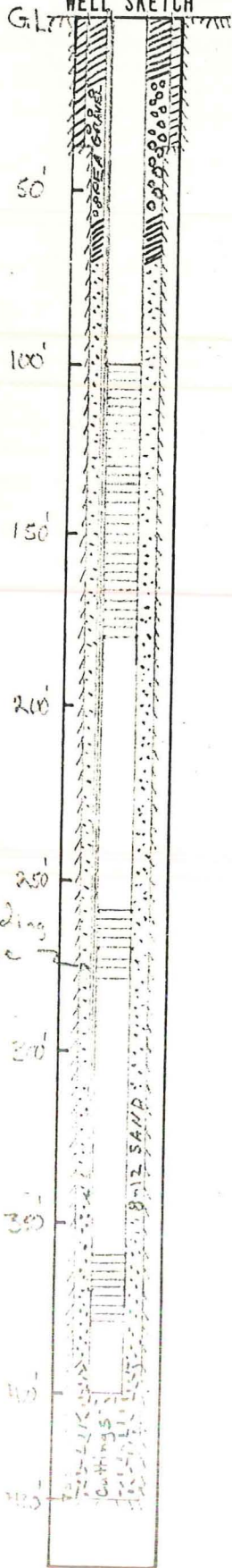




WELL NO. TU-S-T-2 SHEET 1 OF         
 LOGGED BY HYDRO-SEARCH, INC. PROJECT NO. 79290-43  
 DATE (S)        PROJECT NAME       

ELEVATION  
 GROUND LEVEL 4473  
 TOP OF CASING 4475

WELL SKETCH



LOCATION OR COORDINATES       

DRILLING SUMMARY

TOTAL DEPTH DRILLED 430'  
 ROTARY X CORE         
 DRILLING CONTRACTOR Northwest Air Drilling & Development Ogden, Utah  
 RIG (S) USED Chicago Pneumatic RT-1800  
 SIZE (S) AND TYPE (S) OF BITES 0+38'(26" Tri-cone); 38'+430'(17 1/2" Tri-cone).  
 DRILLING FLUID Nova Muel Corporation, "V7E" Polymer  
 SAMPLING METHOD 10 Foot intervals, and at every major lithologic change  
 SURFACE CASING 2 1/2" X 38"  
 COMMENTS (PROBLEMS, SHUTDOWNS, ETC)  
First pilot hole abandoned at 150'

PACKERS None

CENTRALIZERS 1" x 1/8" x 8" steel bands at 100', 200', and 300'.  
 SAND OR GRAVEL PACK 8-12 sand pack from 70' to 390', Pea Gravel From 20' to 60'.  
 CEMENT (MIX) 10:1 CEMENT: Bentonite DEPTH (S) 60' to 70'  
and From surface to 20'.

BENTONITE         
 PELLETS         
 SLURRY       

DEVELOPMENT

TREME         
 DEPTH 390' 370' 290' 190' 380'  
 TIME 3hr 1hr 1.5hr 1.3hr 1.6hr

TIME LOG

	START	FINISH	ELAPSED TIME	% OF TOTAL
DRILLING	7-9-80 1300	7-14-80 10:20	59.25	52.3
LOGGING	7-10-80 5:40	7-10-80 12:10	6.5	5.7
CASING	7-16-80 2:45	7-17-80 2:00	17.5	15.4
GRAVEL PACKING	7-19-80 1800	7-20-80 14:15	20	17.6
CEMENTING	7-20-80 14:15	7-20-80 17:15	3	2.6
BENTONITE PELLETS				
SLURRY				
DEVELOPMENT	7-20-80 2300	7-21-80 0600	7	6.1

DESIGN

BASIS DRILLER'S LOG         
 GEOLOGIC LOG Hydro-Search, Inc.  
 GEOPHYSICAL LOG Contract Geophysical  
 COPIES ATTACHED YES  NO

STEEL CASING STRING

FROM 100' TO 180' - Blank  
 FROM 180' TO 259.7' - 60 Screen  
 FROM 259.7' TO 279.7' - 10 Screen  
 FROM 279.7' TO 379.7' - Blank

PVC CASING - STEEL CASING STRING

FROM 379.7' TO 379.7' - 10 Screen  
 FROM 379.7' TO 379.7' - Blank  
 FROM        TO         
 FROM        TO         
 FROM        TO       

CASING STEEL PVC  
 DIMENSIONS 38" 38" OD  
 SCREEN  
 DIMENSIONS 38" 104 OD  
 SLOT SIZE 30

MISCELLANEOUS

2" I.D. Sounding Tube from SURFACE to 430'  
Static Water level from Ground Surface = 47.2' at 1440 7-21-80 (approx. 8 hrs. after development pumping stopped)

# LOG OF BOREHOLE

LOC. or COORDS. <u>Tule Valley, Utah</u> <u>T17S, R15W, S17N, E7SW</u> GROUND ELEV. <u>4550 ft.</u> TOTAL DEPTH <u>430'</u> BOREHOLE DIAM. <u>1 7/8"</u>	DRILLER <u>Dean Mitchell</u> RIG <u>Chicago Pneumatic RT-1800</u> BIT(S) <u>(0-30") 2 1/2" Tricone, (30"-430") 1 7/8" Tricone</u> FLUID <u>V7E Polymer</u>	START DATE <u>7-9-80</u> FINISH DATE <u>7-16-80</u> TIME <u>1200</u> 1855 GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO HOW LEFT <u>Cased</u>
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LOCATION Tule Valley, Utah  
 LOGGED BY ELF, JEF, SLR, MKY, BV  
Tule Valley (Hobbs)

PROJECT 12413-80 Shallow Aquifer  
MA Project F150 01

DEPTH	PENE RATE	CIRC RET	AIRLIFT LOSS Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
0	54.5 ft./hr.			Sandy-Silty GRAVEL		<p>Sandy-silty arenous, limestone fragments light gray to dark gray, matrix material is yellow. Unit is poorly sorted, pebble size is not uniform. Unit consists of approximately 30% gravel, and 70% matrix. Subangular to subrounded, no structure, plasticity good, moderately sticky, poorly consolidated, positive acid test on gravel chips.</p> <p>The unit is interlayered with clay and boulders. These areas can be noted in the symbol column.</p>
20	77					
40	53					
60	19					
80	25					
90	27					
100	42.9					
110	60					
120	27.3					
130	21.4					
140	27.3			Sandy-silty Gravel		
150	50					
160	30					
170	52					
180	60					
190	48					
200	25					
210	43					
220	18					
230	30					
240	15					
250	18					
260	14					
270	18					

# LOG OF BOREHOLE

BOREHOLE 10-1-80  
PAGE 2 OF 3

LOC. or COORDS. <u>Tule Valley, Calif</u> <u>T17S, R15W, S20N, 17 NE 1/4, S16W 1/4</u> GROUND ELEV. <u>4520 ft</u> TOTAL DEPTH <u>430 ft</u> BOREHOLE DIAM. <u>17.5 inches</u>	DRILLER <u>Dean Mitchell</u> RIG <u>Chicago Pneumatic RT-1800</u> BIT(S) <u>(10 3/8") 26" Tricone (48-420) 17 1/2"</u> FLUID <u>V7 E Polymer</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">START</td> <td style="text-align: center;">FINISH</td> </tr> <tr> <td>DATE <u>7-9-80</u></td> <td><u>7-16-80</u></td> </tr> <tr> <td>TIME <u>1200</u></td> <td><u>1855</u></td> </tr> <tr> <td colspan="2">GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</td> </tr> <tr> <td colspan="2">HOW LEFT <u>(1000)</u></td> </tr> </table>	START	FINISH	DATE <u>7-9-80</u>	<u>7-16-80</u>	TIME <u>1200</u>	<u>1855</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		HOW LEFT <u>(1000)</u>	
START	FINISH											
DATE <u>7-9-80</u>	<u>7-16-80</u>											
TIME <u>1200</u>	<u>1855</u>											
GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO												
HOW LEFT <u>(1000)</u>												

LOCATION Tule Valley, Calif  
 LOGGED BY F.E. [unclear] [unclear]

PROJECT 1247-50 Shallow Groundwater  
CA Project FV80

DEPTH	PENE RATE	CIRC RET	AIRLIFT LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
-160	14				Sandy-silty GRAVEL		See page 1
	14						
	13						
	8.5						
-180	30						
	30						
	11						
-200	26						
	30						
	12						
-220	24						
	18						
	30						
	30						
-240	21.4						
	23						
	50						
	12						
-260	19						
	19						
	30						
	17.6						
-280	14						
	17.6						
	21						
	16.5						
-300	17						
	13.6						
	23						
	17.6						
-320	16.7						

Kellie sticking in hole when tools pulled  
 to add new drill rods, at 290', 310',  
 320' and 340'.

# LOG OF BOREHOLE

BOREHOLE TU-5-1-2  
PAGE 3 OF 3

LOC. or COORDS. <u>Tule Valley, Sta. 6</u> <u>(T7S, R15W) S017. NE 1/4 S174</u>	DRILLER <u>Dean Mitchell</u>	START DATE <u>7-9-80</u>	FINISH DATE <u>7-16-80</u>
GROUND ELEV. <u>4520 ft</u>		TIME <u>1200</u>	<u>1855</u>
TOTAL DEPTH <u>430 ft</u>	RIG <u>Chicago Pneumatic RT-1800</u>	GEOPHYS. LOG <input type="checkbox"/> YES <input type="checkbox"/> NO	
BOREHOLE DIAM. <u>17 3/4 inches</u>	BIT(S) <u>(0-38) 26" Maxice (38-43) 17 1/2"</u>	HOW LEFT _____	
	FLUID <u>VFE Polymer</u>		

LOCATION Tule Valley, Sta. 6  
LOGGED BY ELF, JEG, S.R. MEY, RVL

PROJECT 1243-80 S. Valley Groundwater Devel.  
1243-80-01 FV80-01

DEPTH	PENE RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
320	16.7			Sandy-silty Gravel	[Symbol]	See page 1.
	16.7					
	13.0					
340						
	15.8					
	17.6					
360	17.6					
	17.6					
	25					
	14.2					
380	15.8					
	16.7					
	17.6					
	15					
400	15					
	6.4			Sandy-silty Gravel	[Symbol]	Last 20' of 17 1/2" hole was drilled without the pilot hole. pilot → 0-410' Reaming → 0-430'
	17.4					
T.D. 430 →						
440						