

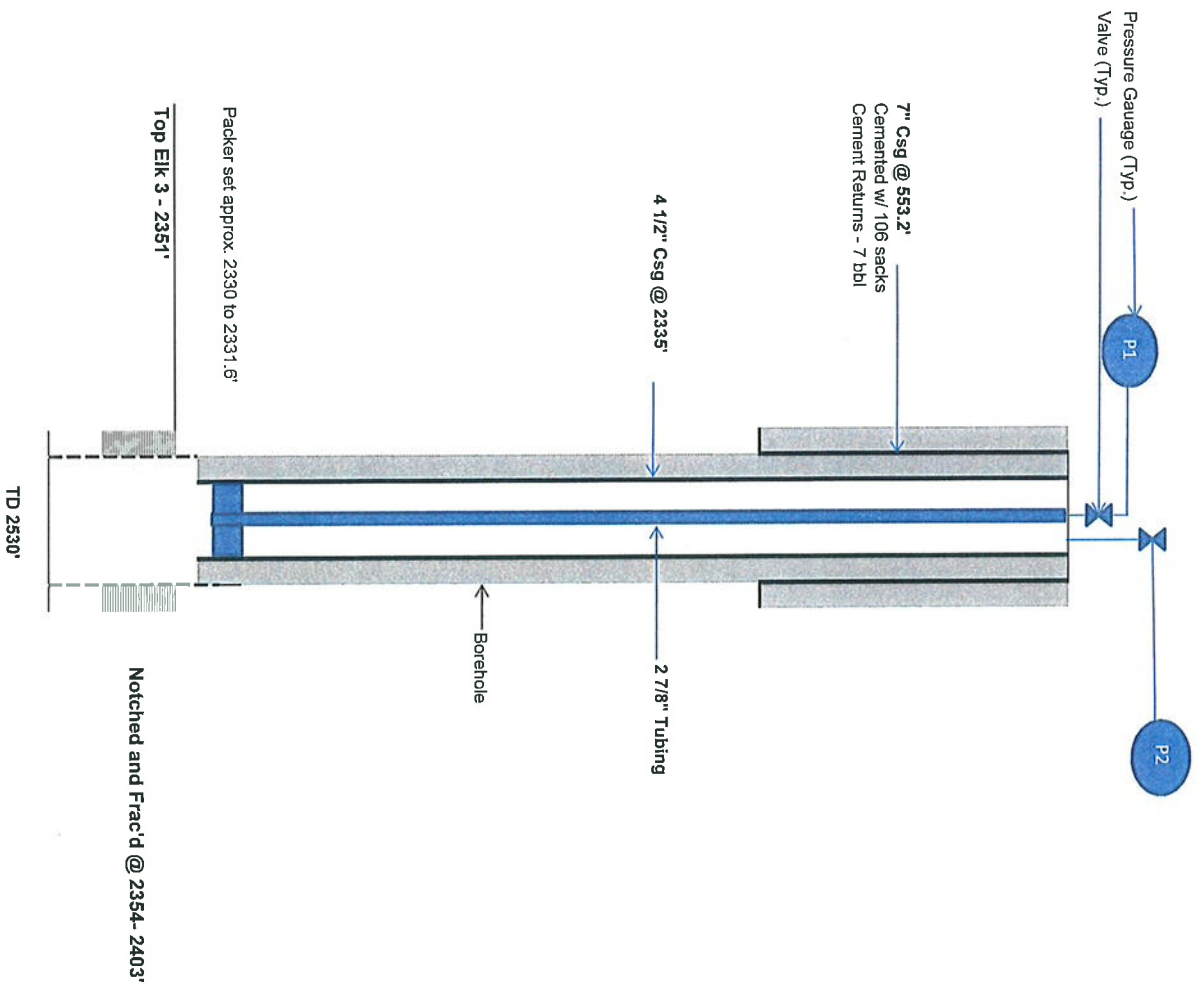
WELL CONSTRUCTION

INJECTION WELL CONFIGURATION

Well Construction Diagram

Proposed Injection Test Well

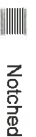
Seneca Well #38268
Highland Township
Elk County, PA
37-047-23835



Key



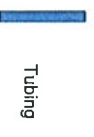
Cement



Notched and Frac'd Interval



Packer



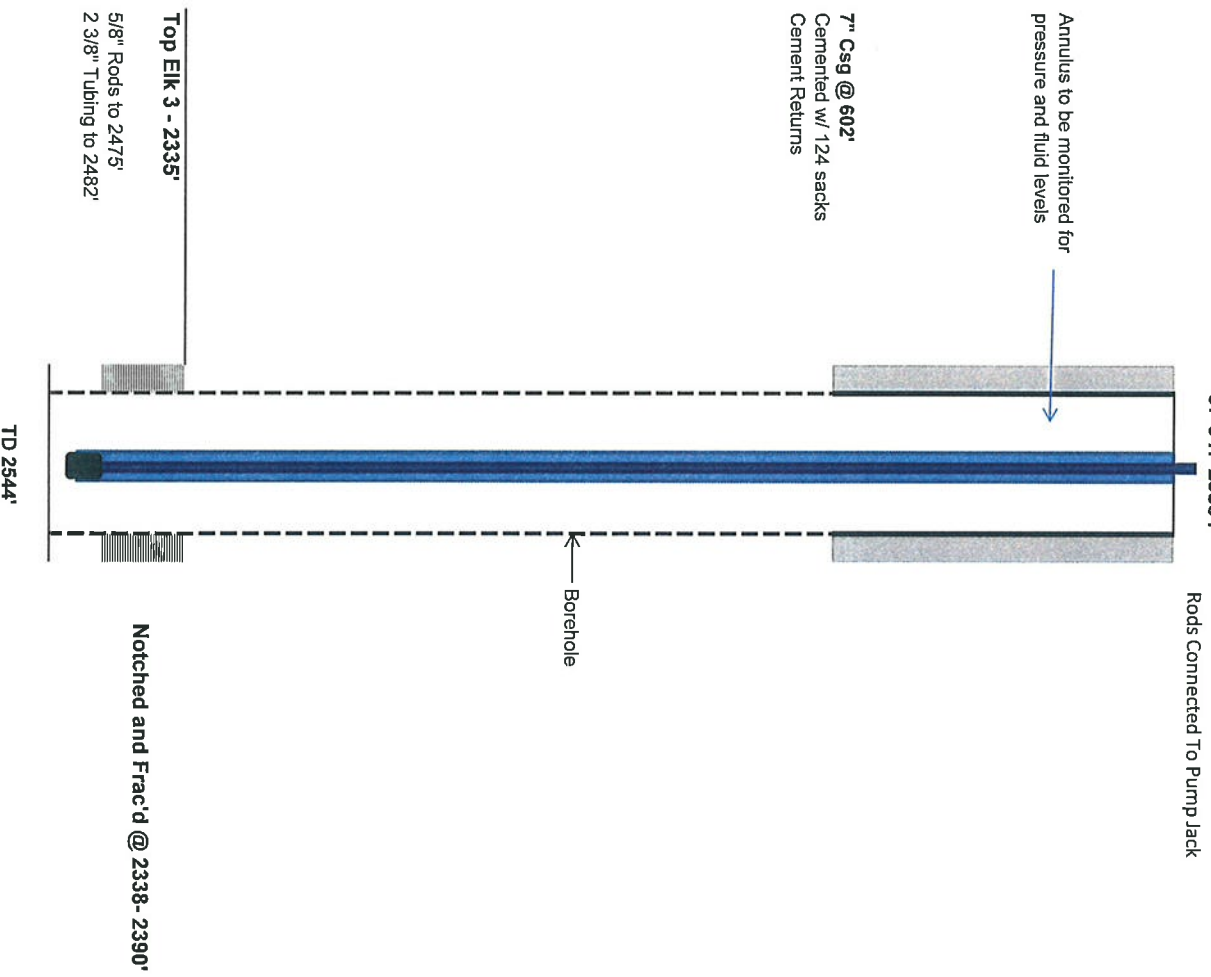
Tubing

Diagram Not to Scale

Well Construction Diagram

Proposed Monitoring Well

Seneca Well #38281
Highland Township
Elk County, PA
37-047-23884



Key

- Cement
- Notched and Frac'd interval

- Tubing
- Rods
- Pump

Diagram Not to Scale

Monitoring Program Addendum

Prior to the commencement of injection operations at Well #38268, Seneca will install 4-1/2" casing, cementing it back to the surface. A 2-7/8" tubing will be installed on a packer set immediately above the injection zone. This tubing will be used to convey fluid from the surface directly to the Elk 3 Sand. The annulus between the tubing and the 4-1/2" casing will be filled with corrosion inhibiting fluid to protect both the tubing and the casing. Seneca will apply positive pressure to the fluid in the annulus between the 4-1/2" casing and the 2-7/8" tubing. Seneca will continuously monitor fluid pressure in the annular space between the 2-7/8" tubing and 4-1/2" casing. The well will be equipped with an automatic high pressure shutoff device. Any significant deviation in the pressure of that fluid will automatically shut down operations at the well as it may be an indicator of mechanical integrity issues in the injection well. Seneca will also have the ability to shut down the well remotely from Seneca's offices. EPA will be notified of any shut down within 24 hours and the cause of the pressure deviation will be investigated and remediated before operations can recommence.

Wells #38281 and #1144, located 1,090 feet southwest of the subject injection well and 2,040 feet northwest of the subject injection well, respectively, will be utilized as monitor wells for injection at Well #38268. Well construction diagrams for these wells are attached in Section 7.

Prior to monitoring being performed at Wells #1144 and #38281, each well will be shut-in and modified to isolate the Elk 3 Sand. This will be done to effectively monitor conditions in the Elk 3 Sand only.

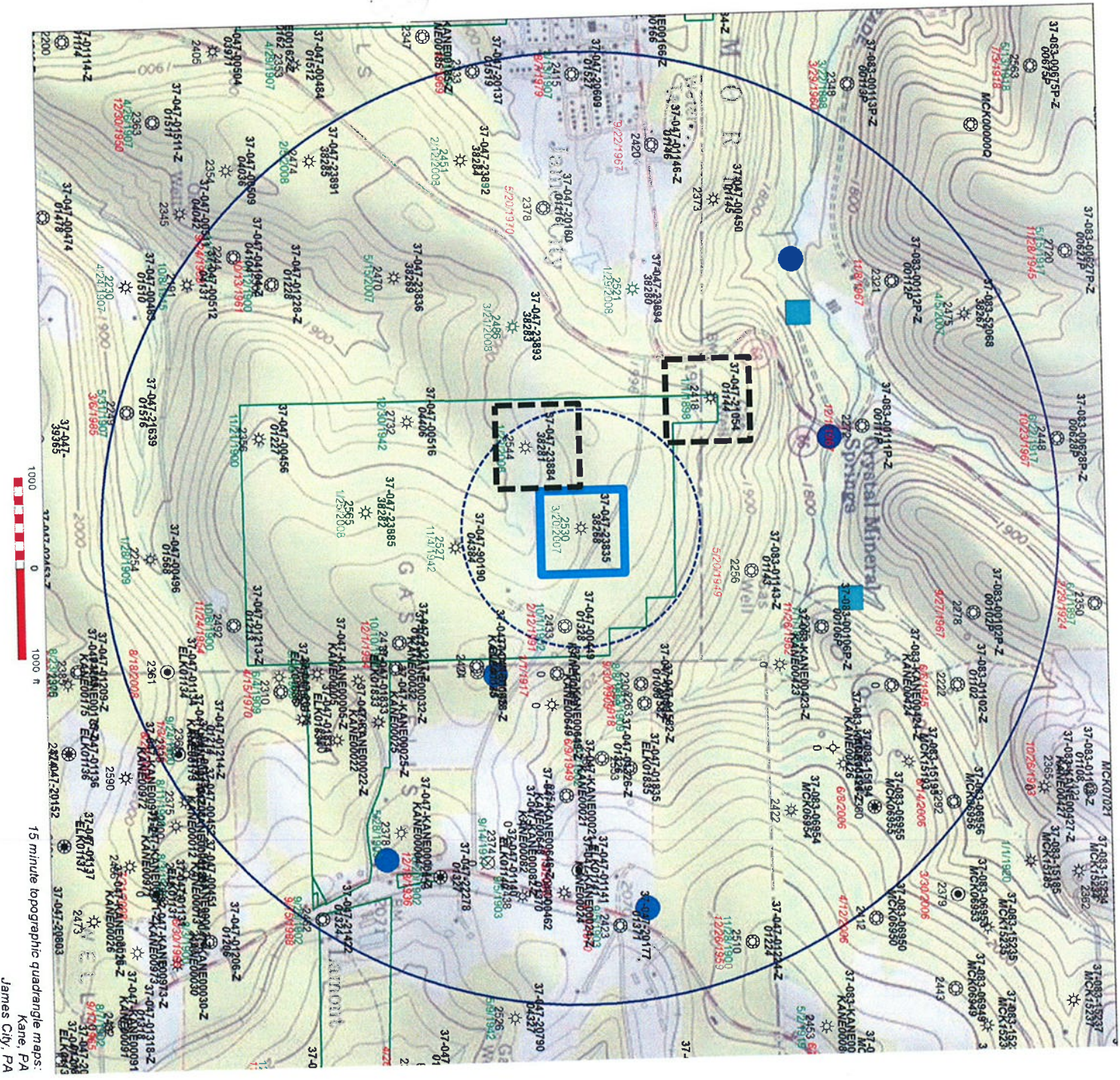
To isolate the Elk 3 Sand in Well #38281, Seneca proposed to install 4-1/2 inch casing on a packer, set directly above the Elk 3 Sand. This well was drilled in 2008 with an air rotary rig. Once the packer is properly set, Seneca will re-install the tubing and rods inside the 4-1/2" casing.

Well #1144 was drilled in 1898 with a cable tool rig. Seneca will plug back above the Elk 3 Sand, install 4-1/2 inch casing on a formation packer, and then cement the casing in place. Subsequently, the plug, cement, and plug back material will be drilled out in order to regain full communication with the Elk 3 Sand below the production casing.

Seneca proposes to conduct quarterly monitoring at both monitor wells which are currently producing gas from the Elk 3 Sand. At the beginning of each monitoring period, both monitor wells will be shut in for a period of approximately one week to allow for equilibration with respect to pressures and fluid levels in the Elk 3 Sand. Once equilibrium has been reached in the monitor wells, Seneca will record surface pressures and downhole fluid levels. If fluid levels in the Elk 3 Sand in the monitor wells are stable, Seneca reserves the right to pump, swab, or bail the fluid out of the wellbore in order to effectively produce gas from the injection zone.

While being used as monitor wells, if the fluid level in either well is observed to rise to within 250 feet of the base of the USDW, disposal operations in Well #38268 will be stopped immediately, EPA will be notified, and operating conditions will be evaluated in order to control the fluid levels.

Injection Well	Monitoring Well	Approximate Distance and Direction From Injection Well
Seneca #38268	Seneca #1144	2,040 feet northwest
Seneca #38268	Seneca #38281	1,090 feet southwest



- Private Water Wells
- Straight ft hole well
- Straight hole well

- Highland Township Water Authority
- Point
- TYPE
- SPRING
- WATER WELL



- Proposed injection well
- Proposed monitor well

 SENECA RESOURCES		Seneca Well 3826	
		Known Gas Wells within 1/4 mile	
Known Water Wells Supplies within 1 mile		Date:	September 6, 2012
Author:	Amanda Ventzy	Scale:	Sec Scale Bar

January 21, 2013

Well Construction Diagram

Proposed Monitoring Well

Seneca Well #38281
 Highland Township
 Elk County, PA
 37-047-23884

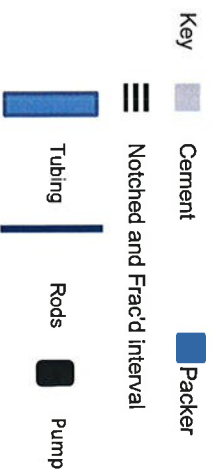
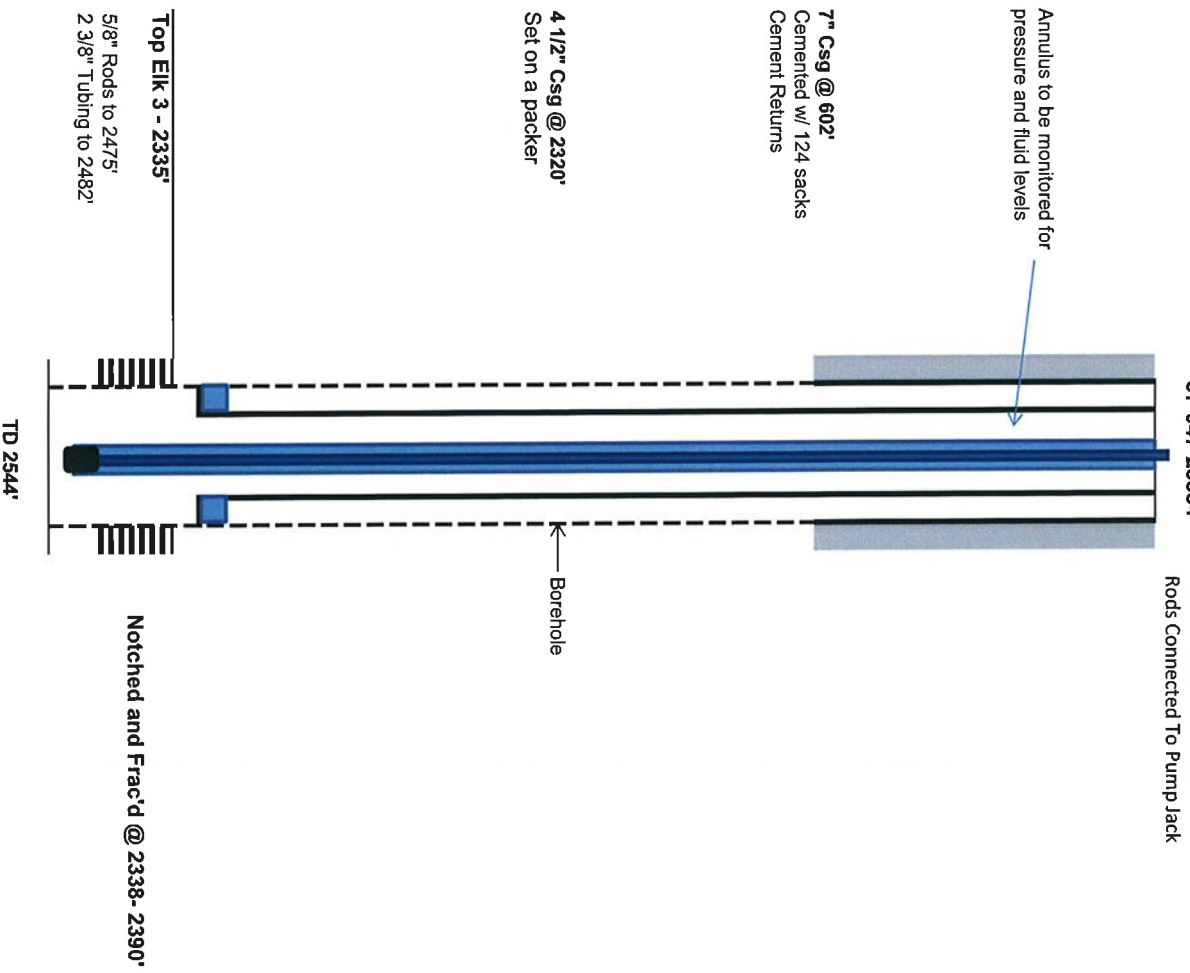
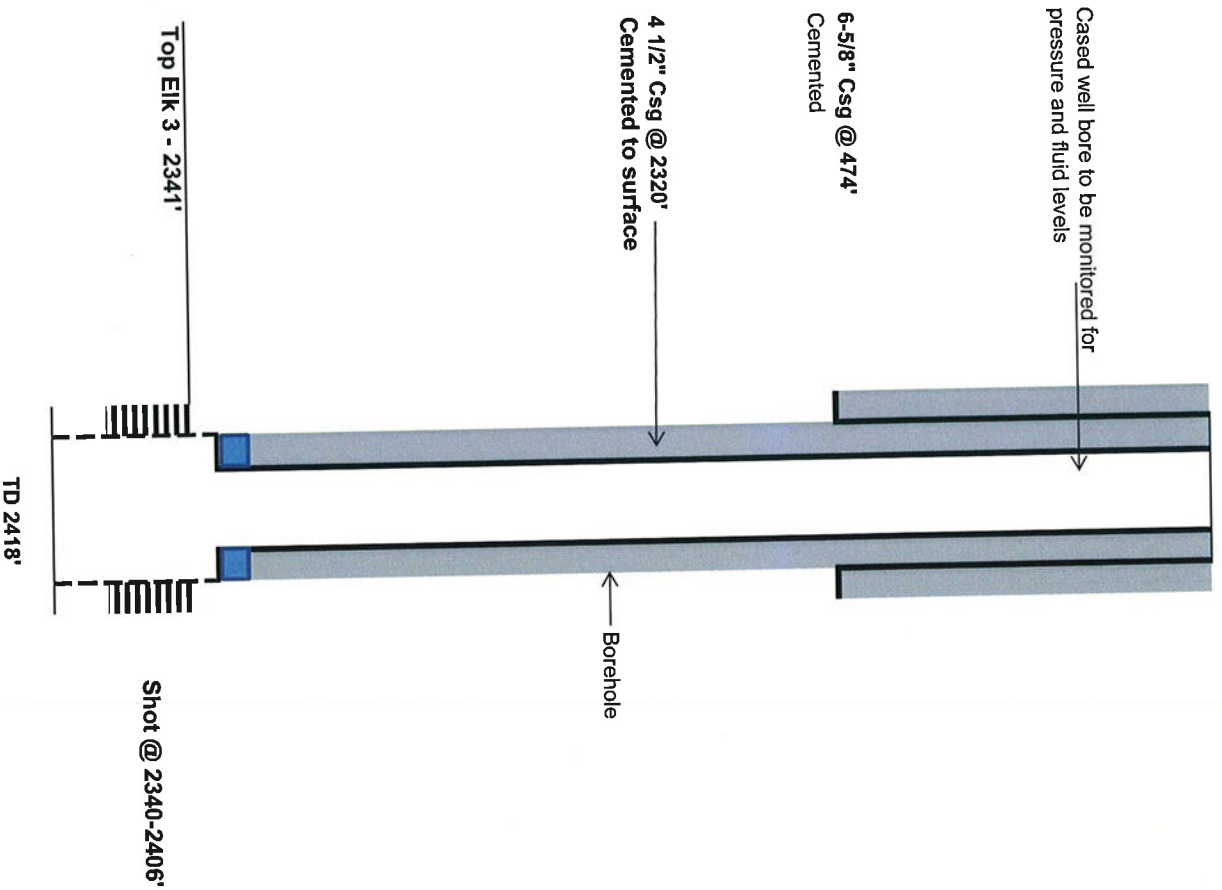


Diagram Not to Scale

January 21, 2013

Well Construction Diagram
Proposed Monitoring Well
Seneca Well #1144
Highland Township
Elk County, PA
37-047-21054



- Key
- Cement
 - ▨ Completed Interval (shot)
 - Formation Packer

January 21, 2013
Diagram Not to Scale

Plugging and Abandonment Plan

At the point when the well is no longer used, the well will be abandoned in accordance with EPA and PADEP regulations. With regard to PADEP regulations, this currently includes providing a "Notice of Intent to Plug a Well" no less than 3 days and no more than 30 days prior to abandoning the well, to allow a PADEP inspector to be present during the plugging procedure. The PADEP may waive the notification period. The notification will include well location plat, well logs, production logs, injection logs, construction details, and proposed abandonment method. After receiving approval from PADEP to proceed, the well will be abandoned and the abandonment procedures will be documented on a "Certificate of Plugging".

The USEPA will be notified of the plugging activity at least 45 days prior to commencing activities. This notification will include USEPA Form No. 7520-14. A proposed plugging plan (Form 7520-14) is attached based on the current PADEP and USEPA regulations. However, this may be modified prior to plugging in order to meet the requirements at the time of the plugging activity. A contractor cost estimate to perform plugging and abandonment according to the proposed plugging plan is attached. The contractor estimate is \$14,650. In addition a \$10,000 contingency has been added resulting in a total estimate of \$24,650 for plugging and abandonment costs.

**PLUGGING AND ABANDONMENT PLAN
PLUGGING AND ABANDONMENT CONSTRUCTION**

**PLUGGING AND ABANDONMENT
CONTRACTOR ESTIMATE**

ALCO Well Services, Inc.

314 Interstate Parkway
Bradford, PA 16701

Sent via electronic mail to okunugal@srcx.com

June 22nd, 2012

Mr. Ladi Okanuga
Production Engineer
Seneca Resource, Inc.
51 Zents Boulevard
Brookville, PA 15825

Dear Mr. Okanuga:

On behalf of ALCO Well Services, Inc., we appreciate the opportunity to present ALCO's quotation for the plugging of Seneca Well #38268.

After reviewing the specifications provided and based on the assumptions outlined below, ALCO's turnkey fee for plugging Well #38268 amounts to \$14,650.

This quotation is valid until September 30th, 2012 and the assumptions are as follows:

1. Cement between 7" casing and 4 1/2" casing must be visible at surface.¹
2. Cement between 9 5/8" casing and 7" casing must be visible at surface.²
3. The projected amount of cement and gel required to plug the well is based on PA DEP regulations and has a direct correlation to the depths indicated on the Well Construction Diagram provided to us by your office.

The quotation breaks down as follows:

Category	Unit	Total
Site Preparation/Restoration	Lump Sum	\$ 1,500
Mobilization/Demobilization	Lump Sum	\$ 1,500
Plugging Rig ³	Hourly	\$ 5,600
Cement Services	Per Sack	\$ 4,300
Gravel and Non-Cement Mat'l	Lump Sum	\$ 750
Disposal	Bbl	\$ 1,000
Total		\$14,650

¹ If cement is not visible between 7" and 4 1/2" casing, a bond log must be run to find top of cement and 4" pipe must be shot off and removed.

² If cement is not visible between 9 5/8" and 7" casing, a bond log must be run to find top of cement and 4" pipe must be shot off and removed.

³ Plugging Rig rate include \$200 hourly rate and 3 laborers. Time estimate is 3.5 days max assuming no other changes to project.

In the event you have questions or concerns about this quotation, feel free to contact me at 814-598-2566. Again, we thank you for the opportunity to submit this quotation.

Sincerely,

Margaret M. Copeland



Margaret M. Copeland
President
ALCO Well Services, Inc.
mcpeland@alcowell.com

PLUGGING AND ABANDONMENT PLAN

EPA FORM 7520-14



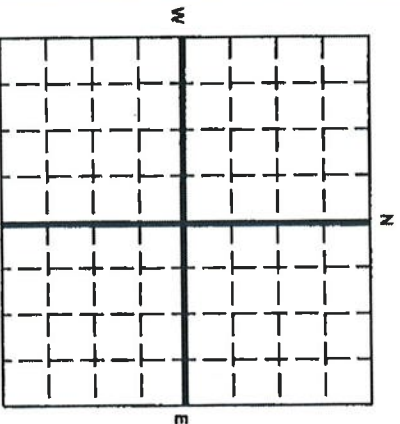
PLUGGING AND ABANDONMENT PLAN

United States Environmental Protection Agency
Washington, DC 20460

Name and Address of Facility
SENECA WELL # 38268 HIGHLAND TOWNSHIP, ELK COUNTY PA.

Name and Address of Owner/Operator
**SENECA RESOURCES CORPORATION
 5800 CORPORATE BLVD SUITE 300, PITTSBURGH PA 15237**

Locate Well and Outline Unit on
 Section Plat - 640 Acres



State **PENNSYLVANIA** County **ELK** Permit Number **37-047-23835**

Surface Location Description
 1/4 of 1/4 of 1/4 of 1/4 of Section Township Range

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location ft. from (N/S) Line of quarter section and ft. from (E/W) Line of quarter section.

TYPE OF AUTHORIZATION

- Individual Permit
- Area Permit
- Rule

Number of Wells **1**

WELL ACTIVITY

- CLASS I
- CLASS II
- Brine Disposal
- Enhanced Recovery
- Hydrocarbon Storage
- CLASS III

Lease Name

Well Number

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT (LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
9.625	26	62.6	62.6	11.25
7.00	17	553.2	553.2	8.75
4.5	10.5	2335	2335	6.25
2.875	6.5	2335	0	6.25

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- The Balance Method
- The Dump Baller Method
- The Two-Plug Method
- Other

CEMENTING TO PLUG AND ABANDON DATA:

Size of Hole or Pipe in which Plug Will Be Placed (Inches)	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
6.25	4.052	4.052	4.052	4.052			
2530	2335	578	2				
39	133	N/A	0.15				
42	157.4	51.6	0.179				
2335	578	2	0				
Measured Top of Plug (ft.)							
Slurry Wt. (Lb./Gal.)	15.6	15.6	8.5	15.6			
Type Cement or Other Material (Class III)	CLS A	CLS A	GEL	CLS A			

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)

From	To	From	To
2335	2530		

Estimated Cost to Plug Wells
\$24,650.00

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Signature

Date Signed

Guy Shroy, Mgr - Production

Guy Shroy

6/25/12

Necessary Resources

Attached is the Seneca Resources Corporation Surety Bond Letter to demonstrate that the company has the resources necessary to plug and abandon the well.

See
Financial
Responsibility
Calculation

Plan for Well Failures

Pressure will be measured in the annulus between the 4 1/2-inch casing and tubing and continuously monitored during injection at Well #38268. Should a pressure increase occur in the monitored space, injection will cease and EPA will be verbally notified within 24 hours and notified in writing within 7 days.

The cause of the pressure increase will be investigated by Seneca and remedial measures implemented following discussions with EPA on the proposed approach.

Appendix A

Appendix A contains well records and information for groundwater wells in the area surrounding Well #38268. Groundwater wells located within 1 mile of Well #38268 are listed in the following table.

**Groundwater Wells And Springs Within 1 mile of Seneca Well #38268
Highland Township, Elk County, PA**

Water Wells Within 1 Mile Radius									
PA Well ID	Date Drilled	Owner	Well Depth	Depth To Bedrock (ft)	Well Use	Borehole Bottom (ft)	Bore Hole Diameter (inches)	Casing Bottom (ft)	Casing Diameter
100718	8/1/1987	KLAIBER RANDY	130	28	WITHDRAWAL				
DWRS6240006 Source 4		HIGHLAND TOWNSHIP WATER AUTHORITY	206		MUNICIPAL BACKUP	206	8	30	6 in., pump set at 170 ft
DWRS6240006 Source 5		HIGHLAND TOWNSHIP WATER AUTHORITY	161		MUNICIPAL BACKUP	161	8	28	6 in., pump set at 140 ft
Springs Within 1 Mile Radius									
PA ID	Owner	Comments							
DWRS6240006 Source 1	HIGHLAND TOWNSHIP WATER	Primary water supply for James City							
DWRS6240006 Source 3	HIGHLAND TOWNSHIP WATER	Backup water supply for James City							



Appendix B

Appendix B contains the names and address of residents located within ¼ mile of the proposed injection well. Other than Seneca, only Collins Pine Lumber Company, PO Box 807, Kane, PA 16735, is located within ¼ mile of the proposed injection well.