

WELL CONSTRUCTION SUMMARY

LOCATION or COORDS: T10N, R58E
section 17 8D

ELEVATION: GROUND LEVEL _____
 TOP OF CASING +1.5 above surface

DRILLING SUMMARY:
 TOTAL DEPTH 604'
 BOREHOLE DIAMETER 9 7/8"
 DRILLER Russel Mangelson, Andrew McPherson, Tim Stanworthy, Errol Whitley
 RIG Chicago Pneumatic RT-1800
 BIT(S) 9 7/8" button
 DRILLING FLUID bentonite
 SURFACE CASING none

WELL DESIGN:

BASIS: GEOLOGIC LOG GEOPHYSICAL LOG

CASING STRING(S): C=CASING S=SCREEN

<u>11.5 - 307.6</u>	<u>C1</u>	<u>473.7 - 515.2</u>	<u>C</u>
<u>307.6 - 328.4</u>	<u>S1</u>	<u>515.2 - 536.2</u>	<u>S</u>
<u>328.4 - 348.8</u>	<u>C</u>	<u>536.2 - 556.7</u>	<u>C</u>
<u>348.8 - 369.8</u>	<u>S</u>	<u>556.7 - 577.9</u>	<u>S</u>
<u>369.8 - 391.2</u>	<u>C</u>	<u>577.9 - 600.1</u>	<u>C</u>
<u>391.2 - 412.1</u>	<u>S</u>	<u>11.5 - 94.0</u>	<u>C</u>
<u>412.1 - 452.6</u>	<u>C</u>	<u>94.0 - 200.5</u>	<u>S</u>
<u>452.6 - 473.7</u>	<u>S</u>	<u>200.5 - 220.0</u>	<u>C</u>

CASING: C1 All casing 2 1/2" pipe
 C2 _____
 C3 _____
 C4 _____

SCREEN: S1 All screen 2 1/2 pre-slotted
 S2 pipe
 S3 _____
 S4 _____

CENTRALIZERS none

FILTER MATERIAL pea gravel

CEMENT 10:1 cement-bentonite

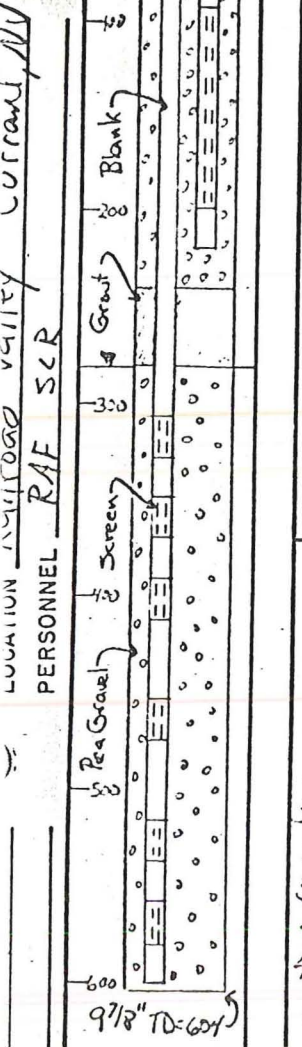
OTHER _____

CONSTRUCTION TIME LOG:

TASK	START		FINISH	
	DATE	TIME	DATE	TIME
DRILLING: <u>9 7/8"</u>	<u>9/20/80</u>	<u>1445</u>	<u>9/21/80</u>	<u>1200</u>
GEOPHYS. LOGGING:	<u>9/21/80</u>	<u>1900</u>	<u>9/21/80</u>	<u>2100</u>
CASING: <u>2 1/2" ID 0-600</u>	<u>9/22/80</u>	<u>0730</u>	<u>9/22/80</u>	<u>1015</u>
<u>2 1/2" ID 0-220</u>	<u>9/23/80</u>	<u>1245</u>	<u>9/23/80</u>	<u>1345</u>
FILTER PLACEMENT:	<u>9/23/80</u>	<u>1100</u>	<u>9/23/80</u>	<u>1200</u>
CEMENTING: <u>Inter-w</u>	<u>9/23/80</u>	<u>1445</u>	<u>9/23/80</u>	<u>1530</u>
DEVELOPMENT: <u>0-600</u>	<u>9/24/80</u>	<u>1150</u>	<u>9/24/80</u>	<u>1700</u>
OTHER: <u>surface cement</u>	<u>9/24/80</u>	<u>0815</u>	<u>9/24/80</u>	<u>0700</u>
<u>development 0-220</u>	<u>9/24/80</u>	<u>1745</u>	<u>9/24/80</u>	<u>1930</u>

WELL DEVELOPMENT
Airlift development for
bottom of hole until clear
220' observation well dry

COMMENTS:
SWL = 281.6 @ 0735-9/29/80



PERSONNEL RAF SCR

LOG OF BOREHOLE

BOREHOLE RR-50-2
PAGE 2 OF 4

LOC. or COORDS. <u>TION, R58E</u> <u>Sec 17</u>	DRILLER <u>Scott Stephenson & Crew</u>	START DATE <u>9/20/80</u>	FINISH DATE <u>9/24/80</u>
GROUND ELEV. _____	RIG <u>CP RT-1800</u>	TIME <u>1975</u>	<u>1200</u>
TOTAL DEPTH <u>609'</u>	BIT(S) <u>9 7/8 button</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	HOW LEFT <u>completed</u>
BOREHOLE DIAM. <u>9 7/8"</u>	FLUID <u>bentonite mud</u>		

DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT (gpm)	MATERIAL	SYMBOL	DESCRIPTION and COMMENTS
160 200	38					
2015						
2021	50					
2027						
	30'					
2027						
	38'					
185 2015						
	38'					
2015						
2017	60					
2104						
	38					
2111						
	30					
200 210						
	38					
2104						
2133	43					
2111						
2150	33					
	27					
220 217						
	30					
221						
225	33					
226						
225	33					
	27					
240 216						
	31					
227						
2307	X					
	42'					
2317						
	38					
260 210						
	40'					
230						
2316	43'					
2312						
	60'					
2347						
	38'					
202 235						
	60					
235						
2357	75					
2410						
2415	60					
300 242						
	30					
2407						
2439	60					
	49					
2445						
	75					
320 244						

Greater clay content. Thin interbedded layers of clay, between 200' to 500'. Similar composition as above. Light-brown sand, clay matrix > 30% of sample. Medium to fine sands, subangular to subrounded grains.

shard partly on mud pump

LOCATION LOGGED BY

PROJECT

LOG OF BOREHOLE

BOREHOLE RR-S-0-2
PAGE 3 OF 4

LOC. or COORDS. <u>T100, P53E</u> <u>SEC 17</u> GROUND ELEV. _____ TOTAL DEPTH <u>604</u> BOREHOLE DIAM. <u>9 7/8</u>	DRILLER <u>Scott Stephens</u> <u>crew</u> RIG <u>CP-RT-1800</u> BIT(S) <u>9 7/8 button</u> FLUID <u>Bentonite</u>	START DATE <u>9/20/80</u> FINISH DATE <u>9/21/80</u> TIME <u>1445</u> <u>1200</u> GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO HOW LEFT <u>complete</u>
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DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
320 244b	60'					
297						
0117	38					
25						
34	38					
	43					
340 38						
75	43					
52						
57	60					
	60					
200						
	43					
360 007						
	38					
235						
235	43					
2041						
	50					
13						
304	33					
	38					
312						
100320	38					
	38					
328						
335	60'					
340						
	60					
345						
	50					
420351						
	60					
350						
908	60					
907						
	38					
45						
	43					
443 74						
	43					
128						
140	43					
	43					
117						
	38					
455						
	38					
505						
	23					
516						
521	21					
538	23					
548						
	20					
480 605						

see page 2

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LOG BOREHOLE

BOREHOLE RR-5-0-2
PAGE 4 OF 4

LOC. or COORDS. <u>TION, R58E</u> sec <u>17</u> GROUND ELEV. _____ TOTAL DEPTH <u>604</u> BOREHOLE DIAM. <u>9 7/8"</u>	DRILLER <u>Scott Stephens's</u> <u>Crew</u> RIG <u>CP RT-130</u> BIT(S) <u>9 7/8 button</u> FLUID <u>Bentonite</u>	START DATE <u>9/20/80</u> FINISH DATE <u>9/21/80</u> TIME <u>1445</u> <u>1200</u> GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO HOW LEFT <u>completed</u>
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DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
603	25					Increased gravels towards. some unconsolidated, unsorted cobbles, pebbles, coarse to medium to fine sands with clay matrix. Cuttings become unidentifiable ~ 585'. Same lithologic composition - rhyolite + carbonate rocks with <20% clay matrix.
615	43					
627	25					
629	27					
671	23					
600 625	38					
705	20					
717	30					
722	25					
75	33					
810	33					
570 821	27					
822	30					
840	33					
849	39					
858	25					
540 907	50					
919	21					
925	27					
931	27					
942	25					
560 957	50					
1001	21					
1012	27					
1018	27					
1052	36					
580 1072	25					
1083	25					
1113	25					
1125	25					
600 1137	23					
1150						

LOGGED BY