

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

November 03, 2015

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-5500275, issued to CABOT OIL & GAS CORPORATION, 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 all 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.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalities being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.

70

James Martin

Operator's Well No: BLUEJAY 3

Farm Name: LYNCH, MICHAEL J. JR., ET

API Well Number: 47-5500275 Permit Type: Plugging

Date Issued: 11/03/2015

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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

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.

WW-4B Rev. 2/01

| 1) Date Octo | per 19 , | 20 15 |
|--------------|-------------|---------|
| 2) Operator | 's | |
| Well No. | Blue Jay #3 | |
| 3) API Well | No. 47-055 | - 00275 |

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

APPLICATION FOR A PERMIT TO PLUG AND ARANDON

| | APPLICATION FOR A PER | MII TO PLUG AND A | BANDON |
|------|---|-------------------|--|
| 4) | Well Type: Oil/ Gas _X/ Liqui | d injection | / Waste disposal / |
| | (If "Gas, Production X or Un | | |
| | | acrarcana ocorage | / Beep/ Shallow_X |
| 5) | Location: Elevation 3,235.93' | Watershed Cub Bra | anch of Camp Creek |
| | District Jumping Branch | County Mercer | Quadrangle Flat Top |
| | | | Quadrangle |
| 6) | Well Operator Cabot Oil & Gas Corporation | 7)Designated Ag | ent Phillip Hill - Cabot Oil & Gas Corporation |
| | Address 2000 Park Lane, Suite 300 | | ess 900 Lee Street East, Suite 1500 |
| | Pittsburgh, PA 15275 | | Charleston, WV 25301 |
| | | | |
| 8) | Oil and Gas Inspector to be notified | 9) Plugging Cont | ractor |
| | Name Gary Kennedy | | tractor Services, Inc. |
| | Address P.O. Box 268 | | 29 Charleston, Road |
| | Nimitz, WV 25978 | 3 | Spencer, WV 25276 |
| | | _ | |
| | | | |
| | | | Received |
| | | | OCT 30 2015 |
| | | | Office of Oil and Gas |
| | | | WV Dept. of Environmental Protection |
| loti | fication must be given to the district of can commence. | il and gas inspec | tor 24 hours before permitted |
| ork | order approved by inspector | terry | Date |
| | | | 11/06/20 |

BLUE JAY #3

API # 47 – 055 – 00275 PLUGGING PROCEDURE

Current Configuration

LTD @ 4371' KB

13-3/8" conductor @ 30' KB, not cemented

9-5/8" - 26# LS casing @ 583' KB, cemented to surface $4^{1}/_{2}$ " - 10.5# M-60 casing @ 3445' KB w/ TOC @ 2867'

4 1/2" was grouted w/ 197 cu. ft. of 50/50 Pozmix - estimated TOC @ 1650'

Perfs: 3080' - 3100'

Pencil Cave: 2994' - 3524'

Little Lime formation: 2870' – 2994' Maxton formation: 2379' – 2400'

Coal @ 87' - 90', 155' - 158', 370' - 374', 382' - 384', & 402' - 404'

Fresh water @ 30' & 162'

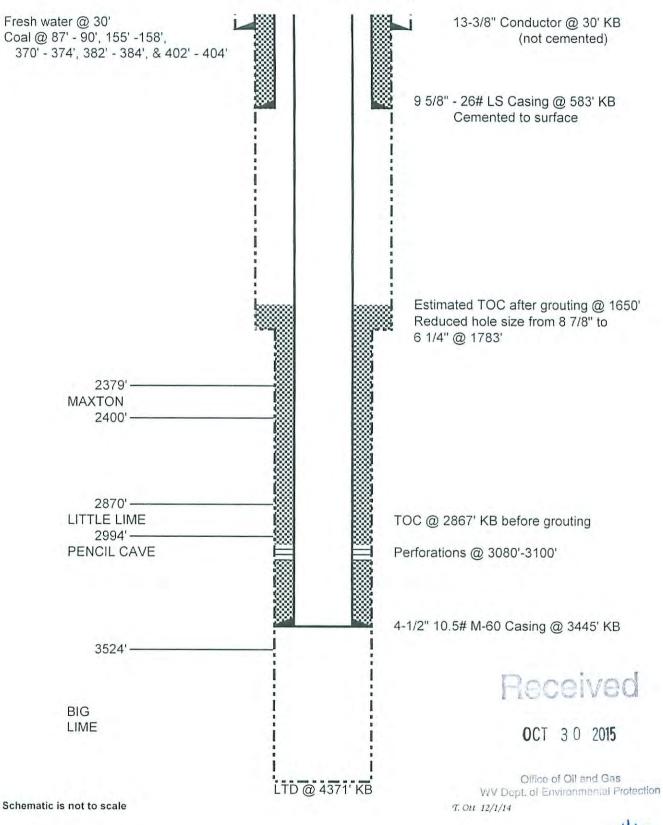
PROCEDURE

- 1. Contact Pineville District 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 pit/tank and stake down securely. Vent 4-1/2" x 9 5/8" annulus.
- 5. Unpack wellhead.
- 6. TIH w/ 2 3/8" work string to TD.
- 7. MIRU Cementing Company.
- 8. Pump 15 bbls 6% gel.
- 9. Pick work string up to 3100'.
- 10. Pump 15 sacks of Class A cement for cement plug 1 from 3100' to 2900'.
- 11. Displace with 11 bbls of 6% Gel.
- 12. Pull work string up to 2450' and pump 15 sacks of Class A cement for cement plug 2 from 2450' to 2250'.
- 13. Displace with 8 ½ bbls of 6% Gel.
- 14. POOH with work string and let cement plug set for a minimum of eight hours.
- 15. Run freepoint and cut 4 1/2" casing where free. Estimate ±1650'.
- 16. Pick up casing 1 jt and pump 40 bbls 6% gel followed by 75 sacks of Class A cement for cement plug 3 from ±1630' to ±1430'.
- 17. Displace with 22 1/2 bbls of 6% Gel.
- 18. Pull casing up to 600' and pump 40 sacks of Class A cement for cement plug 4 from 600' 500'.
- 19. Displace with 8 bbls of 6% Gel.
- 20. Pull casing up to 445' and pump 37 sacks of expanding cement for cement plug 5 from 445' to 350'.
- 21. Displace with 5 1/2 bbls of 6% Gel.
- Pull casing up to 200' and pump 77 sacks of expanding cement for cement plug 6 from 200' to surface.
- 23. TOOH with casing and lay down.
- 24. RDMO cement company.
- 25. Place monument as required by law on top of well bore.
- 26. Reclaim well site.

Received

OCT 3 0 2015

Blue Jay #3 API 47-055-00275 CURRENT CONFIGURATION



Date July 14, 2005 WR-35 API# 47-055 - .00275 State of West Virginia Division of Environmental Protection Section of Oil and Gas 111 9 0 2505 Well Operator's Report of Well Work Farm Name: Michael L. Lynch, et al Operator Well No .: Blue Jay #3 3247' LOCATION: Elevation: Quadrangle: Flat Top District: Mercer Jumping Branch County: Latitude: 1130' feet South of 37° DEG. 35' MIN. 00" SEC. 81° DEG. MIN. 00" SEC. Longitude: feet West of 05 10840 Casing & Cement Fill Used in Drilling Left In Well **Tubing Size** Up Cu. Ft. Cabot Oil & Gas Corporation Company: 13 3/8" 30' 30' N/A 900 Lee Street East, Suite 500 Charleston, WV 25301 9 5/8" 583' 583' 249 Agent: Thomas S. Liberatore 4 1/2" 3445' 131 Inspector: Barry Stollings Permit Issued: 2/18/2005 Dump Squeeze 4 1/2" Casing 197 Well Work Commenced: March 19, 2005 Well Work Completed: April 16, 2005 Verbal Plugging: Permission granted on: Rotary X Cable Total Depth (feet) 4371' Fresh Water Depths (ft) 30', 162' Salt Water Depths (ft) None reported Is coal being mined in area (Y / N)? N Coal Depths (ft) 87'-90', 155'-158', 370'-374', 382'-384', 402'-404' **OPEN FLOW DATA** Big Lime? Pay Zone **Producing Formation** Little Lime Depth (ft) Gas: Initial Open Flow 11 MCF/d Oil: Initial Open Flow Bbl/d Final Open Flow 353 MCF/d Final Open Flow Bbl/d Time of open flow between initial and final tests Hours Static rock pressure N/A psig surface pressure after N/A Hours Pay Zone Second Producing Formation Depth (ft) Gas: Initial Open Flow MCF/d Oil: Initial Open Flow Bbl/d Final Open Flow MCF/d Final Open Flow Bbl/d 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 SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE CABOT OIL & GAS CORPORATION Office of Oil and Gas For: Dilling Superintendent By: Department of Environmental Protection

Flat Jop 4

11/06/2015

| STAGE | PERFS | ACID 15% HCI | FOAM | SAND (lbs) | NITROGEN (scf) | BDP | ATP | MTP - | ISIP |
|-------------------|----------------|-----------------|------|---------------|-------------------|------|------------------|-------|--------------|
| 1-Little Lime | 3080-3100 (40) | 250 gal | 75Q | 83,932 | 787,400 | 1982 | 1626 | 1675 | 1639 |
| FORMATION | | TO | ND. | Marie Company | POTTON | | PO PO B A A PO 1 | | محمد المساحد |
| Sand & Shale | | | | | BOTTOM | l | REMARI | KS | |
| Coal | | 0 87 | | | 87 | | | | |
| Sand & Shale | | 9(| | | 90 155 | | | | |
| Coal | | 15 | | | 158 | | | | |
| Sand & Shale | | 15 | | | 370 | | | | |
| Coal | | 37 | | | 374 | | | | |
| Sand & Shale | | 37 | | | 382 | | | | |
| Coal | | 38 | | | 384 | | | | |
| Sand & Shale | | 38 | | | 402 | | | | |
| Coal | | 40 | | | 404 | | | | |
| Sand & Shale | | 40 | | | 988 | | | | |
| Pride | | 98 | | | 1193 | | | | |
| Silty/Sandy Shale | | 119 | | | 2379 | | | | |
| Maxon | | 237 | | | 2400 | | | | |
| Silty/Sandy Shale | | 240 | | | 2795 | | | | |
| Shale | | 279 | | | 2870 | | | | |
| Little Lime | | 287 | 0 | | 2994 | | | | |
| Pencil Cave | | 299 | 94 | | 3524 | | | | |
| Big Lime | | 352 | 24 | | 4371 | | TD | | |

Office of Oil and Gas
OCT 2 6 2015

WV Department d1/06/2015 Environmental Protection WW-4A Revised 6-07 1) Date: October 19, 2015 2) Operator's Well Number

Blue Jay #3

3) API Well No.: 47 -

055

00275

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

| (| a) Name | ner(s) to be served: Michael J. Lynch | / -, (|) Coal Operator Name | Pocahontas Coal Co., LLC/ | Caldwell Trailblazer, LLC |
|-------|--|--|---|--|---|---|
| | Address | 294 Blue Jay Drive | V | Address | 109 Appalachian Dr. | 818 N. Eisenhower Dr. |
| | | Blue Jay, WV 25816 | | | Beckley, WV 25801 | Beckley, WV 25801 |
| (| b) Name | | | (b) Coal Ow | ner(s) with Declaration | |
| 1 | Address | | | Name | Michael J. Lynch | |
| | | | | Address | 249 Blue Jay Drive | 1/ |
| | | | | e company | Blue Jay, WV 25816 | / |
| (| c) Name | | | Name | *************************************** | |
| 1 | Address | | | Address | 1. | |
| | | | | | | |
| 6) Ir | spector | Gary Kennedy | | (c) Coal Les | see with Declaration | |
| | ddress | P.O. Box 268 | | Name | None of Record | |
| | | Nimitz 14/1/ 25079 | | A 1.7 | | |
| | | MITHILZ, VVV ZOOTO | | Address | | |
| Т | elephone | Nimitz, WV 25978 (304) 382-8402 | | Address | | |
| | | (304) 382-8402 | | | - | |
| | | (304) 382-8402 | BOVE: You | | ived this Form and the follow | ving documents: |
| | | (304) 382-8402 | BOVE: You | | ived this Form and the follow | ving documents: |
| | THE PE | (304) 382-8402 RSONS NAMED All application to Plug and Abando | on a Well on Fo | should have rece | ived this Form and the follow | |
| | THE PE | (304) 382-8402 RSONS NAMED All application to Plug and Abando its and the plugging work order | on a Well on Fo r; and | should have rece | | |
| | THE PE | (304) 382-8402 RSONS NAMED All application to Plug and Abando | on a Well on Fo r; and | should have rece | | |
| | THE PE (1) The well (2) The p | (304) 382-8402 RSONS NAMED All application to Plug and Abando its and the plugging work order plat (surveyor's map) showing the you received these documents is the state of | on a Well on For; and the well location that you have right | should have recent rm WW-4B, which on Form WW-6. | | the work and describes the |
| | THE PE (1) The well (2) The p | (304) 382-8402 RSONS NAMED All application to Plug and Abando its and the plugging work order plat (surveyor's map) showing to | on a Well on For; and the well location that you have right | should have recent rm WW-4B, which on Form WW-6. | sets out the parties involved in | the work and describes the |
| | (1) The well (2) The reason However, y | RSONS NAMED All application to Plug and Abande its and the plugging work order plat (surveyor's map) showing to you received these documents is the you are not required to take any action that under Chapter 22-6 of the West | on a Well on For; and the well location that you have righted at all. the set Virginia Code, | should have recest rm WW-4B, which on Form WW-6. s regarding the applica | sets out the parties involved in ation which are summarized in the interpretator proposes to file or has filed | the work and describes the instructions on the reverses side. |
| | (1) The well (2) The reason However, y Take notice accompany | RSONS NAMED All application to Plug and Abande its and the plugging work order plat (surveyor's map) showing to you received these documents is the you are not required to take any action that under Chapter 22-6 of the Weeting documents for a permit to plug | on a Well on For; and the well location that you have righted at all. the set Virginia Code, and abandon a we | should have recestry WW-4B, which on Form WW-6. It is regarding the application the undersigned well of the with the Chief of the | sets out the parties involved in ation which are summarized in the interpretator proposes to file or has filed to Office of Oil and Gas, West Virginian | the work and describes the instructions on the reverses side. this Notice and Application and a Department of Environmental |
| | (1) The well (2) The reason However, y Take notice accompany Protection, | RSONS NAMED All application to Plug and Abande its and the plugging work order plat (surveyor's map) showing to you received these documents is the you are not required to take any action that under Chapter 22-6 of the Woring documents for a permit to plug with respect to the well at the located the second se | on a Well on For; and the well location that you have righted at all. the st Virginia Code, and abandon a wellion described on the | should have recestrant WW-4B, which on Form WW-6. It is regarding the application of the undersigned well of the uttached Application in the attached Application. | sets out the parties involved in ation which are summarized in the interpretator proposes to file or has filed to Office of Oil and Gas, West Virginian and depicted on the attached Form | the work and describes the instructions on the reverses side. this Notice and Application and a Department of Environmental and WW-6. Copies of this Notice |
| | (1) The well (2) The part of the reason However, y Take notice accompany Protection, the Applica | RSONS NAMED All application to Plug and Abande its and the plugging work order plat (surveyor's map) showing to you received these documents is the you are not required to take any action that under Chapter 22-6 of the Woring documents for a permit to plug with respect to the well at the located the second se | on a Well on For; and the well location that you have righted at all. est Virginia Code, and abandon a wellion described on the described on | should have recestrant WW-4B, which on Form WW-6. It is regarding the application of the undersigned well of the uttached Application certified mail or delivered. | sets out the parties involved in ation which are summarized in the interpretator proposes to file or has filed to Office of Oil and Gas, West Virginian | the work and describes the instructions on the reverses side. this Notice and Application and a Department of Environmental and WW-6. Copies of this Notice. |

COMMONWEALTH OF PENNSYLVANIA Notarial Seal

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

Subscribed and sworn before me this

By: Kenneth L. Marcum

Its: Regulatory Supervisor 2000 Park Lane, Suite 300 Address

Pittsburgh, PA 15275

Telephone (412) 249-3850

Office of Oil and Gas

My Commission Expires November 16, 2017 Notary Public

Oil and Gas Privacy Notice

WV Department of Environmental Protection

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 depprivacyoffier@wv.gov. 11/06/2015 WW-9 (2/15)

| API | Num | ber | 47 | - | |
|-----|-----|-----|----|---|--|
| | | | | | |

Operator's Well No. Blue Jay 33

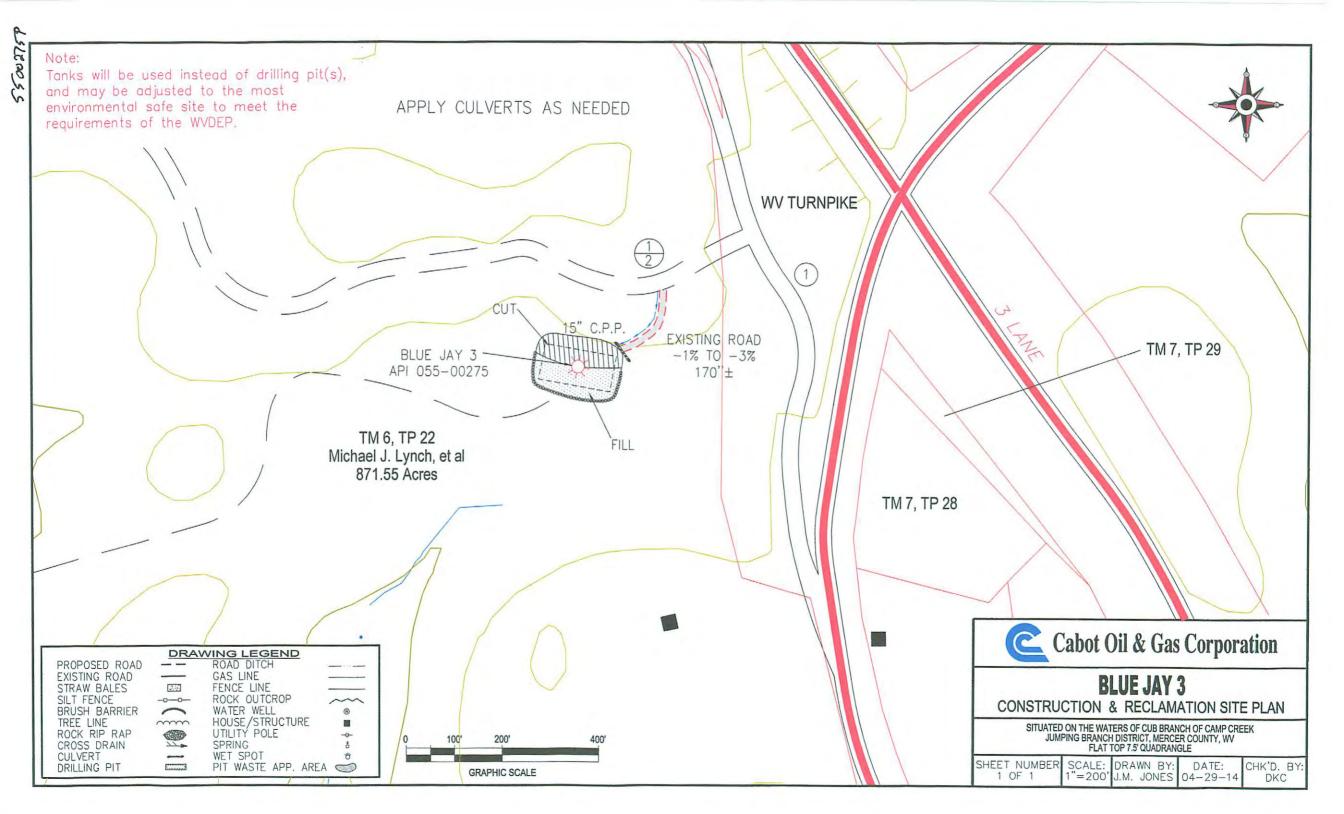
STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

| Operator Name_ Cabot Oil & Gas Corporation | OP Code 08145 |
|---|--|
| Watershed (HUC 10)_Cub Branch of Camp Creek | Quadrangle Flat Top |
| Do you anticipate using more than 5,000 bbls of water to comp | olete the proposed well work? Yes No |
| Will a pit be used? Yes No V | |
| 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 | |
| | it Number) |
| Reuse (at API NumberOff Site Disposal (Supply form WV | V 0 for disposal leasting) |
| Other (Explain No treated pit waster | |
| Will closed loop system be used? If so, describe: N/A | |
| Drilling medium anticipated for this well (vertical and horizon | tal)? 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 Owest Virginia solid waste facility. The notice shall be provided where it was properly disposed. | Gas of any load of drill cuttings or associated waste rejected at any l within 24 hours of rejection and the permittee shall also disclose |
| on August 1, 2005, by the Office of Oil and Gas of the West V provisions of the permit are enforceable by law. Violations of law or regulation can lead to enforcement action. I certify under penalty of law that I have personally application form and all attachments thereto and that, base | conditions of the GENERAL WATER POLLUTION PERMIT issued irginia Department of Environmental Protection. I understand that the of any term or condition of the general permit and/or other applicable by examined and am familiar with the information submitted on this d on my inquiry of those individuals immediately responsible for true, accurate, and complete. I am aware that there are significant illity of fine or imprisonment. |
| Company Official Signature | s-rea |
| Company Official (Typed Name) Kenneth L. Marcum | OCT 3 0 2015 |
| Company Official Title Regulatory Supervisor | Citize of Cit and Con |
| | Office of Oil and Gas WV Dent, of Environmental Protection |
| Subscribed and sworn before me this 1941 day of | October , 20 1.5 |
| Constance C. Canden | Notary Public Notarial Seal |
| My commission expires 11/16/2017 | Constance C. Carden, Notary Public McDonald Boro, Washington By 201 My Commission Expires Nov. 16, 221 MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES |

Operator's Well No. Blue Jay 33

| Cabot Oil & Gas Corporation | | |
|---|--------------------------|--------------------------|
| Proposed Revegetation Treatment: Acres Disturbed 1.0 | 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 | os/acre | |
| Mulch Pulp Fiber at 1000 to 1500 lbs. Tons/s | acre | |
| See | d Mixtures | |
| Temporary | Perr | manent |
| Seed Type lbs/acre | Seed Type | lbs/acre |
| Grain Rye - 100) (Red Clover - 5) (Fescue - 40) | (Grain Rye - 100) (Red C | lover - 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) (A | Alta Sweet Clover - 5) |
| Yellow Clover - 5) (Birdsfoot Trefoil - 10) | (Yellow Clover - 5) (B | irdsfoot Trefoil - 10) |
| Photocopied section of involved 7.5' topographic sheet. | | |
| lan Approved by: | | |
| Comments: | | |
| | | |
| | | |
| | | |
| | | |
| | | Received |
| | | OCT 3 0 2015 |
| itle: Inspector | Date: 18/22/05 | 2013 |
| ield Reviewed? () Yes (|) No | Office of Oil and Gas |



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 THAT ARE DISTURDED BY CONSTRUCTION.

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.

| TABLE 11-4 SPACIN | G OF CROSS DRAINS |
|-------------------|-------------------|
| ROAD GRADE (%) | DISTANCE (FT) |
| 11 | 400 |
| 2 | 250 |
| 5 | 135 |
| 10 | 80 |
| 15 | 60 |
| 20 | 45 . |

| TABLE 11-7 SPAC | ING OF CULVERTS |
|-----------------|-----------------|
| 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 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 BLUE JAY

- FROM BECKLEY, WV DRIVE SOUTH ON INTERSTATE 77 FOR 18.3 MILES TO EXIT 28 (RT. 48/GHENT/FLAT TOP 1.) EXIT).
- TURN LEFT ONTO ROUTE 48 TO GHENT AND CONTINUE FOR 0.1 MILE± TO THE INTERSECTION OF SECONDAR AND ROUTE 48 AND U.S. ROUTE 19.

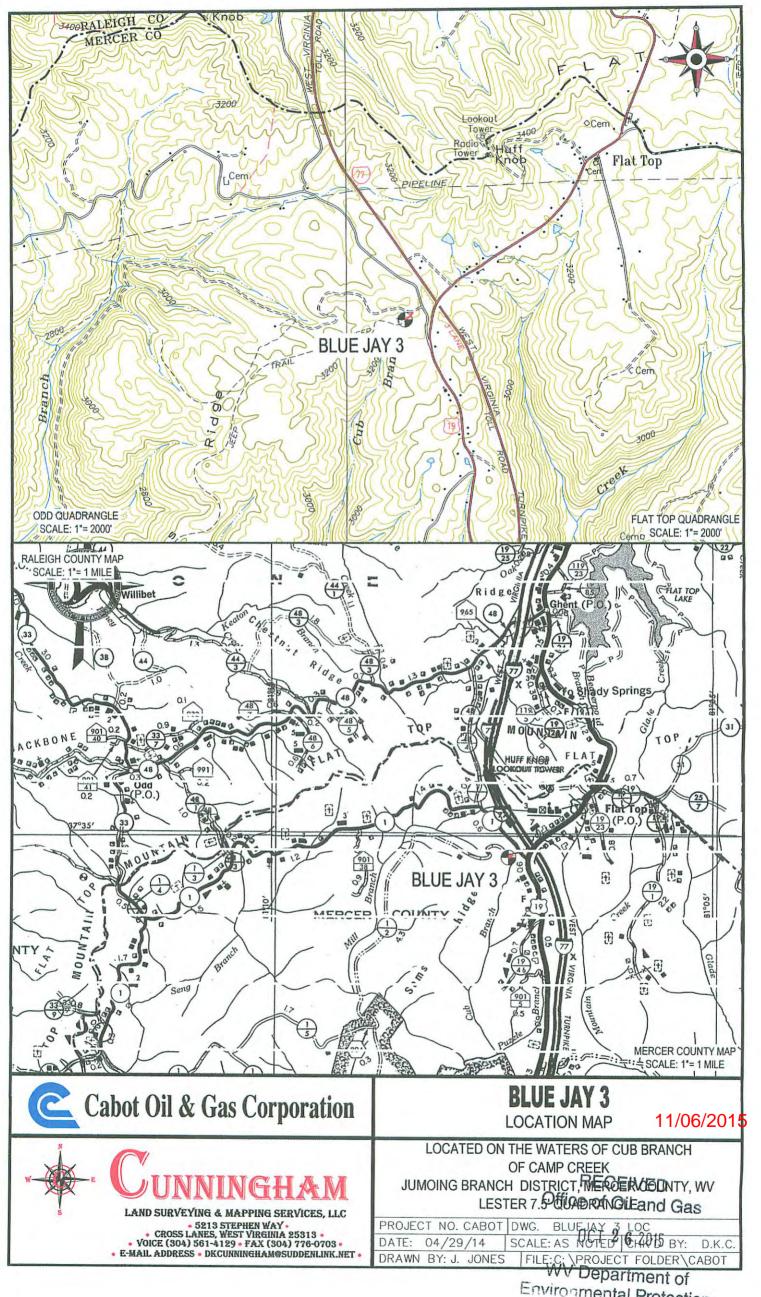
Office ONONR and Gas TURN RIGHT ONTO U.S. ROUTE 19 AND GO SOUTH FOR 3.4 MILES± TO THE INTERSECTION OF 4.)

TURN RIGHT ONTO SECONDARY ROUTE 1 AND GO APPROXIMATELY 0.1 MILE± TO THE INTERSECTION OF 1/06/201 SECONDARY ROUTE 1/2.

TURN LEFT ONTO SECONDARY ROUTE 1/2 AND GO APPROXIMATELY 200 FEET± TO THE BEGINNING OF THE ACCESS ROAD LOCATED ON THE LEFT HAND SIDE OF THE ROAD. 5.)

FROM THE AFOREMENTIONED SITE, FOLLOW THE EXISTING ROAD FOR APPROXIMATELY 200 FEENEVED PROTECTION AND DECLARATE IN THE FIELD AS SHOWN ON THE "CONSTRUCTION AND DECLARATE OF THE PROTECTION AND EXISTING WELL SITE IN THE FIELD AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLANTONMENTAL Protection Environmental Protection 6.)





Environmental Protection

