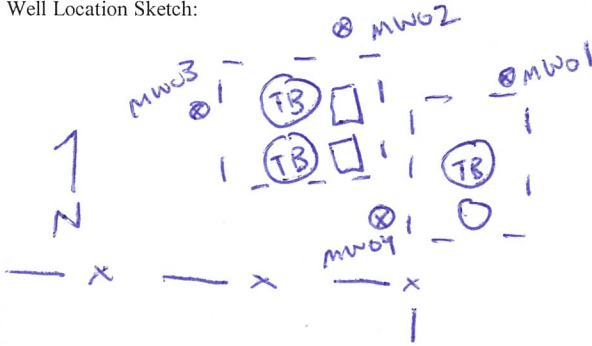


Well Location Sketch:



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## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number:

MW01

Project:

Hatch WPRR

Date:

6-25-18

Project Number:

Logged By:

David Stainback

Drilled By:

Drs 11 Pro

Elevation:

N/A

Detector:

PID

Drilling Method:

Direct push

Sampling Method:

Cont.

Gravel Pack:

Silica Sand

Seal:

Bentonite

Grout:

-

Casing Type:

PVC

Diameter:

1"

Length:

9'

Hole Diameter:

2.75"

Depth to Liquid:

-

Screen Type:

PVC

Slot:

0.010

Diameter:

1"

Length:

15'

Total Depth:

24'

Depth to Water:

44.5

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand Augered/Not Logged	
					4					
					6					
	moist	0.0	No		8			SC	6-8' Brown clayey sands, fgr, decreasing clay w/ depth, moist, no stain/odor	
					10			CL	8-10' SAA,	
					12			SC	10-11' clay lense w/ sand, low to med plast, no stain/odor	
	wet	0.2			14			SP	11-12' poorly graded fgr sands, no stain/odor	
					16				12-16' Brown fgr sands, poor grading, clay lense 12-12.5', no stain/odor, wet @ 14.5' bgs	
	moist	0.0			18				16-20' SAA fgr sands, poorly sorted w/ clay lense 18-19', no stain/odor, tight clay @ 19.75', moist	
		0.0			20			CL	19.75-24' Light brown clay, high plast, dense/tight, moist, no stain/odor	
					22				TD @ 24' bgs	
					24				set w/ Reser	
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

NOTES:

Page 1 of 1

Well Location Sketch:



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See mw01

## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number:

mw02

Project:

Hatch UPRR

Date:

6-25-18

Project Number:

Logged By:

David Stainback

Drilled By:

D&amp;H Pro

Elevation:

Detector:

PID

Drilling Method:

Direct Push

Sampling Method:

Cont.

Gravel Pack:

Silica Sand

Seal:

Bentonite

Grout:

-

Casing Type:

PVC

Diameter:

1"

Length:

10'

Hole Diameter:

2.75"

Depth to Liquid:

-

Screen Type:

PVC

Slot:

6.010

Diameter:

1"

Length:

10'

Total Depth:

20'

Depth to Water:

15'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					Riser
					2				Hand Augered/Not Logged	
					4					
					6					
					8			SP	6-8' Brown poorly graded sand	
					10			SC	moist, no stain/odor, silt	
					12				lense 6" @ 7.5'	
					14			SP	8-12' Brown clayey sands,	
					16				fgs, moist, no stain/odor	
					18				12-16 Brown poorly graded	
					20				sands, wet @ 15' bgs, stain	
					22				obs. @ 15.5' bgs	
					24				16-17' SAA	
					26				17-20' clay, brown, w/ decrease	
					28				in sand & increase in density	
					30				& cohesion w/ depth, no stain	
					32				odor obs., very tight, moist	
					34					
					36					
					38					
					40					

moist 6.0 NO

0.1

0.5

wet 15,000 Yes

13.7 NO

4.2

7D @ 20' bgs

Set w/ riser



Well Location Sketch:

See MW01



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## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number:

MW03

Project:

Hatch UPRR

Date:

6-26-18

Project Number:

Logged By:

David Stainback

Drilled By:

Deli Pro

Elevation:

N/A

Detector:

PID

Drilling Method:

Direct Push

Sampling Method:

Cont.

Gravel Pack:

Silica Sand

Seal:

Bentonite

Grout:

-

Casing Type:

PVC

Diameter:

1"

Length:

10'

Hole Diameter:

2.75"

Depth to Liquid:

-

Screen Type:

PVC

Slot:

0.010

Diameter:

1"

Length:

10'

Total Depth:

20'

Depth to Water:

14'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand Augered/Not Logged	
					4					
					6					
					8			SC	6-8' Brown to gray clayey fine sands, stain/odor throughout	
					10				8-12' SAA	
					12				12-16' SAA, but w/ heavy stain obs. 14-15'	
					14					
					16			CL	16-20' Brown clay, dense, med-high plast, SC odor, w stain, moist	
					18					
					20					
					22					
					24					
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

moist >15,000 Yes  
 6.233  
 wet 377  
 moist 147 No  
 63

TD @ 20' bgs  
 Set well w/ riser

Well Location Sketch:



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## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number:

MW04

Project:

Hatch UPRR

Date:

Project Number:

Logged By:

David Stainback

Drilled By:

Dall PO

Elevation:

N/A

Detector:

PID

Drilling Method:

Direct Push

Sampling Method:

Cont.

Gravel Pack:

Silica Sand

Seal:

Bentonite

Grout:

-

Casing Type:

PVC

Diameter:

1"

Length:

10'

Hole Diameter:

2.75"

Depth to Liquid:

-

Screen Type:

PVC

Slot:

0.010

Diameter:

1"

Length:

10'

Total Depth:

20'

Depth to Water:

15'

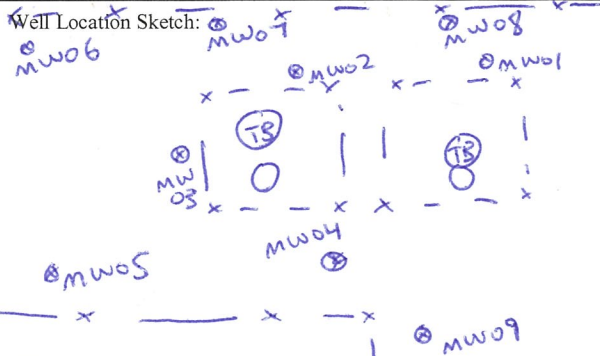
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					Riser
					2				Hand Augered/Not Logged	
					4					
					6					
	moist	0.0	NO		8			SC	6-12' Brown clayey sands, fgs, moist, no stain/odor, clay lense 6" @ 11'	
		7.3			10				12-16' SAA, w heavy stain obs @ 15', wet @ 15'	
		>15,000			12					
	wet	>15,000	Yes		14				16-18' SAA, heavy stain @ 17.5'	
		>15,000			16				18-20' Brown clay, med-high plast, dense, moist, no stain/odor obs.	
	moist	0.0	NO		18			CL		
					20					
					22					
					24					
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

TDE 20' bgs

Set well w/ riser



Well Location Sketch:



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## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW05	Project: Hatch UPRR 42-11 #1		
Date: 7/6/2018	Project Number: 14218028		
Logged By: David Stainback	Drilled By: Drill Pro		
Drilling Method: Direct Push	Sampling Method: Continuous		
Seal: Bentonite	Grout: N/A		
Diameter: 1"	Length: 10'	Hole Diameter: 2.75'	Depth to Liquid: -
Diameter: 1"	Length: 10'	Total Depth: 20'	Depth to Water: 13'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand Augered/Not Logged	
					4					
					6					
					8					
					10					
					12					
					14					
					16					
					18					
					20					
					22					
					24					
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

Well Location Sketch:



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See MW05

## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: <b>MW06</b>	Project: Hatch UPRR 42-11 #1
Date: 7/6/2018	Project Number: 14218028
Logged By: David Stainback	Drilled By: Drill Pro
Elevation: N/A	Detector: PID
Drilling Method: Direct Push	Sampling Method: Continuous
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Grout: N/A
Screen Type: PVC	Diameter: 1"
Slot: 0.01	Length: 10'
	Hole Diameter: 2.75"
	Depth to Liquid: -
	Total Depth: 20'
	Depth to Water: 11'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand Augered/Not Logged	
					4					
					6					
	moist	0.0	NO		8	X	100%	SC	6-12' Brown fgr Sands, moist, wet 11-12', Iron nutting 10-12', no stain/odor, mgr Sands 11-12'	
		0.0			10	X	80%		12-14.5' Brown/black fgr-mgr Sands, wet, stain/odor 12.5-15'	
	wet	29.5			12	X			14.5-20' Brown to tan clay, dense, good cohesion, med plastic, no stain/odor, moist	
		306	YES		14	X		CL		
	moist	5.7	NO		16	X	100%			
					18	X	60%			
		0.1			20	X				
					22				TD @ 20'	
					24				Set w/ FM	
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					



Well Location Sketch:



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See MW05

## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: <b>MW07</b>	Project: Hatch UPRR 42-11 #1
Date: 7/6/2018	Project Number: 14218028
Logged By: David Stainback	Drilled By: Drill Pro
Elevation: N/A	Detector: PID
Gravel Pack: Silica Sand	Drilling Method: Direct Push
Casing Type: PVC	Seal: Bentonite
Screen Type: PVC	Grout: -
Slot: 0.01	Diameter: 1"
Length: 10'	Hole Diameter: 2.75"
Total Depth: 20'	Depth to Liquid: N/A
Depth to Water: 11"	

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand Augered/Not Logged	
					4					
					6					
	Moist	0.0	No		8			SC	6-12' Brown clayey sands, moist, fgr, no stain/odor, wet @ 11', mgr - fgr 11-12'	
	wet	0.3			10				12'-14.5' SAA	
					12				14.5-20' Brown to tan clay, dense, good cohesion, med plast, moist, wet mgr sand lens from 17-18', no stain/odor obs.	
	moist	0.0			14			CL		
					16					
	dry	0.0			18					
	moist				20					
					22					
					24					
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

TD @ 20' bgs

Finished w/  
steel riser

Well Location Sketch:



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See mws

## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: <i>mws</i>	Project: Hatch UPRR 42-11 #1
Date: 7/6/2018	Project Number: 14218028
Logged By: David Stainback	Drilled By: Drill Pro
Elevation: N/A	Detector: PID
Drilling Method: Direct Push	Sampling Method: Continuous
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Diameter: 1"
Screen Type: PVC	Slot: 0.01
Diameter: 1"	Length: 10'
Hole Diameter: 2.75"	Depth to Liquid: -
Total Depth: 20'	Depth to Water: 11.5'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand Augered/Not Logged	
					4					
					6					
					8					
					10					
					12					
					14					
					16					
					18					
					20					
					22					
					24					
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

Hand Augered/Not Logged

6-12' Light grey to brown clayey sands, fgr, no staining, moist, wet @ 11.5' bgs, iron mottling, 9-11' SAA, but w/ no mottling & 8" clay lense @ 15' bgs, no S/O.  
16-20' SAA, but fgr-mgr sands, clay lense (5") @ 19.5'

TD @ 20' bgs

Set w/ riser



Well Location Sketch:

Sec mw05



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## BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: <b>mw09</b>	Project: Hatch UPRR 42-11 #1
Date: 7/6/2018	Project Number: 14218028
Logged By: David Stainback	Drilled By: Drill Pro
Elevation: N/A	Detector: PID
Drilling Method: Direct Push	Sampling Method: Continuous
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Diameter: 1"
Screen Type: PVC	Slot: 0.01
	Diameter: 1"
	Length: 10'
	Hole Diameter: 2.75"
	Depth to Liquid: -
	Total Depth: 20'
	Depth to Water: 14'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hand Augered/Not Logged	
					4					
					6					
					8			SP	6-8 Light brown fgr sands, moist, no S/O,	
					10			SC	8-12' SAA, increase in clay content w/ depth, moist, clay lens 3" @ 9.5' bgs, 10" clay lens @ 11.5'	
					12				12-16' Dark brown to light clayey fgr sands, fine fine gravels	
					14				12-13.5', clay lens 7" @ 13.5' bgs, 14-16- clayey sands, wet, SAA	
					16				16-20' Brown fgr-mgr clayey sands, very saturated, no S/O	
					18					
					20					
					22					
					24					
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

NOTES:

Page \_\_\_\_ of \_\_\_\_