# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

In The Matter Of:

Range Resources-Appalachia, LLC : Oil and Gas Act

f/k/a Great Lakes Energy Partners, LLC : Water Supply Replacement : Snow Shoe Borough Supply

Suite 300 : Snow Shoe Borough Authority

Canonsburg, PA 15317 : Centre County

## **CONSENT ORDER AND AGREEMENT**

This Consent Order and Agreement is entered into this 24 day of 1000, 2008, by and between the Commonwealth of Pennsylvania, Department of Environmental Protection (hereinafter "Department"), Range Resources-Appalachia, LLC (hereinafter "Range Resources") formerly known as Great Lakes Energy Partners, LLC, and Snow Shoe Borough Authority ("SSBA"), (collectively, the "Parties").

The Department has found and determined the following:

- A. The Department is the agency with the duty and authority to administer and enforce 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 regulation ("rules and regulations") promulgated thereunder.
- B. Range Resources is a Delaware limited liability company engaged in the exploration and production of oil and gas resources in Pennsylvania. Range Resources' mailing address is 380 Southpointe Boulevard, Suite 300. Canonsburg, Pennsylvania 15317.

C. SSBA is a water authority with a mailing address of 112 East Sunset Avenue, Snow Shoe, PA 16874. SSBA is organized to provide a public water supply to roughly 1,000 homes and businesses located in Snow Shoe Borough and adjacent communities ("Water Supply"). SSBA derives the Water Supply from two water wells permitted by the Department: Water Well No. 1 and Water Well No. 2. Water Well No. 1 is permitted to pump 250 gallons per minute ("GPM"); Water Well No. 2, originally permitted in August 2000 to pump 300 GPM, was re-permitted in March 2007 to pump 200 GPM. Water Well No. 2 has been SSBA's primary water source for the Water Supply.

### Background

- D. On June 3, 2003, the Department issued well permit No. 37-027-21113-00 ("Permit") to Range Resources authorizing Range Resources to drill the Gulf USA No. 4 Gas Well in Snow Shoe Township, Centre County, Pennsylvania ("Gulf USA No. 4 Well"). At the request of Range Resources, the Department renewed the Permit in 2004 and 2005 pursuant to 58 P.S. § 601.201(i).
- E. On or about November 14, 2005, Range Resources commenced drilling operations at the Gulf USA No. 4 Well site. Drilling of the Gulf USA No. 4 Well was completed on November 18, 2005.
- F. In November 2005, SSBA notified the Department that following the commencement of drilling operations at the Gulf USA Well No. 4, Water Well No. 2 experienced a diminution in quantity. SSBA requested that the Department conduct an investigation into the alleged diminution in quantity of Water Well No. 2.
- G. On November 25, 2005, the Department initiated an investigation of the alleged diminution of the Water Supply.

- H. The Gulf USA Well No. 4 is located roughly 1,500 feet horizontally from Water Well No. 2 and is drilled completely through the same confined aquifer; *i.e.* the Rockwell Formation, that Well No. 2 penetrates.
- I. The Department conducted an investigation and determined that the SSBA Water Supply was diminished in quantity as a consequence of Range Resources' drilling activities at the Gulf USA No. 4 Well.
- J. The diminution of a private or public water supply constitutes a public nuisance and unlawful conduct pursuant to Sections 502 and 509(2) of the Oil and Gas Act, 58 P.S. §§ 601.502 and 601.509(2). Well operators who affect a private or public water supply by pollution or diminution are required to restore or replace the affected water supply with an alternate water supply adequate in quantity and quality for the purposes served by the supply. 58 P.S. § 601.208(a) and 25 Pa. Code § 78.51(a).
- K. On February 2, 2007, the Department issued an order to Range Resources requiring Range Resources, among other things, to submit a written plan and schedule to restore or replace the Water Supply ("February 2, 2007 Order"). A copy of the February 2, 2007 Order is attached hereto and incorporated herein as Exhibit A.
- L. On or about March 1, 2007, Range Resources filed an appeal of the February 2, 2007 Order with the Environmental Hearing Board ("Board") which was docketed at EHB Docket No. 2007-075-L ("Appeal"). In its Appeal, Range Resources denied and disputed the Department's determination that Range Resources caused any diminution in quantity of SSBA's Water Supply as a result of any drilling activities at the Gulf USA No. 4 Well. Range Resources continues to dispute and deny that it caused any diminution in quantity of SSBA's Water Supply.

# With SSBA's Concurrence, The Department And Range Resources Have Reached An Agreement To Settle The Appeal

M. The Department and Range Resources agreed to resolve the above referenced appeal amicably by entering into a Consent Order and Agreement containing terms and conditions that address the protection of the SSBA Water Supply from potential impacts of future oil or gas wells drilled by Range Resources within roughly a one mile radius of Water Well No. 1 and Water Well No. 2 as depicted on the map attached hereto as Exhibit B ("Wellhead Protection Area"). The terms and conditions are set forth in full in Paragraphs 3 and 4 hereof.

Although not a party to the Appeal, SSBA was involved in the settlement negotiations between the Department and Range Resources and concurs with the terms and conditions.

- N. SSBA and Range Resources negotiated a separate agreement that resolves legal issues between Range Resources and SSBA arising from the drilling of Gulf USA Well No. 4. Among other things, under the agreement, Range Resources will pay SSBA to assist in remediation efforts at Water Well No. 2.
- O. The Department agrees that this Consent Order and Agreement and the agreement between Range Resources and SSBA referenced in Paragraph N, above, including Range Resources' payment of a monetary sum to SSBA, resolve Range Resources' obligations under the February 2, 2007 Order.

After full and complete negotiation of all matters set forth in this Consent Order and Agreement and upon mutual exchange of 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 Range Resources and SSBA as follows:

1. <u>Authority</u>. This Consent Order and Agreement is an Order of the Department authorized and issued pursuant to Sections 208 and 503 of the Oil and Gas Act, 58 P.S. §§ 601.208 and 601.503; and Section 1917-A of the Administrative Code. *supra*.

## 2. Findings.

- a. Range Resources and SSBA agree that the findings in Paragraphs A through O are true and correct and, in any matter or proceeding involving Range Resources, SSBA and the Department, Range Resources and SSBA shall not challenge the accuracy or validity of these findings.
- b. The Parties do not authorize any other persons to use the findings in this Consent Order and Agreement in any matter or proceeding.
- 3. <u>Casing and Cementing Protocol</u>. Range Resources shall implement the Casing and Cementing Protocol attached hereto as Exhibit C and incorporated herein as if fully set forth at any oil or gas well which it drills within the Wellhead Protection Area for Water Well No. 1 and Water Well No. 2 as depicted on the map attached hereto and incorporated herein as Exhibit B.
- 4. Presumption of Liability for Diminution of Quantity. If there is no "return" of Gel Slurry, *i.e.* the Gel Slurry fails to circulate as provided in the Casing and Cementing Protocol, Range Resources shall be presumed responsible for the diminution in quantity of Water Well No. 1, Water Well No. 2 or any other water well located in the Wellhead Protection Area to be permitted by the Department to SSBA in the future, if such diminution occurs within three (3) months after the completion of drilling or alteration of any oil or gas well drilled within the Wellhead Protection Area.

- 5. The Department accepts Range Resources' binding commitments set forth in Paragraphs 3 and 4 above, and its agreement to pay SSBA described in Paragraph N, above, as constituting compliance with the February 2, 2007 Order.
- 6. Within ten (10) days of the date of this Consent Order and Agreement, Range Resources shall file with the Environmental Hearing Board a praecipe to withdraw the Appeal docketed at EHB Docket No. 2007-075-L.

#### 7. Additional Remedies.

- a. In the event Range Resources fails to comply with any provision of this Consent Order and Agreement, the Department may, in addition to the remedies prescribed herein, pursue any remedy available for a violation of an order of the Department, including an action to enforce this Consent Order and Agreement.
- b. The remedies provided by this paragraph are cumulative and the exercise of one does not preclude the exercise of any other. The failure of the Department to pursue any remedy shall not be deemed to be a waiver of that remedy.
- 8. Reservation of Rights. The Department reserves the right to require additional measures to achieve compliance with applicable law. Range Resources reserves the right to challenge any action which the Department may take to require those measures.
- 9. <u>Liability of Range Resources</u>. Range Resources shall be liable for any violations of the Consent Order and Agreement, including those caused by, contributed to, or allowed by its officers, agents, employees, or contractors. Except as provided in Paragraph 10(d) hereof, Range Resources also shall be liable for any violation of this Consent Order and Agreement caused by, contributed to, or allowed by its successors and assigns. This Consent Order and Agreement shall apply to all successors and assigns of Range Resources.

- 10. <u>Transfer of Any Legal or Equitable Interest in Oil and Gas Wells Drilled</u>
  <u>Within The Wellhead Protection Area After the Date of this Consent Order</u>
  and Agreement.
- a. The duties and obligations under this Consent Order and Agreement shall not be modified, diminished, terminated or otherwise altered by the transfer of any legal or equitable interest in oil wells or gas wells drilled after the date of this Consent Order and Agreement within the Wellhead Protection Area as defined by this Consent Order and Agreement. Such legal or equitable interest shall include but not be limited to well drilling permits issued by the Department.
- b. If Range Resources intends to transfer any legal or equitable interest in any oil well or gas well drilled after the date of this Consent Order and Agreement which are affected by this Consent Order and Agreement, Range Resources shall serve a copy of this Consent Order and Agreement upon the prospective transferee of the legal and equitable interest at least thirty (30) days prior to the contemplated transfer and shall simultaneously inform the Southwest Regional Office of Oil and Gas Management Program of such intent.
- c. No requests for transfers of any well drilling permits for wells located within the Wellhead Protection Area that are issued to Range Resources or its successor(s) by the Department after the date of this Consent Order and Agreement will be approved by the Department unless the transferee agrees to comply with the terms and conditions of this Consent Order and Agreement in an amendment of this Consent Order and Agreement.
- d. If Range Resources seeks to pursue a transfer of any legal or equitable interest in oil wells or gas wells drilled within the Wellhead Protection Area after the date of this Consent Order and Agreement, it may seek to modify this Order to authorize assignment of the respective obligations hereunder to such transferee. The Department in its sole discretion may

agree to modify or terminate Range Resources' duties and obligations under this Consent Order and Agreement upon transfer of any legal or equitable interest in any oil well or gas well drilled within the Wellhead Protection Area after the date of this Consent Order and Agreement. Range Resources waives any right that it may have to challenge the Department's decision in this regard.

11. <u>Correspondence with Department</u>. All correspondence with the Department concerning this Consent Order and Agreement shall be addressed to:

Manager
Oil and Gas Management
Department of Environmental Protection
400 Waterfront Drive
Pittsburgh, PA 15222-4745
Phone: (412) 442-4000

Fax: (412) 442-4328

12. <u>Correspondence with Range Resources</u>. All correspondence with Range Resources concerning this Consent Order and Agreement shall be addressed to:

Stephen P. Rupert Vice President - Operations Range Resources-Appalachia, LLC 125 State Route 43 P.O. Box 550 Hartville, OH 44685-0550

Phone: (330) 877-6747 Fax: (330) 877-6129

Range Resources shall notify the Department whenever there is a change in the contact person's name, title, or address. Service of any notice or any legal process for any purpose under this Consent Order and Agreement, including its enforcement, may be made by mailing a copy by first class mail to the above address.

13. <u>Correspondence with SSBA</u>. All correspondence with the SSBA concerning this Consent Order and Agreement shall be addressed to:

Bonnie Brown Secretary Snow Shoe Borough Authority 112 East Sunset Avenue Snow Shoe, PA 16874 Phone: (814) 387-4594

Fax: (814) 387-4594

with a copy to:

Cristen Long, Esquire
McQuaide Blasko, Attorneys at Law
811 University Drive
State College, PA 16801-6699

Phone: (814) 238-4926 Fax: (814) 234-5620

SSBA shall notify the Department whenever there is a change in the contact person's name, title, or address. Service of any notice or any legal process for any purpose under this Consent Order and Agreement, including its enforcement, may be made by mailing a copy by first class mail to the above address.

- 14. <u>Severability</u>. The paragraphs of this Consent Order and 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 Agreement shall constitute the entire integrated agreement of the Parties. 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. <u>Attorney Fees</u>. 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 Agreement.

- 17. <u>Modifications</u>. No changes, additions, modifications, or amendments of this Consent Order and Agreement shall be effective unless they are set out in writing and signed by the Parties hereto.
- 18. <u>Titles</u>. A title used at the beginning of any paragraph of this Consent Order and Agreement may be used to aid in the construction of that paragraph, but shall not be treated as controlling.
- 19. <u>Decisions under Consent Order</u>. Any decision which the Department makes under the provisions of this Consent Order and Agreement is intended to be neither a final action under 25 Pa. Code § 1021.2, nor an Adjudication under 2 Pa. C.S. § 101. Any objection which Range Resources or SSBA may have to the decision will be preserved until the Department enforces this Consent Order and Agreement.
- 20. <u>Resolution</u>. Attached hereto as Appendix A is a resolution of the SSBA authorizing its signatories below to enter into this Consent Order and Agreement on its behalf.
- 21. <u>Execution of Agreement</u>. This Consent Order and Agreement may be signed in counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument. Facsimile signatures shall be valid and effective.
- 22. <u>Binding Effect</u>. This Consent Order and Agreement shall be binding upon and shall inure to the benefit of the Parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, the Parties hereto have caused this Consent Order and Agreement to be executed by their duly authorized representatives. The undersigned representatives of Range Resources and SSBA certify under penalty of law, as provided by 18 Pa. C.S. § 4904, that they are authorized to execute this Consent Order and Agreement on behalf of Range Resources and SSBA; that Range Resources and SSBA consent to the entry of this

y 1314, the Administrative Agency Daw, 2	. 1 a. C.S. 9 103(a) and Chapters 3A and 7A, or any
other provision of law. Signature by Rango	e Resources and SSBA attorneys certifies only that th
agreement has been signed after consulting	with counsel.
FOR RANGE RESOURCES- APPALACHIA, LLC:	FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION:
Jeffrey A. Bynnin Serior Vice President - Land ABU	Alan J. Eichler  Manager  Oil and Gas Management  Southwest Region
Richard W. Hosking, Esquire Attorney for Range Resources- Appalachia, LLC	Gail A. Myers
	Assistant Counsel Southwest Region
FOR SNOW SHOE BOROUGH AUTHORITY:	
	Amy Ershler Assistant Counsel North Central Region
Name Title	
	Appendix & Exhibits: Appendix A - SSBA Resolution

Cristen Long, Esquire
Attorney for Snow Shoe Borough Authority

Exhibit A - February 2, 2007 Order
Exhibit B - Map of Wellhead Protection Area
Exhibit C - Casing and Cementing Protocol

FOR RANGE RESOURCES-APPALACHIA, LLC: FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION:

Jeffrey A. Bynum Senior Vice President - Land ABU Alan J. Eichler Manager Oil and Gas Management Southwest Region

Richard W. Hosking, Esquire Attorney for Range Resources-Appalachia, LLC

Gail A. Myers
Assistant Counsel
Southwest Region

FOR SNOW SHOE BOROUGH AUTHORITY:

Name PRESIDENT
Title

Amy Ershler
Assistant Counsel
North Central Region

( Ifm

Cristen Long, Esquire

Attorney for Snow Shoe Borough Authority

Appendix & Exhibits:

Appendix A - SSBA Resolution

Exhibit A - February 2, 2007 Order

Exhibit B - Map of Wellhead Protection Area

Exhibit C - Casing and Cementing Protocol

agreement has been signed after consulting with counsel.	
FOR RANGE RESOURCES- APPALACHIA, LLC:	FOR THE COMMONWEALTH OF PENNSYLVANIA, DEPARTMENT OF ENVIRONMENTAL PROTECTION:
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Jeffrey A. Bynum Senior Vice President - Land ABU	Alàn J. Eichler Manager Oil and Gas Management Southwest Region
Richard W. Hosking, Esquire	$G_{i}$
Attorney for Range Resources- Appalachia, LLC	Gail A. Myers Assistant Counsel Southwest Region
FOR SNOW SHOE BOROUGH AUTHORITY:	
	Amy Ershler Assistant Counsel North Central Region
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	Appendix & Exhibits: Appendix A - SSBA Resolution Exhibit A - February 2, 2007 Order
Cristen Long, Esquire Attorney for Snow Shoe Borough Authority	Exhibit B - Map of Wellhead Protection Area Exhibit C - Casing and Cementing Protocol

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Jeffrey A. Bynum Senior Vice President - Land ABU	Alan J. Eichler Manager Oil and Gas Management Southwest Region
Richard W. Hosking, Esquire Attorney for Range Resources- Appalachia, LLC	Gail A. Myers Assistant Counsel Southwest Region
FOR SNOW SHOE BOROUGH AUTHORITY:	Amy Ershler Assistant Counsel North Central Region
Title	Appendix & Exhibits: Appendix A - SSBA Resolution Exhibit A - February 2, 2007 Order
Cristen Long, Esquire Attorney for Snow Shoe Borough Authority	Exhibit B - Map of Wellhead Protection Area Exhibit C - Casing and Cementing Protocol

#### **RESOLUTION OF**

# SNOW SHOE BOROUGH AUTHORITY

BE IT RESOLVED, this 19<sup>th</sup> day of November, 2007, as duly passed at a public meeting held this date, that the Board of Snow Shoe Borough Authority hereby accepts and approves the terms and conditions, as amended, of that certain Consent Order and Agreement in the Matter of:

Great Lakes Energy Partners, LLC (now Range Resources) v. Commonwealth of Pennsylvania, Department of Environmental Protection EHB Docket No. 2007-075-L

prepared and transmitted by the Commonwealth of Pennsylvania Department of Environmental Protection (and which is hereby incorporated by reference); and further, authorizes Gary Fox. President to execute and transmit said Consent Order and Agreement on behalf of Snow Shoe Borough Authority.

Dated: November 19, 2007

SNOW SHOE BOROUGH AUTHORITY

Attest:

Bonnie Brówn, Secretary By: Gary Fox, President

# COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

In The Matter Of:

Great Lakes Energy Partners, LLC

Oil and Gas Act

P.O. Box 235

Water Supply Replacement

Route 85 and Northern Avenue

Snow Shoe Borough Water Supply

Yatesboro, PA 16263

Snow Shoe Borough

Centre County

#### ORDER

Now, this \_\_\_\_\_ day of \_\_ERPLAR\_\_\_, 2007, the Commonwealth of Pennsylvania, Department of Environmental Protection ("Department"), has found and determined the following:

A. The Department is the agency with the duty and authority to administer and enforce 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 regulation ("rules and regulations") promulgated thereunder.

# Great Lakes Energy Partners, LLC

- B. Great Lakes Energy Partners, LLC ("Great Lakes") is a Pennsylvania corporation engaged in the exploration and production of oil and gas resources in Pennsylvania. Great Lakes' mailing address is P.O. Box 235, Route 85 and Northern Avenue, Yatesboro, PA 16263.

  The Snow Shoe Borough Water Authority Water Supply
- C. Snow Shoe Borough Water Authority ("SSEWA") is a water authority with a mailing address of 112 East Sunset Avenue, Snow Shoe, PA 16874. SSBWA is organized to

provide a public water supply to roughly 1,000 homes and businesses located in Snow Shoe Borough and adjacent communities ("Water Supply"). SSBWA derives the Water Supply from two water wells. Water well No. 1 is permitted to pump 250 gallons per minute ("GPM") ("Snow Shoe Water Well No. 1"). Water well No. 2 is permitted to pump 300 GPM ("Snow Shoe Well No. 2"). Snow Shoe Water Well No. 2 is SSBWA's primary water source for the Water Supply.

#### The Gas Well

- D. On June 3, 2003, the Department issued well Permit No. 37-027-21113-00 ("Permit") to Great Lakes authorizing Great Lakes to drill the Gulf USA No. 4 Gas Well in Snowshoe Township, Centre County, Pennsylvania ("Gulf USA No. 4 Well").
- E. On or about November 14, 2005, Great Lakes commenced drilling operations at the Gulf USA No. 4 Well site. Drilling of the Gulf USA No. 4 Well was completed on November 18, 2005.

# Water Supply Diminution Investigation

- F. On or about November 17, 2005, following the commencement of drilling operations at the Gulf USA No. 4 Well site, SSBWA notified the Department that beginning on November 16, 2005, Snow Shoe Well No. 2 was no longer maintaining delivery of 300 GPM.

  SSBWA requested that the Department conduct an investigation.
- G. On November 21, 2005, the Department initiated an investigation of the alleged diminution of the Water Supply.

Pursuant to 58 P.S. § 601.201(i), well permits expire one year after issuance unless operations for drilling the well are commenced within such period. At the request of Great Lakes, the Department renewed the Permit in 2004 and 2005.

- H. The Gulf US.4 No. 4 Well is located roughly 1500 feet horizontally from Snow Shoe Well No. 2 and is drilled completely through the same aquifer; i.e. the Rockwell Formation, that Snow Shoe Well No. 2 penetrates.
- I. Snow Shoe Well No. 2 was placed into production in August 2000, and since then until November 16, 2005, it was capable of consistently delivering 300 GPM.
- J. SSBWA met with Great Lakes on April 25, 2003, to discuss Great Lakes' proposed plans to drill a number of gas wells known as the Gulf USA Gas Wells in the vicinity of Snow Shoe Well No. 1 and Snow Shoe Well No. 2.
- K. By memorandum dated May 27, 2003, from SSBWA's consultant to Great Lakes, SSBWA recommended that, due to the highly confined (artesian) nature of the Rockwell Formation, Great Lakes implement SSBWA's proposal for casing and grouting the Gulf USA Gas Wells in order to protect the Water Supply. SSBWA also requested the opportunity to be present when Great Lakes drilled through the Rockwell Formation at each of the Gulf USA Gas Well sites.
- L. Great Lakes partially implemented SSBWA's casing and grouting recommendation at the first three Gulf USA Gas Wells that Great Lakes drilled. There were no known adverse impacts to Snow Shoe Well No. 1 or Snow Shoe Well No. 2 during or after the drilling and completion of such wells.
- M. Great Lakes did not implement SSBWA's proposed casing and grouting recommendation at the Gulf USA No. 4 Well.
- N. Great Lakes notified SSBWA in advance of drilling through the Rockwell Formation at the first Gulf USA Gas Well that Great Lakes drilled. Great Lakes did not notify SSBWA in advance of drilling through the Rockwell Formation at the Gulf USA No. 4 Well.

- On November 16, 2005, SSBWA personnel measured the water level in Snow Shoe Water Well No. 2 and found that the pumping water level had dropped from 51 feet to 63 feet, the well was producing turbid water, and the well pump was vibrating excessively and emitting a pinging noise. An automatic safety switch shut off the pump after Snow Shoe Well No. 2's computer showed that the water level in the well had dropped below a safe pumping depth. SSBWA restarted the pump, decreasing the well's pumping rate from 300 GPM to 100 GPM.
- P. From November 16, 2005 to December 23, 2005, SSBWA observed that the decrease in the water levels in Snow Shoe Well No. 2 prevented SSBWA from maintaining a constant pumping rate of 300 GPM. During this period of time, SSBWA manipulated the well's pumping rate between 225 GPM and 100 GPM to prevent the pump from shutting down.
- Q. From December 23, 2005 to June 5, 2006, SSBWA maintained a constant pumping rate at Snow Shoe Well No. 2 of 225 GPM. Because the pumping water level in the Rockwell Formation dropped by 12 feet, Snow Shoe Well No. 2 could no longer reliably produce water at the permitted rate of 300 GPM.
- R. In 1997, when Snow Shoe Well No. 2 was drilled, the static water level of the well measured 1.76 feet below ground surface. On June 5, 2006, the static water level of the well measured 32.8 feet below ground surface. The difference in the static water level represents a loss in available draw down in the well.
- S. A comparison of the 1997 and 2006 aquifer tests shows a 20 foot depletion of the ground water level available for pumping from the aquifer. Aquifer tests conducted between July 21, 2006 and September 26, 2006, confirm that Snow Shoe Well No. 2 can no longer sustain a constant pumping rate of 300 GPM.

- T. Based on SSBWA's fracture trace analysis of the vicinity of Snow Shoe Well No. 2, Gulf USA Well No. 4 and Snow Shoe Well No. 2 are both located on the same fracture trace feature. In order to maximize yield, Snow Shoe Well No. 2 was located on a fracture trace feature which may represent an enhanced flow path for ground water.
  - U. The Water Supply is diminished in quantity.
- V. The Department determined that the diminution of the Water Supply is the result of Great Lakes' drilling activities at the Gulf USA No. 4 Well.
- W. Well operators who affect a private or public water supply by pollution or diminution are required to restore or replace the affected water supply with an alternate water supply adequate in quantity and quality for the purposes served by the supply. 58 P.S. § 601.208(a) and 25 Pa. Code § 78.51(a).
- X. Section 208(b) of the Oil and Gas Act, 58 P.S. § 601.208(b), provides that if the Department finds that the pollution or diminution was caused by well drilling or the operation of an oil or gas well, then it shall issue such orders to the well operator as are necessary to assure compliance with 58 P.S. § 601.208(a).
- Y. The Department advised Great Lakes of the diminution of the Water Supply.

  Great Lakes provided no further information as to the cause of the diminution of the Water Supply.
- Z. Section 78.51(d) of the Department's rules and regulations, 25 Pa. Code § 78.51(d), requires that the operator shall affirmatively demonstrate to the Department's satisfaction that the quality of the restored or replaced water supply to be used for human consumption is at least equal to the quality of the supply before it was affected by the operator. However, if the quality of the water supply before it was affected by the operator cannot be

affirmatively established, the operator shall demonstrate that the concentration of substances in the restored or replaced water supply does not exceed the primary and secondary maximum contaminant levels ("MCLs") established under 25 Pa. Code § 109.202 (relating to state MCLs and treatment technique requirements).

AA. The diminution of the Water Supply constitutes a public nuisance and unlawful conduct pursuant to Sections 502 and 509(2) of the Oil and Gas Act, 58 P.S. §§ 601.502 and 601.509(2).

NOW, THEREFORE, pursuant to Sections 208 and 503 of the Oil and Gas Act, 58 P.S. §§ 601.208 and 601.503; and Section 1917-A of the Administrative Code, 71 P.S. § 510-17, the Department hereby orders that:

- 1. a. Within thirty (30) days of receipt of this Order, Great Lakes shall provide the Department with a written plan and schedule which describes in detail the methods and/or techniques proposed to restore or replace permanently the Water Supply and when it will do so ("Plan and Schedule"). The proposed Plan and Schedule shall include, at a minimum:
  - i A method of demonstrating to the satisfaction of the Department that the quantity and quality of the permanently restored or replaced water supply meet the requirements of 25 Pa. Code §§ 78.51(a), (d), (e). (f), and (g);
  - ssbwa on a permanent basis for any increased operation and maintenance costs associated with the restored or replaced water supply which exceeds those associated with the existing Water Supply. A copy of any signed agreements between Great Lakes and SSBWA in this regard should be submitted with the proposed Plan and Schedule.
- b. Great Lakes shall commence and thereafter complete implementation of the Plan and Schedule as approved by the Department upon the Department's approval or

approval with modifications. The approved Plan and Schedule shall be incorporated into this Order as if fully set forth herein.

- c. Great Lakes shall respond to any Department requests for additional information concerning the Plan and Schedule or comments concerning the Plan and Schedule within ten (10) days of such request for comments.
- 2. In complying with this Order, Great Lakes shall not affect by pollution or diminution any other water supply.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH
THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL
WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

David F. Janco

Regional Manager

Oil and Gas Management

Southwest Region

# CASING/CEMENTING PROCEDURES FOR OIL AND GAS WELLS DRILLED WITHIN ONE MILE WELL HEAD PROTECTION AREA OF SNOW SHOE BOROUGH AUTHORITY (SSBA) WELLS NOS. 1 AND 2

Range Resources-Appalachia, LLC ("Range Resources") agrees to comply with the following procedures for casing and cementing any oil wells and gas wells drilled within the one mile wellhead protection area depicted on the attached map.

1. a. Provide written notice by facsimile to designees of the Department of Environmental Protection's (DEP) Oil & Gas Management Program and Water Supply Management Program and SSBA at least 72 hours prior to spudding any oil and gas well located within the one mile wellhead protection area depicted on map attached hereto as ATTACHMENT A. Written notice shall be faxed to the following DEP and SSBA designees at the following numbers:

DEP:

Alan Eichler

Manager

Oil & Gas Management Program

412 442-4328

John Hamilton

Manager

Water Supply Management Program

570 327-3565

SSBWA:

Bonnie Brown

Secretary SSBWA 814 387-4594

James Casselberry

Casselberry & Associates

814 235-2363

- b. Permit access to the oil and gas well site to DEP and SSBA representatives.
- c. Whether or not representatives of the DEP and SSBA are present for the spudding, casing and cementing of the well, Range Resources may, provided it has fully complied with the above written notice requirement, proceed with the well spudding, casing and cementing activities.
- d. Range Resources shall not be responsible for determining the proper casing setting depths. Casing setting depths must be provided by SSBA's consultant.

- 2. Install conductor as needed.
- 3. Drill to base of Burgoon formation, if present, and set and permanently cement casing.
- 4. Drill to base<sup>2</sup> of Rockwell formation.
- 5. Install Rockwell casing with a basket set at a depth of not more than 40' higher than the base of the Burgoon. This basket is to ensure that the top of the Rockwell casing can be grouted in case there is a circulation problem in the Rockwell.
- 6. To seal off fractures, fissures, etc. and stabilize hole through the Rockwell, circulate a gel slurry composed of sodium bentonite weighing 9 pounds per gallon (lbs/gal).
- 7. a. If circulation is achieved, pump an additional amount of the gel equivalent to the theoretical annular volume as a precaution to ensure that proper conditioning of the hole has occurred. Permanently cement casing with "Light Cement" consisting of a pozmix cement slurry containing 6% bentonite and weighing 12-14 lbs/gal.
- b. If circulation is not achieved, cement with volume of "Light Cement" sufficient to fill no more than 50' of the theoretical bottom annular space. This is to ensure that there is some cement at the base of the Rockwell casing while minimizing any cement entry into the aquifer. Fill annular space above basket with volume of "Light Cement" equal to theoretical annular volume. Production tubing installed in well will be permanently cemented to surface.
- 8. Continue drilling and casing/cementing as per 25 Pa. Code § 78.83.

Depth of Burgoon formation to be determined by information provided by SSBA's consultant.

<sup>&</sup>lt;sup>2</sup>Depth of Rockwell formation to be determined by information provided by SSBA's consultant.