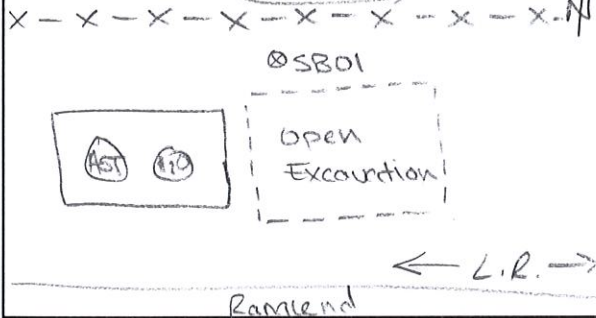


Well Location Sketch:

Compressor Station



Compliance · Engineering · Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

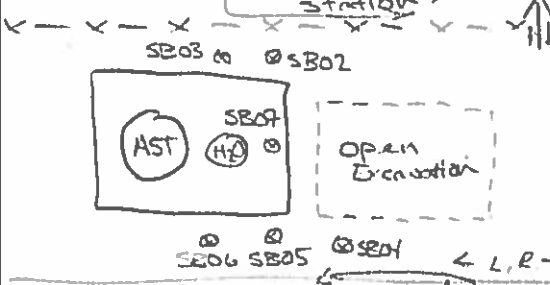
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: SBO1	Project: Platteville Compressor Station
Date: 4/10/2015	Project Number: 014213112
Logged By: Kris Shepherd	Drilled By: Drill Pro
Elevation:	Detector: PID
Drilling Method: Direct Push	Sampling Method: Continuous
Gravel Pack: Silica Sand	Seal: Bentonite
Casing Type: PVC	Diameter: 1" Length: N/A
Screen Type: PVC	Slot: 0.01 Diameter: 1" Length: N/A
	Hole Diameter: 3" Depth to Liquid: -
	Total Depth: 20' Depth to Water: -

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
	Dry				2					
		0.0	none		4				4' fg sand, brown, no stain, no odor, dry	
		0.0			6				6' SAA	
		0.0			8				8' SAA	
					10				Hydrovac, Sampled Via Hand Auger	
		0.2		SBO1@ 10' (0950)	12	5'	5'		10' → 15' fg sand, brown, no stain, no odor, dry	no well set
		0.4			14					
	Moist	9.8			16				15' → 18' clayey fg sand, brown, no odor, no stain, low cohesion, low plasticity, dry	
		27.3			18	5'	4'			
				SBO1@ 20' (1000)	20					
					22					
					24				18' → 20' clay, brown, high plasticity, mod. cohesion, moist, no stain, no odor	
					26					
					28					
					30				- Back filled w/ Bentonite	
					32					
					34					
					36					
					38					
					40					

Well Location Sketch:



Compliance - Engineering - Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: SB0A	Project: LI PRR 22 PAR AM 01 True HSK 10-13A
Date: 4/10/2015	Project Number: 014215073
Logged By: Kris Shephard	Drilled By: Alpine/Northern Plains

Elevation:	Detector: PID	Drilling Method: HydoVac/Direct Push	Sampling Method: Continuous
Gravel Pack: Silica Sand	Seal: Bentonite	Grout:	
Casing Type: PVC	Diameter: 1"	Length: N/A	Hole Diameter: 3"
Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: N/A
		Total Depth: 20'	Depth to Liquid:
			Depth to Water:

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
	Dry				2					
		0.0	none		4				7' fg sand, brown, no stain, no odor - dry	
		0.0	none		6				5' SAA	
		0.0	none		8				2' SAA	
					10				Hydrovac, Sampled Via Hand Auger	
		0.2	none		12				10' → 14.5' fg sand, brown, no odor, no stain, dry	
		0.3			14	5'	4'		14.5' → 17.5' clayey fg sand, brown, no odor, no stain, low cohesion	
	moist	2.7			16				low, dry	
		7.0			18	5'	3'		17.5' → 20' clay, brown, high plasticity, moist cohesion	no well set
					20				moist @ 18'	
					22					
					24					
					26					
					28					
					30				- No confirmation samples taken per Sam LaRue's request	
					32					
					34				- Back filled w/ bentonite	
					36					
					38					
					40					

Well Location Sketch:



Compliance - Engineering - Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: **SBO3** Project: **UPRR 22 Pan Am Cr Trail HSR 10-13A**
 Date: **4/10/2015** Project Number: **014215093**
 Logged By: **Jeremy Espinoza** Drilled By: **Alpine/Northern Plains**

See SBO2 Log

Elevation: _____ Detector: **PID** Drilling Method: **HydoVac/Direct Push** Sampling Method: **Continuous**

Gravel Pack: **Silica Sand** Seal: **Bentonite** Grout: _____

Casing Type: **PVC** Diameter: **1"** Length: **N/A** Hole Diameter: **3"** Depth to Liquid: _____

Screen Type: **PVC** Slot: **0.01** Diameter: **1"** Length: **N/A** Total Depth: **20'** Depth to Water: _____

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
	Dry				2					
		0.0	none		4				4' fine sand, brown, no stain,	
		0.0	none		6				6' no odor, dry	
		0.0	none		8				8' SAA	
					10				Hydrovac, Sampled Via Hand Auger	
		0.3	none		12				10' → 14' fg sand, brown,	
		1.1			14	5'	4"		no stain, no odor, dry	
		0.5			16				14' → 18' clayey fg sand,	
	moist	0.6			18	5'	4"		brown, low cohesion, low	no well set
					20				plasticity, no stain, no odor,	
					22				dry	
					24				18' → 20' clay, brown	
					26				high plasticity, med. cohesion,	
					28				no stain, no odor, moist	
					30				- no confirmation samples	
					32				collected per Sam La Rue's	
					34				request	
					36				- Back filled w/ bentonite.	
					38					
					40					

Well Location Sketch:



Compliance - Engineering - Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

See SBO2 log

Boring/Well Number: **SBO4** Project: **LPRR 22 Pm Am G**
 Date: **4/10/2015** Title: **HSR 10-13A**
 Logged By: **Kris Shepherd** Project Number: **04215073**
 Drilled By: **Alpine/Northern Plains**

Elevation: Detector: **PID** Drilling Method: **HydoVac/Direct Push** Sampling Method: **Continuous**

Gravel Pack: **Silica Sand** Seal: **Bentonite** Grout: **-**

Casing Type: **PVC** Diameter: **1"** Length: **N/A** Hole Diameter: **3"** Depth to Liquid: **-**

Screen Type: **PVC** Slot: **0.01** Diameter: **1"** Length: **N/A** Total Depth: **20'** Depth to Water: **-**

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
------------------------	------------------	-------------	----------	----------	------------------	---------------------	----------------	-------------------	-------------------------

					0				
	Dry				2				
		0.0	none		4			4' fg sand, brown, no stain, no odor, dry	
		0.0	none		6			6' SAA	
		0.0	none		8			3' SAM	
					10			Hydrovac, Sampled Via Hand Auger	
		0.2	none		12			10' → 19' fg sand, brown, no stain, no odor, dry	
		1.3			14	5' 4'		- clayey sand 3" stringer @ 12', brown, low cohesion, low plasticity, no odor, no stain, dry	no well set
		1.2			16				
	Moist				18	5' 4'		- clayey sand 6' stringer @ 17.5'	
		10.3			20			- moist @ 13'	
					22				
					24				
					26			19' → 20' clay, brown, high plasticity, med cohesion	
					28			no stain, no odor, moist	
					30				
					32				
					34				
					36				
					38				
					40				

Well Location Sketch:



Compliance · Engineering · Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: SB05 Project: UPRR 22 Fin Area
True HSR 10-13A

Date: 4/10/2015 Project Number: 014215073

Logged By: Jeremy Espinoza Drilled By: Alpine/Northern Plains

Elevation: _____ Detector: PID Drilling Method: HydoVac/Direct Push Sampling Method: Continuous

Gravel Pack: Silica Sand Seal: Bentonite Grout: _____

Casing Type: PVC Diameter: 1" Length: - Hole Diameter: 3" Depth to Liquid: _____

Screen Type: PVC Slot: 0.01 Diameter: 1" Length: - Total Depth: 20 Depth to Water: _____

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2					
		0.0	None		4				-4' fine grain sand, brown, no staining, no odor, dry	
		0.0	None		6				-6' SAA	
		0.0	None		8				-8' SAA	
					10				Hydrovac, Sampled Via Hand Auger	
	↓ Dry	0.0	None		12	5	4		12-14' fine sand, med brown, no stain, no odor, dry	NO well set
		0.0			14					
		0.0			16					
		0.0			18	5	4		14-20' Sandy clay, med brown, no stain, no odor, med cohesion, med plasticity	
		0.0			20					
					22					
					24					
					26					
					28					
					30					
					32					
					34					
					36					
					38					
					40					

Well Location Sketch:



Compliance - Engineering - Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: **3B06** Project: **UPRR 22 Pan Am G1**
TRAC HSR 10-13A
 Date: **4/10/2015** Project Number: **014215093**
 Logged By: **Jeremy Espinoza** Drilled By: **Alpine/Northern Plains**

See SB02 log

Elevation: _____ Detector: **PID** Drilling Method: **HydroVac/Direct Push** Sampling Method: **Continuous**

Gravel Pack: **Silica Sand** Seal: **Bentonite** Grout: _____

Casing Type: **PVC** Diameter: **1"** Length: **-** Hole Diameter: **3"** Depth to Liquid: _____

Screen Type: **PVC** Slot: **0.01** Diameter: **1"** Length: **-** Total Depth: **20'** Depth to Water: _____

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2					
		0.0	None		4				4' fine grain sand, brown, no stain, no odor, dry 6' SAA 8' SAA Hydrovac, Sampled Via Hand Auger	
		0.0	None		6					
		0.0	None		8					
		0.0	None		10					
	Dry	0.0	None		12	54			10-13' fine sand, med brown, Dry, no stain, no odor	
		0.0			14					
		0.0			16					
		0.0			18	55			13-20' Sandy clay, med brown, Dry, no stain, no odor, med plasticity and cohesion	NO well set
		0.0			20					
		0.0			22					
		0.0			24					
		0.0			26					
		0.0			28					
		0.0			30					
		0.0			32					
		0.0			34					
		0.0			36					
		0.0			38					
		0.0			40					

Well Location Sketch:



Compliance • Engineering • Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: SB07	Project: UPRR 22 th Ann Am G TFL# - HSR 10-13A
Date: 4/10/15 & 4/13/15	Project Number: 014215093
Logged By: Kris Steplund / J.E.	Drilled By: Alpine/Northern Plains

Elevation:	Detector: PID	Drilling Method: Hand Auger	Sampling Method: Continuous
------------	-------------------------	--------------------------------	--------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	GROUT:
------------------------------------	---------------------------	--------

Casing Type: PVC	Diameter: 1"	Length: N/A	Hole Diameter: 3"	Depth to Liquid:
----------------------------	-----------------	----------------	----------------------	------------------

Screen Type: PVC	Slot 0.01	Diameter: 1"	Length: N/A	Total Depth: ~17.5'	Depth to Water:
----------------------------	--------------	-----------------	----------------	------------------------	-----------------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0				
	Dry		now		2				
		0.0			4			4' clayey gravelly sand, brown, dry, no stain, no odor	
		0.0			6			6' fg sand, brown, no stain, no odor, dry	
		0.0			8			8' SAA	
					10			Hydrovac, Sampled Via Hand Auger	
		9.2			12			10' → 12' fg sand, brown, no stain, slight odor, dry	
		182	gray	SB07 @ 13'	14			12' → 16' clayey fg sand, brown, low cohesion, low plasticity, no stain, no odor	no well set
		391			16			- stain + odor starting @ 13' bgs.	
	moist	57.7			18			16' → 18' fg sand, gray + odor, dry	
		75.5			20			- moist @ 17.5' bgs	
		22.7		SB07 @ 17.5' (1150)	22			18' → 19.5' clay, gray stain, odor, mod cohesion, high plasticity, moist	
					24			- clay swelling into bore could not reach 20' bgs	
					26			- Back-filled w/ bentonite	
					28				
					30				
					32				
					34				
					36				
					38				
					40				

Well Location Sketch:

Compressor Station

Tanks MW01



Compliance • Engineering • Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW01	Project: Platteville Compressor Station
Date: 8/21/15	Project Number: 14213112
Logged By: Jeremy Espinoza Kris Shepherd	Drilled By: Drill Pro
Drilling Method: Hollow Stem Auger -Direct Push	Sampling Method: split spoon -Continuous
Seal: Bentonite	Grout: -

Elevation: _____ Detector: **PID**

Gravel Pack:
Silica Sand

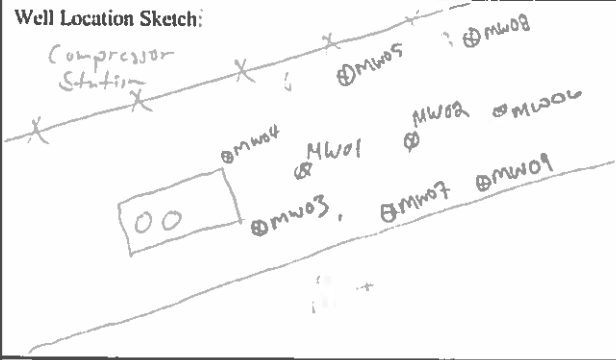
Casing Type:
PVC

Screen Type:
PVC

Diameter: 1"	Length: 15'	Hole Diameter: 3"	Depth to Liquid: -
Diameter: 1"	Length: 15'	Total Depth: 30'	Depth to Water: 23'

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8				Hydrovac, Not Logged	
					10					
	Mobt		None		12				10-18 1/2 Gravelly, sandy clay, moist, med brown, no stain, no odor 18 1/2-28' Silty clay, moist, grey, high cohesion, high plasticity, no stain, odor, wet at 23' 3' stringer of coarse sand at 28', black stain, odor 28-30 Gravelly silty clay, grey, wet, med cohesion, med plasticity, no stain, odor - Well set to 30 - flush mount	
					14			CL		
3576					16					
2580		1050			18	2	2			
3581	Wet	1071			20	2	2			
		757			22	1	0			
		644			24	2	2			
		1250			26	2	2			
					28	1	0			
					30	2	2			
					32					
					34					
					36					
					38					
					40					

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW02	Project: Platteville Compressor Station
Date: 4/25/16	Project Number: 14213112
Logged By: Jeremy Espinoza	Drilled By: DrillPro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	------------------	---------------------------------	--------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout:
-----------------------------	--------------------	--------

Casing Type: PVC	Diameter: 1"	Length: 14'	Hole Diameter: 3"	Depth to Liquid:
---------------------	-----------------	----------------	----------------------	------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: 34'	Depth to Water: 14.43
---------------------	---------------	-----------------	----------------	---------------------	--------------------------

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					
	Moist	0.0	None		12	2	2	CL	0-15 Gravelly sandy clay, dark brown, dry, low plasticity, low cohesion, no stain, no odor	
	↓	0.0			14	4	4			
	wet	531	skin	MW03 @ 15' (RPI)	16			SP		
	Moist	163	None		18	4	4	CH	15-16' Fine sand, silty, dark brown, wet, skin, odor	
	↓	556		MW02 @ 19' (RPI)	20					
	wet	1242		MW01 @ 21' (RPI)	22	4	4	CL	16-20 Clay, dark brown, moist, no stain, odor, high cohesion, high plasticity	
	↓	1055			24					
	wet	40.1			26	4	4		- white veins	
	↓	62.2			28					
	wet	74.9			30	2	2	CL	20-21 Med sand, silty, dark brown, wet, skin, odor	
					32	4	1		21-34' fine sandy clay, dark brown, moist, med plasticity, med cohesion, no stain, odor	
		84.1		MW02 @ 34' (RPI)	34			CS	6" stringer of gravelly sandy clay, wet, no stain, no odor @ 33'	
					36				wet at 24'	
					38				34' claystone, gray to orange, weathered, no stain, no odor	
					40					

15 1/2



Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW03	Project: Platteville Compressor Station
Date: 4/25/16	Project Number: 14213112
Logged By: Jeremy Espinoza	Drilled By: DrillPro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	------------------	---------------------------------	--------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout:
-----------------------------	--------------------	--------

Casing Type: PVC	Diameter: 1"	Length: 15'	Hole Diameter: 3"	Depth to Liquid:
---------------------	-----------------	----------------	----------------------	------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 15'	Total Depth: 30	Depth to Water: 16.35
---------------------	---------------	-----------------	----------------	--------------------	--------------------------

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					
	moist	0.0	none	-	12	2	2	SP	10-16 SP - Poor Sorted Fine Sand - Med sand Brown - Brw rd, moist. No stain no odor	
	moist	0.0	none	-	14	4	4			
	moist	0.4	none	MW03 @ 16' 1145	16			CH	- 6" s n & sc clayey, Fine grained sand Brown moist, no odor, No stain low cohesion / low plasticity @ 14'	
	moist	108.0	none	-	18	4	4			
					20				16-20' Fat Clay w/ trace fine grained sand Brown moist, High cohesion High plasticity NO stain, Slight odor	
	SAT	40.0	Slight Black	MW03 @ 24 1215	22	4	3	CL		
					24			SW	20-24 Clay w/ trace Fine grained sand med Brown, moist Hgh cohesion / High Plasticity S gnt stain / slight odor	
	moist	54.9	none	-	26	4	4	CL		
	moist	23.9	none	-	28					
	moist	8.6	none	-	30	4	4		Poorly sorted, Fine sand, silt Brown, SATURATED Med cohesion, med plasticity NO stain, NO odor	
					32					
					34					
					36				25-32 gravelly sandy clay me Brown, wet High cohesion, moderate plasticity no stain, NO odor	
					38					
					40				Flush mount	

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW04	Project: Platteville Compressor Station
Date: 4/25/12	Project Number: 14213112
Logged By: Jeremy Espinoza	Drilled By: DrillPro

See MW02

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	----------------------	-------------------------------------	------------------------------------

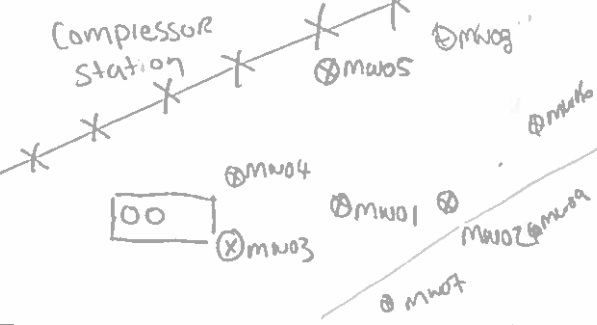
Gravel Pack: Silica Sand	Seal: Bentonite	Grout:
---------------------------------	------------------------	--------

Casing Type: PVC	Diameter: 1"	Length: 15	Hole Diameter: 3"	Depth to Liquid:
-------------------------	---------------------	-------------------	--------------------------	------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20	Total Depth: 31	Depth to Water: 16.24
-------------------------	-------------------	---------------------	-------------------	------------------------	------------------------------

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					
	Moist	0.0	NONE	-	12	2	2	SP	10-15 Poorly sorted med-fine grained sand Brown, moist, no cohesion/no plasticity no stain, no odor 11.5-15 SATURATED	
	11.5-15 SAT	0.0	NONE	-	14	4	3			
	Moist	0.0	NONE	-	16			SP	15-16.5 Fine sand w/clay Brown, moist, low cohesion low plasticity no stain, no odor	
	Moist	0.0	NONE	-	18	4	4	LL		
	Moist	14.0	NONE	MW04 @ 18' 1320 "RPI"	20			SP	16.5-17 Poorly sorted med-fine grained sand Brown, SATURATED, no stain/odor	
	Moist	56.4	Slight Gray	MW04 @ 22' 1345 "RPI"	22	4	4		17-20 clay w/fine sand, Brown moist High cohesion, High plasticity NO stain, ODOR	
	Moist	7.8	NONE	-	24			LL		
	Moist	0.5	NONE	-	26	4	4		20-21 med-fine grained sand w/clay Brown, SATURATED, No stain, no odor Low plasticity / low cohesion	
					28					
					30	3	3		22-30 clay w/ fine sand, Brown moist High cohesion, High plasticity Slight stain, slight odor	
					32					
					34				30-31 clay w/med grained sand Brown, moist no stain, no odor High cohesion, high plasticity	
					36					
					38					
					40				Flush MOUNT	

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW05	Project: Platteville Compressor Station
Date: 2/25/16	Project Number: 14213112
Logged By: Jeremy Espinoza	Drilled By: DrillPro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	---------------	------------------------------	-----------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout:
--------------------------	-----------------	--------

Casing Type: PVC	Diameter: 1"	Length: 15	Hole Diameter: 3"	Depth to Liquid: 20
------------------	--------------	------------	-------------------	---------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20	Total Depth: 31	Depth to Water: 15.63
------------------	------------	--------------	------------	-----------------	-----------------------

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					
	moist	0.4	None	-	12	2	2	SP	10-14 well graded, med-fine grained sand Brown, moist, NO stain, NO odor	
	moist	0.0	None	-	14	4	3	LL	14-16 Fine-med grained clay Brown, moist, med plasticity, med cohesion	
	moist	22.5	Slight	MW05 @ 14.5'	16			SP		
	moist	22.5	Slight	MW05 @ 14.5'	18	4	4	CL	16-17 well graded, med-fine grained sand Brown, moist, NO stain, NO odor	
	moist	46.9	Slight	-	20	4	4		17-26 Clay w/ fine sand, Brown moist High cohesion High plasticity Slight gray stain, slight odor	
	moist	70.1	Slight	MW05 @ 15.0'	22	4	4			
	moist	70.1	Slight	MW05 @ 15.0'	24					
	moist	70.1	Slight	MW05 @ 15.0'	26	4	4	Clay Stone	20-21 SATURATED	
	moist	70.1	Slight	MW05 @ 15.0'	28			SP		
	moist	0.0	None	-	30	3	3	Clay Stone	26-28 weathered gray-red clay stone moist, low cohesion, low plasticity	
					32				28-29 SATURATED well graded med-fine grained sand, Brown, NO stain, NO odor	
					34					
					36					
					38					
					40				29-31 weathered gray-red clay stone moist, low cohesion, low plasticity	

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW006	Project: Platteville Compressor Station
Date: 4/26/2016	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro

See MW002 Log

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	---------------	------------------------------	-----------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
--------------------------	-----------------	----------

Casing Type: PVC	Diameter: 1"	Length: 12'	Hole Diameter: 3"	Depth to Liquid: -
------------------	--------------	-------------	-------------------	--------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: 32'	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 Auger Hydrovac, Not Logged to 10' bgs	
					4					
					6					
					8					
					10					
moist wet	0.2	none	none	MW006 @ 10' (0830)	12	2'	2'	SP	10' → 14.5' v. fg → Mg sand, brown, no odor, no stain, moist	
↓ moist	0.3	↓ gray	↓	MW006 @ 12' (0835)	14	4'	4'	SC	→ wet @ 11' bgs → odor + gray stain 13' → 14.5'	
↓	14.5	↓ none	↓	MW006 @ 17' (0850)	16			SC	14.5' → 16.5' clayey fg → Mg sand, gray stain, odor, moist	
↓	220	↓ gray	↓	MW006 @ 21' (0900)	18	4'	4'	CL	16.5' → 22.5' sandy clay, brown w/ gray mottled staining, odor, low cohesion, low plasticity, moist	
↓	201				20				22.5' → 26' fg sandy clay, brown, no odor, no stain, moist	
↓	32.2				22	4'	4'	SC	→ odor @ 23' → wet @ 24'	
↓	1260				24				→ 6" gravelly Mg sand stringer @ 25.5', brown, odor, wet	
↓	135				26	4'	4'	CH	26' → 28' sandy clay, brown, no odor, no stain, high cohesion, high plasticity, moist	
↓	34.0				28				28' → 32' weathered clay stone, gray to orange, no stain, no odor, moist	
↓	67.4				30	4'	4'	CLS		
↓	3.4				32					
↓	5.1			MW006 @ 32' (0910)	34					
↓	54.2				36					
					38					
					40					

NOTES:

Well Location Sketch:



Compliance · Engineering · Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring Well Number: MW07 Project: Platteville Compressor Station

Date: 4/26/16 Project Number: 14213112

Logged By: DANIEL NEWMAN - Jeremy Espinoza Drilled By: DrillPro

Elevation: _____ Detector: PID Drilling Method: Direct Push Sampling Method: Continuous

Gravel Pack: Silica Sand Seal: Bentonite Grout: _____

Casing Type: PVC Diameter: 1" Length: _____ Hole Diameter: 3" Depth to Liquid: _____

Screen Type: PVC Slot: 0.01 Diameter: 1" Length: 20 Total Depth: 32 Depth to Water: 15.11

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					
					8					
					10					
	Moist	4.4	NONE	MW07 @10' 945	12	2	2	SP	10-12 med-fine, well graded sand, Brown moist, no stain, no odor	
	Moist	0.2	NONE	MW07@12' 970	14	4	2	CL	12-15.5 silty-fine grained clay, Brown moist low cohesion, low plasticity no stain, no odor	
	Moist	0.6	NONE	-	16			SP		
	Moist	3.5	NONE	-	18	4	4		15.5-16.5 med-fine well graded sand, Brown, SATURATED No stain, no odor	
	Moist	17.5	gray mottled	MW07@18' 1000	20			CL	16.5-24 silty-fine grained clay, Brown moist med cohesion, med plasticity mottled gray stain, slight odor	
	Moist	8.7	gray mottled	-	22	4	4		20-22 SATURATED, NO stain, no odor	
	Moist	33.5	gray mottled	-	24				22.5 med-fine well graded sand Brown, moist	
	Moist	9.6	NONE	-	26	4	4	CL	24-29 slight stain, slight odor	
	Moist	0.7	NONE	-	28			SP	24-29 silty-fine grained clay, Brown moist High cohesion, High plasticity NO stain, no odor	
					30			CL	27.5-27.7 gray clay, Brown moist low cohesion, low plasticity no stain, no odor	
	Moist	11.2	none	MW07@32' 1020	32	4	4	CL	29-29.5 gray clay, Brown, moist low cohesion, low plasticity No stain, no odor	
					34					
					36				29.5-32 silty-fine grained clay, Brown moist med cohesion, med plasticity No stain, no odor	
					38				- Straggles of gray clay	
					40					

Flush Mount

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: *MW08* Project: **Platteville Compressor Station**

Date: *4/26/16* Project Number: **14213112**

Logged By: **Jeremy Espinoza** Drilled By: **DrillPro**

Elevation: _____ Detector: **PID** Drilling Method: **Direct Push** Sampling Method: **Continuous**

Gravel Pack: **Silica Sand** Seal: **Bentonite** Grout: _____

Casing Type: **PVC** Diameter: **1"** Length: **15** Hole Diameter: **3"** Depth to Liquid: _____

Screen Type: **PVC** Slot: **0.01** Diameter: **1"** Length: **20** Total Depth: _____ Depth to Water: **13.42**

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					
	Moist	1.4	NONE	MW08012 1065	12	2	2	SP	10-12 med. fine grained well graded sand Brown moist, no stain, no odor	
	Moist SAT	0.3	NONE	-	14	4	3	LL	12-15 Fine Grained sand poorly graded Brown moist, no stain, no odor	
					16			SP	14-15 SATURATED	
	Moist	25.4	NONE	-	18	4	4	CL	15-16 Silty-fine grained clay Brown, moist med cohesion, med plasticity no stain, no odor	
	Moist	57.8	slight mottled gray	MW08021 1100	20			CL	16-16.5 med. fine grained well graded sand Brown, moist, no stain, no odor	
	Moist	11.5	NONE	-	22	4	3		16.5-18.5 Silty-fine grained clay, Brown moist med cohesion, med plasticity no stain, no odor	
	Moist	5.5	none	-	24					
	Moist	3.3	none	-	26	4	4	Clay Stone	18.5-20 Silty-fine grained clay, Brown moist med cohesion, med plasticity slight mottled gray stain no odor	
	Moist	31.0	none	MW08028 1120	28				20-24 Silty-fine grained clay, Brown, moist, no stain, no odor med cohesion, med plasticity	
	Moist	7.1	none	-	30	2	2		24-28 clay stone with sand stringer gray-orange, weathered no stain, no odor	
					32				28-30 weathered clay stone, gray-orange, moist no stain, no odor with fine silt stringers	
					34					
					36					
					38					
					40					

BROW

Refusal @ 30'
Flush mant

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: **MW09** Project: **Platteville Compressor Station**

Date: **4/26/16** Project Number: **14213112**

Logged By: **Daniel Newman, Jeremy Espinoza** Drilled By: **DrillPro**

Elevation: _____ Detector: **PID** Drilling Method: **Direct Push** Sampling Method: **Continuous**

Gravel Pack: **Silica Sand** Seal: **Bentonite** Grout: _____

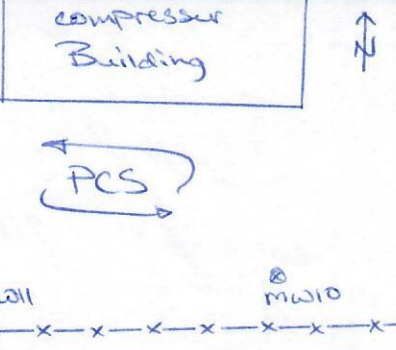
Casing Type: **PVC** Diameter: **1"** Length: _____ Hole Diameter: **3"** Depth to Liquid: _____

Screen Type: **PVC** Slot: **0.01** Diameter: **1"** Length: **20** Total Depth: **32** Depth to Water: **12.48**

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	2	2	SP	10-14 med-fine grained sand, Brown-orange, moist NO stain, no odor	
moist	0.6		NONE	MW09@12.16						
SAT	0.7		NONE	MW09@12.20	14	4	3	LL	12-15 SATURATED	
moist	1.2		NONE	-	16			LL	14-17 Silty-fine grained clay, Brown moist med cohesion, med plasticity no stain, no odor	
					18			SP	16- SATURATED	
moist	BS.2		Slight mottled gray	MW09@20.12.25	20	4	4	LL	17-18 med-fine grained sand, Brown, moist no stain, no odor	
moist	0.9		NONE	-	22			LL	18-23 Silty-fine grained clay, Brown moist med cohesion, med plasticity slight gray mottled stain, slight odor	
moist	1.1		NONE	-	24	4	4			
moist	2.0		NONE	-	26			SP	23-28 large gravelly clay, Brown, moist med cohesion, med plasticity NO stain, no odor	
moist	5.9		NONE	-	28	4	4	LL	25-26 med-fine grained sand, Brown moist NO stain, no odor	
moist	1.3		NONE	MW09@32.12.35	30				26-30 large gravelly clay, Brown, moist med cohesion, med plasticity NO stain, no odor	
					32	4	4			
					34			X	28-30 large gravelly, sandy stringers moist, Brown, no stain, no odor	
					36			X	30-32 large gravelly clay, Brown, moist med cohesion, med plasticity NO stain, no odor	
					38					
					40				Flush mount	

40254C

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW10	Project: Platteville Compressor Station
Date: 11/15/2010	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	------------------	---------------------------------	--------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
-----------------------------	--------------------	-------------

Casing Type: PVC	Diameter: 1"	Length: 10'	Hole Diameter: 3"	Depth to Liquid: -
---------------------	-----------------	----------------	----------------------	-----------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: ~32'	Depth to Water:
---------------------	---------------	-----------------	----------------	----------------------	-----------------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
	moist	0.0	none		12	2' 2"		SP	10' → 13' fg sand, trace Mg sand, black, no stain, no odor, moist	
	wet	0.1			14	4' 4"		SM	13' → 16.5' silty fg sand, trace clay, brown, no stain, no odor, wet	
		0.0			16				16.5' → 18.5' sandy clay, light brown, cohesive, mod. plasticity, no odor	
	moist	0.0			18	4' 4"		CL	no stain, moist	
		153			20			CH	→ wet, odor, no stain 18' → 18.5'	
		0.2			22	4' 3"		CL	18.5' → 21' clay, trace fg sand, light brown, no odor, no stain, cohesive, high plasticity, moist	
		1.6			24			CH	21' → 23' sandy clay, light brown to tan @ ~23.5', cohesive, high plasticity, no stain, odor, moist	
		5.5			26	4' 4"		CS	23' → 25' clay, gray, rocks, cohesive, mod. plasticity, no stain, odor, moist	
		15.7			28				→ gypsum 24' → 25'	
		9.7			30	4' 4"		SS	25' → 30.5' weathered clay stone, gray w/ iron staining, no odor, moist	
		1.1			32				30.5' → 32' silty sandstone w/ interbedded fine weathered clay stone layers, gray & orange, no stain, no odor, wet @ ~3'	
		0.2			34					
					36					
					38					
					40					

NOTES:

→ Pull up to 30' bentonite from 22' → 30'

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: <i>MW11</i>	Project: Platteville Compressor Station
Date: <i>11/15/2016</i>	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	------------------	---------------------------------	--------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
-----------------------------	--------------------	-------------

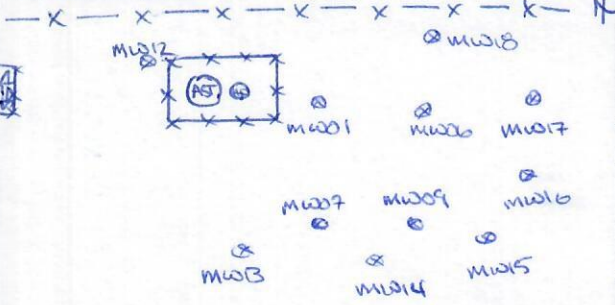
Casing Type: PVC	Diameter: 1"	Length: <i>8'</i>	Hole Diameter: 3"	Depth to Liquid: -
---------------------	-----------------	----------------------	----------------------	-----------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: <i>20'</i>	Total Depth: <i>~28'</i>	Depth to Water: <i>~11.5'</i>
---------------------	---------------	-----------------	-----------------------	-----------------------------	----------------------------------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
	moist ↓ wet	0.2	none		12	2'	2'	SP	10' → 14' fg sand, brown, no stain, no odor, moist, wet @ ~11.5'	
		0.5			14	4'	4'	SM	14' → 16.5' silty fg sand, brown to light brown, no stain, no odor, wet	
	moist	0.2			16				16.5' → 24.5' sandy clay, light brown, cohesive, mod. plasticity, no stain, no odor, moist	
		0.1			18	4'	4'			
		0.6			20				→ trace gravel ~21' → 21.5' bgs	
		0.6			22	4'	4'	CL	→ gypsum veining starting @ 21' bgs	
		1.1			24				→ color changes to light tan @ ~22' bgs	
		0.6			26	4'	4'	CH		
					28			CS	24.5' → 25.5' clay, light brown, cohesive, high plasticity, no stain, no odor, moist	
					30				25.5' → 28' weathered clay stone gray w/ orange iron staining, no odor, moist	
					32					
					34					
					36				→ flush mount	
					38					
					40					

NOTES:

Well Location Sketch:



Compliance • Engineering • Remediation
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW12	Project: Platteville Compressor Station
Date: 11/15/2016	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro
Drilling Method: Direct Push	Sampling Method: Continuous

Elevation: _____ Detector: **PID**

Gravel Pack: **Silica Sand**

Seal: **Bentonite** Grout: **-**

Casing Type: **PVC**

Diameter: **1"** Length: **12'** Hole Diameter: **3"** Depth to Liquid: **-**

Screen Type: **PVC** Slot: **0.01**

Diameter: **1"** Length: **20'** Total Depth: **~32'** 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				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
	moist	0.0	none		12	2'	2'	SP	10' → 15.5' fg sand, brown, no odor, no stain, moist → wet @ ~14'	
	↓ wet	0.1			14	4'	3'		15.5' → 19.5' silty fg sand, brown, no stain, no odor, wet → trace clay 18' → 19.5'	
		0.0			16					
		0.0			18	4'	4'	SM	19.5' → 20.5' sandy clay, brown, cohesive, mod. plasticity, no stain, no odor, wet	
		0.1			20			CL	20.5' → 21.5' clayey fg sand, wet, brown, no stain, no odor	
		0.0			22	4'	4'	SC SP	21.5' → 22' fg → Mg sand, brown, no stain, no odor, wet	
	↓ moist	0.1			24				22' → 29' sandy clay, light brown, cohesive, mod. plasticity, no odor, no stain, moist	
		0.1			26	4'	4'	CL	→ 4" stringer fg → coarse sand w/trace clay @ 27.25', brown wet, no stain, no odor	
		0.3			28					
		0.1			30	4'	4'	CH	29' → 31.5' Clay, gray to orange, gypsum veining, cohesive, high plasticity, moist	
		0.1			32			CS	31.5' → 32' clay stone, gray to orange, moist	
					34				→ finish mount	
					36					
					38					
					40					

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW13	Project: Platteville Compressor Station
Date: 11/18/2016	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro

See MW12 log

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	-------------------------	--	---------------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
------------------------------------	---------------------------	--------------------

Casing Type: PVC	Diameter: 1"	Length: 12'	Hole Diameter: 3"	Depth to Liquid: -
----------------------------	------------------------	-----------------------	-----------------------------	------------------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: ~32'	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				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
	Moist	0.1	none		12	2'	2'	SP	10' → 13' fg sand, brown, no stain, no odor, moist	
	Wet	0.2			14	4'	4'	SM	13' → 15.5' silty fg sand, trace clay, brown, no stain, no odor, wet	
		0.1			16			CL	15.5' → 16.5' sandy clay, brown, cohesive, low plasticity, no odor, no stain, wet	
		0.1			18	4'	4'	SM	16.5' → 18' silty fg sand, trace clay, brown, no stain, no odor, wet	
	Moist	0.4			20				18' → 32' Sandy clay, brown to light brown/red. plasticity, cohesive, no stain, no odor, moist	
		0.7			22	4'	4'		→ 6" Stringer fg → mg sand @ ~20', brown, no stain/odor, wet	
		0.8			24			CL	→ 6" Stringer clayey fg sand @ ~25' brown, no stain/odor, wet	
		0.4			26	4'	4'		→ odor ~28' → 29.5', no stain	
		0.4			28					
		19.2			30	4'	4'			
		1.4			32					
					34				→ flush mount	
					36					
					38					
					40					

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: <i>MW14</i>	Project: Platteville Compressor Station
Date: <i>11/18/2016</i>	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro

See MW 12 log

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	------------------	---------------------------------	--------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
-----------------------------	--------------------	-------------

Casing Type: PVC	Diameter: 1"	Length: 8'	Hole Diameter: 3"	Depth to Liquid: -
---------------------	-----------------	---------------	----------------------	-----------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: ~28'	Depth to Water: ~12'
---------------------	---------------	-----------------	----------------	----------------------	-------------------------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
					12	2'	2'	SP	10' → 11.5' fg sand, brown, no stain, no odor, moist	
					14	4'	4'	SM	11.5' → 14' silty fg sand, trace clay, brown, no stain, no odor, moist	
					16				→ wet @ ~12'	
					18	4'	3'	CL	14' → 25' sandy clay, brown to light brown, cohesive, mod. plasticity, no odor, no stain, moist	
					20				→ 6" string fg → coarse sand, trace gravel @ ~18', gray stain, odor, wet	
					22	4'	4'		→ trace gravel in clay starting @ ~22' bgs	
					26	4'	2'	CH	25' → 28' clay, gray w/ iron staining, cohesive, mod. plasticity, no stain, no odor, moist	
					30				→ Refusal @ ~28' bgs	
					32				→ flush mount	
					34					
					36					
					38					
					40					

NOTES:

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: <i>MW15</i>	Project: Platteville Compressor Station
Date: <i>11/10/2016</i>	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro

See MW12 log

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	------------------	---------------------------------	--------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
-----------------------------	--------------------	-------------

Casing Type: PVC	Diameter: 1"	Length: <i>7.75'</i>	Hole Diameter: 3"	Depth to Liquid: -
---------------------	-----------------	-------------------------	----------------------	-----------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: <i>20'</i>	Total Depth: <i>~27.75'</i>	Depth to Water: <i>~10'</i>
---------------------	---------------	-----------------	-----------------------	--------------------------------	--------------------------------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
					12	2'	2'	SM	10' → 13' silty fg sand, trace clay, brown, no stain, no odor, wet	
					14	4'	4'		13' → 25' sandy clay, brown, cohesive, med. plasticity, no stain, no odor, moist	
					16				→ odor 15.5' → 16', no stain	
					18	4'	4'	CL	→ 3' stringer clayey sand @ ~17', brown, no stain, no odor, wet	
					20					
					22	4'	4'		25' → 27' clay, gray w/iron staining, cohesive, med. plasticity, no stain, no odor, moist	
					24					
					26	3.75'	2'	CH	27' → 27.75' clay stone, gray to orange, no stain, no odor, moist	
					28			CS		
					30				→ Refusal @ ~27.75'	
					32				→ Flush mount	
					34					
					36					
					38					
					40					

NOTES:

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW16	Project: Platteville Compressor Station
Date: 11/10/2016	Project Number: 14213112
Logged By: Kris Shepherd	Drilled By: Drill Pro

see MW12 log

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	---------------	------------------------------	-----------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
--------------------------	-----------------	----------

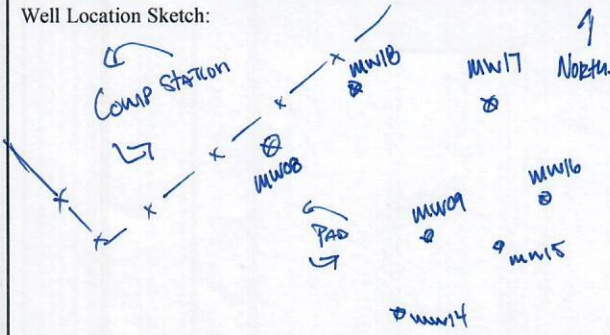
Casing Type: PVC	Diameter: 1"	Length: 12'	Hole Diameter: 3"	Depth to Liquid: -
------------------	--------------	-------------	-------------------	--------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: ~32'	Depth to Water: ~10'
------------------	------------	--------------	-------------	-------------------	----------------------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
	Wet ↓ moist	0.1 26.3 1.9 1.1 19.3 0.6 5.4 4.9 2.0 3.2 4.1 1.9	no stain ↓ stain none		12	2'	2'	SM	10' → 12.75' silty fg sand, trace clay, brown w/ tan veins, no stain, no odor, wet → 4' stringer fg → coarse sand @ ~12.5', stain (gray), odor, wet	
					14	4'	3'			
					16					
					18	4'	3'	CL	12.75' → 26' sandy clay, light brown, cohesive, mod. plasticity, no odor, no stain, moist	
					20					
					22	4'	4'		→ 1" stringer fg → coarse sand @ ~18.25', no stain, odor, wet	
					24				→ odor in sandy clay @ ~21' to ~23'	
					26	4'	4'		→ 1" stringer Mg → coarse sand @ ~25.75', no stain, no odor, wet	
					28			CH	26' → 29.5' clay, gray, cohesive, mod. plasticity, no stain, no odor, moist	
					30	4'	4'			
					32			CS	29.5' → 32' claystone, gray to orange, no stain, no odor, moist	
					34					
					36					
					38					
					40				→ flush mount	

NOTES:

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW17	Project: Platteville Compressor Station
Date: 11/22/2016	Project Number: 14213112
Logged By: Ryan Zerius	Drilled By: Drill Pro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	-------------------------	--	---------------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
------------------------------------	---------------------------	--------------------

Casing Type: PVC	Diameter: 1"	Length: 8'	Hole Diameter: 3"	Depth to Liquid: -
----------------------------	------------------------	----------------------	-----------------------------	------------------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20	Total Depth: 28'	Depth to Water: 11.0
----------------------------	----------------------	------------------------	----------------------	----------------------------	--------------------------------

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
					12	2'	2'	SP Sm	10-10.5 Brown. fg. rounded. NO ODR. NO STAIN.	
					14	4'	4'	CL	10.5-11. Brown. TRACE clay. Silty. NO ODR. NO STAIN.	
					16				11-13 grey. Silty SAND. ODR STAIN.	
					18	4'	4'		13-16 Brown silty SANDY clay. NO ODR. NO STAIN.	
					20				14-17 Black. Vertical fracture with sanding filling voids. ODR. STAIN.	
					22	4'	4'		17' gravel. Brown. Rust & 2" lens. NO ODR. NO STAIN.	
					24	4'	4'		17-20 Brown/rust silty clay. Slight ODR. NO STAIN. Low plastic.	
					26	4'	4'		20-28' Brown silty clay med plastic. cohesive. gravel inclusions. ≤ 5%. NO ODR. NO STAIN.	
					28					
					30					
					32					
					34					
					36					
					38					
					40					

Must not
 ↓
 Moist
 ↓

NO YES
 Slight YES
 ↓
 NO
 ↓

Rebar @ 28'
 20' Screen to 8' sand to 6'
 Bentonite to grade. Concrete Plumbant.

Well Location Sketch:



Compliance • Engineering • Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW18	Project: Platteville Compressor Station
Date: 11/22/2016	Project Number: 14213112
Logged By: RYAN ZEENIS	Drilled By: Drill Pro

SEE MW 17 Boring Log.

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	-------------------------	--	---------------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
------------------------------------	---------------------------	-------------

Casing Type: PVC	Diameter: 1"	Length: 8'	Hole Diameter: 3"	Depth to Liquid: -
----------------------------	-----------------	----------------------	----------------------	-----------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: 28'	Depth to Water: 11.5'
----------------------------	----------------------	-----------------	-----------------------	----------------------------	---------------------------------

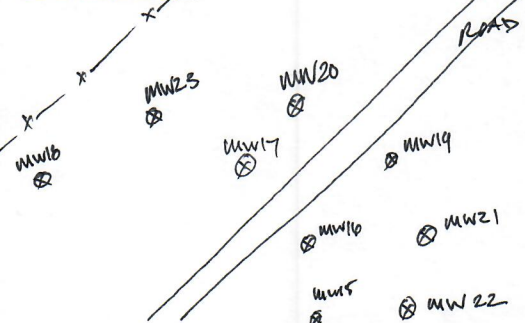
Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
					2				Hydrovac, Not Logged	
					4					
					6					
					8					
					10					
					12	2'	2'	SP	10-11.5. BROWN. Fg ROUNDED. NO ODR. NO STAIN Wet @ 11.5	
					14	4'	4'	SM	11.5-14 BROWN/TAN. silty sand. TRACE clay. NO STAIN NO ODR.	
					16			CL	14-19. BROWN / LIGHT BROWN PLASTIC. COHESIVE. - STAIN @ 14.5 ODR. @ 15.5 ODR.	
					18	4'	4'		- GRAVEL STRIPS @ 19. NO ODR. NO STAIN	
					20			CH	19-20. TAN/LIGHT BROWN COHESIVE. HIGH PLASTIC. NO ODR. NO STAIN	
					22	4'	4'	CL	20-24. TAN / LIGHT BROWN Silty SANDY clay. MED PLASTIC. wet. NO ODR. NO STAIN.	
					24				- GRAVEL STRIPS @ 23.5 NO ODR NO STAIN	
					26	4'	4'		24-26 grey-light TAN silty clay WITH FESTINING in interbeds. SLIGHT ODR. NO STAIN	
					28	4'	4'		26-28 grey-light TAN. silty SANDY clay. MED PLASTIC. SLIGHT ODR NO STAIN	
					30				Rebar @ 28' Set well @ 27' DUE TO CAVEIN. 20' screen. SAND TO 6' BOTTOM TO GRADE CONCRETE. FLUSH MANT.	
					32					
					34					
					36					
					38					
					40					

Molt wet
 0.0
 0.1
 0.0
 0.0
 442.7
 199.7
 14.8
 8.9
 1.7
 3.4
 1.7
 2.3
 30.7
 200.3
 50.7
 49.8
 41.6

NO
 SLIGHT
 YES
 NO

max wet

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW 19	Project: Platteville Compressor Station
Date: 3/14/2017	Project Number: 014213112
Logged By: Ryan Zernis	Drilled By: Drill Pro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	---------------	------------------------------	-----------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
--------------------------	-----------------	----------

Casing Type: PVC	Diameter: 1"	Length: 12'	Hole Diameter: 3"	Depth to Liquid: -
------------------	--------------	-------------	-------------------	--------------------

Screen Type: PVC	Slot: 0.01	Diameter: 1"	Length: 20'	Total Depth: 32	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					
Wet	244.7	16.9	Yes		5			SC/SP	0-10. NOT LOGGED HAND AUGER. "CLEAN SOIL - NO IMPACTS OBSERVED"	
Wet	16.9	10.3	Slight		10			CL	10-12' CLAYEY Fg SANDS ROUNDED TAN/GRAY ODDR STAIN.	
	10.3	2.3	NO		15				12-14 SAA.	
	2.3	2.5	NO		20				14-15 RED GRAVELLY CLAY MED PLASTIC. (2)AVLS ROUNDED NO ODDR. NO STAIN	
	2.5	1.3	NO		25				15-16 PINK/RED TAN GRAVELLY CLAY MED/HIGH PLASTIC (2)AVLS ROUNDED NO ODDR NO STAIN	
	1.3	2.9	NO		30				16-20 TAN PINK GRAVELLY CLAY. MED PLASTIC NO ODDR. NO STAIN. - @ 18' 2" STAMPER GRAVELLS WELL ROUNDED.	
	2.9	3.2	NO		35				20-24 SAA	
	3.2	2.2	NO		40				24-28 SAA C 24' 1.5" STRIPPER GRAVELLY WELL ROUNDED.	
	2.2	1.9	NO		45				28-30 TAN/LIGHT BROWN CLAYEY Fg/Vfg SANDS WELL ROUNDED. - Slight < 5% GRAVELLS. NO STAIN NO ODDR.	
	1.9								30-32' GRAY/LIGHT GRAY, BROWN/LIGHT BROWN LAYERED/BANDED CLAYEY Fg/Vfg SANDS WELL ROUNDED NO STAIN NO ODDR.	
									TIP 32' 20' SCREEN SAND TO 10' BENTONITE TO GRAPE CONCRETE FLASHMOUNT	

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: **MW20** Project: **Platteville Compressor Station**
 Date: **3/14/2017** Project Number: **014213112**
 Logged By: **Ryan Zernis** Drilled By: **Drill Pro**

Elevation: _____ Detector: **PID** Drilling Method: **Direct Push** Sampling Method: **Continuous**

Gravel Pack: **Silica Sand** Seal: **Bentonite** Grout: **-**

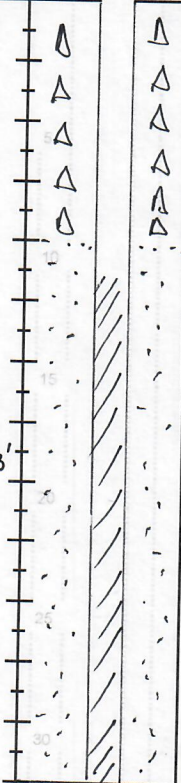
Casing Type: **PVC** Diameter: **1"** Length: **12** Hole Diameter: **3"** Depth to Liquid: **-**

Screen Type: **PVC** Slot: **0.01** Diameter: **1"** Length: **20** Total Depth: **32** Depth to Water: **1' 30, 31'**

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0				0-10 NOT LOGGED - HAND AUGER "CLEAN SOIL" - NO IMPACTS OBSERVED.	
					5				10-12 TAN/GREY CLAYEY Fg SANDS ROUNDED. OOLC. STAIN.	
					10			SC/SP	12-14 SAA.	
					15			CL	14-16: RED GRAVELLY CLAY. MED PLASTIC. NO OOLC. NO STAIN	
					20			CL	16-20 RED PINK TAN SILTY SANDY GRAVELLY CLAY MED PLASTIC. ROUNDED AQUEOUS. NO STAIN NO OOLC.	
					25			CL	20-23. SAA. GRAVEL STRIPPER @ 22', 23' 1" - ROUNDED	
					30			CL	23-24 RED PINK TAN SILTY SAND GRAVELLY CLAY. MED PLASTIC ROUNDED Aqg. NO STAIN NO OOLC.	
					35				24-28' SAA.	
					40				28-32' SAA. - WLT @ 30', 31'	
					45				TD. 32' SCREEN 20' SAND TO 10' BENTONITE TO GRADE. FLUSHMENT CONCRETE.	

SEE MW19 Boring Log.

Moisture Content: NA, 52.7, 40.9, 17.2, 10.2, 9.8, 5.2, 4.9, 17.9, 3.1, 2.9, 1.7
 Vapor: NO, YES, SLIGHT, NO, NO, NO
 Staining: NO, YES, SLIGHT, NO, NO, NO



Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW 21	Project: Platteville Compressor Station
Date: 3/14/2017	Project Number: 014213112
Logged By: Ryan Zernis	Drilled By: Drill Pro
Drilling Method: Direct Push	Sampling Method: Continuous
Seal: Bentonite	Grout: -
Casing Type: PVC Diameter: 1" Length: 12'	Hole Diameter: 3" Depth to Liquid: -
Screen Type: PVC Slot: 0.01 Diameter: 1" Length: 20'	Total Depth: 32' Depth to Water: 13', 25', 28'

SEE MW 19 Boring Log.

Elevation: Detector: PID

Gravel Pack: Silica Sand

Casing Type: PVC

Screen Type: PVC Slot: 0.01

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0				0-10 NOT LOGGED. HAND ADDED. "CLEAN SOIL" NO IMPACTS OBSERVED.	
					5				10-12. NO RECOVERY.	
					10				12-14 GREY. SILTY CLAYEY Fg SANDS WELL ROUNDED ODR STAIN.	
					15			SC/SP	14-16. TAN LIGHT BROWN SILTY SANDY (Fg) GRAVELLY CLAY. MED PLASTIC. NO ODR. NO STAIN	
	4129		YES		20			CL	16-20. TAN LIGHT BROWN. BROWN. SILTY SANDY (Fg) GRAVELLY CLAY. LOW PLASTIC. NO ODR. NO STAIN	
	26.3		NO		25				20-24. TAN LIGHT BROWN. OFF WHITE. Silty gravelly clay MED PLASTIC. NO ODR. NO STAIN.	
	0.7				30			GM	@ 22' 2" GRAVEL STRENGTH WELL ROUNDED. NO ODR. NO STAIN	
	6.2				35			LL	24-26. BROWN TAN GRAVELS. CG. ROUNDED NO ODR. NO STAIN.	
	0.5				40			GM	26-28' TAN LIGHT BROWN SILTY GRAVELLY CLAY MED PLASTIC. NO ODR. NO STAIN.	
	0.9				45			GM	28-30' BROWN TAN GRAVELS (CG) WELL ROUNDED NO ODR. NO STAIN.	
	0.9							CL/WCS	30-32. GREY. LIGHT GREY. RUST IN FINGERES CRUMBLY SOFT. "WEATHERED CLAYSTONE" NO ODR. NO STAIN.	
	0.5								TD. 32' SCREEN 20' SAND TO 10' BENTONITE TO GRADE. ALUMINUM CONCRETE.	
	1.2									
	1.0									

NOTES:

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW 22	Project: Platteville Compressor Station
Date: 3/14/2017	Project Number: 014213112
Logged By: Ryan Zernis	Drilled By: Drill Pro
Drilling Method: Direct Push	Sampling Method: Continuous

Elevation: _____ Detector: **PID**

Gravel Pack:
Silica Sand

Seal:
Bentonite

Grout:
-

Casing Type:
PVC

Diameter: **1"** Length: **12'**

Hole Diameter: **3"** Depth to Liquid: **-**

Screen Type:
PVC Slot: **0.01**

Diameter: **1"** Length: **20**

Total Depth: **32'** Depth to Water: **14, 20**

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
					0					
	MDVT	NA	NO		5				0-10. NOT LOGGED. HAND AUGER. "CLEAN SOIL" - NO IMPACTS OBSERVED.	
					10				10-12. NO RECOVERY.	
	NA	NA	NA		15				12-14 GREY Silty sandy (fg) CLAY. MED PLASTIC. ODR. STAIN	
	MOIST	465.2	YES		20				14-16. GREY BROWN. TAN. LIGHT BROWN Silty sandy (fg) GRAVELLY CLAY SLIGHT ODR. SLIGHT STAIN.	
	WET	52.9	SLIGHT		25				16-20 BROWN. Silty sandy (fg) GRAVELLY CLAY. NO STAIN NO ODR. - SOFT 16-19.0 - HARD @ 20'	
	WET	39.7	NO		30				20-23 SAA.	
	WET	22.3			35				23-24 GREY LIGHT GREY RUST IN FRACTURES "WEATHERED CHAT STONE" HARD. NO STAIN NO ODR.	
	MOIST	4.0			40				24-28 GREY. LIGHT GREY Silty sandy (Vfg/fg) CLAY. SOFT LOW PLASTIC. NO STAIN NO ODR. "WEATHERED CHAT STONE" RUST IN FRACTURES.	
		2.2			45				28-28.5 SAA. STAIN/ODR. - REFUSAL @ 28.5 - When push point to TD for well SET WKS ASSE TO ONLY GO TO 24'. - STEP OUT 10' SSE - REPLACEMENT Boring NOT LOGGED.	
		1.7							TD. 32' SCREEN 20' SAND TO 10' BENTONITE TO GRADE. PLUSHMOUT CONCRETE.	
		2.9								
	NA	1022	YES							
		NA	NA							

NOTES:

Well Location Sketch:



Compliance - Engineering - Remediation
LT Environmental, Inc.
 4600 W. 60th Avenue
 Arvada, Colorado 80003

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW 23		Project: Platteville Compressor Station	
Date: 3/14/2017		Project Number: 014213112	
Logged By: Ryan Zernis		Drilled By: Drill Pro	
Drilling Method: Direct Push		Sampling Method: Continuous	
Seal: Bentonite		Grout: -	
Diameter: 1"	Length: 16'	Hole Diameter: 3"	Depth to Liquid: -
Diameter: 1"	Length: 20'	Total Depth: 30, 32'	Depth to Water: 10, 17, 20

SEE MW 19 Log

Elevation: _____ Detector: **PID**

Gravel Pack:
Silica Sand

Casing Type:
PVC

Screen Type:
PVC Slot: **0.01**

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Recovery	Soil/Rock Type	Lithology/Remarks	Well Completion Diagram
------------------------	------------------	-------------	----------	----------	------------------	------------	----------	----------------	-------------------	-------------------------

					0					
	Moist	NA	NO						0-10. NOT LOGGED. HAND AGER. "CLEAN SOIL" - NO IMPACTS OBSERVED.	
					5				10-12 BROWN CLAYEY SILTY SAND (Fg) ROUNDED NO ODR. NO STAIN.	
	Wet	0.9	NO		10			SC/SP	12-16 BROWN. SILTY SANDY (Fg) GRAVELLY (ROUNDED) CLAY. MED PLASTIC. NO ODR. NO STAIN.	
		1.2			15			CL	16-19 SAA.	
		1.5			20			GM	19-22. BROWN. TAN GRAVELL WELL ROUNDED NO ODR. NO STAIN	
		2.1			25			CL	22-24 BROWN. SILTY SANDY (Fg) GRAVELLY (ROUNDED) CLAY. NO STAIN NO ODR. - GRAVELL LENS @ 22.5, 23.5 1"	
		0.3			30			GM	24-25 BROWN. TAN GRAVELL WELL ROUNDED NO ODR. NO STAIN.	
		0.9			35			CL/WCS	25-28 GREY. FRACTURED (RUST) Vfg-Fg SANDY CLAY. ROUNDED NO ODR. NO STAIN. WCS @ 26-27 - SILTY SANDY CLAY	
		1.2			40			GM	28-30 BROWN. TAN GRAVELL. WELL ROUNDED. NO ODR. NO STAIN.	
		1.1			45			SC/SP	30-32. GREY. LIGHT GREY. BROWN. LIGHT BROWN BANDED. CLAYEY (Vfg-Fg) SANDS WELL ROUNDED. NO ODR. NO STAIN. - SAMPLE TO 32'	
		1.0							WELL SET @ 30' DUE TO FLOWING SANDS.	
		1.2							TD 32' WELL SET AT 30. 20' SCREEN. SAND TO 8' CONCRETE. FISH MOUNT.	

NOTES:

Well Location Sketch:

Compressor Station

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Access Road

Amwoh

mw26



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW19R Project: Platteville Compressor Station

Date: 09/20/2017 Project Number: 14213112

Logged By: Brandon Finn/Jay Thomas Drilled By: Drill Pro

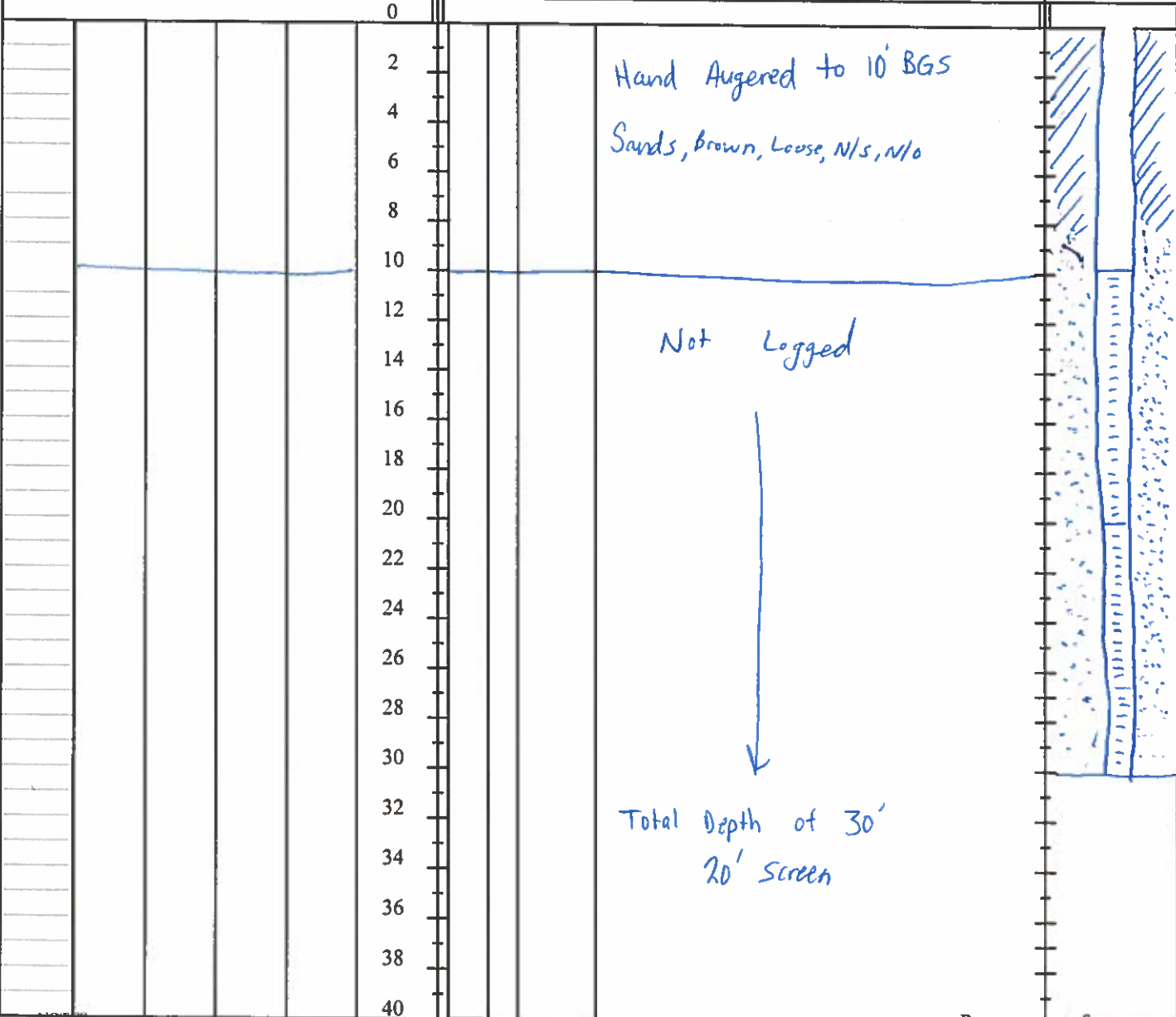
Elevation: Detector: PID Drilling Method: Direct Push Sampling Method: Continuous

Gravel Pack: Silica Sand Seal: Bentonite Grout: -

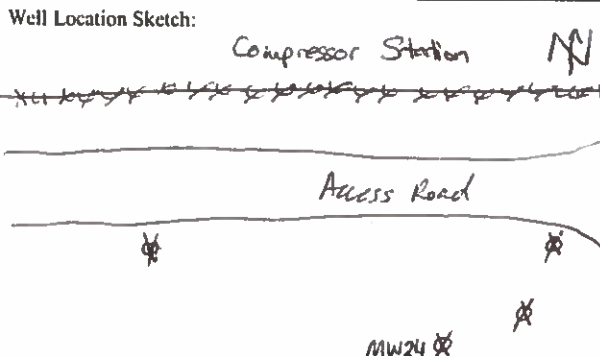
Casing Type: PVC Diameter: 1" Length: 10' Hole Diameter: 3" Depth to Liquid: -

Screen Type: PVC Slot: 0.010 Diameter: 1" Length: 20' Total Depth: 30' 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
------------------------	------------------	-------------	----------	----------	------------------	------------	----------	----------------	-------------------	-------------------------



NOTES



BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW24	Project: Platteville Compressor Station
Date: 09/20/2017	Project Number: 14213112
Logged By: Brandon Finn/Jay Thomas	Drilled By: Drill Pro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	-------------------------	--	---------------------------------------

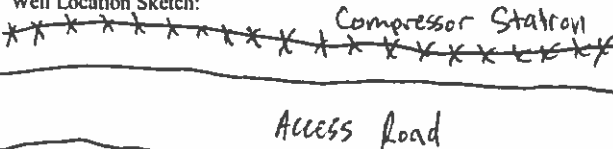
Gravel Pack: Silica Sand	Seal: Bentonite
------------------------------------	---------------------------

Casing Type: PVC	Diameter: 1"	Length: 10'	Hole Diameter: 3"	Depth to Liquid: -
----------------------------	------------------------	-----------------------	-----------------------------	------------------------------

Screen Type: PVC	Slot: 0.010	Diameter: 1"	Length: 20'	Total Depth: 30'	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 to 10' BGS	
					4				-Brown, loose, sands, fine sands, N/S, N/O, no plasticity, non-cohesive	
					6			S		
					8					
	Dry				10					
	moist	0.0	N	-	10					
	Wet	0.0	N		12	24"		CL	Sandy clay, moist to very moist, brown to dark brown, slight, very slight stain, N/O plasticity and cohesive	
		0.0	N		14	48"		CL	SAA w/ small amounts of gravel	
	very moist		N		16					
			N		18	48"		CL	SAA, gravel content increases significantly @ 19.5-20	
			N		20					
			Slight	-	22	48"		CL	SAA, gravel between 21.0-21.5	
					24					
	Saturated	0.0	N	-	26	48"		CL/S	SAA to 25.5' 25.5-28' - Brown, loose, gravelly sands, coarse to medium gravel, N/S, N/O, no plasticity	
			N		28					
	Saturated	0.0	N	-	30	48"		CL/S	Sandy clay to 28.5' Loose, Brown, N/S, N/O slight plasticity 28.5-30' gravel, sands, N/S, N/O, dark brown, no plasticity	
					32					
					34					
					36					
					38					
					40					
									Bottom of well set @ 30' deep 20' screen	

Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.

4600 W. 60th Avenue

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: MW25	Project: Platteville Compressor Station
Date: 09/20/2017	Project Number: 14213112
Logged By: Brandon Finn/Jay Thomas	Drilled By: Drill Pro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	-------------------------	--	---------------------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout: -
------------------------------------	---------------------------	--------------------

Casing Type: PVC	Diameter: 1"	Length: 10'	Hole Diameter: 3"	Depth to Liquid: -
----------------------------	------------------------	-----------------------	-----------------------------	------------------------------

Screen Type: PVC	Slot: 1"	Diameter: 1"	Length: 20'	Total Depth: 30'	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 to 10' BGS	
					4				Sands, Loose, Brown, N/S, N/O	
					6			5	No plasticity	
	Moist				8					
	Moist	0.0	N		10					
	Saturated	0.0	N		12	36"		S	-Loose, Brown, Sands, N/S, N/O, No plasticity	
	Saturated	0.0	N		14	40"		SC	-Loose, Brown, Sandy clay, N/S, N/O, slight plasticity, some cohesiveness	
	Saturated	0.0	N		16					
	Saturated	0.0	N		18	40"		SC	-SAA	
	Saturated	0.0	N		20					
	Saturated	0.0	N		22	40"		SC	-SAA	
	Saturated	0.0	N		24					
	Saturated	0.0	N		26	48"		SC	-SAA	
	Saturated	0.0	N		28					
	Saturated	0.0	N		30	48"		SC	-SAA	
					32					
					34				-Refusal @ 33' in depth	
					36				well set @ 30' deep	
					38				20' screen	
					40					

Well Location Sketch: *Compressor Station*
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~



Compliance - Engineering - Remediation
 LT Environmental, Inc.
 4600 W. 60th Avenue

Access Road

MW27
MW26
MW24
MW25

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: *MW26* Project: **Platteville Compressor Station**
 Date: *09/20/2017* Project Number: **14213112**
 Logged By: **Brandon Finn/Jay Thomas** Drilled By: **Drill Pro**

Elevation: Detector: **PID** Drilling Method: **Direct Push** Sampling Method: **Continuous**

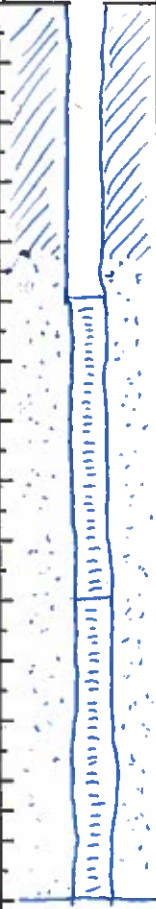
Gravel Pack: **Silica Sand** Seal: **Bentonite** Grout: **-**

Casing Type: **PVC** Diameter: **1"** Length: **10'** Hole Diameter: **3"** Depth to Liquid: **-**

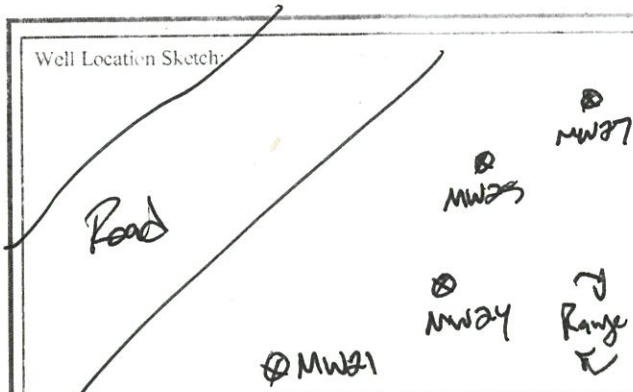
Screen Type: **PVC** Slot: Diameter: **1"** Length: **20'** Total Depth: **30'** Depth to Water: **11'**

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 to 10' BGS	
					4					
					6			S	- Loose, Brown, Sands, Fine Sands, N/s, N/o, No plasticity, Non-cohesive	
					8					
	Moist				10					
	Moist	0.0	N		12	30"		SC	- Loose, Brown, Sandy clays, N/s, N/o, Plasticity, cohesive	
	Moist	0.0	N		14	48"		SC	- SAA - Loose to medium	
	Moist	0.0	N		16					
	Moist	0.0	N		18	48"		SC	- SAA Trace gravel	
	Saturated	0.0	N		22	48"		SC	- SAA 2" at gravel at 23'	
	Saturated	0.0	N		26	48"		S	- Loose, Brown, Sand, trace fine sand, N/s, N/o, No plasticity coarse gravel mixed within	
	Saturated	0.0	N		30	30"		S	- SAA	
					32					
					34					
					36					
					38					
					40					



Well Location Sketch:



Compliance - Engineering - Remediation

LT Environmental, Inc.
4600 W. 60th Avenue

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Well Name: MW27	Project: Platteville Compressor Station
Date: 12-27-17	Project Number: 14213112
Drilled By: Jay Thomas	Drilled By: Drill Pro

Elevation:	Detector: PID	Drilling Method: Direct Push	Sampling Method: Continuous
------------	---------------	------------------------------	-----------------------------

Gravel Pack: Silica Sand	Seal: Bentonite	Grout:
--------------------------	-----------------	--------

Casing Type: PVC	Diameter: 1"	Length: 10'0"	Hole Diameter: 3"	Depth to Liquid:
------------------	--------------	---------------	-------------------	------------------

Screen Type: PVC	Slot:	Diameter: 1"	Length: 20'0"	Total Depth: 30'0"	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				10.5	
Moist	0.1	No	N/A		6	2	2	SC	6-7.5 Fg sand w/clay, brown, moist, poorly graded, moderately dense, poorly	
	1.0				8				graded, no stain, no odor	
	0.1				10	4	4	CL	7.5-10.5 Clay content increases	
Saturated	0.2				12				10.5-30 Fg sandy clay, moist, brown, stiff, highly cohesive, high plasticity, no stain, no odor, more mottled brown	
	0.2				14	4	4		Sand content decreases w/depth	
	0.6				16				13-Saturated	
	0.1				18	4	4		19.5-20 Interspersed Cg sand + gravel	
	0.2				20				16.5-16.6 Interspersed Mg sand	
	0.2				22	4	4		20-20.75 Clay	
	0.1				24				24-25 Interspersed Ms-Cg sand	
	0.2				26	4	4		Finished w/steel riser	
	0.2				28					
	0.2				30	2	2			
					32					
					34					
					36					
					38					
					40					