

## **APPENDIX 3.6-A**

### **Alluvial Drill Hole Logs**

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DATE 5/4/11 COUNTY Fall River STATE SD

### Appendix 3.6-A

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-15-ALLUV-2  
 T.D. 34' LOCATION: 427342.717 1029544.69 State Plane NAD 27  
 BIT SIZE 4 FC  
 SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock  
 DATE 5/1/11 COUNTY Fall River STATE MD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER Alteration	Alteration %			SAMPLE DESCRIPTION			
					Primary Oxidation	Reduction	Secondary Oxidation	L = Limonite (Lmn)	SOX = Surf. Oxidation	(Amounts in Percent, %)	T = Trace 1 = Minor 2 = Moderate 3 = Abundant
								Rd. Reduced	POX = Primary Oxid.		C = Carbon B = Bleached K = Kaolin Cht = Chert
								Rdt. Reduction	BSOX = Base of Surf. Oxid.		
								P = Pyrite (Pyr)	2OX = Secondary Oxid.		
								P <sub>T</sub> = Pyrite Tarnish	T <sub>z</sub> = Transition Zone		
								T <sub>d</sub> = Feldspar			
7											
10											
20											
30											
40											
50											
60											
70											

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-15-ALUV-3  
T.D. 4' LOCATION: 427616.698, 1030779.431, Hole Plots MAD27  
BIT SIZE 4" FA  
SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock  
DATE 5/4/11 COUNTY Fall River STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %	SAMPLE DESCRIPTION		T=Trace 1=Minor 2=Moderate 3=Abundant
						L=Limonite (Lmn) SOX Surf. Oxidation Rd. Reduced Rdt. Reduction P=Pyrite (Pyr) Pt=Pyrite Tarnish	(Amounts in Percent, %) POX=Primary Oxid. BSOX=Base of Surf. Oxid. 2OX=Secondary Oxid. Tn=Transition Zone Fid=Feldspar	
0-4'					Water Level - DRY -	with sandy clay w/ sand, gravel, H. mud brown dry, scat. roots,		
10						TD @ 4' contact w/ weathered GRANULOS.		
20						hole back filled w/ cuttings		
30								
40								
50								
60								
70								



POWERTECH (USA) INC.

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB1-15-ALLUV-4

T.D. 40' LOCATION: 426606.639, 1029414.805 State Plane NAD27

BIT SIZE 4" FA

SAMPLE LOG BY IE LEASE: (PROJECT) Dewey Burdock

DATE 5/4/11 COUNTY Fall River STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %	Primary Oxidation	Reduction	Secondary Oxidation	SAMPLE DESCRIPTION		T = Trace	
									L = Limonite (Lmn)	(Amounts in Percent, %)	1 = Minor	2 = Moderate
									SOX = Surf. Oxidation		3 = Abundant	
									Rd. Reduced	POX = Primary Oxid.	C = Carbon	B = Bleached
									Rdt. Reduction	BSOX = Base of Surf. Oxid.	K = Kaolin	Ch = Chert
									P = Pyrite (Pyr)	2OX = Secondary Oxid.		
									P <sub>T</sub> = Pyrite Tarnish	Ta = Transition Zone		
									Fld = Feldspar			
0-35'									silty, sandy, CLAY, lt-med brown, dry, scat roots, (Alluv)			
10												
20												
30												
32'									x 32' damp			
35-40'									silty, sandy, clayey, GRAVEL, med brown, quartzite & chert pebbles, wet (Alluv)			
40									weathered GRANITE @ 40' TD			
50									x hole drilled out to 8 1/2" w/ 4 1/4 HSA & converted to MN.			
60												
70												



# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-2-ALLUV-1  
 T.D. 32' LOCATION: 435645.325 1033625.757 Sht 1 NAD 27  
 BIT SIZE 4" FA  
 SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock  
 DATE 5/4/11 COUNTY Fall River STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %	SAMPLE DESCRIPTION		T = Trace 1 = Minor 2 = Moderate 3 = Abundant
						L = Limonite (Lmn) SOX = Surf. Oxidation Rd. Reduced Rdt. Reduction P = Pyrite (Pyr) Pt = Pyrite Tarnish	POX = Primary Oxid. BSOX = Base of Surf. Oxid. 2OX = Secondary Oxid. Tn = Transition Zone fd = Feldspar	
						Water Level - DRY -		C = Carbon B = Bleached K = Kaolin Cht = Chert
0-22'						silty clay, brown, dry, wet roots		
22-25'						silty, sandy, clay, reddish brown, dry		
25-32'						silty clay, iron in gray, dry, weathered (karstic)		
TD @ 32'						hole bottomed w/ cutting		



POWERTECH (USA) INC.

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-Z-ALLUV-2

T.D. 20 LOCATION: 425771.895, 10341344.263 State Place NE 27

BIT SIZE 4" FA

SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock

DATE 5/4/11 COUNTY Fall River STATE IL

DEPTH	LITHOLOGY	CARBON PYRITE	Alteration %	SAMPLE DESCRIPTION		T = Trace 1 = Minor 2 = Moderate 3 = Abundant C = Carbon B = Bleached K = Kaolin Cht = Chert
				L = Limonite (Lmn) SOX Surf. Oxidation Rd. Reduced Rdt. Reduction P = Pyrite (Pyr) Pt = Pyrite Tarnish	POX = Primary Oxid. BSOX = Base of Surf. Oxid. 2OX = Secondary Oxid. Tn = Transition Zone fld = Feldspar	
				0-8'		
				silty CLAY, P. brown and reds dry		
10				8-8.5'		
				silty GRAVEL		
20				8.5-20'		
				silty CLAY w/ red gray sh. frags.; weathered L-AMPHIBOL, dry		
				20-22'		
				hole was backfilled w/ cuttings		
30						
40						
50						
60						
70						



# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-3 ALLUV-1  
 T.D. 19' LOCATION: 135194.344 1028398.117 State Plane 11N12E  
 BIT SIZE 4" FA  
 SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock  
 DATE 5/5/11 COUNTY Fall River STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	Alteration %			SAMPLE DESCRIPTION		T = Trace 1 = Minor 2 = Moderate 3 = Abundant
				OT Alteration	Primary Oxidation	Reduction Secondary Oxidation	L = Limonite (Lmn) SOX Surf. Oxidation Rd. Reduced Rdt. Reduction P = Pyrite (Pyr) Pt = Pyrite Tarnish	(Amounts in Percent, %) POX = Primary Oxid. BSOX = Base of Surf. Oxid. 2OX = Secondary Oxid. Tn = Transition Zone Fid = Feldspar	
0									
0-2'									
4-19'									
10									
20									
30									
40									
50									
60									
70									



POWERTECH (USA) INC.

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-3-ALLUV-2  
 T.D. 33' LOCATION: 435708.096 1031228.363 State Hwy 11AD27  
 BIT SIZE 4" FA  
 SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock  
 DATE 5/4/11 COUNTY Fall River STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %		SAMPLE DESCRIPTION		T = Trace	
					Primary Oxidation	Reduction	L = Limonite (Lmn)	(Amounts in Percent, %)	1 = Minor	2 = Moderate
							SOX = Surf. Oxidation		3 = Abundant	
							Rd. Reduced	POX = Primary Oxid.		
							Rdt. Reduction	BSOX = Base of Surf. Oxid.		
							P = Pyrite (Pyr)	ZOX = Secondary Oxid.		
							P <sub>T</sub> = Pyrite Tarnish	Tn = Transition Zone		
								fld = Feldspar		
									C = Carbon	B = Bleached
									K = Kaolin	Ch = Chert
0										
10										
20										
30										
40										
50										
60										
70										



POWERTECH (USA) INC.

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-3-ALLUV-3

T.D. 28' LOCATION: 434097.55, 1030382.506 (State Plane NAD83)

BIT SIZE 4" FA

SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock

DATE 5/4/11 COUNTY Fall River STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %			SAMPLE DESCRIPTION		T = Trace	
					Primary Oxidation	Reduction	Secondary Oxidation	L = Limonite (Lmn)	(Amounts in Percent, %)	1 = Minor	2 = Moderate
								SOX = Surf. Oxidation		3 = Abundant	
								Rd. Reduced	POX = Primary Oxid.		
								Rdt. Reduction	BSOX = Base of Surf. Oxid.		
								P = Pyrite (Pyr)	2OX = Secondary Oxid.		
								P <sub>T</sub> = Pyrite Tarnish	Tn = Transition Zone	C = Carbon	B = Bleached
									fld = Feldspar	K = Kaolin	Chf = Chert
0-22'											
10											
20											
30											
40											
50											
60											
70											





DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-30-ALLUV-1  
T.D. 22' LOCATION: 446030.785, 1015233.937 Shiloh NAD27  
BIT SIZE 4" FA  
SAMPLE LOG BY LE LEASE: (PROJECT) Denny Kunkin  
DATE 5/11/11 COUNTY Custer STATE SD

Dewey-Burdock GDP  
March 2012





POWERTech (USA) Inc.

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DZ11-30-ALLUV-2

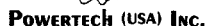
T.D. 19' LOCATION: 44°20'18.44" N, 101°51'22.43" W, Slope Phase Unit 27

BIT SIZE 4" FA

SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock

DATE 5/11/11 COUNTY Lincoln STATE Id

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration			SAMPLE DESCRIPTION		T = Trace 1 = Minor 2 = Moderate 3 = Abundant	
					Primary	Reduction	Secondary				
					Oxidation	%	Oxidation	L = Limonite (Lmn) SOX = Surf. Oxidation Rd. Reduced Rdt. Reduction P = Pyrite (Pyr) P <sub>T</sub> = Pyrite Tarnish	POX = Primary Oxid. BSOX = Base of Surf. Oxid. 2OX = Secondary Oxid. Tn = Transition Zone Fid = Feldspar	C = Carbon K = Kaolin B = Bleached Cht = Chert	
					Water Level - DRY -			0-19'			
								silty, clayey, silt-sand. 1/2" red iron scale, dry			
10											
20								-14' sand gravel - pea-nickel sized			
								TD 19' competent CR			
30								* hole was backfilled w/ cuttings.			
40											
50											
60											
70											



DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-32-ALLUV-1  
T.D. 27' LOCATION: 442388.7 1021640.993 (Info Pump NAD27)  
BIT SIZE 4" FA  
SAMPLE LOG BY LE LEASE: (PROJECT) Henry Buntick  
DATE 5/5/11 COUNTY Custer STATE SD

### Appendix 3.6-A



DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. D211-32-ALLUV-2  
T.D. 33' LOCATION: 443229.095, 1021611.931 State Plane NAD 27  
BIT SIZE 4" FA  
SAMPLE LOG BY LE LEASE: (PROJECT) Dwight Burdick  
DATE 5/5/11 COUNTY Butler STATE SD

Dewey-Burdock GDP  
March 2012





DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-32 ALLUV-3  
T.D. 23' LOCATION: 439392.15, 1027300.41 Hole Plots NAD 27  
BIT SIZE 4" FA  
SAMPLE LOG BY LE LEASE: (PROJECT) Denny Bierbeck  
DATE 5/5/11 COUNTY Custer STATE SD

Dewey-Burdock GDP  
March 2012





POWERTech (USA) Inc.

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-34-ALLUV-1

T.D. 40' LOCATION: 440777.307, 1028655.567, 540 ft. NW 1/4 Sec 34, T11N, R10E, S17E

BIT SIZE 4" PA

SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock

DATE 5/5/11 COUNTY Butler STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %	SAMPLE DESCRIPTION		T = Trace 1 = Minor 2 = Moderate 3 = Abundant
						L = Limonite (Lmn) SOX Surf. Oxidation Rd. Reduced Rdt. Reduction P = Pyrite (Pyr) T = Pyrite Tarnish	POX = Primary Oxid. BSOX = Base of Surf. Oxid. 2OX = Secondary Oxid. Tn = Transition Zone fld = Feldspar	
						Water Level - DRY -		
0-32'						silty CLAY, H. brown, sand rich, dry		
10								
20								
30						- 31.22 reddish brown		
32-35'						silty CLAY med H brown, sand gravel, dry		
35-40'						silty CLAY, coarse (2-4" gravel) by water table (P)		
40-46'						70-46' (sample) (P) (P) (P) (P) (P)		
50						x hole was backfilled w/ cuttings.		
60								
70								



POWERTech (USA) Inc.

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-34-ALLUV-2

T.D. 24' LOCATION: 1410677.466, 1029912.071 S. 10th Ave. NW 24'

BIT SIZE 4" FA

SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock

DATE 5/5/11 COUNTY Custer STATE SD

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %	SAMPLE DESCRIPTION			
						L= Limonite (Lmn)	SOX Surf. Oxidation	(Amounts in Percent, %)	T= Trace
						Rd. Reduced	POX= Primary Oxid.		1= Minor
						Rdt. Reduction	BSOX= Base of Surf. Oxid.		2= Moderate
						P= Pyrite (Pyr)	ZOX= Secondary Oxid.		3= Abundant
						P <sub>T</sub> = Pyrite Tarnish	Tn= Transition Zone		C= Carbon B= Bleached
							fld= Feldspar		K= Kaolin Chl= Chert
0-15'						silty clayey silt, orange brown, med fine grained gravel & sand			
10-12'						dry			
15-24'						silty clayey sand, med fine grained, orange brown, wet			
24-24'						compacted LEANERS			
						hole plugged w/ bentonite chips			
30									
40									
50									
60									
70									





DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB 34-ALLUV-3  
T.D. 45' LOCATION: 440600.525, 1032523.83 State Plane NAD 27  
BIT SIZE 4" FA  
SAMPLE LOG BY LE LEASE: (PROJECT) Donay Burdick  
DATE 5/4/11 COUNTY Custer STATE SD

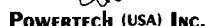
### Appendix 3.6-A

# PowerTech (USA) Inc.

DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-34-ALLUV-4  
 T.D. 45' LOCATION: 441812.501, 1932063.537 White Pine Nevada  
 BIT SIZE 4" FA  
 SAMPLE LOG BY LE LEASE: (PROJECT) Dewey Burdock  
 DATE 5/5/11 COUNTY Luster STATE NV

DEPTH	LITHOLOGY	CARBON	PYRITE	OTHER	Alteration %	SAMPLE DESCRIPTION			
						L= Limonite (Lmn)	SOX = Surf. Oxidation	T= Trace	
						Rd. Reduced	POX= Primary Oxid.	1= Minor	
						Rdt. Reduction	BSOX= Base of Surf. Oxid.	2= Moderate	
						P= Pyrite (Pyr)	2OX= Secondary Oxid.	3= Abundant	
						Pt= Pyrite Tarnish	Tn= Transition Zone	C= Carbon	B= Bleached
							Fld= Feldspar	K= Kaolin	Chf= Chert
0-24.5'						silty CLAY/clayey SILT orangeish brown, dry, wet red.			
10									
20									
24.5-35'						sl. silty, clayey GRAVEL, whites/grays/pinks, fine nickel sized material			
30						quartzites & chert, dry			
35-44'						sl. silty CLAY, red brown, wet			
40									
44-45'						GRAVELS, gray			
50						hole drilled out to 8 1/2" at 44'11" & moved to next.			
60									
70									





DRILLED WITH: AIR ☐ WATER ☐ HOLE NO. DB11-35-ALLUV-1  
T.D. 25' LOCATION: 440745.07 1034633.112 Job's Place ROAD 2.7  
BIT SIZE 4" FA  
SAMPLE LOG BY LE LEASE: (PROJECT) Dorsey Buried  
DATE 5/4/11 COUNTY Custer STATE SD

### Appendix 3.6-A