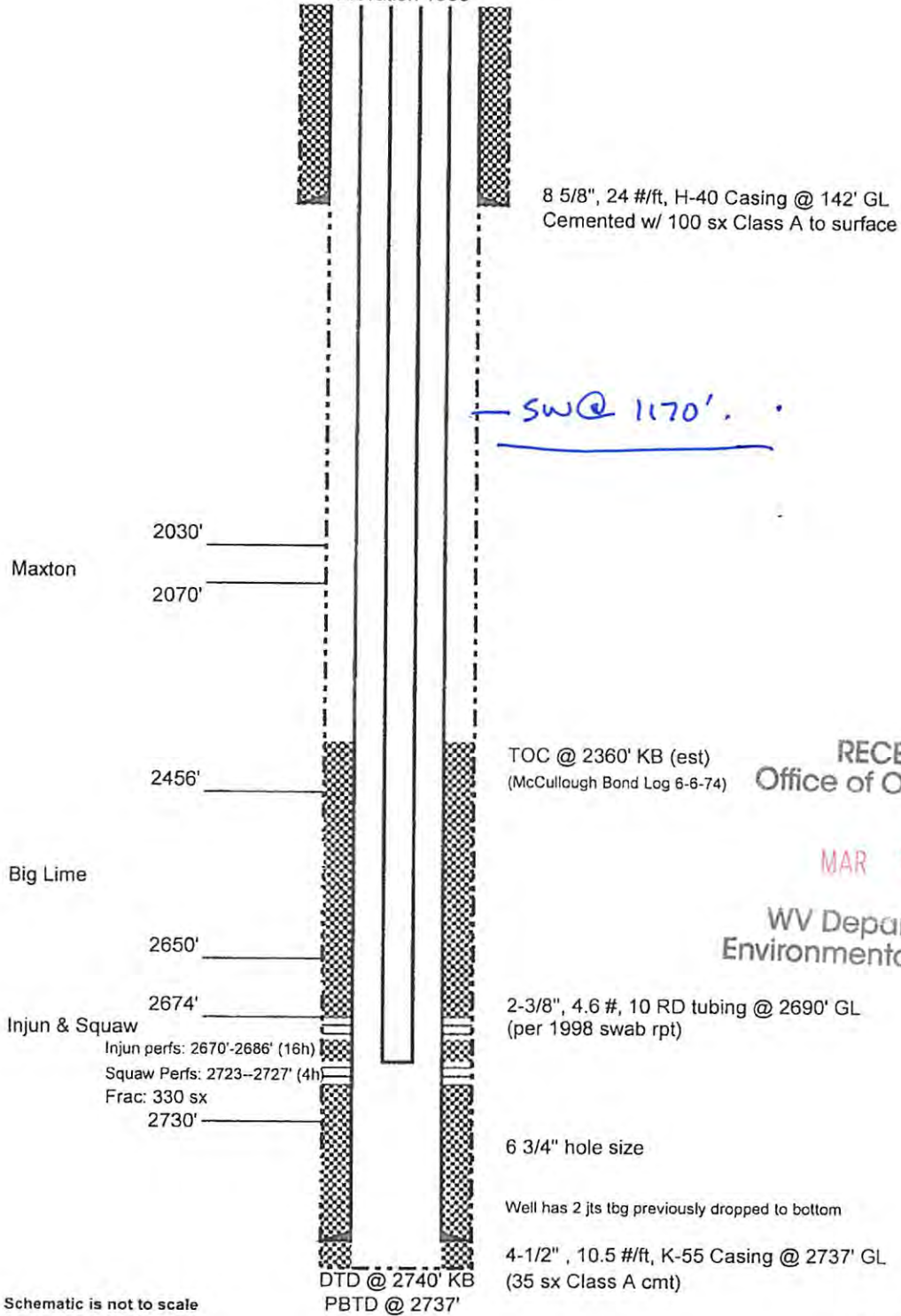
MAR 7 2017

WV Department of
Environmental Protection

★ PLUG 3 FROM 1400' TO 1100'
TO COVER SALT WATER SHOW
@ 1170'. ADJUST SKS TO 63 SKS FOR 300' PLUG,
JMM
03/31/2017

CURRENT CONFIGURATION

E.R. Morris #1
API 47-015-00997
CURRENT CONFIGURATION
Elevation 1533'



RECEIVED
Office of Oil and Gas

MAR 7 2017

WV Department of
Environmental Protection

Schematic is not to scale

g.a. slirey 2/16/2017



RECEIVED

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL & GAS DIVISION
DEPT OF MINES

Oil and Gas Division

WELL RECORD

Quadrangle Clay
Permit No. Cl a-997

Rotary Oil _____
Cable _____ Gas
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind)

Company Appalachian Exploration & Dev., Inc.
Address P.O. Box 628, Charleston, W. Va.
Farm E.R. Morris Gas Unit Acres 12
Location (waters) Open Fk./Bells Crk. Gauley R.
Well No. 1 Elev. 1533'
District Pleasant County Clay
The surface of tract is owned in fee by E.R. Morris
Address Hill Rd., Box 5, Lizemore, W. Va.
Mineral rights are owned by same
Address _____
Drilling Commenced 5/26/74
Drilling Completed 6/3/74
Initial open flow _____ cu. ft. _____ bbls.
Final production 636 M cu. ft. per day _____ bbls.
Well open 10-1/2 hrs. before test 90 RP.
Well treatment details:

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10"			
9 5/8			
8 5/8	142'	142'	
7			
5 1/2			
4 1/2	2737'	2737'	
3			
2-3/8"	2680'	2680'	
Liners Used			

Attach copy of cementing record.

Perforated Squaw, Injun 2670-86' 2723-27' 1 hole per ft. Balled out with 1000 gals. penetrating acid. Fract with 1000 gals. Methanol, 900 bbls. gelled water, 30,000# 20/40 sand, 30,000# 10/20 sand. Breakdown psi 900#. Maximum psi 3100#. Average psi 2369#.

Coal was encountered at none reported Feet _____ inches
Fresh water 45' Feet _____ Salt Water 1170' Feet _____
Producing Sand Squaw, Injun Depth 2670-86' 2723-27'

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Rotary			0	8		
Shale and soil			8	150		
Rock			150	215		
Sand stone and shale			215	410		
Shale and sand			410	650		
Shale			650	899		
Shale and sand			899	1170		
Salt sand			1170	1765		
Shale			1765	2030		
Sand Maxton			2030	2070		
Shale			2070	2106		
Sand			2106	2154		
Shale			2154	2364		
Sandy shale with lime			2364	2456		
Big Lime			2456	2650		
Red sand			2650	2690		
Shale			2690	2714		
Sand with shale			2714	2740	T.D.	

Received
Office of Oil & Gas

MAR 02 2017

03/31/2017

C/A4 - 997

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Cement Record						
Casing		Cement		No. of sks.		
8-5/8"		Class A		100		circulated to surface
4-1/2"		Thixotropic		35		

Received
Office of Oil & Gas
MAR 02 2017

03/31/2017

Date July 17 19 74
 Appalachian Exploration & Development, Inc.
 APPROVED: [Signature] Owner
 By [Signature] District Production Superintendent
 (Title)

15 00997 P

WW-4A
Revised 6-07

1) Date: February 20, 2017
2) Operator's Well Number
E.R. Morris #1
3) API Well No.: 47 - 015 - 00997

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

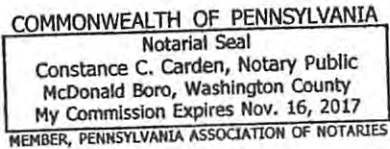
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Alfred Gary & Georgie Jomayne Holcomb</u>	Name <u>Not Operated</u>
Address <u>15407 Clay Highway</u> <u>Lizemores, WV 25125</u>	Address _____
(b) Name <u>Jimmy D. & Philip D. Backus</u>	(b) Coal Owner(s) with Declaration
Address <u>P.O. Box 99</u> <u>Lizemores, WV 25125</u>	Name <u>Blaze Minerals, LLC</u>
(c) Name <u>Evelena Bird Heirs</u>	Address <u>520 Folly Road, Suite P285</u> <u>Charleston, SC 29412</u>
Address <u>264 Meadow Branch Road</u> <u>Bomont, WV 25030</u>	Name _____
6) Inspector <u>Jeremy James</u>	Address _____
Address <u>P.O. Box 36</u> <u>Clendenin, WV 25045</u>	(c) Coal Lessee with Declaration
Telephone <u>(304) 951-2596</u>	Name <u>None of Record</u>
	Address _____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator Cabot Oil & Gas Corporation
 By: Kenneth L. Marcum
 Its: Regulatory Supervisor
 Address 2000 Park Lane, Suite 300
Pittsburgh, PA 15275
 Telephone (412) 249-3850

Received
Office of Oil & Gas
MAR 02 2017

Subscribed and sworn before me this 20th day of February, 2017
Constance C. Carden Notary Public
My Commission Expires November 16, 2017

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

03/31/2017

WW-9
(2/15)

API Number 47 - 015 - 00997

Operator's Well No. E.R. Morris #1

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Cabot Oil & Gas Corporation OP Code 08145

Watershed (HUC 10) Right Fork of Sycamore Creek Quadrangle Bentree

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No treated pit wastes will be produced)

Will closed loop system be used? If so, describe: N/A

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. no drilling proposed

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. No cuttings produced during plugging operation

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Kenneth L. Marcum*

Company Official (Typed Name) Kenneth L. Marcum

Company Official Title Regulatory Supervisor

Subscribed and sworn before me this 20th day of February, 2017

Constance C. Carden

Notary Public
COMMONWEALTH OF PENNSYLVANIA

My commission expires 11/16/2017

Notarial Seal
 Constance C. Carden, Notary Public
 McDonald Boro, Washington County
 My Commission Expires 11/16/2017
 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Form WW-9

Operator's Well No. E.R. Morris #1

Cabot Oil & Gas Corporation

Proposed Revegetation Treatment: Acres Disturbed 1.5 Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20/20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch Pulp Fiber at 1000 to 1500 lbs. Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type	lbs/acre	Seed Type	lbs/acre
(Grain Rye - 100) (Red Clover - 5) (Fescue - 40)		(Grain Rye - 100) (Red Clover - 5) (Fescue - 40)	
(Annual Rye - 20) (White Clover - 5)		(Annual Rye - 20) (White Clover - 5)	
(Perennial Rye - 10) (Alta Sweet Clover - 5)		(Perennial Rye - 10) (Alta Sweet Clover - 5)	
(Yellow Clover - 5) (Birdsfoot Trefoil - 10)		(Yellow Clover - 5) (Birdsfoot Trefoil - 10)	

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: 

Comments: _____

Title: inspector OOG

Date: 2-27-17

Field Reviewed? () Yes () No

RECEIVED
Office of Oil and Gas

MAR 7 2017

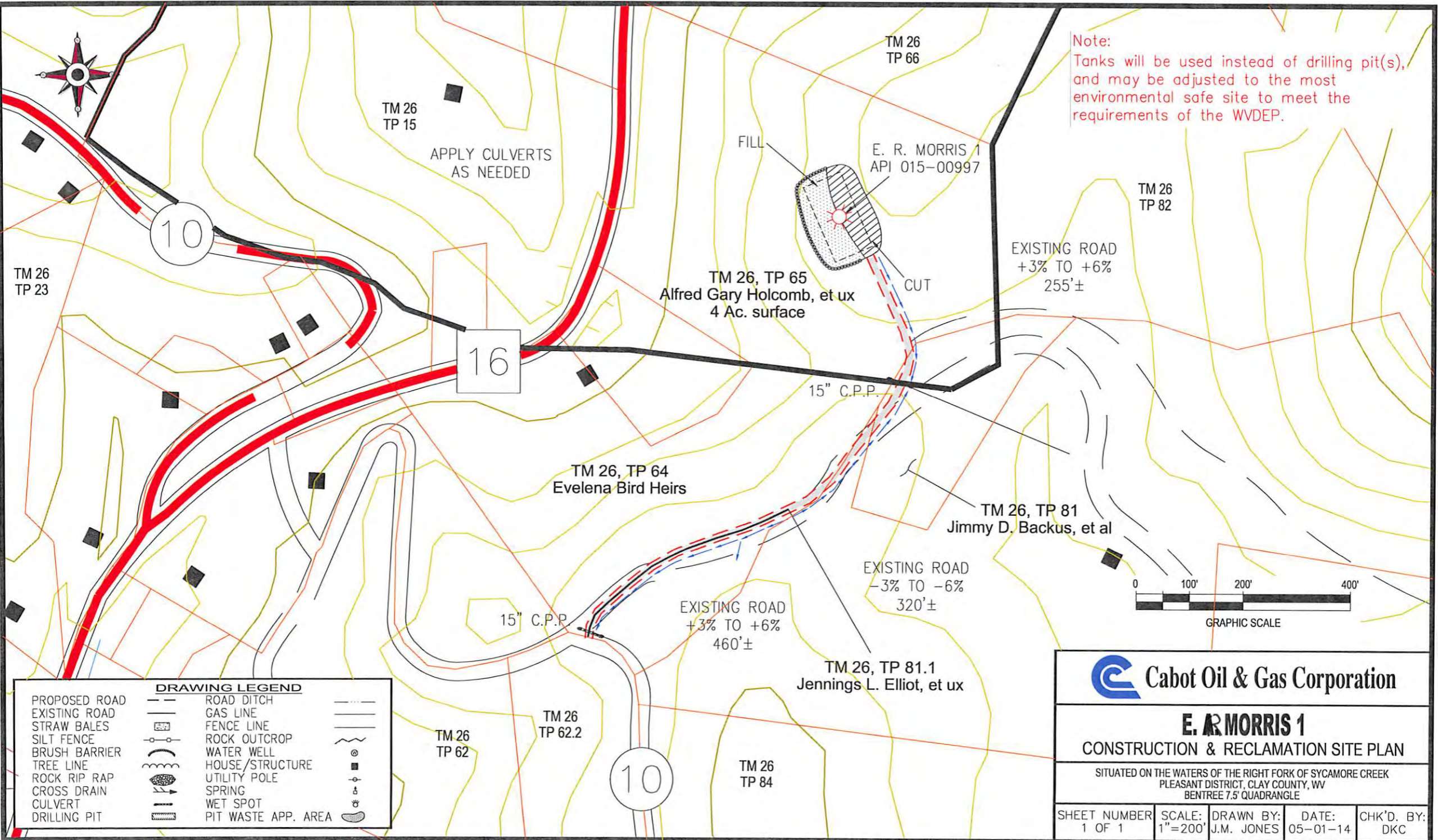
WV Department of
Environmental Protection

03/31/2017

1500997



Note:
Tanks will be used instead of drilling pit(s),
and may be adjusted to the most
environmental safe site to meet the
requirements of the WVDEP.



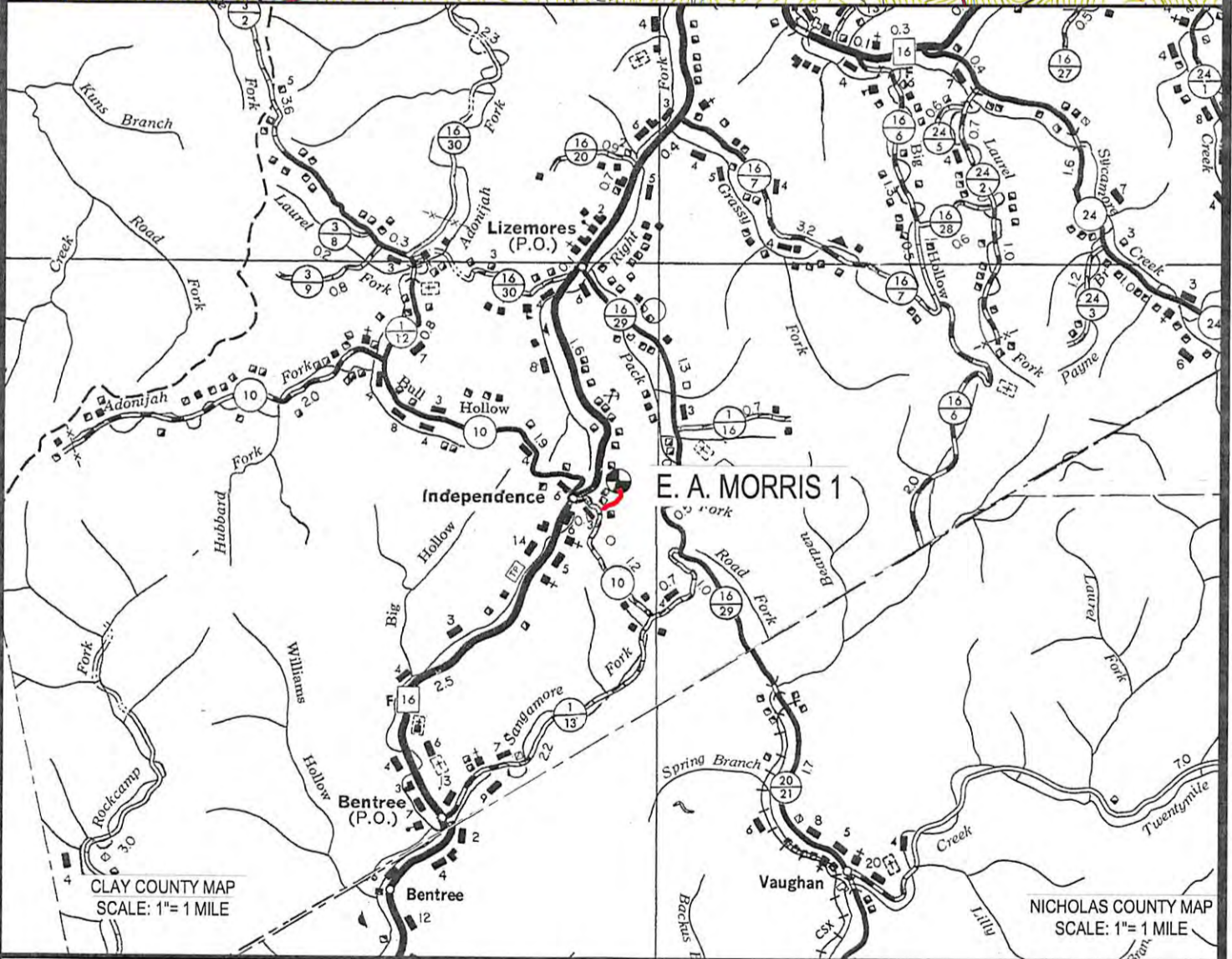
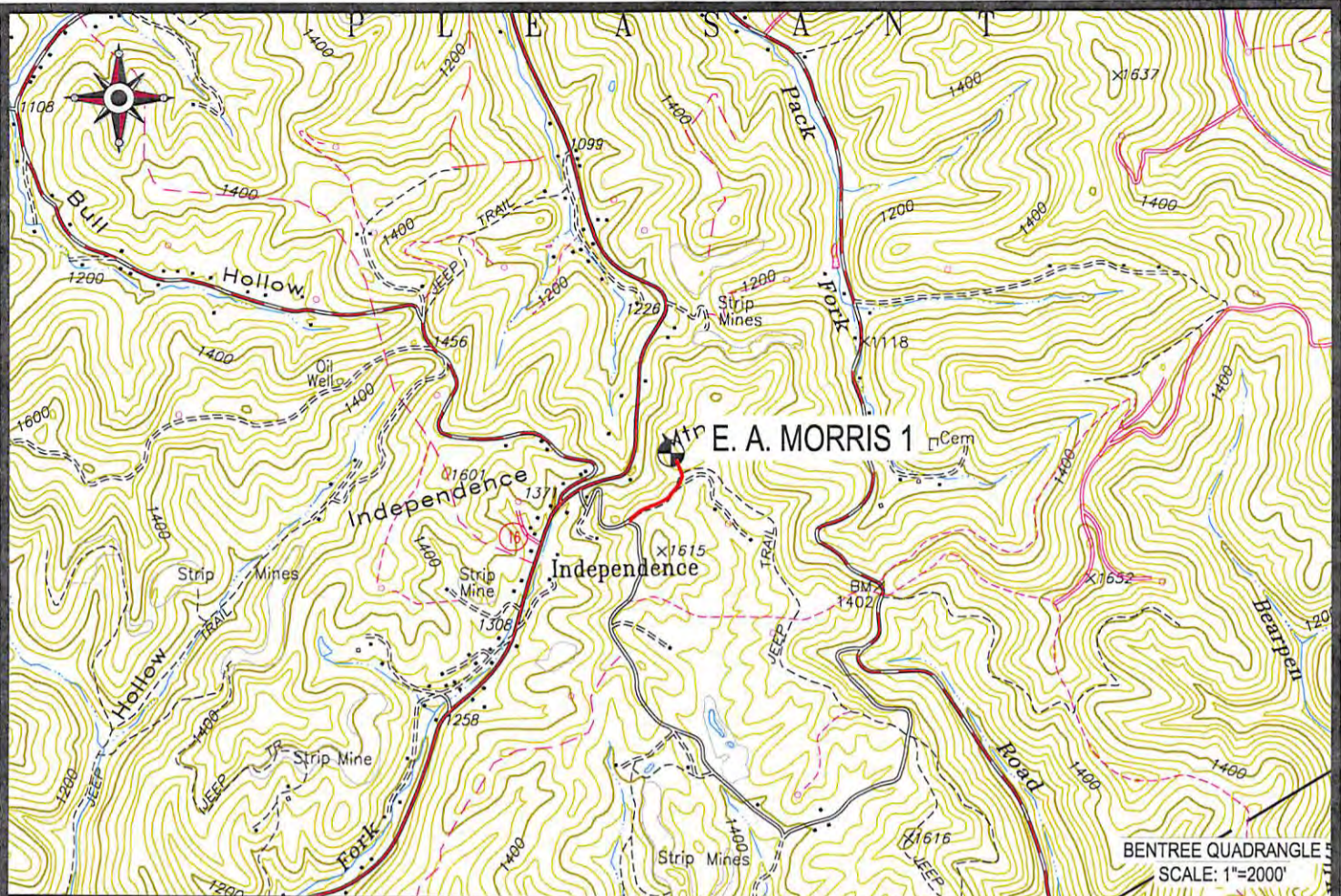
DRAWING LEGEND		
PROPOSED ROAD	ROAD DITCH	UTILITY POLE
EXISTING ROAD	GAS LINE	WET SPOT
STRAW BALES	FENCE LINE	PIT WASTE APP. AREA
SILT FENCE	ROCK OUTCROP	
BRUSH BARRIER	WATER WELL	
TREE LINE	HOUSE/STRUCTURE	
ROCK RIP RAP	UTILITY POLE	
CROSS DRAIN	SPRING	
CULVERT	WET SPOT	
DRILLING PIT	PIT WASTE APP. AREA	

Cabot Oil & Gas Corporation

E. R. MORRIS 1
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF THE RIGHT FORK OF SYCAMORE CREEK
PLEASANT DISTRICT, CLAY COUNTY, WV
BENTREE 7.5' QUADRANGLE

SHEET NUMBER 1 OF 1	SCALE: 1"=200'	DRAWN BY: J.M. JONES	DATE: 05-01-14	CHK'D. BY: DKC
------------------------	-------------------	-------------------------	-------------------	-------------------



 Cabot Oil & Gas Corporation

E. A. MORRIS 1
LOCATION MAP 03/31/2017



CUNNINGHAM

LAND SURVEYING & MAPPING SERVICES, LLC
5213 STEPHEN WAY
CROSS LANES, WEST VIRGINIA 25313
VOICE (304) 561-4129 FAX (304) 776-0703
E-MAIL ADDRESS DKCUNNINGHAM@SUDDENLINK.NET

LOCATED ON THE WATERS OF THE RIGHT FORK
OF SYCAMORE CREEK
PLEASANT DISTRICT, CLAY COUNTY, WV
BENTREE 7.5' QUADRANGLE

PROJECT NO. CABOT	DWG. MORRIS 1 LOC
DATE: 05-01-14	SCALE: AS NOTED
DRAWN BY: J. JONES	CHK'D BY: D.K.C.
	FILE: C:\PROJECT FOLDER\CABOT

GENERAL NOTES:

THIS DRAWING REPRESENTS A SCHEMATIC REPRESENTATION OF THE PROPOSED WELL SITE AND ACCESS ROAD. PROPOSED STRUCTURES SUCH AS THE DRILLING PIT, ROADWAY, CULVERTS, SEDIMENT BARRIERS, ETC. ARE SHOWN IN THEIR APPROXIMATE PREPLANNING CONFIGURATION. GIVEN UNFORESEEN CIRCUMSTANCES, THE AS-BUILT LOCATION OF THESE STRUCTURES MAY VARY SLIGHTLY FROM THE LOCATION SHOWN ON THE ATTACHED DRAWINGS.

ALL ROADS SHOWN THEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH GUIDELINES AND REQUIREMENTS OF WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL MANUAL.

ALL CULVERTS SHOWN ON THIS DRAWING ARE PROPOSED AND WILL BE A MINIMUM OF 15" IN DIAMETER UNLESS OTHERWISE NOTED.

DITCH LINES AND CULVERTS WILL BE INSTALLED WHENEVER PRACTICAL. HOWEVER PORTIONS OF THE EXISTING/ PROPOSED ROADS WHICH ARE LOCATED IN SOLID ROCK SHALL NOT REQUIRE DITCHES OR CROSS DRAINS, UNLESS OTHERWISE WARRANTED BY FIELD CIRCUMSTANCES.

SUPPLEMENTAL DRAINAGE AND/OR SEDIMENT CONTROL STRUCTURES MEASURES IN ADDITION TO THOSE SHOWN ON THE ATTACHED DRAWINGS WILL BE INSTALLED WHEN AND WHERE DEEMED NECESSARY. SUCH ADDITIONAL MEASURES MAY CONSIST OF EITHER STRAW BALES, SILT FENCES OR OTHER MEASURES OUTLINED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

SEDIMENT BASINS (TRAPS) WILL BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAINS INLETS AS REQUIRED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL MANUAL. FIELD CONDITIONS SUCH AS ROCK OUTCROPS AND BEDROCK MAY PROHIBIT INLET TRAPS BEING INSTALLED WHEN THESE CONDITIONS EXIST. ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

A SEDIMENT BARRIERS OF EITHER BRUSH, STRAW BALES, FILTER FENCE, ETC. WILL BE INSTALLED AND MAINTAINED BELOW THE OUT FALL OF ALL PROPOSED CULVERTS AND AT ALL OTHER STORM WATER DRAINAGE POINTS FROM EITHER THE ROADWAY OR THE LOCATION.

ALL NECESSARY TIMBER OR BRUSH WILL BE REMOVED FROM ROUTE OF THE ROADWAY AND LOCATION BY CLEANING AND GRUBBING ACTIVITIES. ANY SALVAGEABLE TIMBER WILL BE CUT AND STACKED TO THE SIDE OF THE ROADWAY OR REMOVED TO A STOCKPILE AREA. THE REMAINING TIMBER OR BRUSH WILL BE CUTUP AND WIND ROWED BELOW THE OUTSLOPE OF THE CONSTRUCTION AREAS TO BE UTILIZED AS A SEDIMENT BARRIER.

SEPARATE PERMITS WILL BE OBTAINED FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ALL POINTS OF INGRESS AND EGRESS FROM COUNTY AND STATE ROADS. THESE INGRESS AND EGRESS POINTS WILL BE MAINTAINED IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS. A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF 8" OF CRUSHED STONE WILL BE CONSTRUCTED FOR A MINIMUM DISTANCE OF 50' FROM THE INGRESS AND EGRESS POINTS OF ALL PUBLIC ROADWAYS IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS.

ALL CULVERTS SHOWN ON THE ATTACHED DRAWINGS ARE TO BE CONSIDERED PERMANENT AND WILL REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE. A STABILIZED OUTLET CONTROL DEVICE SUCH AS RIP RAP, NATURAL STONE, BRUSH, ETC. WILL BE INSTALLED BELOW THE OUT FALL OF ANY ROADWAY CULVERT(S) WHICH ARE NOT LOCATED IN A STREAM OR CREEK.

PERMANENT CROSS DRAINS OR WATER BARS WILL BE INSTALLED AS AN INTEGRAL PART OF THE RECLAMATION PROCESS AND SHALL BE SPACED IN ACCORDANCE WITH AS-BUILT ROADWAY SLOPES AND TABLE 11-4 OF THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

TEMPORARY SEEDING AND MULCHING WILL BE UTILIZED TO PROVIDE A VEGETATIVE COVER ON ALL DISTURBED AREAS I.E. ROADWAYS, LOCATION, ROAD/LOCATION SLOPES AND ANY OTHER AREAS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES.

THE LOCATION OF DRILLING PIT(S) MAY BE ADJUSTED TO THE MOST ENVIRONMENTAL SAFE SITE TO MEET THE REQUIREMENTS OF THE WVDEP.

CONTRACTORS NOTE:

IT IS THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND CONDITION OF ALL UNDERGROUND UTILITIES, SANITARY SEWERS, STORM SEWERS, ETC. PRIOR TO THE COMMENCEMENT OF ANY/OR CONSTRUCTION ACTIVITIES. DIG WITH C.A.R.E. CALL MISS UTILITY 1-800-245-4848.

ROAD GRADE (%)	DISTANCE (FT)
1	400
2	250
5	135
10	80
15	60
20	45

ROAD GRADE (%)	DISTANCE (FT)
2-5	500-300
6-10	300-200
11-15	200-100
16-20	100



1-800-245-4848

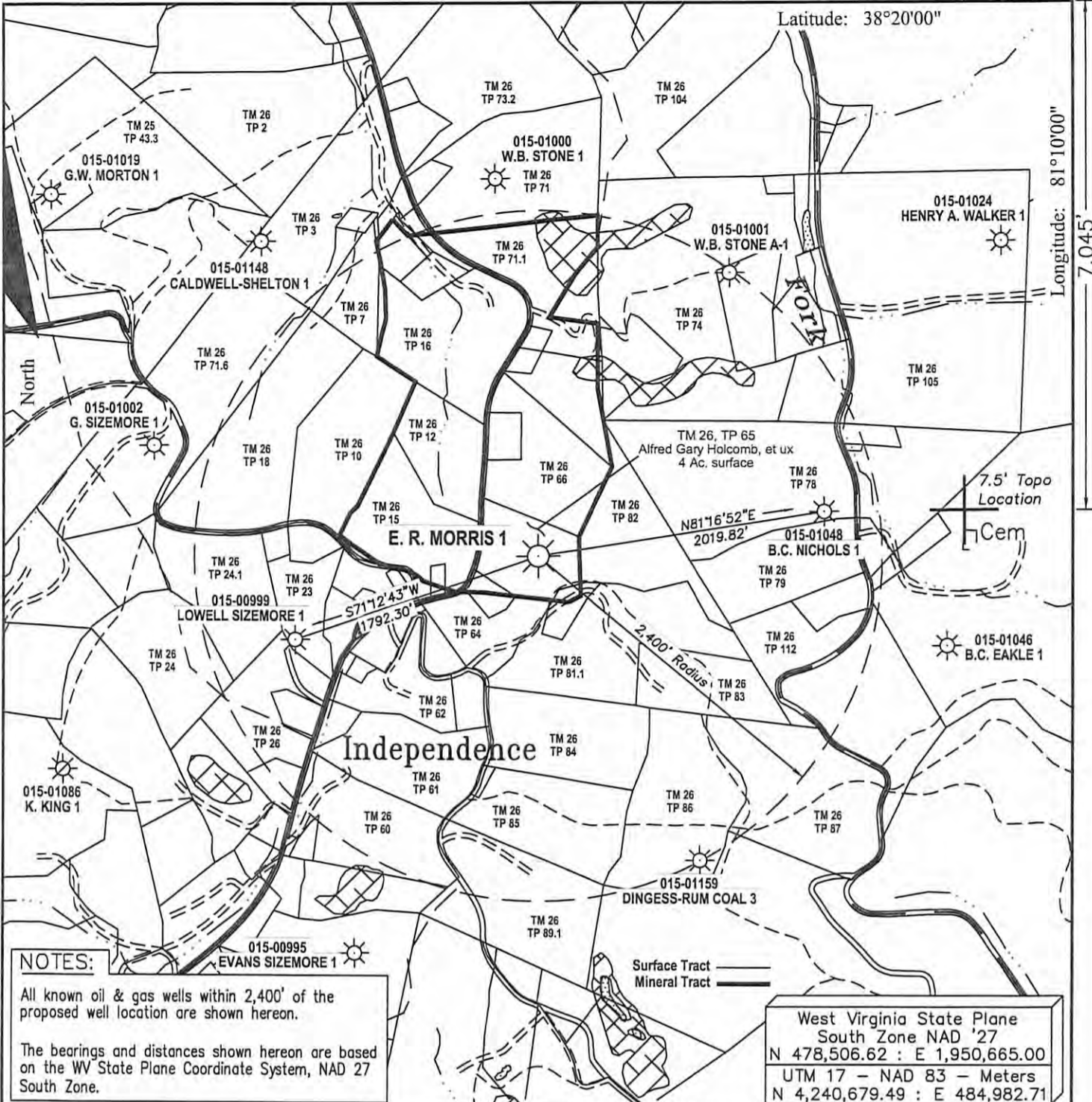
DRAWING LEGEND

- PROPOSED ROAD
- EXISTING ROAD
- STRAW BALES
- SILT FENCE
- BRUSH BARRIER
- TREE LINE
- ROCK RIP RAP
- CROSS DRAIN
- CULVERT
- DRILLING PIT
- ROAD DITCH
- GAS LINE
- FENCE LINE
- ROCK OUTCROP
- WATER WELL
- HOUSE/STRUCTURE
- UTILITY POLE
- SPRING
- WET SPOT
- PIT WASTE APP. AREA

DRIVING DIRECTIONS FOR E. R. MORRIS 1

- 1.) FROM CHARLESTON, W.VA DRIVE EAST ON INTERSTATE 64 FOR 16.0 MILES± TO EXIT 85 AND EXIT THE HIGHWAY.
- 2.) AT THE END OF THE EXIT RAMP, GO STRAIGHT AND CONTINUE EAST ACROSS THE BRIDGE TO U.S. ROUTE 60.
- 3.) TURN RIGHT AND CONTINUE IN AN EASTERLY DIRECTION ON U.S. ROUTE 60 FOR 3.7 MILES± TO THE INTERSECTION OF OLD U.S. 60/KELLEYS CREEK ROAD.
- 4.) TURN SLIGHTLY RIGHT AND CONTINUE IN A NORTHERLY DIRECTION ON SECONDARY ROUTE 81 FOR 17.3 MILES± TO STATE ROUTE 16.
- 5.) TURN LEFT AND CONTINUE IN A NORTHERLY DIRECTION ON STATE ROUTE 16 FOR 5.2 MILES± TO SECONDARY ROUTE 10.
- 6.) TURN RIGHT AND CONTINUE IN AN EASTERLY DIRECTION ON SECONDARY ROUTE 10 FOR 0.2 MILE± TO BEGINNING OF THE EXISTING ACCESS ROAD LOCATED ON THE LEFT-HAND SIDE OF THE ROAD.
- 7.) FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 0.2 MILE± TO THE WELL SITE AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

03/31/2017

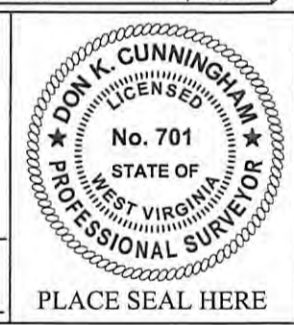


NOTES:
 All known oil & gas wells within 2,400' of the proposed well location are shown hereon.
 The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

West Virginia State Plane
 South Zone NAD '27
 N 478,506.62 : E 1,950,665.00
 UTM 17 - NAD 83 - Meters
 N 4,240,679.49 : E 484,982.71

FILE #: _____
 DRAWING #: Morris 1 ww6
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1 : 12,729
 PROVEN SOURCE OF ELEVATION: Global Positioning System (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 ENVIROMENTAL PROTECTION.
 Signed: Don K. Cunningham
 R.P.E.: _____ L.L.S.: 701



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



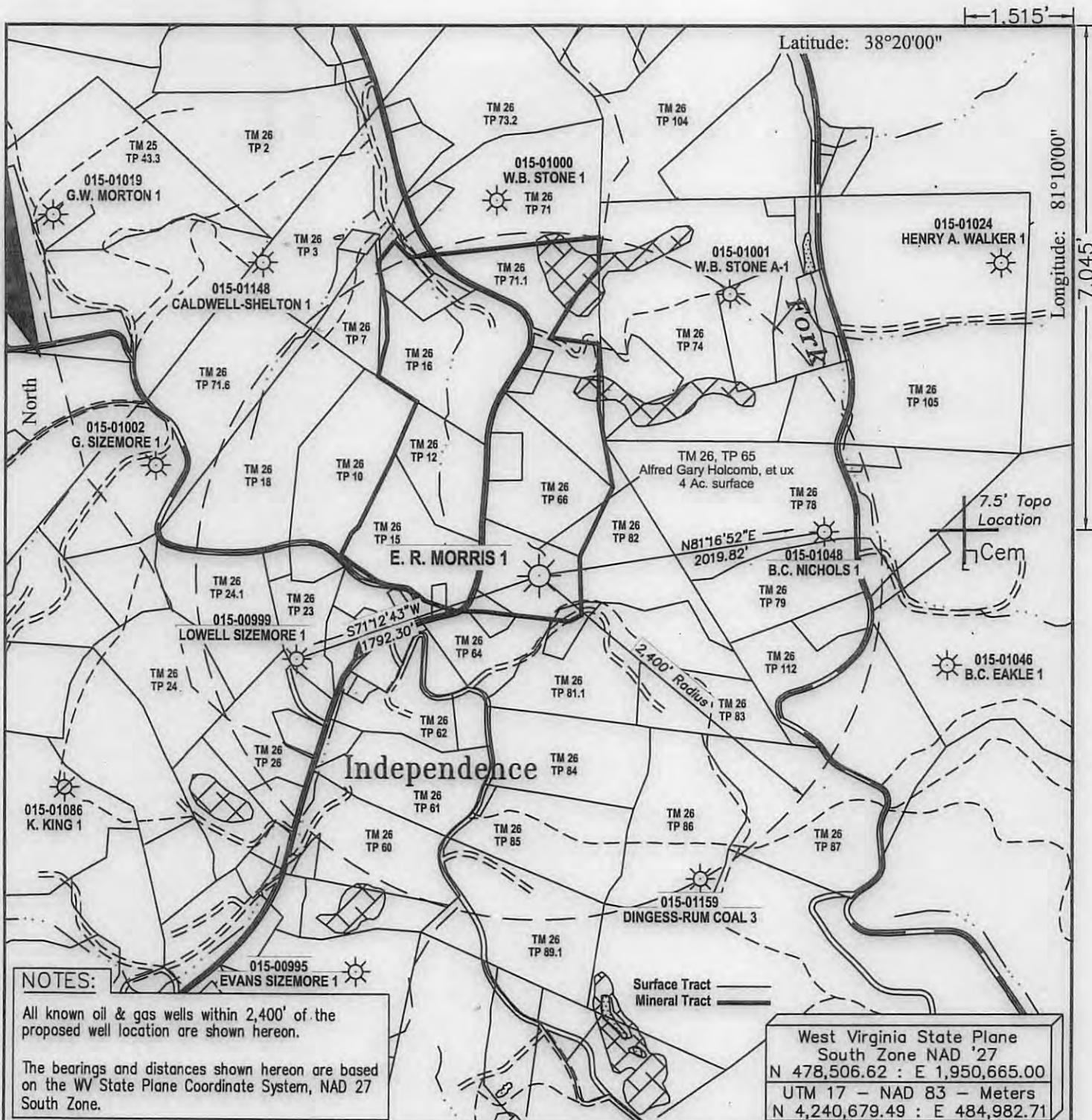
DATE: May 1, 2014
 OPERATOR'S WELL #: E. R. Morris 1
 API WELL #: 47 015 00997
 STATE COUNTY PERMIT

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

WATERSHED: Right Fork of Sycamore Creek ELEVATION: 1,539.63'
 COUNTY/DISTRICT: Clay / Pleasant QUADRANGLE: Bentree
 SURFACE OWNER: Alfred Gary Holcomb, et ux ACREAGE: 4
 OIL & GAS ROYALTY OWNER: Ezelle R. Morris, heirs ACREAGE: 70
 LEASE #: 47-0911 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: _____ ESTIMATED DEPTH: _____
 WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Whitney Johnson
 Address Five Penn Center West, Suite 401 Address P.O. Box 450
 City Pittsburgh State PA Zip Code 15276 City Glasgow State WV Zip Code 25086

03/31/2017



NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

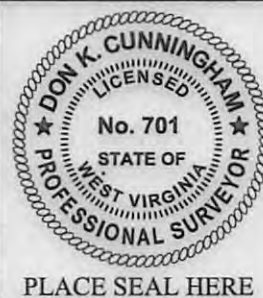
The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

West Virginia State Plane
South Zone NAD '27
N 478,506.62 : E 1,950,665.00
UTM 17 - NAD 83 - Meters
N 4,240,679.49 : E 484,982.71

FILE #: _____
DRAWING #: Morris 1 ww6
SCALE: 1" = 1000'
MINIMUM DEGREE OF ACCURACY: 1 : 12,729
PROVEN SOURCE OF ELEVATION: Global Positioning System (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 ENVIROMENTAL PROTECTION.

Signed: Don K. Cunningham
R.P.E.: _____ L.L.S.: 701



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



DATE: May 1, 2014
OPERATOR'S WELL #: E. R. Morris 1
API WELL #: 47 015 00997 P
STATE COUNTY PERMIT

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

WATERSHED: Right Fork of Sycamore Creek ELEVATION: 1,539.63'

COUNTY/DISTRICT: Clay / Pleasant QUADRANGLE: Bentree

SURFACE OWNER: Alfred Gary Holcomb, et ux ACREAGE: 4

OIL & GAS ROYALTY OWNER: Ezelle R. Morris, heirs ACREAGE: 70

LEASE #: 47-0911 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: _____ ESTIMATED DEPTH: _____

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Whitney Johnson
Address Five Penn Center West, Suite 401 Address P.O. Box 450
City Pittsburgh State PA Zip Code 15276 City Glasgow State WV Zip Code 25086

03/31/2017