

ATTACHMENT B

Additional Alluvial Characterization Well Completion Report



CONSULTANTS
· ENVIRONMENTAL
· GEOTECHNICAL
· MATERIALS
· FORENSICS

November 5, 2012

Mr. Frank Lichnovsky
Powertech (USA), Inc.
PO Box 812
Edgemont, SD 57735

Subject: Well Completion Reports
Powertech Inc.
Sites NW of Edgemont, South Dakota
AET No. 17-01493

Dear Frank:

Please find the attached boring location maps, well construction logs, and South Dakota well completion reports for six monitoring wells drilled on October 29-31, 2012. If you have any questions regarding the attached reports, please call our office at (605) 388-0029.

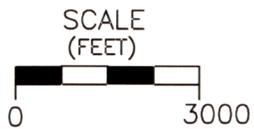
Respectfully,

A handwritten signature in black ink that reads 'Kristen R. Yates'.

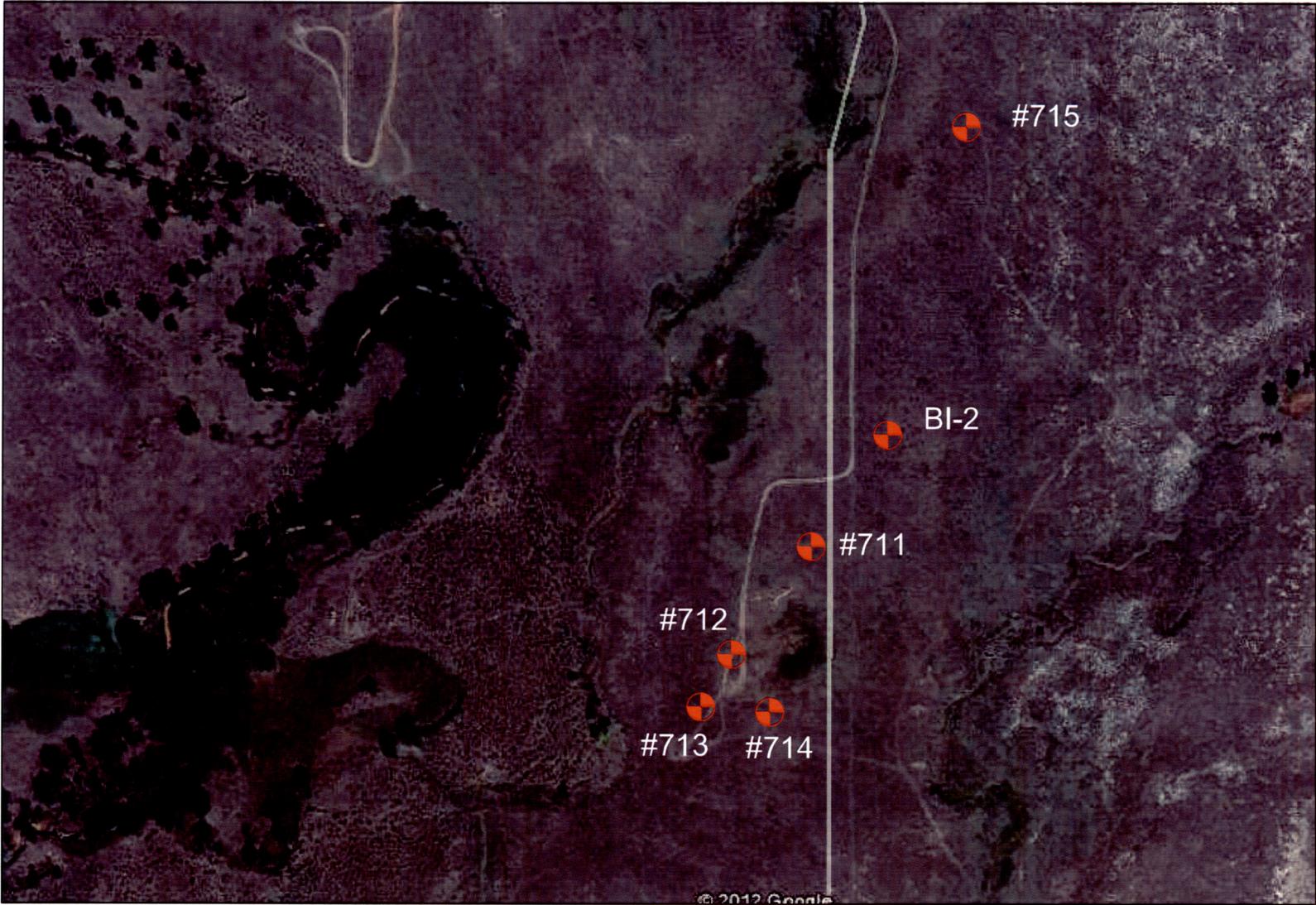
Kristen R. Yates, EI, CPRR
Geotechnical Project Manager

attachments

cc. Mr. Ken Buhler - SDDENR



PROJECT: POWERTECH USA	PROJECT NO. 17-01593
SUBJECT: SITE LOCATION MAP	DATE: NOVEMBER 5, 2012
SCALE: 1 INCH = 3000 FEET	DRAWN BY: KY
	REVIEWED BY: RNT



	PROJECT: POWERTECH USA	PROJECT NO. 17-01593
	SUBJECT: BORING LOCATION MAP	DATE: NOVEMBER 5, 2012
	SCALE: 1 INCH = 400 FEET	DRAWN BY: KY



AMERICAN
ENGINEERING
TESTING, INC.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 17-01593 BORING/WELL NUMBER #711
 PROJECT NAME Powertech USA, Inc DATE DRILLED 10/29/12
 LOCATION near Edgemont, South Dakota CASING TYPE/DIAMETER 2-inch diam. Sch 40 PVC
 DRILLING METHOD 4.25" HSA SCREEN TYPE 2-inch diam. Sch 40 PVC 0.010 slot
 SAMPLING METHOD NA PACKING TYPE 8-16 Silica Sand
 GROUND ELEVATION 3643.00 GROUT TYPE Portland Cement
 TOP OF CASING 3646 DEPTH TO WATER 15.26
 LOGGED BY FL GROUND WATER ELEVATION 3630.74
 REMARKS _____

PID (ppm)	Blow Count	RECOVERY (inches)	SAMPLER TYPE	INTERVAL	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	GW LEVEL	BORING ABANDONED
					1			Sand fine to medium grained, orange to light brown	Concrete	Concrete
					2					
					3					
					4					
					5	FA				
					6					
					7					
					8					
					9					
					10			Sandy Clay red	2" PVC Riser	Portland Cement Grout
					11					
					12					
					13					
					14	FA				
					15					
					16			Clayey Sand fine grained at top to coarse grained at bottom, red, wet	Hydrated Bentonite	2" PVC Screen
					17					
					18					
					19			Gravel red	Silica Sand Pack	
					20					
					21	FA				
					22					
					23			Shale black		
					24					
					25	CA				
					26			End of Boring		
					27	SHALE				
					28					

AET_ENVI 17-01593.GPJ AET WITH PID INFO 11/5/12



AMERICAN
ENGINEERING
TESTING, INC.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 17-01593 BORING/WELL NUMBER #712
 PROJECT NAME Powertech USA, Inc DATE DRILLED 10/29/12
 LOCATION near Edgemont, South Dakota CASING TYPE/DIAMETER 2-inch diam. Sch 40 PVC
 DRILLING METHOD 4.25" HSA SCREEN TYPE 2-inch diam. Sch 40 PVC 0.010 slot
 SAMPLING METHOD NA PACKING TYPE 8-16 Silica Sand
 GROUND ELEVATION 3634.00 GROUT TYPE Portland Cement
 TOP OF CASING 3637 DEPTH TO WATER 7.63
 LOGGED BY FL GROUND WATER ELEVATION 3629.37
 REMARKS _____

PID (ppm)	Blow Count	RECOVERY (inches)	SAMPLER TYPE	INTERVAL	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	GW LEVEL	BORING ABANDONED
					1	FA		Sand fine to medium grained, light yellow		Concrete
					2	FA				
					3	FA		Sandy Clay light yellow		
					4	FA				
					5	FA				Portland Cement Grout
					6	FA				
					7	FA				2" PVC Riser
					8	FA		Sandy Clay red		
					9	FA				
					10	FA				Hydrated Bentonite
					11	FA				
					12	FA				
					13	FA				
					14	FA		Clayey Sand fine grained at top to coarse grained at bottom, red, wet		
					15	FA				
					16	FA				
					17	FA				
					18	FA				
					19	FA				Silica Sand Pack
					20	FA				
					21	CA		Gravel red		2" PVC Screen
					22	CA				
					23	SHALE		Shale black		
					24	SHALE				
					25			End of Boring		

AET_ENVI 17-01593.GPJ AET WITH PID INFO 11/5/12



AMERICAN
ENGINEERING
TESTING, INC.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 17-01593 BORING/WELL NUMBER #713
 PROJECT NAME Powertech USA, Inc DATE DRILLED 10/29/12
 LOCATION near Edgemont, South Dakota CASING TYPE/DIAMETER 2-inch diam. Sch 40 PVC
 DRILLING METHOD 4.25" HSA SCREEN TYPE 2-inch diam. Sch 40 PVC 0.010 slot
 SAMPLING METHOD NA PACKING TYPE 8-16 Silica Sand
 GROUND ELEVATION 3635.00 GROUT TYPE Portland Cement
 TOP OF CASING 3638 DEPTH TO WATER 20.59
 LOGGED BY FL GROUND WATER ELEVATION 3617.41
 REMARKS _____

PID (ppm)	Blow Count	RECOVERY (inches)	SAMPLER TYPE	INTERVAL	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	GW LEVEL	BORING ABANDONED
					1	FA		Sand fine to medium grained, light yellow to tan		Concrete
					2	FA				
					3	FA		Sandy Clay light yellow to tan		Portland Cement Grout
					4	FA				
					5	FA				
					6	FA				
					7	FA				
					8	FA		Sandy Clay red		2" PVC Riser
					9	FA				
					10	FA				Hydrated Bentonite
					11	FA				
					12	FA				
					13	FA				
					14	FA				
					15	FA		Clayey Sand fine grained at top to coarse grained at bottom, red, wet		
					16	FA				
					17	FA				
					18	FA				
					19	FA				
					20	FA				
					21	FA				
					22	CA		Gravel red		Silica Sand Pack
					23	CA				
					24	CA				
					25	CA				
					26	CA				
					27	SHALE		Shale black		2" PVC Screen
					28			End of Boring		

AET_ENVI 17-01593.GPJ AET WITH PID INFO 11/5/12



AMERICAN
ENGINEERING
TESTING, INC.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 17-01593 BORING/WELL NUMBER #714
 PROJECT NAME Powertech USA, Inc DATE DRILLED 10/29/12
 LOCATION near Edgemont, South Dakota CASING TYPE/DIAMETER 2-inch diam. Sch 40 PVC
 DRILLING METHOD 4.25" HSA SCREEN TYPE 2-inch diam. Sch 40 PVC 0.010 slot
 SAMPLING METHOD NA PACKING TYPE 8-16 Silica Sand
 GROUND ELEVATION 3639.00 GROUT TYPE Portland Cement
 TOP OF CASING 3642 DEPTH TO WATER 8.62
 LOGGED BY FL GROUND WATER ELEVATION 3633.38
 REMARKS _____

PID (ppm)	Blow Count	RECOVERY (inches)	SAMPLER TYPE	INTERVAL	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	GW LEVEL	BORING ABANDONED
					1	FA		Sand fine to medium grained, light red		Concrete
					2	FA				
					3			Sandy Clay dark red		2" PVC Riser
					4					
					5					Portland Cement Grout
					6					
					7					
					8	FA				
					9					
					10					
					11					
					12					
					13					
					14	FA		Sandy Clay red		Hydrated Bentonite
					15					
					16			Clayey Sand fine grained at top to coarse grained at bottom, red, wet		
					17					
					18					
					19					
					20	FA				
					21					2" PVC Screen
					22					Silica Sand Pack
					23					
					24					
					25			Gravel red		
					26	CA				
					27	SHALE		Shale black		
					28			End of Boring		

AET_ENVI_17-01593.GPJ_AET WITH PID INFO 11/5/12



AMERICAN
ENGINEERING
TESTING, INC.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER	17-01593	BORING/WELL NUMBER	#715
PROJECT NAME	Powertech USA, Inc	DATE DRILLED	10/30/12
LOCATION	near Edgemont, South Dakota	CASING TYPE/DIAMETER	2-inch diam. Sch 40 PVC
DRILLING METHOD	4.25" HSA	SCREEN TYPE	2-inch diam. Sch 40 PVC 0.010 slot
SAMPLING METHOD	NA	PACKING TYPE	10-20 Silica Sand
GROUND ELEVATION	3653.00	GROUT TYPE	Portland Cement
TOP OF CASING	3655	DEPTH TO WATER	16.29
LOGGED BY	FL	GROUND WATER ELEVATION	3638.71
REMARKS			

PID (ppm)	Blow Count	RECOVERY (inches)	SAMPLER TYPE	INTERVAL	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	GW LEVEL	BORING ABANDONED
					1			Sand fine to medium grained, light yellow to tan	Concrete	Concrete
					2	FA				
					3	FA				
					4	FA				
					5			Sandy Clay red	Portland Cement Grout	2" PVC Riser
					6					
					7					
					8					
					9	FA		Clayey Sand fine grained at top to coarse grained at bottom, red, wet	Hydrated Bentonite	Hydrated Bentonite
					10					
					11					
					12					
					13			Gravel red	Silica Sand Pack	2" PVC Screen
					14					
					15					
					16					
					17			Shale black	End of Boring	End of Boring
					18	FA				
					19					
					20					
					21			Shale black	End of Boring	End of Boring
					22					
					23					
					24					
					25			Shale black	End of Boring	End of Boring
					26					
					27	CA				
					28					
					29			Shale black	End of Boring	End of Boring
					30					
					31	SHALE				
					32					

AET_ENVI 17-01593.GPJ AET WITH PID INFO 11/5/12

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER	17-01593	BORING/WELL NUMBER	BI-2
PROJECT NAME	Powertech USA, Inc	DATE DRILLED	10/30/12
LOCATION	near Edgemont, South Dakota	CASING TYPE/DIAMETER	2-inch diam. Sch 40 PVC
DRILLING METHOD	4.25" HSA	SCREEN TYPE	2-inch diam. Sch 40 PVC 0.010 slot
SAMPLING METHOD	NA	PACKING TYPE	8-16 Silica Sand
GROUND ELEVATION	3649.00	GROUT TYPE	Portland Cement
TOP OF CASING	3652	DEPTH TO WATER	15.21
LOGGED BY	FL	GROUND WATER ELEVATION	3636.79
REMARKS			

PID (ppm)	Blow Count	RECOVERY (inches)	SAMPLER TYPE	INTERVAL	DEPTH (ft. BGL)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	GW LEVEL	BORING ABANDONED
					1	FA		Sand fine to medium grained, light yellow to red		Concrete
					2	FA				
					3	FA				
					4	FA				
					5	FA		Sandy Clay brown		Portland Cement Grout
					6	FA				
					7	FA		Sandy Clay red		2" PVC Riser
					8	FA				
					9	FA				
					10	FA				Hydrated Bentonite
					11	FA				
					12	FA				
					13	FA				
					14	FA		Clayey Sand fine grained at top to coarse grained at bottom, red, wet		
					15	FA				
					16	FA				
					17	FA				
					18	FA				
					19	FA				
					20	FA				
					21	FA				
					22	FA				
					23	FA				
					24	FA				
					25	FA				Silica Sand Pack
					26	FA				
					27	CA		Gravel red		2" PVC Screen
					28	CA				
					29	CA				
					30	CA				
					31	CA				
					32	CA				
					33	CA				
					34	SHALE		Shale black		
					35	SHALE		End of Boring		

AET_ENVI 17-01593.GPJ AET WITH PID INFO 11/5/12

SOUTH DAKOTA WATER WELL COMPLETION REPORT

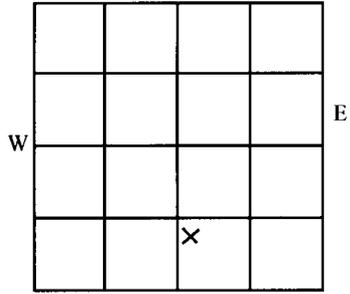
11- 02

Location SW 1/4 SE 1/4 Sec 3 Twp 7S Rg 1E

County Custer

North

Please mark well location with an "X"



Well Owner: Powertech (USA) Inc.

Business Name: Powertech (USA) Inc.

Address: PO Box 812

City, State, Zip: Edgemont SD 57735

WELL LOG: DEPTH

Table with 3 columns: FORMATION, FROM, TO. Rows include Sand - orange to light brown, Sandy Clay - red, Clayey Sand - red, Gravel - red, and Shale - black.

Well Completion Date

10/31/12



Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? ft. from Unknown (identify source)

PROPOSED USE: Domestic/Stock, Irrigation, Municipal Industrial, Business Institutional, Test holes, Monitoring well

METHOD OF DRILLING: 3.25" ID, 6.25 OD HSA to 28 feet

CASING DATA: Steel, Plastic, Other

Table with 5 columns: PIPEWEIGHT, DIAMETER, FROM, TO, HOLE DIAMETER. Values include 2.00 IN, 0.0 FT, 18.0 FT, 6.25 IN.

GROUTING DATA: Cement, Bentonite. Grout Type, No. of Sacks, Grout Weight, From, To.

SCREEN: Perforated pipe, Manufactured. Diameter 2.00 Inches, Length 10.0 Feet. Material Sch 40 PVC. Slot Size 0.010".

WAS A PACKER OR SEAL USED? Yes, No. If so, what material? Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion? Yes, How? No, Why Not? Monitoring Well Only

STATIC WATER LEVEL 15 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by Valve, Reducers, Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

Pumped Describe: NA

Bailed

Other

Pumping Level Below Land Surface

Ft. After Hrs. pumped GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS: Monitoring Well #711. Lat/Long (43.4673N, 103.98602W) from PWE handheld GPS

This well was drilled under license # 678 and this report is true and accurate.

Drilling firm: American Engineering Testing, Inc.

Signature of License Representative: [Signature]

Signature of Well Owner or Equitable Property Holder:

Date:

SOUTH DAKOTA WATER WELL COMPLETION REPORT

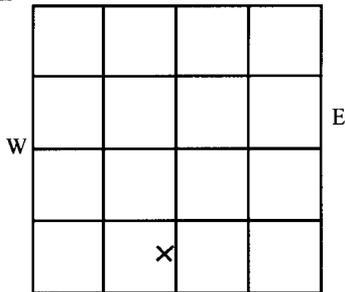
11-02

Location SE ¼ SW ¼ Sec 3 Twp 7S Rg 1E

County Custer

North

Please mark well location with an "X"



Well Completion Date:



10/31/12

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.):

_____ ft. from Unknown (identify source)

PROPOSED USE:

- Domestic/Stock Municipal Business Test holes
 Irrigation Industrial Institutional Monitoring well

METHOD OF DRILLING:

3.25" ID, 6.25 OD HSA to 23 feet

CASING DATA:

- Steel Plastic Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
_____ LB/FT	<u>2.00</u> IN	<u>0.0</u> FT	<u>13.0</u> FT	<u>6.25</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Cement</u>	_____	Lb/gal	<u>0.0</u> Ft	<u>9.0</u> Ft
<u>Bentonite</u>	_____	Lb/gal	<u>9.0</u> Ft	<u>11.0</u> Ft

Describe grouting procedure _____

SCREEN:

- Perforated pipe Manufactured

Diameter 2.00 Inches Length 10.0 Feet

Material Sch 40 PVC

Slot Size 0.010" Set From 13.0 Feet to 23.0 Feet

Other information 8-16 Silica Sand from 11' to 23'

WAS A PACKER OR SEAL USED?

- Yes No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION:

Was well disinfected upon completion?

- Yes, How? _____

Lab to which water

- No, Why Not? Monitoring Well Only

quality sample sent for analysis _____

Well Owner: Powertech (USA) Inc.

Business Name: Powertech (USA) Inc.

Address: PO Box 812

City, State, Zip: Edgemont SD 57735

WELL LOG:

DEPTH

FORMATION	FROM	TO
<u>Sand - light yellow</u>	<u>0</u>	<u>3</u>
<u>Sandy Clay - light yellow to red</u>	<u>3</u>	<u>14</u>
<u>Clayey Sand - red</u>	<u>14</u>	<u>20</u>
<u>Gravel - red</u>	<u>20</u>	<u>23</u>
<u>Shale - black</u>	<u>23</u>	<u>25</u>

STATIC WATER LEVEL 7 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by Valve Reducers Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

Pumped Describe: NA

Bailed

Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

Monitoring Well #712

Lat/Long (43.46653N, 103.98682W) from PWE handheld GPS

This well was drilled under license # 678 and this report is true and accurate.

Drilling firm: American Engineering Testing, Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: _____

SOUTH DAKOTA WATER WELL COMPLETION REPORT

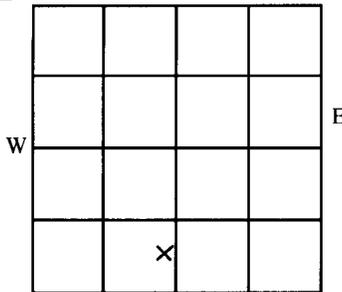
11- 02

Location SE 1/4 SW 1/4 Sec 3 Twp 7S Rg 1E

County Custer

North

Please mark well location with an "X"



Well Completion Date:



10/31/12

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
 _____ ft from Unknown (identify source)

PROPOSED USE:

- Domestic/Stock Municipal Business Test holes
 Irrigation Industrial Institutional Monitoring well

METHOD OF DRILLING:

3.25" ID, 6.25 OD HSA to 28 feet

CASING DATA:

Steel Plastic Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	<u>2.00</u> IN	<u>0.0</u> FT	<u>13.0</u> FT	<u>6.25</u> IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Cement		Lb/gal	<u>0.0</u> Ft	<u>9.0</u> Ft
Bentonite		Lb/gal	<u>9.0</u> Ft	<u>11.0</u> Ft

Describe grouting procedure _____

SCREEN:

Perforated pipe Manufactured
 Diameter 2.00 Inches Length 15.0 Feet
 Material Sch 40 PVC
 Slot Size 0.010" Set From 13.0 Feet to 28.0 Feet
 Other information 8-16 Silica Sand from 11' to 28'

WAS A PACKER OR SEAL USED? Yes No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

Yes, How? _____
 No, Why Not? Monitoring Well Only
 Lab to which water quality sample sent for analysis _____

Well Owner: Powertech (USA) Inc.

Business Name: Powertech (USA) Inc.

Address: PO Box 812

City, State, Zip: Edgemont SD 57735

WELL LOG: _____ DEPTH

FORMATION	FROM	TO
Sand - light yellow to tan	0	3
Sandy Clay - light yellow to red	3	14
Clayey Sand - red	14	21
Gravel - red	21	26
Shale - black	26	28

STATIC WATER LEVEL 21 FEET

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ Inch pipe

Controlled by Valve Reducers Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

- Pumped Describe: NA
 Bailed
 Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

Monitoring Well #713
 Lat/Long (43.46615N, 103.9871W) from PWE handheld GPS

This well was drilled under license # 678 and this report is true and accurate.

Drilling firm: American Engineering Testing, Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder: _____

Date: _____

SOUTH DAKOTA WATER WELL COMPLETION REPORT

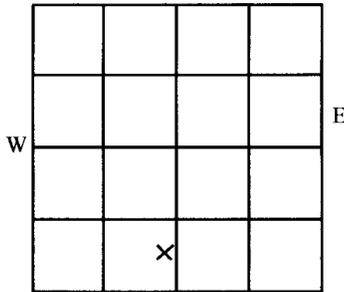
11- 02

Location SE 1/4 SW 1/4 Sec 3 Twp 7S Rg 1E

County Custer

North

Please mark well location with an "X"



Well Completion Date:



10/31/12

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?

 ft from Unknown (identify source)

PROPOSED USE:

- Domestic/Stock Municipal Business Test holes
 Irrigation Industrial Institutional Monitoring well

METHOD OF DRILLING:

3.25" ID, 6.25 OD HSA to 28 feet

CASING DATA:

- Steel Plastic Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	2.00 IN	0.0 FT	17.0 FT	6.25 IN
LB/FT	IN	FT	FT	IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Cement		Lb/gal	0.0 Ft	13.0 Ft
Bentonite		Lb/gal	13.0 Ft	15.0 Ft

Describe grouting procedure

SCREEN:

- Perforated pipe Manufactured

Diameter 2.00 Inches Length 10.0 Feet

Material Sch 40 PVC

Slot Size 0.010" Set From 17.0 Feet to 27.0 Feet

Other information 8-16 Silica Sand from 15' to 27'

WAS A PACKER OR SEAL USED?

- Yes No

If so, what material?

Describe packer(s) and location

DISINFECTION:

Was well disinfected upon completion?

- Yes, How?

No, Why Not? Monitoring Well Only

Lab to which water quality sample sent for analysis

Well Owner: Powertech (USA) Inc.

Business Name: Powertech (USA) Inc.

Address: PO Box 812

City, State, Zip: Edgemont SD 57735

WELL LOG: DEPTH

FORMATION	FROM	TO
Sand -light red	0	3
Sandy Clay - dark red to red	3	15
Clayey Sand - red	15	25
Gravel - red	25	27
Shale - black	27	28

STATIC WATER LEVEL 9 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by Valve Reducers Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

Pumped Describe: NA

Bailed

Other

Pumping Level Below Land Surface

 Ft. After Hrs. pumped GPM

 Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Monitoring Well #714

Lat/Long (43.46611N, 103.98643W) from PWE handheld GPS

This well was drilled under license # 678 and this report is true and accurate.

Drilling firm: American Engineering Testing, Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date:

SOUTH DAKOTA WATER WELL COMPLETION REPORT

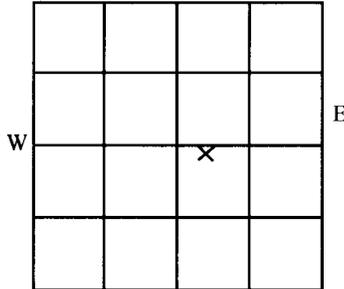
11- 02

Location NE 1/4 SE 1/4 Sec 3 Twp 7S Rg 1E

County Custer

North

Please mark well location with an "X"



Well Completion Date:



10/31/12

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? ft from Unknown (identify source)

PROPOSED USE:

- Domestic/Stock, Irrigation, Municipal, Industrial, Business, Institutional, Test holes, Monitoring well (checked)

METHOD OF DRILLING:

3.25" ID, 6.25 OD HSA to 28 feet

CASING DATA:

Steel Plastic (checked) Other

If other describe

Table with columns: PIPEWEIGHT, DIAMETER, FROM, TO, HOLE DIAMETER. Values: 2.00 IN, 0.0 FT, 12.0 FT, 6.25 IN.

GROUTING DATA:

Table with columns: Grout Type, No. of Sacks, Grout Weight, From, To. Values: Cement, Bentonite, 0.0 Ft, 8.0 Ft, 8.0 Ft, 10.0 Ft.

Describe grouting procedure

SCREEN:

Perforated pipe Manufactured (checked) Diameter 2.00 Inches Length 20.0 Feet Material Sch 40 PVC Slot Size 0.010" Set From 12.0 Feet to 32.0 Feet Other information 10-20 Silica Sand from 10' to 32'

WAS A PACKER OR SEAL USED?

Yes No (checked)

If so, what material? Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

Yes, How? No, Why Not? (checked) Monitoring Well Only Lab to which water quality sample sent for analysis

Well Owner: Powertech (USA) Inc.

Business Name: Powertech (USA) Inc.

Address: PO Box 812

City, State, Zip: Edgemont SD 57735

WELL LOG: DEPTH

Table with columns: FORMATION, FROM, TO. Rows: Sand -light yellow to tan, Sandy Clay - red, Clayey Sand - red, Gravel - red, Shale - black.

STATIC WATER LEVEL 16 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by Valve Reducers Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

- Pumped Describe: NA, Bailed, Other

Pumping Level Below Land Surface

Ft. After Hrs. pumped GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Monitoring Well #715 Lat/Long (43.47031N, 103.98447W) from PWE handheld GPS

This well was drilled under license # 678 and this report is true and accurate.

Drilling firm: American Engineering Testing, Inc.

Signature of License Representative: [Signature]

Signature of Well Owner or Equitable Property Holder:

Date:

SOUTH DAKOTA WATER WELL COMPLETION REPORT

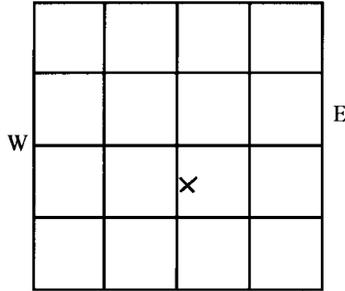
11- 02

Location NE 1/4 SE 1/4 Sec 3 Twp 7S Rg 1E

County Custer

North

Please mark well location with an "X"



Well Completion Date:

10/31/12



Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.): ft. from Unknown (identify source)

PROPOSED USE:

- Domestic/Stock, Municipal, Business, Test holes, Irrigation, Industrial, Institutional, Monitoring well (checked)

METHOD OF DRILLING:

3.25" ID, 6.25 OD HSA to 28 feet

CASING DATA:

- Steel, Plastic (checked), Other

If other describe

Table with columns: PIPEWEIGHT, DIAMETER, FROM, TO, HOLE DIAMETER. Values: 2.00 IN, 0.0 FT, 14.0 FT, 6.25 IN.

GROUTING DATA:

Table with columns: Grout Type, No. of Sacks, Grout Weight, From, To. Values: Cement, 0.0 Ft, 10.0 Ft; Bentonite, 10.0 Ft, 12.0 Ft.

Describe grouting procedure

SCREEN:

- Perforated pipe, Manufactured (checked)

Diameter 2.00 Inches Length 20.0 Feet

Material Sch 40 PVC

Slot Size 0.010" Set From 14.0 Feet to 34.0 Feet

Other information 8-16 Silica Sand from 12' to 34'

WAS A PACKER OR SEAL USED? Yes No (checked)

If so, what material?

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

- Yes, How? No, Why Not? (checked)

Lab to which water quality sample sent for analysis Monitoring Well Only

Well Owner: Powertech (USA) Inc.

Business Name: Powertech (USA) Inc.

Address: PO Box 812

City, State, Zip: Edgemont SD 57735

WELL LOG: DEPTH

Table with columns: FORMATION, FROM, TO. Rows: Sand -light yellow to tan (0-5), Sandy Clay - brown to red (5-13), Clayey Sand - red (13-26), Gravel - red (26-34), Shale - black (34-35).

STATIC WATER LEVEL 15 FEET

If flowing: closed in pressure PSI

GPM flow through Inch pipe

Controlled by Valve Reducers Other

Reduced flow rate GPM

Can well be completely shut in?

WELL TEST DATA:

- Pumped Describe: NA, Bailed, Other

Pumping Level Below Land Surface

Ft. After Hrs. pumped GPM

Ft. After Hrs. pumped GPM

If pump installed, pump rate: GPM

REMARKS

Monitoring Well BI-2 Lat/Long (43.4681N, 103.98526W) from PWE handheld GPS

This well was drilled under license # 678 and this report is true and accurate.

Drilling firm: American Engineering Testing, Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: