

**Attachment L**  
**Construction Procedures**  
**SAMMY-MAR LLC Povlik Injection Well**

Construction Details For:

Well Name: John J. Povlik #1  
Location: Huston Twp, Clearfield Co. PA  
(See Well Location Plat)

Drilling Program

The Povlik will be air rotary drilled from the surface through the Huntersville Chert/Oriskany Sandstone injection zone, to a total depth of 7,098'. SAMMY-MAR will set 8' to 10' of 24 ½" conductor pipe sanded in with sakrete to surface. Two (2) water strings will be installed, the first string consisting of 200' of 16" casing and the second string being 375' of 11 ¾" casing, both strings will be cemented back to surface. Sammy-Mar will then run 1,250' of 8 5/8" surface casing cemented back to surface. The final, long string, of casing will consist of 7,030' of 4 ½" casing with the cement top at 5,030' (2,000' of cement fill up). See attachment M for detailed casing and cementing data. The injection string will be made up of 2 7/8" 6.4#/ft N-80 tubing set on a Baker AL-2 Lock-Set packer at 7,025'. The injection zone, consisting of the Huntersville Chert and Oriskany Sandstone, will be left open.

The annulus between the 2 7/8" injection string and the 4 ½" casing will be filled with fresh water mixed with Corr Plex 300 which acts as a corrosion inhibitor and bacteria growth preventer, twenty gallons of Corr Plex 300 will be mixed with approximately 2,500 gallons of fresh water.

See Attachment M for surface facilities and well head details.

Deviation Checks:

The drilling rig will run periodic deviation checks to ensure the well bore remains within 2 to 3 degrees of vertical.

Logging Program:

The following open hole well logs will be run, Gamma Ray, Compensated Density, Neutron, Dual Induction, Temperature and Caliper. The logs will be run from TD to the bottom of the 8 5/8" casing with the Gamma Ray run to surface.

A cement bond log will be run after cementing the 4 ½" casing to determine cement top and quality of the bond.

**Attachment L  
Casing and Cementing Data  
SAMMY-MAR LLC Povilik Injection Well**

Casing	Size inches	Type	Weight	Grade	Set Depth feet	Internal Yield Pressure in psi	Collapse Pressure in psi	Joint Yield lbs.	Body Yield lbs	Basket feet	Centralizers feet
Conductor	24 1/2		88	J-55	10						
Water String	16	LT & C	65	H-40	200	1640	670	439000	736000	65	Every Joint
Water String	11 3/4	LT & C	42	H-40	375	1980	1070	307000	478000	180	Every Joint
Surface Casing	8 5/8	LT & C	32	J-55	1250	3930	2530	417000	503000	360	Every 3 Joints
Long String	4 1/2	LT & C	11.6	N-80	7030	7780	7010	223000	267000		Every 3 Joints
Injection String	2 7/8	EUE	6.4	N-80	7025	10570	11160	144960	145000		

Cement	Class	Amount sacks	CaCl %	Celloflake #/sack	Yield cu.ft./sack	Density #/gal.	Volume bbbs.	Cement Tops
Conductor	24 1/2 sacrete	15			1.18	15.6		
Water String	16 A	150		2	0.5	1.18	31.5	Ground Level
Water String	11.75 A	173		2	0.5	1.18	34.8	Ground Level
Surface Casing	8 5/8 A	244		2	0.25	1.18	51.3	Ground Level
Long String	4 1/2 A	318				1.18	57	Ground Level
Injection String	2 7/8							

3/19/2013

Permit # \_\_\_\_\_ G:  
Project # \_\_\_\_\_ C:

Denotes location of top of well on topo map.

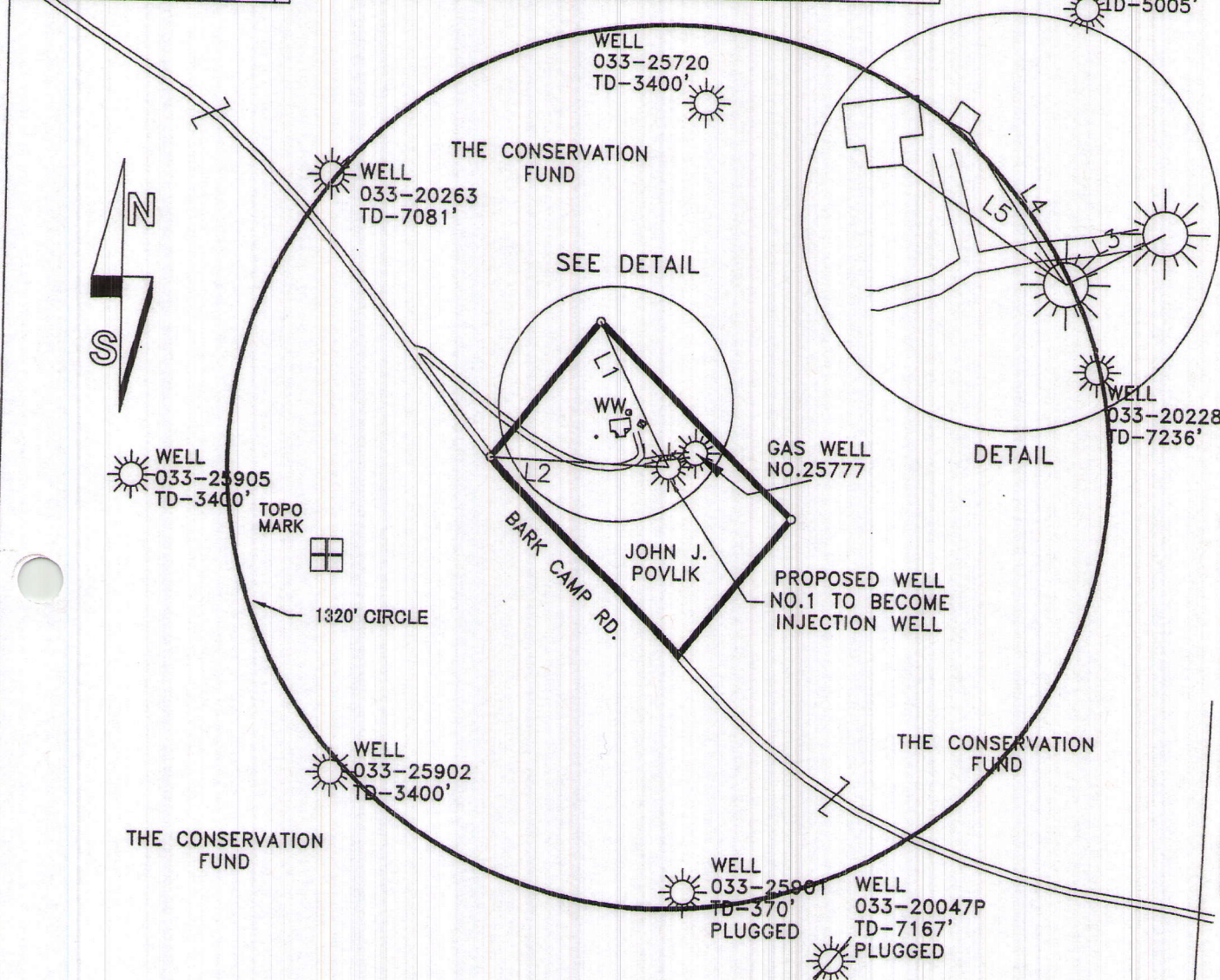
True Latitude: NORTH  
41° 10' 58.29"

True Longitude: WEST  
78° 34' 59.80"

Well is located on topo map 9281 feet south of latitude 41° 12' 30"

LINE	BEARING	DISTANCE	OBJECT
L1	N 26°05'46" W	479.70'	CORNER
L2	N 87°36'33" W	538.06'	CORNER
L3	N 62°03'09" E	91.07'	GAS WELL
L4	N 33°58'55" W	142.03'	SHED
L5	N 54°43'06" W	160.88'	HOUSE

Well is located on topo map 11,453 feet west of longitude 78° 32' 30"



NOTE: This map is for well location purposes only and does not represent a complete boundary survey. Land owner names and some boundary lines are shown as per tax map assessment records.



Applicant / Well Operator Name: <b>DANNIC ENERGY CORPORATION</b>		DEP ID#: <b>5426</b>	Well(Farm) Name: <b>POVLIK</b>		Well #: <b>1</b>	Serial #:
Address: <b>134 MILLRUN DRIVE INDIANA, PA 15701</b>			County: <b>CLEARFIELD</b>	Municipality: <b>HUSTON TOWNSHIP</b>	Well Type: <b>GAS</b>	
911 address of well site: <b>BARK CAMP RD.</b>			USGS 7 1/2 Quadrangle Map Name: <b>PENFIELD</b>	Map Section: <b>8</b>	Surface Elevation: <b>1538 ft.</b>	
Prepared by: <b>RONALD L. FOX, PLS</b>	Phone #: <b>814-745-2861</b>	Dwg #: <b>631812</b>	Date: <b>OCTOBER 31, 2012</b>	Scale: <b>1" = 1200'</b>	Tract Acreage: <b>10</b>	
Lat. & Long Metadata: <b>GPS</b>	Accuracy: <b>Submeter</b>	Datum: <b>Nad 83</b>	Elevation Metadata Method: <b>Topo</b>	Accuracy: <b>+/-10</b>	Datum: <b>NGVD 1929</b>	Survey Date: <b>10-23-2012</b>

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