

1000165  
131 feet  
6'

CLIENT: U.S. Geological Survey / S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Loyeslayday-criley

Water? Maybe At 100'

Date: 2/18/11		Hole # 1000D1 Rig # ①		Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
8:30			ON SITE	1. Crew Travel To Site	
12:45			SETTING UP	2. Rig Up	
12:54			Rig UP	3. Reenter Hole	
			TRUCK STUCK	4. Drilling	
2:47	4	0'	DRILLING	5. Pull Pipe	
2:50	8	15'	1st pipe added	6. Mix Mud & Fill	
2:53		20'	SAMPLE TAKEN SAND & ROCKS	7. Coring	
2:56	8	35'	2nd pipe added	8. Install Casing/Pipe	
2:59		40'	SAMPLE TAKEN - SAND & ROCKS	9. Cementing	
3:04	8	55'	3rd pipe added	10. Rig Down	
3:09		60'	SAMPLE TAKEN SAND & ROCKS.	11. Move Rig To New Site	
3:12	8	75'	4th pipe added	12. Maintenance	
3:15		80'	SAMPLE TAKEN Sand & rocks	13. Standby (Explain)	
3:24	8	95'	5th pipe added	14. Other (Explain)	
3:28		100'	SAMPLE TAKEN Sand & ROCKS THICK.	15. Logging	
3:32	8	115'	6th pipe added	16. Water Trip	
3:35		120'	SAMPLE TAKEN Sand & ROCKS		
3:38		131'	SAMPLE TAKEN Sand		
3:44	5		Remaining pipe		
3:57	5		All pipe out the ground & bit		
4:00	8		CASING HOLES 1st one down		
4:02	8		2nd casing added		
4:19	8		3rd casing added		
4:31	8		4th casing added		
4:42	8		5th casing added		
4:59	8		6th casing added		
5:11	8		7th casing added		
5:30	8		DONE CASING HOLES		

MATERIALS USED

Mud 6 sacks

LC \_\_\_\_\_ Type \_\_\_\_\_

sacks

sacks

sacks

Viscose \_\_\_\_\_

Cement \_\_\_\_\_

Diesel \_\_\_\_\_

Foamer \_\_\_\_\_

Detergent \_\_\_\_\_

Other \_\_\_\_\_

CREW HOURS

Driller 1

Helper 1

Helper 1

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Approved \_\_\_\_\_

1000 lbs  
131 feet  
6'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Cary Slayday-Caley

Water? Yes 80-95 feet

Date: 2/19/11		Hole # 100002 Rig # ①		Driller: Sam Crum	Supervisor: G. Fois
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
8:45			ON Site		
9:05			Setting up	1. Crew Travel To Site	
9:15			Tower up	2. Rig Up	
9:22	4	0'	DRILLING	3. Reenter Hole	
9:27	8	15'	1st pipe added	4. Drilling	
9:30		20'	Sample TAKEN Sand with Rocks	5. Pull Pipe	
10:07	8	35'	2nd pipe added	6. Mix Mud & Fill	
10:09		40'	SAMPLE TAKEN ROCKS & Sand	7. Coring	
10:14	8	55'	3rd pipe added	8. Install Casing/Pipe	
10:18		60'	Sample taken ROCKS & Sand	9. Cementing	
10:26	8	75'	4th pipe added	10. Rig Down	
10:30		80'	Sample TAKEN thick ROCKS & Sand	11. Move Rig To New Site	
11:04	8	95'	5th pipe added	12. Maintenance	
11:08		100'	Sample TAKEN ROCKS with Sand thick	13. Standby (Explain)	
11:15	8	115'	6th pipe added	14. Other (Explain)	
11:17		120'	Sample TAKEN lots of Sand & ROCKS	15. Logging	
11:20		131'	Sample TAKEN still lots of ROCKS & Sand	16. Water Trip	
11:27	5		PULLING PIPE		
11:40	5		pull PIPE & Bit out the gravel		
11:46	8		CASING HOLE 1st ONE DOWN		
11:48	8		2nd casing added		
11:59	8		3rd casing added		
12:10	8		4th casing added		
12:21	8		5th casing added		
12:30	8		6th casing added		
12:45	8		7th casing added		
12:58	8		8th casing added		
1:10	8		DONE CASING HOLE		

MATERIALS USED

- Mud reused + 4 sacks
- LC \_\_\_\_\_ Type \_\_\_\_\_
- \_\_\_\_\_ sacks
- \_\_\_\_\_ sacks
- \_\_\_\_\_ sacks
- Viscose \_\_\_\_\_
- Cement \_\_\_\_\_
- Diesel \_\_\_\_\_
- Foamer \_\_\_\_\_
- Detergent \_\_\_\_\_
- Other \_\_\_\_\_

CREW HOURS

- Driller /
- Helper /
- Helper /

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Approved \_\_\_\_\_

1000 lbs  
131 feet  
6'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Cole, Slaydon - Coley

Water at mid to end

Date: 2/9/11		Hole # 1000D3		Rig # ①	Driller: Sam Crum	Supervisor: G. FUS
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #	
2:44			TOWER UP SST UP			
3:00	4	0'	DRILLING		1. Crew Travel To Site	
3:08	8	15'	1st pipe added		2. Rig Up	
3:10		20'	Sample taken Rocks & Sand		3. Reenter Hole	
3:13	8	35'	2nd pipe added		4. Drilling	
		40'	Sample taken Rocks & Sand		5. Pull Pipe	
3:21	8	55'	3rd pipe added		6. Mix Mud & Fill	
3:24		60'	Sample taken More Rocks & Sand		7. Coring	
3:30	8	75'	4th pipe Added		8. Install Casing/Pipe	
3:39		80'	Sample taken thick Sand & Rocks		9. Cementing	
3:40	8	95'	5th pipe added		10. Rig Down	
3:43		100'	Sample taken Sand & Rocks		11. Move Rig To New Site	
4:23	8	115'	6th pipe added		12. Maintenance	
4:35		120'	Sample taken Sand & Rocks		13. Standby (Explain)	
4:40		131'	Sand & Rocks Sample taken		14. Other (Explain)	
4:44	5		pulling pipe		15. Logging	
4:54	5		all pipe + Bit out		16. Water Trip	
4:56	8		Casing Hole 1st one down		<b>MATERIALS USED</b> Mud <u>Reused</u> + 2 sacks LC _____ Type _____ _____ sacks _____ sacks _____ sacks Viscose _____ Cement _____ Diesel _____ Foamer _____ Detergent _____ Other _____	
4:58	8		2nd casing added			
5:06	8		3rd casing added			
5:15	8		4th casing added			
5:25	8		5th casing added			
5:34	8		6th casing added			
5:43	8		7th casing added			
5:53	8		8th casing added			
6:03	8		DONE CASING HOLE			
			OFF SITE traveling back to el Centro			
			7pm arrived 7:30pm			

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Approved \_\_\_\_\_

1046 H1  
120 feet  
8'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Coye Slayton-Criley

Water? Yes 120'

Date: 1/26/11		Hole # 1046 H1	Rig # ①	Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
9:10			ON SITE		
10:00	16		Water trip	1. Crew Travel To Site	
11:45	16		Water trip	2. Rig Up	
12:15	12		Changing out screen	3. Reenter Hole	
1:05	4	- 0'	DRILLING	4. Drilling	
1:12	8	- 15'	1st pipe Added	5. Pull Pipe	
1:15		- 20'	SAMPLE TAKEN SAND ROCKS TAN colored	6. Mix Mud & Fill	
1:23	8	- 35'	2nd pipe added	7. Coring	
1:27		40'	SAMPLE TAKEN lots of SAND ROCKS.	8. Install Casing/Pipe	
1:32	8	- 55'	3rd pipe added	9. Cementing	
1:37		60'	SAMPLE TAKEN sand sand SAND ROCK	10. Rig Down	
1:54	8	- 75'	4th pipe added	11. Move Rig To New Site	
2:40		80'	SAMPLE TAKEN sand sand clay for	12. Maintenance	
2:56	8	- 95'	5th pipe added	13. Standby (Explain)	
3:00		100'	SAMPLE TAKEN sand with clay TAN colored	14. Other (Explain)	
3:38	8	- 115'	6th pipe added	15. Logging	
3:43		120'	SAMPLE TAKEN sand clay SANDS	16. Water Trip	
			Note: Fixed a Broken HOSE ON Rig		
3:55	5		Pulling pipe		
4:05	5		all pipe out the HOLE		
4:08	8		CASING HOLE		
5:46	8		DONE CASING		
6:11			OFF SITE		

MATERIALS USED

Mud 7 sacks  
LC \_\_\_\_\_ Type \_\_\_\_\_  
\_\_\_\_\_ sacks  
\_\_\_\_\_ sacks  
\_\_\_\_\_ sacks  
Viscose \_\_\_\_\_  
Cement \_\_\_\_\_  
Diesel \_\_\_\_\_  
Foamer \_\_\_\_\_  
Detergent \_\_\_\_\_  
Other \_\_\_\_\_

CREW HOURS

Driller / \_\_\_\_\_  
Helper / \_\_\_\_\_  
Helper / \_\_\_\_\_

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
Bit 9 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_

Approved \_\_\_\_\_

1046AC  
120 feet  
8'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Coye Slattery-Coley

Thursday		Date: 1/27/11	Hole # 1046AC	Rig # ①	Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #	
10:40			ON SITE			
11:52			almost setup ready to drill		1. Crew Travel To Site	
12:15	4	0'	Started Drilling		2. Rig Up	
1pm	8	15'	1st pipe added		3. Reenter Hole	
			20 FOOT SAMPLE MISSED		4. Drilling	
1:17pm	8	35'	2nd pipe added		5. Pull Pipe	
					6. Mix Mud & Fill	
1:21		40'	sample taken sand clay gravel tan colored		7. Coring	
					8. Install Casing/Pipe	
1:27	8	55'	3rd pipe added		9. Cementing	
					10. Rig Down	
1:35		60'	sample taken sand gravel & rocks		11. Move Rig To New Site	
					12. Maintenance	
1:51	8	75'	4th pipe added		13. Standby (Explain)	
					14. Other (Explain)	
1:55		80'	sample taken sand clay tan rocks brown colored rocks		15. Logging	
					16. Water Trip	
2:00	8	95'	5th pipe added		MATERIALS USED	
					Mud <u>reused</u> sacks	
					LC _____ Type _____	
		100'	sample taken clay sand some rocks brown tan colored		_____ sacks	
			missed 6th pipe added		_____ sacks	
		170'	sample clay sand some rocks		Viscose _____	
2:45	8		CASING HOLE		Cement _____	
2:53	8		2nd added		Diesel _____	
3:10	8		3rd casing added		Foamer _____	
3:20	8		4th casing added		Detergent _____	
3:33	8		5th casing added		Other _____	
3:48	8		6th casing added		CREW HOURS	
					Driller / _____	
					Helper / _____	
					Helper / _____	

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 97/8 changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_

Approved \_\_\_\_\_

1001A  
500lbs?  
80feet  
8'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Cory Skayday-CPI/eq

Date: 1/25/11		Hole # 10S1A		Rig # ①	Driller: Sam Crum	Supervisor: GFDIS
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #	
10:45			ON SITE			
11:00	16		WATER TRIP		1. Crew Travel To Site	
11:30			Setting up Rig		2. Rig Up	
12:15	4	0'	DRILLING		3. Reenter Hole	
12:23	8	15'	1st pipe Added		4. Drilling	
12:27		20'	SAMPLE TAKEN BROWN CLAY THICK MATERIAL BIT ROCKS & GRAVEL		5. Pull Pipe	
12:33	8	35'	2nd pipe Added		6. Mix Mud & Fill	
12:35		40'	SAMPLE TAKEN CLAY BROWN WITH GRAVEL AND ROCKS		7. Coring	
12:41	8	55'	3rd pipe added		8. Install Casing/Pipe	
12:47		60'	SAMPLE TAKEN THICK CLAY & ROCKS		9. Cementing	
12:51	8	75'	4th pipe added		10. Rig Down	
12:57		80'	SAMPLE TAKEN CLAY THICK BROWN WITH ROCKS & SAND		11. Move Rig To New Site	
1:12	5		1st pipe REMOVED		12. Maintenance	
1:21	5		All pipe OUT to ground		13. Standby (Explain)	
			NOTE WAITING ON CASING TO SHOW UP		14. Other (Explain)	
3:00	8		1st casing in hole		15. Logging	
3:05	8		2nd casing added		16. Water Trip	
3:20	8		3rd casing added			
3:30	8		4th casing added			
3:45	8		5th casing added			
4:00			DONE CASING HOLE			
4:25			MOVED TO NEXT SITE			
5:15			OFF SITE			

MATERIALS USED

Mud \_\_\_\_\_ sacks  
LC \_\_\_\_\_ Type \_\_\_\_\_  
\_\_\_\_\_ sacks  
\_\_\_\_\_ sacks

Viscose \_\_\_\_\_  
Cement \_\_\_\_\_  
Diesel \_\_\_\_\_  
Foamer \_\_\_\_\_  
Detergent \_\_\_\_\_  
Other \_\_\_\_\_

CREW HOURS

Driller / \_\_\_\_\_  
Helper / \_\_\_\_\_  
Helper / \_\_\_\_\_

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
Bit 97/8 changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_

Approved \_\_\_\_\_

90 feet  
8'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Cyril Skayday - CWI

Date: 2/10/11		Hole # 1058C Rig # ①		Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
7:45			O.N. SITE		
8:25			Water Trip Changing Filter	1. Crew Travel To Site	
				2. Rig Up	
				3. Reenter Hole	
10:46				4. Drilling	
			TOWER UP	5. Pull Pipe	
11:24				6. Mix Mud & Fill	
				7. Coring	
11:30	4	0	DRILLING	8. Install Casing/Pipe	
				9. Cementing	
11:38	8	15	1st pipe added	10. Rig Down	
				11. Move Rig To New Site	
11:49		20	SAMPLE TAKEN DARK BROWN thick clay	12. Maintenance	
				13. Standby (Explain)	
				14. Other (Explain)	
11:54	8	35	2nd pipe added	15. Logging	
				16. Water Trip	
11:59		40	SAMPLE TAKEN DARK BROWN thick clay		
				MATERIALS USED	
12:12	8	55	3rd pipe added	Mud _____ sacks	
				LC _____ Type _____	
12:16		60	SAMPLE TAKEN DARK THICK CLAY	_____ sacks	
				_____ sacks	
12:33	8	75	4th pipe added	_____ sacks	
				_____ sacks	
		80	SAMPLE TAKEN SAME DARK BROWN THICK CLAY	_____ sacks	
				_____ sacks	
12:40	5		REMAINING PIPE	Viscose _____	
12:50	5		AND PIPE + BIT OUT	Cement _____	
				Diesel _____	
12:52	8		CASING HOLE 1st casing Down	Foamer _____	
12:54	8		2nd CASING Added	Detergent _____	
1:07	8		3rd CASING Added	Other _____	
1:25	8		4th CASING Added		
1:42	8		5th casing Added		
1:57	8		DONE CASING HOLE		
				CREW HOURS	
				Driller _____ / _____	
				Helper _____ / _____	
				Helper _____ / _____	

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 9 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Approved \_\_\_\_\_

1007A13 1067A2  
 Target 1000 lbs  
 2x 80' holes  
 8" casing

Water?  
 No  
 Clay

CLIENT: U.S. Geological Survey/ S.C.E.C.  
 PROJECT: SSIP  
 CLIENT REP: Liz Rose / Corey Slayday - criller

Sat		Date: 12-18-10	Hole # 1067a1	Rig # ①	Driller: Sam Crum	Supervisor: G FUIS
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #	
2:45	1		From 2191a			
3:10	2		ON SITE		1. Crew Travel To Site	
4:00	4	0			2. Rig Up	
4:25	8	15'	CLAY imagine that ...		3. Reenter Hole	
	4	~40'			4. Drilling	
5:00	10		Rig DOWN FOR THE NIGHT		5. Pull Pipe	
Sunday 12 19, 2010						
9am	2		Rig UP		6. Mix Mud & Fill	
10:25	4	50	Reached about 50' at 10:25am Clay Brown mid thickness a bit SOFTER SAME AS the last 5 HOLES.		7. Coring	
10:34	8	57'	added pipe		8. Install Casing/Pipe	
10:45	4	60'	Clay Brown still the same.		9. Cementing	
10:57	4	~68	DRILLING THROUGH Dark Brown Clay mid thickness.		10. Rig Down	
11:17		75'	added pipe		11. Move Rig To New Site	
11:38		80'	sample thick clay Dark Brown		12. Maintenance	
11:42	8		removing pipe		13. Standby (Explain)	
11:55	8		adding casing		14. Other (Explain)	
12:03	8		2nd CASING in tunnel		15. Logging	
12:18	8		3rd CASING down hole		16. Water Trip	
12:25	8		4th CASING NO problem added			
12:56	8		5th CASING done and drum			
1:15	10		MOVING UP 15 FEET			
1:20	2		15' FEET UP Rig up 2nd 80 FOOT HOLE!			
1:45			Setting up Digging Hole			

MATERIALS USED

Mud 2 sacks  
 LC Type \_\_\_\_\_  
 \_\_\_\_\_ sacks  
 \_\_\_\_\_ sacks  
 \_\_\_\_\_ sacks  
 Viscose \_\_\_\_\_  
 Cement \_\_\_\_\_  
 Diesel \_\_\_\_\_  
 Foamer \_\_\_\_\_  
 Detergent \_\_\_\_\_  
 Other \_\_\_\_\_

CREW HOURS

Driller 1  
 Helper 1  
 Helper 1

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_

Bit 9/8 changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_

Approved \_\_\_\_\_



11007 01 342  
 1000 lbs  
 2x 80' holes  
 8' casing

water Deep

CLIENT: U.S. Geological Survey/ S.C.E.C.  
 PROJECT: SSIP  
 CLIENT REP: Coye Skayday Criley

Sunday		Date: 12-19-10	Hole # 1067a2	Rig # ①	Driller: Sam Crum	Supervisor: G. Fujs
TIME	LOG #	FOOTAGE	REMARKS			LOG REFERENCE #
2:11	2		Rig up Getting Everything set up for Drilling			1. Crew Travel To Site
2:36	4	0'	Began Drilling 1067a2			2. Rig Up
2:59	4		Thick Clay Dark Brown			3. Reenter Hole
3:10		15'	Driller noticed mudd coming out of a hole not 1067a2 hole but formed a hole of its own			4. Drilling
3:12			Drilling stopped for the day			5. Pull Pipe
3:28	16		Filling up water tank			6. Mix Mud & Fill
3:55			OFF SITE !!			7. Coring
12-20-10	MONDAY	MONDAY	12-20-10 Monday 12-20-10			8. Install Casing/Pipe
8:30			I Arrived on site scouted other site 7:45 - 8:30 waiting for Drillers to show up.			9. Cementing
9:50			DRILLERS ON SITE!			10. Rig Down
10:00	2		Setting up Drill			11. Move Rig To New Site
10:45	4	0'	Started Drilling			12. Maintenance
10:53	8	15'	1st pipe added			13. Standby (Explain)
11:00		20'	Sample Dark Brown Clay mid thickness mid color			14. Other (Explain)
11:15	8	35'	2nd pipe being added			15. Logging
11:22		40'	Sample taken same as 20' mid thickness Brown Dark mid color.			16. Water Trip
NOTE			mud clay coming from ground about 5 feet on the side of the hole NOT FROM 1067a2! FROM THE SIDE!			
11:33	5		pulling the pipe out to clean it			
11:38	5		Pulled all pipe to clean drill bit full of thick mid color dark brown clay			
11:43	3/8/4		reinstated pipe back in the hole drilling again			

MATERIALS USED	
Mud	2 sacks
LC	Type _____
	sacks
	sacks
	sacks
Viscose	_____
Cement	_____
Diesel	_____
Foamer	_____
Detergent	_____
Other	_____
CREW HOURS	
Driller	/ _____
Helper	/ _____
Helper	/ _____

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 9/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Approved \_\_\_\_\_

1000 lbs  
2x80' holes  
8' casing

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Ray Staylor-Celcer

WATER DEP

Monday		Date: 12-20-10		Hole #	Rig #	Driller: Sam Crum	Supervisor: G. FUS
TIME	LOG #	FOOTAGE	REMARKS				LOG REFERENCE #
11:53	8	55'	3rd pipe being added.				1. Crew Travel To Site
12:04		60'	Sample thick mid clay Brown dark mid color some grain But same as last sample!				2. Rig Up
12:10	4		Drilling A Bit Slowed Due to thick clay				3. Reenter Hole
12:20	8	75'	4th pipe being added.				4. Drilling
12:30		80'	Sample thick mid Dark Brown Clay				5. Pull Pipe
12:35	5		REMOVING PIPE				6. Mix Mud & Fill
			NOTE mud still coming up from different hole as pipe being removed				7. Coring
12:45	5		All done removing pipe.				8. Install Casing/Pipe
12:50	8		1st casing installed				9. Cementing
1:00	8		2nd casing down NO problems				10. Rig Down
1:15	8		3rd casing SOME HEID NOT MUCH				11. Move Rig To New Site
1:45	8		All casing down THE HOLE				12. Maintenance
			Cleaning up the hole covering packing up drill equipment to move to new location!				13. Standby (Explain)
2:45	1		Moving to NEWSITE 2150a				14. Other (Explain)
3:05			ARRIVED AT 2150a				15. Logging
							16. Water Trip
							MATERIALS USED
							Mud _____ sacks
							LC _____ Type _____
							_____ sacks
							_____ sacks
							_____ sacks
							Viscose _____
							Cement _____
							Diesel _____
							Foamer _____
							Detergent _____
							Other _____
							CREW HOURS
							Driller _____ / _____
							Helper _____ / _____
							Helper _____ / _____

Footage: FROM \_\_\_\_\_' TO \_\_\_\_\_' TOTAL FOOTAGE \_\_\_\_\_'

Bit \_\_\_\_\_ changed at \_\_\_\_\_' Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_' Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_' Size \_\_\_\_\_"

Approved \_\_\_\_\_

250 lbs  
6'  
78 feet  
10 F2

Water Dep?

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Kyle Slayday - CONWAY

Tuesday		Date: 12-21-10	Hole # 1077a	Rig # ①	Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS			LOG REFERENCE #
1:35	11		MOVING RIG TO NEW SITE			1. Crew Travel To Site
1:40			ARRIVED AT NEW SITE FROM			2. Rig Up
2:12	2		RIG UP			3. Reenter Hole
			WATER TRUCK STUCK			4. Drilling
						6. Mix Mud & Fill
						7. Coring
						8. Install Casing/Pipe
						9. Cementing
3:00pm			OFF SITE			10. Rig Down
12-27-10 MONDAY 12-27-10	MONDAY 12-27-10	MONDAY 12-27-10	MONDAY 12-27-10			11. Move Rig To New Site
8:50			ON SITE 2145a 3 then came to check 1077a			12. Maintenance
10:00			walked the roads to 1077a for wet roads 2 out of the 3 are a bit bad.			13. Standby (Explain)
10:45			MEET UP WITH SIX MILLER DRILLING HELP GOT THEM SET UP AS MUCH AS POSSIBLE			14. Other (Explain)
11:15			THEY LEFT TO GET OTHER RIG AND REST OF THE DAY			15. Logging
12:16			SAM. ALMOST AT 1077a SITE TO DRILL.			16. Water Trip
1:00pm			BOTH DRILLERS ON SITE			MATERIALS USED
2:07			Rig up 1077a about to drill			Mud <u>        </u> sacks
2:09	4		DRILLING 1077a			LC <u>        </u> Type <u>        </u>
2:13	8	15	1st pipe added			<u>        </u> sacks
2:18		20	SAMPLE THICK BROWN CLAY MID COLORED.			<u>        </u> sacks
2:21			CLEANING DRILL BIT			Viscose <u>        </u>
2:24	8	35	2nd PIPE ADDED			Cement <u>        </u>
2:26		40	SAMPLE THICK TEXTURED BROWN MID COLOR CLAY			Diesel <u>        </u>
2:32		55	3rd pipe ADDED			Foamer <u>        </u>
2:36		60	SAMPLE TAKEN THICK DARK BROWN MID COLOR BIT BODY			Detergent <u>        </u>
						Other <u>        </u>
						CREW HOURS
						Driller <u>  /  </u>
						Helper <u>  /  </u>
						Helper <u>  /  </u>

Footage: FROM          TO          TOTAL FOOTAGE           
 Bit 7718 changed at          Size           
 Bit          changed at          Size           
 Bit          changed at          Size         

Approved

1077A  
250 lbs  
78 Feet  
6

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Coye Slayday-CRiley

202

Date: 12-27-10		Hole # 1077a	Rig # ①	Driller: Sam Crum	Supervisor: G. Fuse
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
3:01			Missed pipe being pulled and the 80' marker for sample had to run over to site 2195a	1. Crew Travel To Site 2. Rig Up 3. Reenter Hole 4. Drilling 5. Pull Pipe 6. Mix Mud & Fill 7. Coring 8. Install Casing/Pipe 9. Cementing 10. Rig Down 11. Move Rig To New Site 12. Maintenance 13. Standby (Explain) 14. Other (Explain) 15. Logging 16. Water Trip	
3:02	8		1st casing		
			HAD TO STOP AND HELP 6 KILLER GET DRILL BIT OFF THEY HAVE NOT STARTED 2195a yet.		
4:14	8		2nd casing down		
4:24	8		3rd casing being added		
4:34	8		4th casing added		
4:44	8		5th casing added		
5:15			PACKING UP GETTING EVERYTHING READY FOR MOVE TOMMOROW	MATERIALS USED Mud <u>0</u> sacks LC _____ Type _____	
5:30			OFF SITE!	_____ sacks	
12-28-10		TUESDAY 12-28-10		_____ sacks	
6:25 AM			ON SITE GETTING ALL SUPPLIES TO MOVE TO NEXT SITE	_____ sacks Viscose _____ Cement _____	
6:43 AM			ON SITE 2195a.	Diesel _____ Foamer _____ Detergent _____ Other _____	
				CREW HOURS	
				Driller <u>1</u> _____	
				Helper <u>1</u> _____	
				Helper <u>1</u> _____	

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Approved \_\_\_\_\_

12/17/10  
 target 250 lbs  
 78' 6" ✓

water?

YES, at  
 ~25' it took  
 mud into ditch  
 so Sam thickened  
 the mud to stop it

CLIENT: U.S. Geological Survey/ S.C.E.C.

PROJECT: SSIP

CLIENT REP: Liz Rose

Friday Dec. 17, 2010		Hole # 1079a	Rig # 1	Driller: Sam Crum	Supervisor: Fuis
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #
1:00	7/16		pulling water right out of canal		1. Crew Travel To Site
1:15			tower up; I went to check next site		2. Rig Up
1:25	4		*clay; not much sand		3. Reenter Hole
			water took mud into ditch, plug it.		4. Drilling
2:40	4	80'	QUICK drilling; clay & some sand		5. Pull Pipe
			but not much material?		6. Mix Mud & Fill
3:30	8	casing			7. Coring
					8. Install Casing/Pipe
					9. Cementing
					10. Rig Down
5:00	10	78'	Off site; Leaving rig & equipment		11. Move Rig To New Site
			here then making to 211a		12. Maintenance
			in the morning		13. Standby (Explain)
					14. Other (Explain)
					15. Logging
					16. Water Trip
MATERIALS USED					
			*this sp is right next to a		Mud - 6 sacks
			big ditch, but was the		LC _____ Type _____
			only place the owner		_____ sacks
			wanted to put it; since		_____ sacks
			it's 80' down, it hopefully		_____ sacks
			will not be problematic		Viscose _____
					Cement _____
					Diesel _____
					Foamer _____
					Detergent _____
					Other _____
CREW HOURS					
					Driller / _____
					Helper / _____
					Helper / _____

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_

Bit 7 7/8" changed at \_\_\_\_\_ Size \_\_\_\_\_"

Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

78

Approved \_\_\_\_\_

10.00  
250 lbs  
78'  
6

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Coye Slagden - crawler

water

Date: 2/10/11		Hole # 10816	Rig # ①	Driller: Sam Crum	Supervisor: G. Full
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #
3:50			ON SITE		
4:45			OFF SITE		
2/11/11		2/11/11	2/11/11	2/11/11	2/11/11
8:45			ON SITE		
9:00			SETTING UP		
9:30			TOWER UP		
9:46			ADDING BIT TO DRILL		
9:52	4	0'	DRILLING		
9:58	9	15'	1st pipe added		
10:01		20'	SAMPLE TAKEN THICK BROWN CLAY		
10:04	8	35'	2nd pipe added		
			MISSED SAMPLES FOR 40'		
10:40	8	55'	3rd pipe added		
10:42		60'	SAMPLE TAKEN THICK BROWN CLAY		
11:02	8	75'	4th pipe added		
11:06		78'	SAMPLE TAKEN DARK BROWN CLAY		
11:24			REMAINING PIPE		
11:33			ALL PIPE & BIT OUT THE GROUND		
11:35	8		CASING HOLE STONED DOWN		
11:37	6		2nd CASING ADDED		
11:47	6		3rd CASING ADDED		
11:57	6		4th CASING ADDED		
12:07	8		5th CASING ADDED		
12:17	6		DONE CASING HOLE		

2/11/11

1. Crew Travel To Site
2. Rig Up
3. Reenter Hole
4. Drilling
5. Pull Pipe
6. Mix Mud & Fill
7. Coring
8. Install Casing/Pipe
9. Cementing
10. Rig Down
11. Move Rig To New Site
12. Maintenance
13. Standby (Explain)
14. Other (Explain)
15. Logging
16. Water Trip

MATERIALS USED

Mud (reused) sacks \_\_\_\_\_  
 LC \_\_\_\_\_ Type \_\_\_\_\_  
 \_\_\_\_\_ sacks  
 \_\_\_\_\_ sacks  
 \_\_\_\_\_ sacks

Viscose \_\_\_\_\_  
 Cement \_\_\_\_\_  
 Diesel \_\_\_\_\_  
 Foamer \_\_\_\_\_  
 Detergent \_\_\_\_\_  
 Other \_\_\_\_\_

CREW HOURS

Driller /  
 Helper /  
 Helper /

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 1 1/4 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Approved \_\_\_\_\_

JFH  
Auger

1005 b  
250 lb  
78' 6"

WOODRIDGE  
at 20'  
& more at

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: LIZ ROSE

Mon. Dec. 20, 2010 Hole # 10836 Rig # 2-JFH Driller: Sam Crum Supervisor: Fuis

TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #
7:45	2		on site; 4 of their augers are here Julio = primary driller	1. Crew Travel To Site
8:15	4	6	Drill Augering 1/2 sections	2. Rig Up
8:30	12			3. Reenter Hole
8:50	4			4. Drilling
9:15	8	20'?	Riverbank/Flood plain Very fine sand; may be mix of sand & silt; med. brown color; ~40% fine	5. Pull Pipe
9:35	4/8	40'	sand (fine) and clay intermixed	6. Mix Mud & Fill
10:20	4	60'		7. Coring
10:55	4	70'		8. Install Casing/Pipe
11:12	4	78'		9. Cementing
11:40	5		The 6" casing wouldn't fit inside the drill pipe like they thought it would (because 6" ID, not OD) when they pulled the drill pipe out the hole caved in around 20' in the sandy aquifer	10. Rig Down
12:40			they have to use the 12" larger now instead of the 6" and I went to get more bentonite to plug 5/11 the larger hole	11. Move Rig To New Site
2:50	4	80'		12. Maintenance
3:19	8	CASING XII	Dropping casing through drill pipe	13. Standby (Explain)
4:35	5			14. Other (Explain)
4:45	6			15. Logging
5:30	5		still pulling out & loading the auger sections; they're all covered in clay & have to be cleaned off every single section	16. Water Trip
5:45	9			
			WATER: 20-30' in sand then clay; then ~70 or 75' another dg. in fine sand that was flowing faster than the first	
6:15	12	79'	cut off extra casing → buried hole, etc.	
6:20	10			

MATERIALS USED

Mud 4 sacks  
4 Holding clips  
LC Type  
sacks  
sacks  
sacks

to seal casing in

CREW HOURS

Driller /  
Helper /  
Helper /

Footage: FROM TO TOTAL FOOTAGE  
Bit 10" auger changed at 78' Size "  
Bit 12" auger changed at Size "  
Bit 0 changed at Size "

Approved

Revised: 21, June 1999

David Delis

off site at 7 pm

Every good dirt/sand farm  
roads, owners can reach gain  
of (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

1087-  
250165  
78  
6

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Coyle Slayday-Celley

Water maybe

Date: 2/11/11		Hole # 1087c Rig # ①		Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
1:30			ON SITE		
2:15			ABOUT ALL SETUP READY TO DRILL	1. Crew Travel To Site	
2:22	4	0'	DRILLING	2. Rig Up	
2:27	8	15'	1st pipe added	3. Reenter Hole	
2:30		20'	SAMPLE TAKEN THICK DB CLAY	4. Drilling	
2:33	8	35'	2nd pipe added	5. Pull Pipe	
			NO SAMPLE AT 40'	6. Mix Mud & Fill	
3:16	8	55'	3rd pipe added	7. Coring	
4:45		60'	SAMPLE TAKEN THICK BROWN CLAY	8. Install Casing/Pipe	
4:22	8	75'	4th pipe added	9. Cementing	
4:23		78'	SAMPLE TAKEN THICK BROWN CLAY	10. Rig Down	
4:06	5		REMOVING PIPE BIT TOO	11. Move Rig To New Site	
4:12	5		ALL PIPE & BIT OUT THE GROUND	12. Maintenance	
4:14	8		CASING HOLE IS ONE DOWN	13. Standby (Explain)	
4:16	8		2nd CASING ADDED	14. Other (Explain)	
4:26	8		3rd CASING ADDED	15. Logging	
4:36	8		4th CASING ADDED	16. Water Trip	
4:46	8		5th CASING ADDED		
4:56	8		DONE CASING HOLE		
				<b>MATERIALS USED</b>	
				Mud <u>6</u> sacks	
				LC _____ Type _____	
				_____ sacks	
				_____ sacks	
				_____ sacks	
				Viscose _____	
				Cement _____	
				Diesel _____	
				Foamer _____	
				Detergent _____	
				Other _____	
				<b>CREW HOURS</b>	
				Driller <u>1</u>	
				Helper <u>1</u>	
				Helper <u>1</u>	

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Approved \_\_\_\_\_



14100  
250lbs  
78'6"

water!  
maybe 450'  
hard to tell  
though

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Liz Rose

Fr: Jan. 21, 2011

TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #
11:30	2		Set up as far from ditch as we could without going into the soft dirt, sort of on the road	1. Crew Travel To Site 2. Rig Up 3. Reenter Hole
1:45	16		Back w/ water trailer	4. Drilling 5. Pull Pipe 6. Mix Mud & Fill
2:00	4	0	A lot of material came out of this hole - clay	7. Coring 8. Install Casing/Pipe 9. Cementing 10. Rig Down 11. Move Rig To New Site 12. Maintenance 13. Standby (Explain) 14. Other (Explain) 15. Logging 16. Water Trip
6:00	5	79'	Hard clay all the way down to about the last 20' where it got sandier	
6:16	5	CASING	drill bit out	
6:25	8	↓		
7:10	10	79'		
				<b>MATERIALS USED</b>
				Mud $\phi$ sacks
				LC _____ Type _____
				_____ sacks
				_____ sacks
				_____ sacks
				Viscose _____
				Cement _____
				Diesel _____
				Foamer _____
				Detergent _____
				Other _____
				<b>CREW HOURS</b>
				Driller _____ / _____
				Helper _____ / _____
				Helper _____ / _____

Footage: FROM \_\_\_\_\_ ' TO \_\_\_\_\_ ' TOTAL FOOTAGE \_\_\_\_\_'  
 Bit 7 7/8" changed at \_\_\_\_\_ ' Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_"

Approved \_\_\_\_\_

1093a1 = a2

2 x 75' holes  
8" casing

Water?  
**No**  
(Probably 85-90')?

CLIENT: U.S. Geological Survey/ S.C.E.C.

PROJECT: SSIP

CLIENT REP: Liz Rose

Date: <u>Tues. Dec 16, 2010</u>		Hole # <u>1093a</u>	Rig # <u>1</u>	Driller: <u>Sam Crum</u>	Supervisor: <u>Fuis</u>
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
6:45	1		Had to get casing and water before beginning drilling	1. Crew Travel To Site	
9:30	2	1093a2	I arrived	2. Rig Up	
9:45	4	0		3. Reenter Hole	
	4/8	15'		4. Drilling	
10:03	8	35'	(some sand) mixed into mostly clay	5. Pull Pipe	
			there's a lot of sand coming out of the desander, but off the shaker, really just clay	6. Mix Mud & Fill	
10:31	8	55'		7. Coring	
	4	80'		8. Install Casing/Pipe	
10:55	5		clay softened up 80-85' & the drill almost kept on drilling down but Sam caught it & stopped	9. Cementing	
11:15	16/14		Sam welded some of the casing while Travis pumped water from the ditch	10. Rig Down	
11:30	8	CASING		11. Move Rig To New Site	
12:13			4th section had to be pushed in 5th section was out but will need to be cut off	12. Maintenance	
		83'		13. Standby (Explain)	
1:00			Travis cut off ~ 7 ft then moved rig 15' NE	14. Other (Explain)	
1:20	4	1093a1		15. Logging	
1:30	12			16. Water Trip	
		80'	(I went to meet Mr. Wilson of 1079a)		
2:25	5				
2:40	8	CASING			
3:27			Had to push #4 in		
3:45			Hole in torch hoses -> Gas leak so we can't cut the top of the casing off		
			Welding supply store closed at 4pm		
			Welding supply store opened at 8am replaced torch hoses & cut off ~ 8' of casing		
			Moved to 1079a; 1083a was not staked in OK place		

MATERIALS USED  
Mud 5 used some from yesterday sacks

LC \_\_\_\_\_ Type \_\_\_\_\_  
\_\_\_\_\_ sacks  
\_\_\_\_\_ sacks  
\_\_\_\_\_ sacks

Viscose \_\_\_\_\_  
Cement \_\_\_\_\_  
Diesel \_\_\_\_\_  
Foamer \_\_\_\_\_  
Detergent \_\_\_\_\_  
Other \_\_\_\_\_

CREW HOURS  
Driller 1  
Helper 1  
Helper 1

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE 83' + 80' = 163'  
Bit 9 7/8" changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_

Approved \_\_\_\_\_

Good farm roads but would be unsafe/soft when wet

1075a

water

250 lbs

78' 6"

52'

CLIENT: U.S. Geological Survey/ S.C.E.C.

PROJECT: SSIP

CLIENT REP: ROSE

Date: <u>Thurs. Jan. 20, 2011</u>		Hole # <u>1095a</u>		Rig # <u>2-6KD</u>	Driller: <u>Sam Crum</u>	Supervisor: <u>Fuis</u>
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #	
<del>11:25</del>	1		MOVED FROM 1098a			
11:43	2				1. Crew Travel To Site	
					2. Rig Up	
12:00			getting shaker/truck unstuck		3. Reenter Hole	
1:45	4	0			4. Drilling	
5:00		78'	drilled & leaving site - casing if tomorrow		5. Pull Pipe	
5:10	10				6. Mix Mud & Fill	
			clay in upper 50' - only ~20' of the really hard clay - bottom 30' were silty sand		7. Coring	
					8. Install Casing/Pipe	
					9. Cementing	
					10. Rig Down	
					11. Move Rig To New Site	
					12. Maintenance	
					13. Standby (Explain)	
					14. Other (Explain)	
					15. Logging	
					16. Water Trip	
					MATERIALS USED	
					Mud <u>from 1098a</u> sacks	
					LC _____ Type _____	
					_____ sacks	
					_____ sacks	
					_____ sacks	
					Viscose _____	
					Cement _____	
					Diesel _____	
					Foamer _____	
					Detergent _____	
					Other _____	
					CREW HOURS	
					Driller _____ / _____	
					Helper _____ / _____	
					Helper _____ / _____	

Footage: FROM \_\_\_\_\_ ' TO \_\_\_\_\_ ' TOTAL FOOTAGE \_\_\_\_\_ '

Bit 7 7/8" changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Approved \_\_\_\_\_

Don't drive off packed road

1010a

water?

target: 250 lbs

78' 6"

79'

28'

CLIENT: U.S. Geological Survey/ S.C.E.C.

PROJECT: SSIIP

CLIENT REP: Liz Rose

Date: Jan 19, 2011		Hole # 1098a		Rig # 2-6KD	Driller: Sam Crum	Supervisor: Fluis
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #	
10:00	1		Had to wait on IID permission			
11:08	2				1. Crew Travel To Site	
11:30	1/2		getting the rest of equipment from 28.526		2. Rig Up	
1:30	1/2		PJ back from water trip		3. Reenter Hole	
1:45	4				4. Drilling	
2:45	8		drill collar on in the hole		5. Pull Pipe	
3:00			-need bentonite to help circulate cuttings; waiting for Sam to bring it		6. Mix Mud & Fill	
3:15	4	~22'	48' sandy clay fill ~67'		7. Coring	
4:45	4	78'	Med-brown, med-hard, some sandy clay - (maybe 20-30% sand)		8. Install Casing/Pipe	
4:50	5				9. Cementing	
5:10	10		Will case it tomorrow		10. Rig Down	
5:20			off site		11. Move Rig To New Site	
Thurs. Jan 20, 2011						
7:30	1/2/16				MATERIALS USED	
8:30	8	casing 79'	Travis, Dustin, & I brought casing		Mud 2 sacks	
10:15	10		4 joints of casing (119' x 4 + 9')		LC _____ Type _____	
10:50	11		lid locked & buried		_____ sacks	
					_____ sacks	
					_____ sacks	
					Viscose _____	
					Cement _____	
					Diesel _____	
					Foamer _____	
					Detergent _____	
					Other _____	
CREW HOURS						
					Driller / _____	
					Helper / _____	
					Helper / _____	

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE 79'

Bit 7 1/8" changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_

Approved \_\_\_\_\_

1071C  
250lbs  
78 feet  
6'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Clyde Stansby - CRILEY

Wednesday				
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #
11:45	2		Casing already here	
12:15			Setting up	1. Crew Travel To Site
1:04			Digging Hole for shaker	2. Rig Up
1:28	4	0'	Started Drilling	3. Reenter Hole
1:40			Stopped to Clean Drill Bit	4. Drilling
1:42	4		Drilling again	5. Pull Pipe
2:47	4	8'	Still Drilling The 1st 12 feet	6. Mix Mud & Fill
2:55	12		Fixing A Track	7. Coring
2:58	8	12'	Removing 12 foot Drill Bit to	8. Install Casing/Pipe
3:21			Add Mount Bit Head stuck 1	9. Cementing
			wright Drill Bit HEAD ON AND	10. Rig Down
			DOWN HOLE	11. Move Rig To New Site
3:22	4		Drilling Again	12. Maintenance
3:26		20'	Sample Brown clay	13. Standby (Explain)
			mid thickness	14. Other (Explain)
3:42			Took out Bit welded on	15. Logging
			wings to make Drilling faster	16. Water Trip
3:52	4		Drilling again	
	8		1st pipe added	
4:15		40'	SAMPLE MUD THICK BROWN CLAY	
4:28			Removing pipe Getting ready	
			to leave	
4:40			OFF SITE	

MATERIALS USED

Mud \_\_\_\_\_ sacks

LC \_\_\_\_\_ Type \_\_\_\_\_

\_\_\_\_\_ sacks

\_\_\_\_\_ sacks

\_\_\_\_\_ sacks

Viscose \_\_\_\_\_

Cement \_\_\_\_\_

Diesel \_\_\_\_\_

Foamer \_\_\_\_\_

Detergent \_\_\_\_\_

Other \_\_\_\_\_

CREW HOURS

Driller \_\_\_\_\_ / \_\_\_\_\_

Helper \_\_\_\_\_ / \_\_\_\_\_

Helper \_\_\_\_\_ / \_\_\_\_\_

Footage: FROM \_\_\_\_\_' TO \_\_\_\_\_' TOTAL FOOTAGE \_\_\_\_\_'

Bit 7 7/8 changed at \_\_\_\_\_' Size \_\_\_\_\_"

Bit \_\_\_\_\_ changed at \_\_\_\_\_' Size \_\_\_\_\_"

Bit \_\_\_\_\_ changed at \_\_\_\_\_' Size \_\_\_\_\_"

Approved \_\_\_\_\_

W 110  
250 lbs  
7 1/2" 6"  
73'

NUMBER:  
PJ did not think so

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: LIZ ROSE

Thurs. 1/6/11

Date: 1/6/11 Hole # 1099c Rig # 2-6KD Driller: Sam Crum Supervisor: Fuis

TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #
7:30			(supposed to meet)	
7:50	2		I got to site & unlocked gate	1. Crew Travel To Site
8:34	3	72'		2. Rig Up
8:40	4	78'	clay at the bottom:	3. Reenter Hole
8:47	5		Soft brown clay - smooth, hardly any visible sand/grit - not the rubbery clay (never hit hard)	4. Drilling
				5. Pull Pipe
				6. Mix Mud & Fill
				7. Coring
				8. Install Casing/Pipe
				9. Cementing
9:10	5		drill bit scraped in side box	10. Rig Down
		CASING		11. Move Rig To New Site
		TH	Some of the clottings caved in at the end	12. Maintenance
			84' of casing - 11' = 73'	13. Standby (Explain)
				14. Other (Explain)
				15. Logging
				16. Water Trip
10:26	10	73'		MATERIALS USED
11:18	11		moved rig to 1100b	Mud _____ sacks
12:30			everything off site, gate locked	LC _____ Type _____
				_____ sacks
				_____ sacks
				_____ sacks
				Viscose _____
				Cement _____
				Diesel _____
				Foamer _____
				Detergent _____
				Other _____
				CREW HOURS
				Driller / _____
				Helper / _____
				Helper / _____

Footage: FROM \_\_\_\_\_ ' TO \_\_\_\_\_ ' TOTAL FOOTAGE 73'

Bit 7 1/8" changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

73'

Approved \_\_\_\_\_

Govt lock on gate on Kalin Rd

11006  
target 250lbs  
78' 6"

Water?  
~35'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Liz Rose

THURS. 1/6/11

Date: 1/6/11 Hole # 11006 Rig # 2-6KD Driller: Sam Crum Supervisor: Fuis

TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #
11:45	2			
12:45	4	0		1. Crew Travel To Site
				2. Rig Up
				3. Reenter Hole
2:35	5	42'	Added drill collar 3 <sup>rd</sup> 15' section	4. Drilling
3:21	5	57'	(3x15 + 12) ✓ Added 4 <sup>th</sup> section	5. Pull Pipe
3:47	14		Clay plug around drill steel keeps popping up out of the hole & has to be shoveled away	6. Mix Mud & Fill
				7. Coring
				8. Install Casing/Pipe
4:00	8	72'		9. Cementing
4:20	5	78'	Clay is med-brown "Fat clay" low percentage of fine sand - stayed in soft clay the whole time PJ said	10. Rig Down
		CASING		11. Move Rig To New Site
4:48	8	111'		12. Maintenance
5:50	8		4 <sup>th</sup> is in the ground	13. Standby (Explain)
6:00			Casing will only go in to ~73' they're going to try to pull it down further tomorrow (Have a total of 84' 11" casing)	14. Other (Explain)
6:15			Leaving site so helicopter can spray field	15. Logging
				16. Water Trip
				MATERIALS USED
				Mud _____ sacks
				LC _____ Type _____
				_____ sacks
				_____ sacks
				_____ sacks
				Viscose _____
				Cement _____
				Diesel _____
				Foamer _____
				Detergent _____
				Other _____
				CREW HOURS
				Driller / _____
				Helper / _____
				Helper / _____

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7 7/8" changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Approved \_\_\_\_\_

1102b2  
 target 250 lbs  
 12' 6"  
 80'

Water:  
 130'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
 PROJECT: SSIP  
 CLIENT REP: Liz Ross

Tues. 1/4/11

Date: 1/4/11 Hole # 1102b2 Rig # 2-6KD Driller: Sam Crum Supervisor: Fuis

TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #
11:50	2		on site at 11:50 am w/ rig & shaker (left 2113a at 10:35)	1. Crew Travel To Site
12:00			tower up	2. Rig Up
1:40	4	0		3. Reenter Hole
	4	12'	put on drill collar	4. Drilling
	4	15'		5. Pull Pipe
6:30	10		Rig down for the night	6. Mix Mud & Fill
Wed. 1/5/11				
6:30-7	1/2		clay - med brown, soft clay less than 15% sand	7. Coring
7:30	4	50' in 52'		8. Install Casing/Pipe
8:20	14	80'	6' of hard, rubbery clay Travis brought casing to site	9. Cementing
	5		softer clay at the bottom	10. Rig Down
9:45	8	CASING		11. Move Rig To New Site
		THH		12. Maintenance
10:13	8		section 4 up	13. Standby (Explain)
10:25	8		5" up	14. Other (Explain)
10:37		80'	cut off ~3.5-4' from 84'	15. Logging
10:56	10			16. Water Trip
11:20	11		off site w/ water trailer & rig moving to 1099c	
11:25	16		vail canal	
MATERIALS USED				
				Mud _____ sacks
				LC _____ Type _____
				_____ sacks
				_____ sacks
				_____ sacks
				Viscose _____
				Cement _____
				Diesel _____
				Foamer _____
				Detergent _____
				Other _____
CREW HOURS				
				Driller _____ / _____
				Helper _____ / _____
				Helper _____ / _____

Footage: FROM \_\_\_\_\_ ' TO \_\_\_\_\_ ' TOTAL FOOTAGE 80'

Bit 1 1/8" changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_ "

Approved \_\_\_\_\_

on farm rd north side of vail canal in a wide corner



1103A2 6 3/8 casing  
 2501b  
 78 Feet

Water Dep?  
 No Water!

CLIENT: U.S. Geological Survey/ S.C.E.C.  
 PROJECT: SSIP  
 CLIENT REP: Cape Skayday-Criley

Date: 12-9-10		Hole # 1103A2 Rig # ①		Driller: Sam Crum	Supervisor: G. Fois
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
9:00	14		ON SITE	1. Crew Travel To Site	
9:15			FILLING IN HOLE	2. Rig Up	
9:17			Rig DOWN	3. Reenter Hole	
9:45	1		TRAVELING TO NEW SITE	4. Drilling	
10:26			ARRIVED AT NEW SITE	5. Pull Pipe	
10:36	2		Setting up Rig or Rig UP!	6. Mix Mud & Fill	
11:01			Digging Hole for mud / ALSO Drillers went to get trailer with casing on it.	7. Coring	
11:48			returned with trailer	8. Install Casing/Pipe	
11:54	6		Setting up Shaker mixing mud	9. Cementing	
12:11	4	DRILLING	Started Drilling Drill with an 18 Foot Drill Bit	10. Rig Down	
			start of hole was a little hard got through it fast.	11. Move Rig To New Site	
12:15	8	15'	1st section added.	12. Maintenance	
12:17		20'	Sample 20" clay wet Dark Brown bit of sand	13. Standby (Explain)	
12:23	8	35'	2nd section added	14. Other (Explain)	
12:25		40'	sample taken sand less than 100% Dark Brown clay.	15. Logging	
12:35		55'	sample taken soft wet clay Dark Brown less than 10% sand.	16. Water Trip	
12:40	8	57'	3rd section added	MATERIALS USED	
12:43		60'	Sample taken Not much sand clay Dark Brown wet kinda.	Mud / Bag sacks	
12:46	8	65'	4th section added	LC _____ Type _____	
12:51		80'	Sample taken thick stickie Dark Brown clay	_____ sacks	
				_____ sacks	
				Viscose _____	
				Cement _____	
				Diesel _____	
				Foamer _____	
				Detergent _____	
				Other _____	
				CREW HOURS	
				Driller _____ / _____	
				Helper _____ / _____	
				Helper _____ / _____	

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7 7/8 = 8" hole changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_

Approved \_\_\_\_\_

Samples returned at 11:00 AM on 12-9-10

1103AZ  
 250 lb  
 6 5/8 casing  
 78 Feet

Water Dep?  
 NO water

CLIENT: U.S. Geological Survey/ S.C.E.C.

PROJECT: SSIP

CLIENT REP: COL SIM/AY CRILAY

Date: 12-9-10		Hole # 1103AZ		Rig # ①	Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #	
12:52		PIP removed	- Making Sure all mud IS OUT OF THE HOLE BY Rotating Drill in HOLE.		1. Crew Travel To Site 2. Rig Up 3. Reenter Hole 4. Drilling	
1:14	5		- PIP Being removed FROM THE HOLE		5. Pull Pipe 6. Mix Mud & Fill 7. Coring	
1:22	8	CASING	1st CASING 15 IN.		8. Install Casing/Pipe 9. Cementing 10. Rig Down	
1:30	8		- 2nd casing went in smooth		11. Move Rig To New Site 12. Maintenance	
1:39	8		- 3rd casing NO Problems		13. Standby (Explain) 14. Other (Explain)	
1:50	8		- 4th Fast and Easy. Just Dropped Right ON IN		15. Logging 16. Water Trip	
1:58	8		- 5th casing in easy		MATERIALS USED	
2:00			Cleaning up packing GP SING HOLE BORDERS it and Barring it.			
3:02			- OFF SITE		Mud 1 sacks LC _____ Type _____ _____ sacks _____ sacks _____ sacks	
					Viscose _____ Cement _____ Diesel _____ Foamer _____ Detergent _____ Other _____	
					CREW HOURS	
					Driller / _____ Helper / _____ Helper / _____	

Footage: FROM \_\_\_\_\_ ' TO \_\_\_\_\_ ' TOTAL FOOTAGE \_\_\_\_\_'  
 Bit 7/8 changed at \_\_\_\_\_ ' Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ ' Size \_\_\_\_\_"

Approved \_\_\_\_\_

250lbs  
78 Feet  
6'

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Clyde Skayday-Criley

Friday		Hole #	Rig #	Driller:	Supervisor:
Date:	11/11/11	1105a	①	<del>Sam Crum</del> Six Killer	G. FOLS
TIME	LOG #	FOOTAGE	REMARKS		LOG REFERENCE #
10:00			ON SITE H05A From 11006		1. Crew Travel To Site
10:25	2		Rig UP		2. Rig Up
10:40	16		FILLING UP WATER TRALOR		3. Reenter Hole
12:45	41		STARTED DRILLING		4. Drilling
12:50			LEFT & WENT TO LOOK AT NEXT SITE!		5. Pull Pipe
			MISSED SOME SAMPLES		6. Mix Mud & Fill
2:15	12		FIXING SHAKER PUMP		7. Coring
2:48	12		STILL FIXING SHAKER PUMP		8. Install Casing/Pipe
2:55	4		ALL DONE DRILLING AGAIN		9. Cementing
3:08		40'	SAMPLE BROWN THICK CLAY		10. Rig Down
3:12	8	47'	2nd pipe added		11. Move Rig To New Site
3:30		60'	SAMPLE TAKEN THICK BROWN CLAY		12. Maintenance
4:07	8	72'	4th pipe added		13. Standby (Explain)
4:15		80'	SAMPLE TAKEN THICK BROWN CLAY		14. Other (Explain)
4:25	5		REMOVING PIPE		15. Logging
4:40	5		ALL PIPE OUT		16. Water Trip
4:50	8		CASING THE HOLE		
5:45	3		FINISHED CASING HOLE		
6:20			OFF SITE		
					<b>MATERIALS USED</b>
					Mud <u>①</u> sacks
					LC _____ Type _____
					_____ sacks
					_____ sacks
					_____ sacks
					Viscose _____
					Cement _____
					Diesel _____
					Foamer _____
					Detergent _____
					Other _____
					<b>CREW HOURS</b>
					Driller <u>1</u>
					Helper <u>1</u>
					Helper <u>1</u>

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit 7 7/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Approved \_\_\_\_\_

11100  
140feet  
8'

CLIENT: U.S. Geological Survey/ S.C.E.C.

PROJECT: SSIP

CLIENT REP: Cory Slight-CM2

Wednesday Date: 1/19/11		Hole # 11106	Rig # ①	Driller: Sam Crum	Supervisor: G. FUSE
TIME	LOG #	FOOTAGE	REMARKS	LOG REFERENCE #	
12:30			ON SITE	1. Crew Travel To Site	
12:45			WATER TRIP	2. Rig Up	
12:58			SETUP RIG	3. Reenter Hole	
1:30			ABOUT READY TO DRILL	4. Drilling	
2:10			TOLD TO STOP EVERYTHING	5. Pull Pipe	
				6. Mix Mud & Fill	
				7. Coring	
				8. Install Casing/Pipe	
				9. Cementing	
				10. Rig Down	
				11. Move Rig To New Site	
				12. Maintenance	
				13. Standby (Explain)	
				14. Other (Explain)	
				15. Logging	
				16. Water Trip	
MATERIALS USED					
				Mud _____ sacks	
				LC _____ Type _____	
				_____ sacks	
				_____ sacks	
				_____ sacks	
				Viscose _____	
				Cement _____	
				Diesel _____	
				Foamer _____	
				Detergent _____	
				Other _____	
CREW HOURS					
				Driller _____ / _____	
				Helper _____ / _____	
				Helper _____ / _____	

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_

Bit 9/8 changed at \_\_\_\_\_ Size \_\_\_\_\_"

Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Approved \_\_\_\_\_

140  
8"

CLIENT: U.S. Geological Survey/ S.C.E.C.  
PROJECT: SSIP  
CLIENT REP: Capt. Slayback-Criley

Water yes about 15 feet

Date: 3/13/11		Hole # 1110b		Rig # ①	Driller: Sam Crum	Supervisor: G. FUIS
TIME	LOG #	FOOTAGE	REMARKS			LOG REFERENCE #
12:30	4	0'	DRILLING			1. Crew Travel To Site
1:14	8	15'	1st pipe added			2. Rig Up
1:18		20'	Sample taken Lots of Rocks			3. Reenter Hole
			NOTE Slow drilling Hit water about 15-20 feet.			4. Drilling
5:36	8	35'	2nd pipe added			5. Pull Pipe
6:47		40'	Sample taken Rocks Grind			6. Mix Mud & Fill
3/5/11	3/5/11	3/5/11	1/3/5/11	3/5/11	3/5/11	7. Coring
2:10	8	55'	3rd pipe added			8. Install Casing/Pipe
7:22		60'	Sample taken Rocks & gravel			9. Cementing
		75'	4th pipe added			10. Rig Down
			NOTE Slow drilling Hit WATER About 15 feet			11. Move Rig To New Site
			3/5/11			12. Maintenance
			TRYING TO DRILL DOWN SOME MORE feet if CANT MAKE ANOTHER Hole			13. Standby (Explain)
			60 to 60			14. Other (Explain)
			TWO OF them or ONE 80 to 100 FOOT Hole about 75 feet			15. Logging
6:24	5		Removing pipe			16. Water Trip
6:30	5		All pipe out to ground			MATERIALS USED
6:38	8		CASING HOLE			Mud <u>40+</u> sacks
6:38	8		2nd down Hole			LC _____ Type _____
6:53	8		3rd casing down			_____ sacks
7:08	8		4th added			_____ sacks
7:25	8		5th casing added			Viscose _____
						Cement _____
						Diesel _____
						Foamer _____
						Detergent _____
						Other _____
						CREW HOURS
						Driller <u>/</u>
						Helper <u>/</u>
						Helper <u>/</u>

3/5/11

Footage: FROM \_\_\_\_\_ TO \_\_\_\_\_ TOTAL FOOTAGE \_\_\_\_\_  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"  
 Bit \_\_\_\_\_ changed at \_\_\_\_\_ Size \_\_\_\_\_"

Approved \_\_\_\_\_