

WELL CONSTRUCTION SUMMARY

LOCATION or COORDS: 7 N, 51 E, Sec 10aa ELEVATION: GROUND LEVEL 5626 ft
Nye County, Nevada TOP OF CASING 5629 ft

DRILLING SUMMARY:

TOTAL DEPTH 500 ft
 BOREHOLE DIAMETER 8.5 inches
 DRILLER Scott Johnson
 RIG CP-1800
 BIT(S) 7 1/2 in
 DRILLING FLUID Bentonite mud
 SURFACE CASING none

WELL DESIGN:

BASIS: GEOLOGIC LOG GEOPHYSICAL LOG
 CASING STRING(S): C=CASING S=SCREEN

0 - 220	C	420 - 430	C
220 - 240	S	430 - 460	S
240 - 300	C	460 - 470	C
300 - 320	S		
320 - 340	C		
340 - 360	S		
360 - 380	C		
380 - 400	S		

CASING: C1 _____
 C2 _____
 C3 _____
 C4 _____
 SCREEN: S1 _____
 S2 _____
 S3 _____
 S4 _____

CENTRALIZERS none
 FILTER MATERIAL 200 mesh
 CEMENT 2000 lbs
 OTHER _____

CONSTRUCTION TIME LOG:

TASK	START		FINISH	
	DATE	TIME	DATE	TIME
DRILLING:				
	9/2/80	1425	9/2/80	1900
	9/2/80	2300	9/2/80	2500
GEOPHYS. LOGGING:	9/3/80	1700	9/3/80	1245
CASING:				
	9/2/80	1120	9/2/80	1430
FILTER PLACEMENT:	9/3/80	1445	9/3/80	2220
CEMENTING:	9/4/80	2300	9/4/80	2900
DEVELOPMENT:	9/3/80	2030	9/3/80	2445
OTHER:				

WELL DEVELOPMENT

2000 ft produced
250 gpm
water level = 5560 ft

COMMENTS:

Drillers lost circulation
at 170 ft. Noisy mud
in addition where Bentonite
and 2.5 cu yds of bent
filter.
Final cement was 2
trucks of cement.
Some problem.

LOCATION Hobbs Creek, Nye County, Nevada
 PERSONNEL R. Williams, S. Williams
 PROJECT 2000 ft
 BY Project BY 80

LOG OF BOREHOLE

BOREHOLE 171

PAGE 1 OF 2

LOC. or COORDS. <u>171 R-1</u>	DRILLER <u>...</u>	START DATE <u>...</u>	FINISH DATE <u>...</u>
GROUND ELEV. <u>...</u>	RIG <u>CP-</u>	TIME <u>...</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
TOTAL DEPTH <u>...</u>	BIT(S) <u>...</u>	HOW LEFT <u>...</u>	
BOREHOLE DIAM. <u>...</u>	FLUID <u>...</u>		

LOCATION ...
 LOGGED BY ...
 PROJECT ...

DEPTH	PENE RATE	CIRC RET LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM BOL	DESCRIPTION and COMMENTS
0ft	3 min			Silty sand & gravel	●●●●●	Silty sand + gravel; pale brown (10YR 6/3), black (7.5YR N3/0), welded chert. Fels (65%), quartz (20%), CaCO ₃ (5%), very fine grained sand to fine gravel. Subangular to subrounded, no structure non-plastic; non-sticky; weakly consolidated; siliceous reaction with the sil; uniform. [(0-10ft)]
10ft	1 min			Sand & gravel	●●●●●	
20ft	4 min			Sand & gravel	●●●●●	Sand and gravel; white (7.5YR, N8/0) brown (7.5YR, 5/3), dark grey (7.5YR, N4) black (7.5YR, N3/0); welded chert (6.8%), quartz (30%), CaCO ₃ (2%) poorly sorted, medium to coarse sand and fine gravel; subangular to sub-rounded, no structure; non-plastic; non-sticky; weakly consolidated; siliceous reaction uniform. [(10-20ft)]
30ft	10 min			Sand & gravel	●●●●●	
40ft	7 min			Sand & gravel	●●●●●	- Same as above
50ft	7 min			Sand & gravel	●●●●●	- Same as above
60ft	7 min			Sand & gravel	●●●●●	- Same as above
70ft	7 min			Sand & gravel	●●●●●	- Same as above
80ft	7 min			Sand	●●●●●	Sand; white (7.5YR, 5/3), brown (7.5YR, 5/3), dark grey (7.5YR, 5/3), black (7.5YR, N3/0); welded chert (6.8%), quartz (30%), CaCO ₃ (2%) poorly sorted, medium to coarse sand and fine gravel; subangular to sub-rounded, no structure; non-plastic; non-sticky; weakly consolidated; siliceous reaction uniform. [(10-20ft)]

LOG OF BOREHOLE

BOREHOLE 40-S-0-1
PAGE 2 OF 7

LOC. or COORDS. <u>Hot Creek Valley</u>	DRILLER <u>Scott Stephens Drilling</u>	START DATE <u>9/2/80</u>	FINISH DATE <u>9/3/80</u>
T48 R518 <u>Malaga Nevada</u>	<u>Andrew MacPherson</u>	TIME <u>1425</u>	<u>0606</u>
GROUND ELEV. <u>5600ft</u>	<u>Russel Mangrove</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
TOTAL DEPTH <u>500ft</u>	RIG <u>CP-1700</u>	HOW LEFT <u>Unrestored</u>	
BOREHOLE DIAM. <u>8.8 inches</u>	BIT(S) <u>Tricone</u>		
	FLUID <u>Barite mud</u>		

LOCATION Hot Creek Valley, Nevada
LOGGED BY Scott Stephens
PROJECT Malaga Nuclear Power Plant (FV8)

DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
80ft	9min			Sand	•••••	(cont.) Subangular to subrounded, no structures, non-plastic, non-sticky; moderately consolidated; no HCl reaction, uniform. [70-460ft]
90ft	10min			Sand	•••••	- Same as above
100ft	11min			sand	•••••	- Same as above
110ft	11min			sand	•••••	- Same as above
120ft	10min			Sand	•••••	- same as above
130ft	10min			sand	•••••	- same as above
140ft	11min			sand	•••••	- same as above
150ft	10min			sand	•••••	- same as above
160ft						
170ft						
180ft						
190ft						
200ft						

LOG OF BOREHOLE

BOREHOLE HC-S-C-1

PAGE 2 OF 7

LOC. or COORDS. <u>Hatfield, N.H.</u>	DRILLER <u>Walt Starnes</u>	START DATE <u>9/2/80</u>	FINISH DATE <u>9/3/80</u>
<u>T7N, R51E, S1000 N. 1/2 Sec 20</u>	<u>Russell Mangione</u>	TIME <u>1435</u>	<u>0606</u>
GROUND ELEV. <u>500 ft</u>	RIG <u>CP-1700</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
TOTAL DEPTH <u>500 ft</u>	BIT(S) <u>7 1/2" DIA</u>	HOW LEFT <u>1.25' STORED</u>	
BOREHOLE DIAM. <u>8.8" DIA</u>	FLUID <u>Brackish Water</u>		

LOCATION Hatfield, N.H.
LOGGED BY Russell Mangione

PROJECT Water Table

DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
160 ft	19 in			Sand	•••	Sand, white (7.5% R, 1.1% M), strong brown (7.5% R, 5.1% M), brown (2.5% R, 5.1% M), dark grey (7.5% R, 1.1% M), black (7.5% R, 1.1% M) welded tuff (50%), quartz (20%), A. kyalite (20%), predominantly sorted, fine to coarse sand, subangular to sub-rounded; no structures; non-lastic; non-sticky; moderate; 1-2% clay; no ill. red. <u>F (70-460 ft)</u>
170 ft	10 in			Sand	•••	- same as above
180 ft	11 in			Sand	•••	- same as above
190 ft					•••	- same as above
	14 in			Sand	•••	- same as above
200 ft					•••	- same as above
	16 in			Sand	•••	- same as above
210 ft					•••	- same as above
	14 in			Sand	•••	- same as above
220 ft					•••	- same as above
	17 in			Sand	•••	- same as above
230 ft					•••	- same as above
	17 in			Sand	•••	- same as above
240 ft					•••	- same as above
	17 in			Sand	•••	- same as above
250 ft					•••	- same as above
	17 in			Sand	•••	- same as above
260 ft					•••	- same as above
	17 in			Sand	•••	- same as above
270 ft					•••	- same as above
	17 in			Sand	•••	- same as above
280 ft					•••	- same as above
	17 in			Sand	•••	- same as above
290 ft					•••	- same as above
	17 in			Sand	•••	- same as above
300 ft					•••	- same as above

LOG OF BOREHOLE

BOREHOLE HA-8-0-1

PAGE 4 OF 7

LOC. or COORDS. Hall Brook, 1/2 mi. N. of ...
77A, R512, ...
 GROUND ELEV. 560.17
 TOTAL DEPTH 500.00
 BOREHOLE DIAM. 2.86 inches

DRILLER Scott ...
...
...
 RIG CP-1700
 BIT(S) Tricone
 FLUID Barite mud

START DATE 9/2/80 FINISH DATE 9/3/80
 TIME 1430 1606
 GEOPHYS. LOG YES NO
 HOW LEFT 1.15 restored

LOCATION Hall Brook, 1/2 mi. N. of ...
 LOGGED BY ...

PROJECT ...
...

DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM. BOL	DESCRIPTION and COMMENTS
240ft	7min			Sand	•••••	Sand: white (7.5YR, 18/10) to brown (7.5YR, 5/1), dark grey (7.5YR, 4/10), black (7.5YR, Ne), well-sorted (50%), Quartz (30%), rhynolite (20%), moderately sorted, fine to coarse sand; sub-angular to sub-rounded; most structures; non-plastic; moderate to moderate; no HCl reaction
250ft	8min			Sand	•••••	- same as above
260ft	10min			Sand	•••••	- same as above
270ft	10min			Sand	•••••	- same as above
280ft	7min			Sand	•••••	- same as above
290ft	7min			Sand	•••••	- same as above
300ft	10min			Sand	•••••	- same as above
310ft	7min			Sand	•••••	- same as above
320ft	7min			Sand	•••••	- same as above

LOG OF BOREHOLE

BOREHOLE HC-8-C-1
PAGE 5 OF 7

LOC. or COORDS. <u>Hob Creek Valley</u>	DRILLER <u>Scott Stephenson Drilling</u>	START	FINISH
<u>T7N R51E S30W N40W</u>	<u>Andrew M. G. Phelan</u>	DATE <u>9/1/80</u>	<u>9/3/80</u>
GROUND ELEV. <u>5400ft</u>	<u>Russell Mangione</u>	TIME <u>1435</u>	<u>0606</u>
TOTAL DEPTH <u>500ft</u>	RIG <u>CP-1200</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	HOW LEFT <u>unrestored</u>
BOREHOLE DIAM. <u>8.8 inches</u>	BIT(S) <u>Tricone</u>		
	FLUID <u>Bentonite Mud</u>		

LOCATION Hob Creek Valley, T7N R51E S30W N40W
LOGGED BY R. J. [unclear]

PROJECT Water Resource Program
July 1980 - Feb 1981

DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
320ft	8min			Sand	•••••	Sand; white (7.5/8, 1/2), brown (7.5/8, 5/8), dark grey (7.5/8, 1/4/10), black (7.5/8, 1/2), welded tail (50%), quartz (30%), siltstone (20%); moderately sorted; fine to coarse sand; subangular to subrounded; no structure; non-plastic; non-sticky; moderately consolidated; no HCl reaction
330ft	10min			Sand	•••••	
340ft	7min			Sand	•••••	- same as above
350ft						- same as above
360ft	8min			Sand	•••••	- same as above
370ft	8min			Sand	•••••	- same as above
380ft	10min			Sand	•••••	- same as above
390ft						
400ft	8min			Sand	•••••	- same as above
410ft						
420ft	8min			Sand	•••••	- same as above
430ft						
440ft						
450ft						
460ft						
470ft						
480ft						
490ft						
500ft						

LOG OF BOREHOLE

BOREHOLE HC-S-C-1

PAGE 6 OF 7

LOC. or COORDS. <u>Hot Creek Valley</u> <u>T7N, R51E, S10ac, N20ac</u>	DRILLER <u>Scott Stebbins Drilling</u> <u>Andrew MacPhearson</u> <u>Russel Macpherson</u>	START DATE <u>9/2/80</u>	FINISH DATE <u>9/2/80</u>
GROUND ELEV. <u>5600 ft</u>	RIG <u>CP-1200 (I)</u>	TIME <u>1435</u>	<u>0606</u>
TOTAL DEPTH <u>500 ft</u>	BIT(S) <u>Tri-cone</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
BOREHOLE DIAM. <u>2.8 inches</u>	FLUID <u>Benignite Mud</u>	HOW LEFT <u>Unrestored</u>	

LOCATION Hot Creek Valley, Fresno Co., CA
LOGGED BY R. G. Whitcomb, Ph.D., M.S., M.A.

PROJECT California Geologic Province
San Joaquin Basin

DEPTH	PENE RATE	CIRC RET/LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM BOL	DESCRIPTION and COMMENTS
400 ft	14 min			sand	•••••	Sand white (7.5 IR, N2/2), brown (7.5 IR, S1/2), dark grey (7.5 IR, N4/10), black (7.5 IR, N1/10), well sorted (50%), quartz (30%), feldspar (20%), moderately sorted, fine to coarse
410 ft	12 min			sand	•••••	Grained sand, sub-angular to sub-rounded, well sorted, not plastic, fine to medium, moderately consolidated, no oil, (70-460-15)
420 ft	10 min			sand	•••••	- same as above
430 ft	10 min			sand	•••••	- same as above
440 ft	11 min			sand	•••••	- same as above
450 ft	11 min			sand	•••••	- same as above
460 ft	11 min			sand	•••••	- same as above
470 ft	11 min			sandy clay		Sandy clay, fine to medium, (4.5 IR, N1/2), clay minerals (10%), quartz (10%), feldspar (10%), moderately sorted, clay (4.5 IR, N1/2), fine to medium, rounded, fine to medium, sticky, moderately consolidated, sticky, (4.5 IR, N1/2), fine to medium, rounded, fine to medium, moderately consolidated, sticky, (4.5 IR, N1/2)
480 ft	11 min			clay		clay (4.5 IR, N1/2), fine to medium, rounded, fine to medium, moderately consolidated, sticky, (4.5 IR, N1/2)
490 ft	11 min			clay		clay (4.5 IR, N1/2), fine to medium, rounded, fine to medium, moderately consolidated, sticky, (4.5 IR, N1/2)

LOG OF BOREHOLE

BOREHOLE H0-S-1
PAGE 7 OF 7

LOC. or COORDS. <u>Hot Creek Valley</u> <u>T7N, R51E, S10N, T40N</u>	DRILLER <u>Scott Stephens/Duff</u> <u>Andrew MacPherson</u> <u>Russell MacPherson</u>	START DATE <u>9/2/80</u> TIME <u>1435</u>	FINISH DATE <u>9/3/80</u> TIME <u>0636</u>
GROUND ELEV. <u>5000 ft</u>	RIG <u>CP-1300</u>	GEOPHYS. LOG <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
TOTAL DEPTH <u>500 ft</u>	BIT(S) <u>Mason</u>	HOW LEFT <u>by restorer</u>	
BOREHOLE DIAM. <u>2.8 inches</u>	FLUID <u>Bentonite Mud</u>		

LOCATION Hot Creek Valley, Nevada
 LOGGED BY William D. Williams

PROJECT Subsidence of Mead Dam
1.17 S. 10. East T40N

DEPTH	PENE RATE	CIRC RET LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
480 ft	9 min			clayey sand	•••••	Sand; [470-490 ft]; strong brown (7.5YR, 5/2), brown (7.5YR, 5/2), dark grey (7.5YR, N4/0), black (7.5YR, N3/0); welded silt (50%), quartz (30%), kyanite (20%); moderately sorted; fine to medium grained; sub-angular to subrounded; no structure; nonplastic; non-sticky; moderately consolidated; no HCl reaction; uniform
490 ft	11 min			Sandy clay		clayey sand; white (7.5YR, 10/0), dark grey (7.5YR, N4/0), dark grey (7.5YR, 4/0), black (7.5YR, N3/0); SiO ₂ minerals (crystalline quartz, chlorite, quartz) (65%), welded silt (30%), kyanite (3%); poorly sorted; sub-angular to subrounded; no structure; nonplastic; non-sticky; moderately consolidated; no HCl reaction; uniform = [480-490 ft]
500 ft						Sandy clay; dark grey (7.5YR, 6/2), clayey (50%), quartz (20%), kyanite (10%); moderately sorted; sub-angular to subrounded; no structure; nonplastic; non-sticky; moderately consolidated; no HCl reaction; uniform