

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

IN THE MATTER OF:

Cabot Oil & Gas Corporation : The Clean Streams Law
Dimock and Springville Townships : Oil and Gas Act
Susquehanna County :

CONSENT ORDER AND SETTLEMENT AGREEMENT

This Consent Order and Settlement Agreement is entered into this 15th day of December 2010, by and between the Commonwealth of Pennsylvania, Department of Environmental Protection ("Department") and Cabot Oil & Gas Corporation ("Cabot").

Findings

The Department has found and determined the following:

- A. The Department is the agency with the duty and authority to administer and enforce The Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §§691.1-691.1001 ("Clean Streams Law"); the Oil and Gas Act, Act of December 19, 1984, P.L. 1140, *as amended*, 58 P.S. §§601.101-601.605 ("Oil and Gas Act"); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, *as amended*, 71 P.S. §§510-17 ("Administrative Code"); and the rules and regulations promulgated thereunder ("Regulations").
- B. Cabot is a Delaware corporation registered to do business in Pennsylvania and is engaged in various oil and gas exploration and production activities in Pennsylvania, including in Dimock and Springville Townships, Susquehanna County. Cabot maintains a mailing address at 5 Penn Center West, Suite 401, Pittsburgh, PA 15276.
- C. Cabot is the "owner" and "operator," as those terms are defined in Section 103 of the Oil and Gas Act, 58 P.S. §601.103, of certain gas wells, or has received permit authorization from the Department to drill wells, within an area defined as follows: South of 41 degrees 45 minutes

latitude; East of -75 degrees 54 minutes 11 seconds longitude; North of 41 degrees 42 minutes 14 seconds latitude; and West of -75 degrees 50 minutes 48 seconds longitude in Dimock and Springville Townships, Susquehanna County, Pennsylvania ("Dimock/Carter Road Area," which is the same as the "Affected Area" in the Modified 2009 Agreement). [REDACTED]

D. On November 4, 2009, the Department and Cabot executed a Consent Order and Agreement, which the Parties modified on April 15, 2010, and July 19, 2010 (collectively the "Modified 2009 Agreement"). This Consent Order and Settlement Agreement replaces the Modified 2009 Agreement.

E. The gas wells that Cabot has plugged within the Dimock/Carter Road Area to date, the gas wells that Cabot has drilled and is producing within the Dimock/Carter Road Area, and the gas wells that Cabot has drilled but has not yet fraced within the Dimock/Carter Road Area (collectively "the Dimock/Carter Road Gas Wells") [REDACTED]

F. The Department has determined that eighteen (18) drinking water supplies that serve nineteen (19) homes within the Dimock/Carter Road Area have been affected from the drilling activities at the Dimock/Carter Road Gas Wells (collectively the "Water Supplies"). The owners of the nineteen (19) homes that are served by the Water Supplies are identified [REDACTED]

G. As of the date of this Consent Order and Settlement Agreement, Cabot has undertaken, among other things, the following actions:

1. Plugged and abandoned three of the Dimock/Carter Road Gas Wells -- Baker 1, Gesford 3, and Gesford 9. To date, Cabot has not yet completed the restoration of the Gesford 3 and Gesford 9 Gas Well Sites;

2. Reconditioned the Ely 4 Gas Well by squeezing the annular space, thereby eliminating the pressure that was present in a portion of the annular space between the 4 1/2 and 7 inch casings on the Gas Well, and conducted similar remedial actions at the Ratzel 2H Gas Well after September 14, 2010;
3. Prepared and implemented a plan to check the integrity of the Dimock/Carter Road Gas Wells;
4. Provided temporary, whole house water supplies to owners of residences within the Dimock/Carter Road Area, including to the Property Owners;
5. Provided new vent stacks or extended existing vent stacks on Water Supplies; and
6. Paid \$570,000 to the Department in settlement of civil and monthly stipulated penalties.

H. The Department has determined that Cabot has not: (1) permanently restored and/or replaced all of the Water Supplies by September 17, 2010; (2) completely eliminated the unpermitted discharge of natural gas into the waters of the Commonwealth from the Dimock/Carter Road Gas Wells by November 1, 2010; and (3) plugged or taken other remedial actions at certain of the Dimock/Carter Road Gas Wells by November 13, 2010.

I. Regarding Department costs, from November 4, 2009, to the date of this Consent Order and Settlement Agreement, the Department has incurred costs for staff, lab analyses, and other Department expenses and costs relating to the Dimock/Carter Road Gas Wells, the Water Supplies, and the Modified 2009 Agreement.

J. The Department has determined that the items identified in Paragraph H, above, constitute unlawful conduct by Cabot pursuant to Section 509 of the Oil and Gas Act, 58 P.S. §601.509, and Section 611 of the Clean Streams Law, 35 P.S. §691.611.

K. Cabot disagrees with the substance of the Department's determinations in Findings F, H, and J. However, Cabot agrees to and shall fulfill all of the terms and obligations of this Consent

Order and Settlement Agreement. By entering into this Consent Order and Settlement Agreement, Cabot and the Department desire to fully and finally resolve the items identified in Paragraph L, below.

L. To avoid litigation, to resolve the items set forth above in Paragraphs F, H, and J, and as complete and final settlement of any known claims, demands, stipulated civil penalties, and/or sanctions of any type that the Department has made or could have made against Cabot to date relating to the items set forth in Paragraphs F, H, and J, above, relating to the Modified 2009 Agreement, the Dimock/Carter Road Area, and the Dimock/Carter Road Gas Wells, including for obligations under Section 208 of the Oil and Gas Act, 58 P.S. §601.208, and 25 Pa. Code §78.51, to pay for or restore and/or replace the Water Supplies, or to provide for ongoing operating or maintenance expense of such restoration or replacement, and to provide reimbursement for certain costs incurred by the Department to date, Cabot shall: perform the remediation activities to the Ely 2H and Ely 6H Gas Wells as set forth in Paragraph 5.c., below; pay \$500,000; and shall complete the requirements below and as approved by the Department in accordance with this Consent Order and Settlement Agreement.

Order

After full and complete negotiation of all matters set forth in this Consent Order and Settlement Agreement, and upon mutual exchange of the covenants contained herein, the Parties desiring to avoid litigation and intending to be legally bound, it is hereby ORDERED by the Department and AGREED to by Cabot as follows:

1. **Authority.** This Consent Order and Settlement Agreement is an Order of the Department authorized and issued pursuant to Section 5 of the Clean Streams Law, 35 P.S. §691.5, Section 503 of the Oil and Gas Act, 58 P.S. §601.503, and Section 1917-A of the Administrative Code.

2. *Findings and Effect on Third Parties.*

a. This Consent Order and Settlement Agreement is a settlement between the Department and Cabot, and is a settlement only for the matters specifically addressed herein. This Consent Order and Settlement Agreement replaces the Modified 2009 Agreement.

b. Cabot disagrees with the substance of the Department's determinations in Findings F, H, and J. However, Cabot agrees to and shall fulfill all of the terms and obligations of this Consent Order and Settlement Agreement. Cabot agrees that the Findings in Paragraphs A-L, above, are true and correct and, in any matter or proceeding involving Cabot and the Department, Cabot shall not challenge the accuracy or validity of these Findings.

3. *Compliance, Permits Inside the Dimock/Carter Road Area, Cabot Agreement and Statements.*

a. Cabot hereby agrees that it shall take all actions necessary including, but not limited to, the requirements set forth in this Consent Order and Settlement Agreement, to comply with all applicable environmental laws and regulations, including all applicable provisions of the Clean Streams Law, Oil and Gas Act, and the Regulations.

b. Cabot hereby certifies that it has entered into this Consent Order and Settlement Agreement freely, under no coercion of any kind, and after consulting with Counsel. As identified herein, Cabot hereby agrees to comply with all of its obligations under this Consent Order and Settlement Agreement, and Cabot intends to be legally bound by this Consent Order and Settlement Agreement.

c. Cabot agrees that this Consent Order and Settlement Agreement is valid, is a binding obligation upon Cabot and is a final Order of the Department, and neither Cabot nor any authorized representative, agent, or attorney of Cabot or representing Cabot in any court or administrative forum shall state or argue otherwise for any purpose.

4. ***New Drilling And Hydro-fracturing Inside the Dimock/Carter Road Area.***

a. After the date of this Consent Order and Settlement Agreement, for any of the seven (7) Dimock/Carter Road Gas Wells identified in Paragraph 3.c.2) of the Modified 2009 Agreement (A&M Hibbard 2H; A&M Hibbard 4; Ely 1H; Baker 3; Gesford 4R; Gesford 8H NW; and P. Kelly 1) that Cabot has drilled but not yet hydro-fractured, Cabot may begin hydro-fracturing any such Gas Well or Wells *only* upon receipt of written notice from the Department that Cabot has, as of the date Cabot proposes to frac said Gas Well or Wells, complied with all of its obligations as to said Gas Well or Wells under Paragraph 3.a., above, including obtaining all required permits or other authorizations from the Department, and under Paragraph 5.a, below.

b. In all cases, Cabot shall not complete the drilling of any of Dimock/Carter Road Gas Wells, and shall not begin the drilling of any new Gas Wells within the Dimock/Carter Road Area until after April 15, 2011, at the earliest, and in accordance with all of the requirements of this Paragraph.

c. Before the drilling permit expires for any of the Dimock/Carter Road Gas Wells, Cabot may submit a request to the Department to renew the drilling permit in accordance with 25 Pa. Code §78.17, and the Department will promptly process any such request in accordance with the applicable regulations.

d. After April 15, 2011, Cabot may complete the drilling of any of the Dimock/Carter Road Gas Wells, and/or may begin the drilling of any new Gas Wells within the Dimock/Carter Road Area *only* upon receipt of written notice from the Department that, as to said Gas Well or Wells:

i. Cabot is in compliance with all of its obligations under Paragraph 5, below;

- ii. Cabot is, as of the date Cabot proposes to drill said Gas Well or Wells, in compliance with the applicable requirements of Paragraph 3.a., above, including obtaining all required permits or other authorizations from the Department; and
- iii. Cabot is in compliance with all other obligations under this Consent Order and Settlement Agreement as of the date Cabot plans to drill said Gas Well or Well(s).

5. ***Compliance Obligations Of Cabot With Respect to the Dimock/Carter Road Area Gas Wells.*** All compliance obligations of Cabot under this Consent Order and Settlement Agreement with respect to the Department's claims under the Modified 2009 Agreement, the Oil and Gas Act, and the Clean Streams Law, other than the claims in Paragraph 6, below, are satisfied subject to the Department providing Cabot written notice that Cabot has performed the following:

- a. **Gas Well Pressure Testing.**
 - i. Within seven (7) days of the date of this Consent Order and Settlement Agreement, Cabot shall provide to the Department the hydrocarbon bearing intervals for each of the Dimock/Carter Road Gas Wells based on data collected by Cabot during the past drilling of each of Dimock/Carter Road Gas Wells;
 - ii. Within seven (7) days of the date of this Consent Order and Settlement Agreement, Cabot shall begin pressure testing of each accessible annuli on each of the Dimock/Carter Road Gas Wells. Cabot shall pressure test each annuli for forty-eight (48) consecutive hours, and shall provide the test results for each of the Dimock/Carter Road Gas Wells to the Department within five (5) days of completion of the pressure test on that Gas Well. At least twenty-four (24) hours before Cabot begins pressure testing in accordance with this Paragraph, Cabot shall provide the Department written notice of the Gas Well to be tested and the date and the approximate time that Cabot shall begin such pressure test;
 - iii. In all cases, Cabot shall have completed the 48-hour pressure test of the annuli on all of the Dimock/Carter Road Gas Wells, and shall provide the Department with the results of the pressure tests for all of the Dimock/Carter Road Gas Wells within sixty (60) days of the date of this Consent Order and Settlement Agreement; and
 - iv. If the pressure data required to be provided above indicates that the Gas Well in question is in compliance with Chapter 78 of the proposed regulations or such regulations that are finally enacted, then said Gas

Well shall, absent contradictory data reviewed by the Department, be considered to not be discharging natural gas into the aquifer.

b. Screening/Water Sampling. Cabot has received copies of the results of screenings for free combustible gas and of the laboratory analyses of all samples taken by the Department at the Water Supplies to date. In addition to the screenings and sampling done by the Department, beginning upon execution of this Consent Order and Settlement Agreement, Cabot shall:

- i. at least once every two weeks, screen the well head at each Water Supply for percentage of free combustible gas, and sample the well water at each Water Supply;
- ii. for each water sample collected at a Water Supply, Cabot shall have the water sample analyzed in a Pennsylvania-licensed laboratory for dissolved methane, dissolved ethane, and dissolved propane;
- iii. provide the Department a copy of the results of the screening for free combustible gas, and the laboratory analyses of each water sample within five (5) days of Cabot's receipt of the analyses by its laboratory;
- iv. Cabot shall continue to conduct the screening and sampling under Paragraph 5.b.i., above, once every two weeks at each Water Supply until the results of the screenings and sampling done by the Department in the past and by Cabot under Paragraph 5.b.i., above, show that either no combustible free gas is present at the wellhead for the Water Supply or that such levels of combustible free gas, if properly vented pursuant to applicable regulations and Department practice, do not pose a danger to persons or property *and* the concentration of dissolved methane is below 7 milligrams/liter ("mg/l"), or meets the standard then prescribed by applicable regulations. However, Cabot may petition the Department, based on information obtained in accordance with this Paragraph for a determination that the concentration of methane in the Water Supply is at background levels for the aquifer that supplies that Water Supply. Cabot may further petition the Department for a determination that the concentration of combustible free gas at the wellhead is at levels that do not present a danger to persons or property if properly vented according to applicable regulations and Department practice;
- v. for each Water Supply that meets the standards under Paragraph 5.b.iv, above, Cabot shall continue to screen each such Water Supply for free combustible gas and shall sample each such Water Supply at least

once per quarter, and shall have the water sample analyzed in a Pennsylvania-licensed laboratory for dissolved methane only. Cabot shall provide the Department a copy of the results of the screening for free combustible gas, and the laboratory analyses of each water sample within five (5) days of Cabot's receipt of the screening results and water sample analyses by its laboratory; and

vi. unless the Department determines that the concentration of methane in the Water Supply is at background levels for the aquifer that supplies that Water Supply, Cabot shall continue such screenings and sampling under Paragraph 5b.v., above, for each quarter until the results of the screenings and sampling done by the Department in the past and by Cabot under this Paragraph 5 show that, for eight consecutive quarters, seventy-five percent of the water samples within each monitoring point over time contain 7 mg/l or less of dissolved methane (or meets the standard then prescribed by applicable regulations), and no individual water sample exceeds two times this standard.

c. Beginning no more than 30 days from the date of this Consent Order and Settlement Agreement and continuing each day until 120 days from the date of this Consent Order and Settlement Agreement, Cabot shall complete any and all actions to the extent necessary, if any, to bring the Ely 2H Gas Well and Ely 6H Gas Well into compliance with the Oil and Gas Act, the Clean Streams Law, and the Regulations.

6. *Settlement of Restoration/Replacement Obligation.* The claims by the Department regarding Cabot's obligations under Section 208 of the Oil and Gas Act, 58 P.S. §601.208, and 25 Pa. Code §78.51, including any obligation of Cabot to pay for or restore and/or replace the Water Supplies, or to provide for ongoing operating or maintenance expense shall be satisfied, as follows:

a. Escrow Fund.

i. Within thirty (30) days after the date of this Consent Order and Settlement Agreement, Cabot shall establish nineteen (19) Escrow Funds and each Escrow Fund shall hold an amount equal to, whichever is greater: \$50,000; or two times the assessed value by the Susquehanna County Tax Assessor of the property(ies) owned by the Property Owners within the Dimock/Carter Road Area. [REDACTED]

- ii. Within ten (10) days after Cabot has established and funded the nineteen (19) Escrow Funds in accordance with Paragraph 6.a.i., above, Cabot shall notify each Property Owner, in writing, of the existence of the funds in the Escrow Fund for that Property Owner, the procedure by which the Property Owner can obtain his/her/their payment from the Escrow Fund;
- iii. Cabot shall pay all fees and costs associated with each of the Escrow Funds. The funds in the Escrow Funds shall be paid to Property Owners, their duly authorized attorney or representative or the heirs of the Property Owners in accordance with this Paragraph 6 and the Escrow Agreement attached hereto as Exhibit E. Exhibit E shall be the model of the Escrow Agreement that Cabot shall use for each of the Escrow Funds established under Paragraph 6.a.i, above, and is incorporated herein; and
- iv. If the Escrow Agent and Cabot have not received the executed and notarized Receipt provided for in the Escrow Agreement from the Property Owner on or prior to the 45th day after the date that the Property Owner has received written notice of the Escrow Fund in accordance with this Consent Order and Settlement Agreement, the Escrow Agent shall continue to hold the Escrow Fund until December 31, 2012. During such time period the Escrow Agent shall deliver all proceeds from the Escrow Fund to the Property Owner if and only if the Escrow Agent receives unqualified and unconditional written instruction to do so from a duly authorized representative of the Department and from a duly authorized representative of Cabot. If as of December 31, 2012, the Property Owner has not claimed and received the Escrow Fund, the Escrow Agent shall deliver all proceeds from the Escrow Fund to Cabot on January 2, 2013, together with all interest and/or earnings attributable to the Escrow Fund.

b. Effect of Notification to Department. After the time has passed for the Escrow Fund to be funded in accordance with Paragraph 6.a.i., above, and upon completion of the restoration activities described below, the Department's claims regarding Cabot's obligations under Section 208 of the Oil and Gas Act, 58 P.S. §601.208, and 25 Pa. Code §78.51, to restore and/or replace a Water Supply that serves the property owned by a Property Owner shall be satisfied upon the Department's receipt of information from Cabot that verifies that: the nineteen (19) Escrow Funds have been established and fully funded in accordance with Paragraph 6.a.i, above; each of the Property Owners have received written notice from Cabot of the Escrow Fund and of the procedure

by which the Property Owner can obtain his/her/their payment from such Escrow Fund; *and* each of the Property Owners have received written notice from Cabot that it will install a whole house gas mitigation device at the property as provided for below.

c. For each Property Owner, Cabot shall continue to provide and maintain temporary potable water and, as applicable, shall continue to maintain gas mitigation devices that it had previously installed until Cabot receives written notice from the Department that it has complied with all of the requirements of Paragraph 6.a-6.b., above, for that Property Owner.

d. As long as Cabot provides temporary water to the Property Owners under Paragraph 6.c., above, from a water purveyor and/or water hauler, Cabot shall assure that the water purveyor/hauler has all licenses, permits, and/or other authorizations required under Pennsylvania law and Regulations, and that the Property Owners receive water in amounts sufficient to continually satisfy water usage needs until Cabot receives written notice from the Department that it has complied with all of the requirements of Paragraphs 6.a.-6.b., above, for that Property Owner.

e. As of the date of this Consent Order and Settlement Agreement, Cabot has purchased whole house gas mitigation devices for residential water supplies within the Dimock/Carter Road Area and it has drilled new drinking water wells to serve other residences within the Dimock/Carter Road Area. Within 30 days of the date of this Consent Order and Settlement Agreement, Cabot shall notify each Property Owner, in writing, that Cabot will install, at Cabot's sole expense, a whole house gas mitigation device at the Property Owner's residence.

f. If the Property Owner notifies Cabot, in writing, within sixty (60) days from the date that the Property Owner received the written notice in accordance with Paragraph 6.e, above, that he/she/they agree(s) to Cabot installing a whole house gas mitigation device at his/her/their residence, Cabot shall complete such action at the residence within ninety (90) days from the date that the Property Owner notified Cabot, in writing, of his/her/their agreement.

7. ***Settlement of Claims for Stipulated Civil Penalties and Department Costs.*** Upon signing this Consent Order and Settlement Agreement, Cabot shall pay \$500,000 in complete and final settlement of any known claims or demands of any type that Department has made or could have made against Cabot relating to stipulated penalties under the Modified 2009 Agreement through the date of this Consent Order and Settlement Agreement, and to provide reimbursement for certain costs incurred by the Department to date. The payment shall be made by corporate check or the like made payable to "Commonwealth of Pennsylvania" and sent to the Department at the address set forth in Paragraph 10, below.

8. ***Reservation of Rights.*** The Department reserves the right to require additional measures to achieve compliance with applicable law. To date, the Department has not identified any defective Dimock/Carter Road Gas Wells other than the Gesford No. 3, Gesford No. 9, Baker No. 1, Ely No. 4, Ely 2H and Ely 6H Wells. However, in the event the Department receives new data or information concerning said Wells or any other Dimock/Carter Road Gas Wells, the Department reserves the right to require additional measures to achieve compliance with applicable law, including additional measures to take remedial actions to fix defective Dimock/Carter Road Gas Wells, and to eliminate any unpermitted discharge of natural gas into the waters of the Commonwealth from the Dimock/Carter Road Gas Wells. Cabot reserves the right to challenge any action which the Department may take to require those measures.

9. ***Liability of Cabot.*** Cabot shall be liable for any violations of this Consent Order and Settlement Agreement, including those caused by, contributed to, or allowed by its officers, directors, agents, employees, contractors, successors, and assigns.

10. *Correspondence with and Notice to the Department.* All correspondence with and notice to the Department concerning this Consent Order and Settlement Agreement shall be addressed to:

Mr. Craig Lobins, Regional Manager
Oil and Gas Management
Department of Environmental Protection
230 Chestnut Street
Meadville, PA 16335-3481
Telephone: 814-332-6860
Fax: 814-332-6121

11. *Correspondence with Cabot.* All correspondence with Cabot concerning this Consent Order and Settlement Agreement shall be addressed to:

Mr. Phil Stalnaker
Cabot Oil & Gas Corporation
5 Penn Center West, Suite 401
Pittsburgh, PA 15276
Telephone: 412-249-3850
Fax: 412-249-3855

Cabot shall notify the Department whenever there is a change in the contact person's name, title, or address. Service of any document or notice by the Department under this Consent Order and Settlement Agreement may be made by mail to the above address. However, service of any legal process by the Department for any purpose under this Consent Order and Settlement Agreement, including its enforcement, will be made by mailing a copy by certified mail, return receipt requested, to the above address.

12. *Decisions Under Consent Order and Settlement Agreement.* Any decision which the Department makes under the provisions of this Consent Order and Agreement, including a notice that stipulated civil penalties are due, is intended to be neither a final action under 25 Pa. Code §1021.2, nor an adjudication under 2 Pa.C.S.A. §101. Cabot hereby agrees that it shall not appeal to the Pennsylvania Environmental Hearing Board and/or shall not file any action of any kind with any Pennsylvania State or Federal Court of any decision by the Department on or arising from any matter.

under this Consent Order and Settlement Agreement. Any objection which Cabot may have to any decision by the Department on or arising from any matter under this Consent Order and Settlement Agreement will be preserved until the Department enforces this Consent Order and Settlement Agreement.

13. ***Acknowledgment of No Obligation.***

a. In conjunction with Cabot, the Department will defend this Consent Order and Settlement Agreement in any future appeal(s) brought by or on behalf of any Property Owner and/or any other person or entity.

b. Except for any future appeal(s) of this Consent Order and Settlement Agreement brought by or on behalf of any Property Owner and/or any other person or entity, Cabot acknowledges that the Department has no obligation to defend it in any existing or future other appeal, or in any litigation, lawsuit, demand, or claim for any issue, including damages, brought by or on behalf of any Property Owner and/or any other person or entity for any matters arising from the Dimock/Carter Road Gas Wells, the Water Supplies, any other Consent Order and Agreement, this Consent Order and Settlement Agreement, and/or any and all other matters relating in any way to Cabot and/or the Dimock/Carter Road Area.

14. ***Severability.*** The Paragraphs of this Consent Order and Settlement Agreement shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the Parties.

15. ***Entire Agreement.*** This Consent Order and Settlement Agreement shall constitute the entire integrated agreement of the Parties as to the subject matter hereof. No prior or contemporaneous communications or prior drafts shall be relevant or admissible for purposes of determining the meaning or intent of any provisions herein in any litigation or any other proceeding.

16. *Attorneys' Fees.*

a. Except as stated herein, the Parties shall bear their respective attorney fees, expenses, and other costs in the prosecution or defense of this matter or any related matters, arising prior to execution of this Consent Order and Settlement Agreement.

b. Cabot shall pay the Department for any attorneys' fees or litigation cost awarded against the Department for the consolidated appeal docketed at EHB No. 2010-065 regarding the Modified 2009 Agreement, and/or any attorneys fees or litigation cost awarded against the Department for any appeal(s) filed in the future by any Property Owner and/or any other person or entity regarding this Consent Order and Settlement Agreement.

c. Payment to the Department under Paragraph 16.b., above, shall be on or before the 15th day of the succeeding month, and shall be made by corporate check or the like made payable to "Commonwealth of Pennsylvania" and sent to the Department at the address set forth in Paragraph 10, above.

17. *Modifications.* No changes, additions, modifications, or amendments of this Consent Order and Settlement Agreement shall be effective unless they are set out in writing and signed by the Parties.

18. *Titles.* A title used at the beginning of any Paragraph of this Consent Order and Settlement Agreement may be used to aid in the construction of that Paragraph, but shall not be treated as controlling.

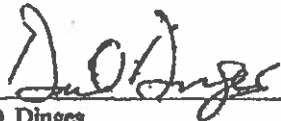
19. *Termination of Consent Order and Settlement Agreement.* Cabot's obligations under this Consent Order and Settlement Agreement shall terminate when Cabot has complied with all of its obligations under this Consent Order and Settlement Agreement.

IN WITNESS WHEREOF, the Parties have caused this Consent Order and Settlement Agreement to be executed by their duly authorized representative. The undersigned representative

of Cabot certifies under penalty of law, as provided by 18 Pa.C.S.A. §4904, that he is authorized to execute this Consent Order and Settlement Agreement on behalf of Cabot, that Cabot consents to the entry of this Consent Order and Settlement Agreement as a final ORDER of the Department; and that Cabot hereby knowingly waives its right to appeal this Consent Order and Settlement Agreement and to challenge its content or validity, which rights may be available under Section 4 of the Environmental Hearing Board Act, the Act of July 13, 1988, P.L. 530, No. 1988-94, 35 P.S. §7514; the Administrative Agency Law, 2 Pa.C.S.A. §103(a) and Chapters 5A and 7A; or any other provision of law. Signature by Cabot's attorney certifies only that the Consent Order and Settlement Agreement has been signed after consulting with counsel.

FOR CABOT OIL & GAS CORPORATION:

FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION:



Dan O. Dinges
Chief Executive Officer



S. Craig Lobins
Regional Manager
Oil and Gas Management Program
Northwest Region



Kevin Cunningham, General Counsel



Susan Shinkman, Chief Counsel

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February 8, 2019

CERTIFIED MAIL NO. [REDACTED]

[REDACTED]

Subject Address: [REDACTED]

Re: 58 Pa. C.S. § 3218 Determination
Water Supply Request for Investigation
Dimock Township, Susquehanna County

Dear [REDACTED]

The Department has completed its investigation of your water supply located at the above referenced subject address ("Water Supply"). Based on the sample results reviewed and supplementary information obtained to date, the Department has determined that the Water Supply was temporarily affected by oil and gas activities but has returned to expected background conditions. Nevertheless, please note that, in the absence of any treatment, your water quality does not meet (i.e., is worse than) the following aesthetic standard.

Parameter	Unit	Statewide Standards or Recommended Levels	Your Sample Results that Are Above Statewide Standards/Levels
Manganese	mg/L	0.05	0.252

Based on current post-treatment system sampling, the treatment system that was previously installed, and is currently operating on the Water Supply, appears to be effectively reducing the levels of the above contaminants to below detection limits. The Department's investigation into your complaint is set forth below.

Summary of Investigation

In the course of investigating possible gas migration issues in the area, the Department was granted permission to sample your water supply. As a result of this screening and sampling, the Department became aware of the presence of combustible gas in the headspace of your water well, and of dissolved methane in your Water Supply. During inspections conducted by the Department, and by others over the course of the investigation, combustible gas was observed at various levels in the headspace of your well and, dissolved methane was detected in your Water Supply. Samples from your Water Supply were collected by the Department as shown in the

attached tables, and submitted to the Department's laboratory in Harrisburg for analysis. The sample results were previously provided to you but are summarized in pertinent part for your reference in the attached tables.

The initial sample results from your Water Supply had detectable methane at levels the Department believed to be elevated by nearby oil and gas activities. The Department also documented varying levels of combustible gas in your water well headspace requiring that it be vented outside the structure. The samples also showed that the Water Supply had levels of aluminum, iron, and manganese above Statewide Standards. On December 15, 2010, the Department determined that your Water Supply was impacted by nearby oil and gas activities based on data collected and reviewed by the Department.

The determination made on December 15, 2010, was part of an executed Consent Order and Settlement Agreement (COSA) between the Department and Cabot Oil and Gas Corporation (Cabot). In addition to a provision for a whole house treatment system, the COSA required the creation of an escrow fund for you as an impacted water supply property owner. Your escrow fund was to hold the greater of \$50,000 or two times the assessed value of your property, and the fund was intended to provide for ongoing operating and/or maintenance expenses related to restoring or replacing your water supply. Cabot was also required to continue sampling your water supply at regular intervals until enough supporting data was collected to meet the requirements of the COSA. The Department has received sufficient data to support the following conclusions.

Dissolved methane data for your Water Supply shows that the concentrations detected in your Water Supply have decreased since 2010, stabilized, and remained relatively constant for the last seven years. The last water sample with elevated methane noted by the Department was documented in 2012, and the last water sample with elevated methane noted in Cabot's sampling was in 2016. Further analysis of the levels of combustible gas in the headspace of your Water Supply well demonstrates an obvious downward trend, to the point that combustible gas has not been detected since screening in 2012.

The data collected and reviewed during this investigation supports the Department's original assertion that the detectable levels of dissolved methane in the Water Supply and combustible gas in the water well headspace were not background concentrations. It also supports the Department's conclusion that the current levels of dissolved methane in your Water Supply and combustible gas in the headspace are consistent with expected background conditions. Please note that when the Department observed elevated levels of dissolved methane in water samples obtained in 2012, a sample was also collected after the installed treatment system. That sample was found to have only negligible levels of dissolved methane, indicating that the treatment system is effectively removing any remaining dissolved methane. Additionally, the Department has evaluated the data and determined that the other compounds analyzed in your Water Supply are now comparable to predrill sample results, or are consistent with expected background conditions. Although still elevated above Statewide Standards, manganese is common in fresh groundwater aquifers in the area and it is not unusual for it to be present in water supplies above those standards. Since manganese was not analyzed in a pre-drill sample, it is not possible to say

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with certainty whether the levels detected in the untreated water are representative of pre-drill conditions.

Based on its investigation, the Department has determined that the impacts to your Water Supply were temporary and that the concentration of methane in the Water Supply is now consistent with expected background conditions. In addition, as noted above, the treatment system on your Water Supply is effectively addressing the manganese. As a result, the Department does not plan to require further action regarding the Water Supply.

Please contact Michael O'Donnell at 570.346.5530 should you have any questions concerning this matter.

Sincerely,



Jennifer W. Means
Environmental Program Manager
Eastern Oil and Gas District

Enclosures:

Laboratory Analytical Tables
"How to Interpret A Water Analysis Report"

cc:

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Eric Rooney, P.G.
Sharon Steinbacher