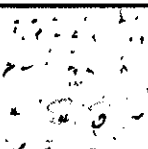

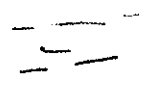
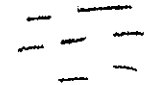

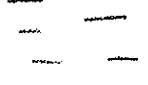
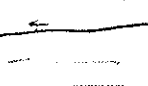

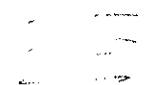

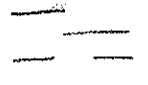
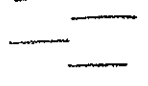
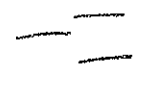
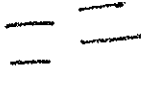







Utah Geological Survey

Lithologic Log

Well ID: CHW1Page 1 of 10Well Location: Willow Springs RdUTM: x 615 720 m, y 4283793 m NAD 83 4287' +2144N ft, E ft from Corner, Sec , T N S R W, SLBM USMStart Date 1-13-2012 Completion Date 1-17-2012 Driller USGS Western DistrictDrilling Method: Air from to Total Depth 880'100' Sand Air + foam from 100' to 880' Static Water Level 14 feetabove & below from to Water Level Date 1-18-2012Screen B 860-880' Screen A 670-690' Measured From Borehole Diameter 12 1/4 from 0 to 20' Casing 10" from 0 to 20'8 1/2 from 20' to 100' Type & Diameter Well A 2" blank from 0 to 670'7 7/8 from 100' to 880' Well B 2" blank from 0 to 860'Screen Screen A from 670 to 690 Ground Elevation: 4349.55'Type & Diameter Screen B from 860 to 880 Logged By: Gary HuntGeophysical Log ☒ Yes ☐ NoOther Logs:

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
5		12 1/4" bit 700		Q alluvium 1-13-2012
10		700		Mud & Sand
15		10" casing		20' of casing set in Cement
20		10" casing		10" casing
25	Alluvium	8 1/2" bit		
30		TO 100'		1-14-2012
35				Morrison Fm. Red mud-
40	Sand			stone & thin white
45				quartz gr. Sandstone
				(Salt Wash mb)

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
55				white Sandstone (Salt wash) wet S.S. (mudstone?)
60				Salt Wash Mb. Sandstone (making water)
65				clay-silt-sand
70				
75				
80				
85				+ Foam for dust
90				
95				making H ₂ O + foam
100			7 7/8" bit	1-14-2012 (1:00 P.M.)
105				Red mudstone (Morrison fm)
110				
115				
120				
125				
130				- 130' @ 1:35 P.M.
135				
140				1:50 P.M.
145				

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
155				Red mudstone
160				Summerville mb of Morrison
165				
170				
175				
180				
185				
190				Geophysical Contact
195				making more water 3:13 P.M.
200				White S.S. (Moab mb) of Entrada
205				
210				
215				
220				
225				
230				
235				
240				
245				

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
255				Moab mb of Entrada ss.
260				
265				
270				
275				
280				9:40 A.M. 1-15-2012
285				Moab mb.
290				
295				
300				
305				
310				
315				Redder ss.
320				Slick Rock mb ?
325				10:35 1-15-2012
330				dark red Sandstone
335				
340				
345				- 0.89 EC 11:32 A.M.

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
355				Red Sandston (Slick Rock mb)
360			7 7/8"	(0.96 EC) 11:43 Am 12-15-2012
365				
370				
375				
380				
385				
390				
395				
400				
405				
410				
415				
420				
425				
430				
435				-dark red Sandstone 2:00 P.m. Slick Rock mb Entrada
440				-pulling all drill pipe @ 2:30 PM
445				

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
455				
460			Pulled Plugged up	End of 1-15-2012 5:00 P.M.
465			1-16-2012 10:10 A.M.	Red Sandstone Slick Rock of Anthoda
470				
475			10:20 A.M.	
480				
485			10:45 A.M.	11
490				
495				
500		7 7/8"	11:05 A.M.	Slick Rock mb.
505				
510				
515			11:30 A.M.	
520		EC 0.83		
525			12:05 A.M.	
530				
535				
540			12:33 P.M.	
545			12:49 P.M.	
				17:50

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
555		7 7/8" ↓	1:03 P.M.	fine grain silty sandstone, red, <u>stick rock</u> of <u>Entraville</u> .
560			1:11 P.M.	
565			1:35 P.M.	
570				
575			1:49 P.M.	
580			lightning break 3:15 P.M. start	
585				
590			3:30 P.M.	
595			3:37 P.M.	
600			3:46 P.M.	
605			4:07 P.M.	
610			4:15	
615			4:23	
620			4:21	
625			4:51	
630				
635			5:04	
640			5:11	
645			5:32	

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
655			6:00 P.M. End	lower sand rock
660		↑	10:00 A.M. Start	10:00 A.M. Start
665		7 7/8"	10:20 A.M.	Slick Rock
670		↓	10:30 A.M.	"
675			10:40 A.M.	"
680			11:00 A.M.	"
685			11:10 A.M.	"
690			11:20 A.M.	" slick Rock mb.
695			11:30 A.M.	"
700			11:50 A.M.	" more white S.S.
705			12:04 P.M.	" lighter colored S.S. (Alteration Zone?)
710			12:09 P.M.	Start Dewey Bridge?
715			12:15 P.M.	more greyish (light colored) Sandstone
720		7 7/8"	12:32 P.M.	Geophysical log @ 421'
725		↓		" Dewey Bridge
730				back to dark red S.S.
735				into Dewey Bridge mb.
740				
745			1:17 P.M.	muddy red S.S. (Chert)

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
		77 1/8 ↓	1:25 P.m.	+ greenish & dark red S.S. Sparse white chert
755			1:34 P.m.	Dewey Bridge Mb.
760			1:40 P.m.	muddy red S.S. (w/chert)
765			2:00 P.m.	muddy red S.S.
770			2:13 P.m.	+ gray S.S. 11
775			2:24 P.m.	+ gray S.S. 11
780			2:33 P.m.	+ red S.S. 11 (muddy)
785			2:50 P.m.	muddy red S.S.
790			3:04 P.m.	11
795			3:11 P.m.	
800			3:20 P.m.	11 - Dewey Bridge mb.
805			3:47 P.m.	Muddy red & gray S.S.
810			3:50 P.m.	11
815			4:03 P.m.	11
820			4:13 P.m.	11
825			4:35 P.m.	11
830			4:44 P.m.	+ gray S.S.
835			4:51 P.m.	- Red S.S. Dewey Bridge mb.
840			4:57 P.m.	Geophysical Navajo @ 840'
845			5:21	842' → Navajo Navajo? + white S.S.

DEPTH	LITHOLOGY	WELL DIAGRAM	DRILLING INFO	LITHOLOGY DESCRIPTION
855		7 7/8"	5:26 P.m.	Navajo S.S.
860			5:31 P.m.	White S.S.
865			5:35 P.m.	Navajo S.S.
870			5:58	Navajo
875			6:04	"
880			6:10	"
885			6:17	T.D. 35' into Navajo
890				
895				
900				
905				
910				
915				
920				
925				
930				
935				
940				
945				

UGS Courthouse Wash Well Completion Plan

