

LOC. or COORDS. <u>SPRING VALLEY</u> <u>30 AB - NE 1/4, NW 1/4</u>	DRILLER _____	START _____	FINISH _____
GROUND ELEV. _____	RIG _____	DATE _____	TIME _____
TOTAL DEPTH <u>(710')</u>	BIT(S) _____	GEOPHYS. LOG _____	YES _____ NO _____
BOREHOLE DIAM. <u>9.1 IN</u>	FLUID <u>BENTONITE MUD</u>	HOW LEFT _____	

LOCATION
LOGGED BY

PROJECT

DEPTH	PENE. RATE	CIRC. REC. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
0				SAND		SAND (0-10') () TO BEN (W 5 YR 1/2) BK (d 5 YR 5/2), TR CH, TR SAT, F-CL SD 95% (FRAG. 10% EX 75%, G ₂ 20%, VOL FRAG 5%), GVL-5% (10% FRAG 70%, VOL FRAG 10%) MS, SD-ANG TO SUB SAND, N.P., NO STKY, NO CONSOL, WK HCl RXN.
10'				SAND		SAND (10'-20') () dk BEN (W 7.5 YR 1/2) BK (d 7.5 YR 5/2), TR SAT, MED TO CL SD - 95% (GR FRAG 80%, G ₂ 15%, FLUPR 5%), TR GVL (GR FRAG 100%) MS, SD - SUB ANG TO SUB SAND, GVL - SUB ANG, STICKLESS, N.P., NO STKY, NO CONSOL, NO HCl RXN.
20'				SAND		SAND (20'-30') () SAME AS ABOVE EXCEPTION: F SD APPEARS, 50% BLK MIXTURE
30'				SAND		SAND (30'-40') () BK (W 7.5 YR 1/2) BK (d 7.5 YR 5/2), TR SAT, F TO MED SD - 100% (10% FRAG 80%, G ₂ 20%, TR CH W/S, SD - SUB ANG TO SUB SAND, STICKLESS, N.P., NO STKY, NO CONSOL, WK HCl RXN.
40'				SAND		SAND (40'-50') () SAME AS ABOVE EXCEPTION: ANG SD SIZE IS MED, 10% F SD FRACTION
50'				SAND		SAND (50'-60') () dk BEN (W 7.5 YR 1/2) BK (d 7.5 YR 5/2), TR SAT, F-CL SD - 95% (10% FRAG 70%, G ₂ 15%, TR FLUPR), TR GVL (10% FRAG 90%, FLUPR 10%) MS, SD - ANG - SUB SAND, GVL - SUB SAND, STICKLESS, N.P., NO STKY, NO CONSOL, WK HCl RXN.
60'				SAND		SAND (60'-70') () dk BEN (W 7.5 YR 1/2) BK (d 7.5 YR 5/2), TR CH, MED - CL SD - 100% (GR FRAG 85%, G ₂ 10%, FLUPR 5%) MS, SD - ANG TO SUB SAND, STICKLESS, N.P., NO STKY, NO CONSOL, WK HCl RXN.
70'				SAND		SAND (70'-80') () SAME AS ABOVE EXCEPTION: ANG SD SIZE IS MED

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PROJECT

DEPTH	PENE. RATE	CIRC. ACT. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM. BOL	DESCRIPTION and COMMENTS
80'				SAND		SAND (80'-90') () DEN (0.75 / 1.4) BRN (2.5 / 5.5) TRST, F-med sd - 100% (GR FRAG 80%, Gz 15%, (MGR 5%), WS, sd - FINE TO SUBRND, STRUCLSS, N.P., NOSTKY, NO CONCH., WK HCL RXN.
90'				SAND		SAND (90'-100') () SAME AS ABOVE
100'				SAND		SAND (100'-110') () SAME AS ABOVE
110'				SAND		SAND (110'-120') () SAME AS ABOVE EXCEPTION: TR GVL.
120'				SAND		SAND (120'-130') () SAME AS ABOVE EXCEPTION: TR LK MISSING
130'				SAND		SAND (130'-140') () DEN (0.75 / 1.4) BRN (7.5 / 5.5) CL - 10%, SLT - 5%, F-med sd - 85% (GRN FRAG 85%, Gz 15% TR HDWR), MS, sd - FINE TO SUBRND, STRUCLSS, N.P., STKY, NO CONCH., WK HCL RXN.
140'				SAND		SAND (140'-150') () SAME AS ABOVE EXCEPTION: NO CL IN THIS INTERVAL
150'				SAND		SAND (150'-160') () SAME AS ABOVE EXCEPTION: TR CL
160'						

m

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

LOCATION LOGGED BY

PROJECT

DEPTH	PENE RATE	CIRC RET LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
160'				SAND		SAND (160'-170') (dk BRN (w 7.5 yr 4/2) BRN (d 7.5 yr 5/2), TR CL, Silt-5%, F-Med sd, -95% (GR FINE 85%, G ₂ 10%, Disp 5%), MS to WS, sd - ANG - SUBRND, STICKLESS, N.P., STKY, NO CONSOL, WK HEL RXN
170'				SAND		SAND (170-180') () SAME AS ABOVE
180'				CLAY SAND		CLAY SAND (180'-190') () dk BRN (w 7.5 yr 4/2) BRN (d 7.5 yr 5/2), CL-40%, Silt-5%, F-Med sd - 55% (GR FINE 90%, G ₂ 10%) MS, sd - ANG to SUBRND, STICKLESS, SP, STKY, NO CONSOL, WK HEL RXN
190'				CLAY SAND		CLAY SAND (190'-200') () dk BRN (w 7.5 yr 4/2) BRN (d 7.5 yr 5/2), CL-30%, Silt-5%, F-Med sd - 65% (GR FINE 80%, G ₂ 20%, TR FID-PR), MS, sd - ANG to SUBRND, STICKLESS, SP, STKY, NO CONSOL, WK HEL RXN
200'				CLAY SAND		CLAY SAND (200'-210') () SAME AS ABOVE EXCEPTION: CL SD + TR GUL APPEAR
210'				SAND		SAND (210'-220') () dk BRN (w 7.5 yr 4/2) BRN (d 7.5 yr 5/2) TR CL, Silt-5%, Med-ss sd - 95% (GR FINE 90%, G ₂ 10%), TR GUL (50% disp, 50% GR FINE) MS, sd - ANG to SUBRND, STICKLESS, N.P., STKY, NO CONSOL, WK HEL RXN
220'				SAND		SAND (220'-230') () SAME AS ABOVE
230'				SAND		SAND (230'-240') () dk BRN (w 7.5 yr 4/2) BRN (d 7.5 yr 5/2) TR CL, Silt-5%, F-Med sd - 95% (GR FINE 75%, G ₂ 25%) WS, sd - ANG to SUBRND, STICKLESS, N.P., NO STKY, NO CONSOL, WK HEL RXN
240'						

LOG OF BOREHOLE

BOREHOLE SP-5-0-1
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LOC. or COORDS. <u>SPRING VALLEY</u> <hr/> GROUND ELEV. _____ TOTAL DEPTH _____ BOREHOLE DIAM. _____	DRILLER _____ <hr/> RIG _____ BIT(S) _____ FLUID _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">START</td> <td style="width: 50%; text-align: center;">FINISH</td> </tr> <tr> <td>DATE _____</td> <td>DATE _____</td> </tr> <tr> <td>TIME _____</td> <td>TIME _____</td> </tr> <tr> <td colspan="2">GEOPHYS. LOG <input type="checkbox"/> YES <input type="checkbox"/> NO</td> </tr> <tr> <td colspan="2">HOW LEFT _____</td> </tr> </table>	START	FINISH	DATE _____	DATE _____	TIME _____	TIME _____	GEOPHYS. LOG <input type="checkbox"/> YES <input type="checkbox"/> NO		HOW LEFT _____	
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PROJECT

DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
466'				SAND		SAND (460'-466') (V. BK BEN. (w. 5/8" 4/4) BEN (2 7/8" 4/4) 2 1/2" 5/8" - MED SD 95% (GRF 236-100), (230%) WB 50% ANGLES & BRND, SANDLESS, NO STKY, NO CONSOL. V. WK HCL EXN.
410'				SAND		SAND (410'-460') () SAME AS ABOVE
420'				SAND		SAND (420'-430') () SAME AS ABOVE
430'				SAND		SAND (430'-440') () SAME AS ABOVE
440'				SAND		SAND (440'-450') () SAME AS ABOVE
450'				SAND		SAND (450'-460') () SAME AS ABOVE EXCEPTION: MED SD MISSING
460'				SAND		SAND (460'-470') () SAME AS ABOVE EXCEPTION: TR MED SD
470'				SAND		SAND (470'-480') () SAME AS ABOVE
480'						

LOG OF BOREHOLE

BOREHOLE SP-5-0-1
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LOC. or COORDS. <u>SPRING VALLEY</u> GROUND ELEV. _____ TOTAL DEPTH _____ BOREHOLE DIAM. _____	DRILLER _____ RIG _____ BIT(S) _____ FLUID _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">START</td> <td style="width: 50%;">FINISH</td> </tr> <tr> <td>DATE _____</td> <td>DATE _____</td> </tr> <tr> <td>TIME _____</td> <td>TIME _____</td> </tr> <tr> <td colspan="2">GEOPHYS. LOG <input type="checkbox"/> YES <input type="checkbox"/> NO</td> </tr> <tr> <td colspan="2">HOW LEFT _____</td> </tr> </table>	START	FINISH	DATE _____	DATE _____	TIME _____	TIME _____	GEOPHYS. LOG <input type="checkbox"/> YES <input type="checkbox"/> NO		HOW LEFT _____	
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DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM. BOL	DESCRIPTION and COMMENTS
320'				SAND		SAND (320'-330') () BK BRN (W 7.5% 4/4), BRN (d 7.5% 5/4), SAT 50%, F-Med sd 95% (GR FAL 20% Q ₃ 10%), WS, sd - AND TO SUPERNO, STIPULESS, N.P., NO STKY, NO CONSOL, WK HCL RXN.
330'				SAND		SAND (330'-340') () SAME AS ABOVE EXCEPTION: TR CL,
340'				SAND		SAND (340'-350') () SAME AS ABOVE EXCEPTION: TR CL, TR (S. SD
350'				SAND		SAND (350'-360') () SAME AS ABOVE
360'				SAND		SAND (360'-370') () BK BRN (W 7.5% 4/4) BK (d 7.5% 5/4) SAT 50% F-Med sd - 95% (GR FAL 20% Q ₃ 20%), WS, sd - AND TO SUPERNO, STIPULESS, N.P., NO STKY, NO CONSOL, WK HCL RXN.
370'				SAND		SAND (370'-380') () SAME AS ABOVE EXCEPTION: MED SD MISSING
380'				SAND		SAND (380'-390') () SAME AS ABOVE EXCEPTION: MED SD MISSING
390'				SAND		SAND (390'-400') () SAME AS ABOVE EXCEPTION: NO MED SD
400'				SAND		SAND (400'-410') () SAME AS ABOVE EXCEPTION: NO MED SD

LOCATION LOGGED BY _____

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LOG OF BOREHOLE

BOREHOLE SP-0-1
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LOC. or COORDS. <u>SPRING VALLEY</u> GROUND ELEV. _____ TOTAL DEPTH _____ BOREHOLE DIAM. _____	DRILLER _____ RIG _____ BIT(S) _____ FLUID _____	START _____ FINISH _____ DATE _____ TIME _____ GEOPHYS. LOG <input type="checkbox"/> YES <input type="checkbox"/> NO HOW LEFT _____
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DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
450'				SAND		SAND (480'-490') (dk BRN (w/ 5/16" BRN (d. 7.5" x 5/16") SAT-5% F. sd 95% (GR FRAG, 75% G, 25% S), 10% S, sd! ANG. GRASS, N.P., NO SKY, NO CHNSOL, V. WK HCL RXN.)
490'				SAND		SAND (490-500') SAME AS ABOVE
500'				SAND		SAND (500'-510') SAME AS ABOVE
510'				SAND		SAND (510'-520') SAME AS ABOVE
520'						SAMPLE MISSING
530'				SAND		SAND (530-540') SAME AS ABOVE
540'				SAND		SAND (540-550') SAME AS ABOVE
550'				SAND		SAND (550-560') SAME AS ABOVE
560'						

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LOG OF BOREHOLE

BOREHOLE SP-5-0-1
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DEPTH	PENE. RATE	CIRC. RET.	AIRLIFT LOSS Q (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
560'				SAND		SAND (560'-570') (IL 60-110) 5yr 4/2, BRN (d 1/2 yr 9p) Lt. 5% F. Med. 2-9.5% (GR F. 2.5%, Q ₃ 1.5%), WS, SD-ANG 3 SUBRD, STRUC/EC, N.P., NO STKY, NO CONSOL., 1 WK HET RXN.
570'				SAND		SAND (570'-580') () SAME AS ABOVE EXCEPTION: Q ₃ SD IS A 20%
580'				SAND		SAND (580'-590') () SAME AS ABOVE
590'				SAND		SAND (590'-600') () SAME AS ABOVE
600'				SAND		SAND (600'-610') () SAME AS ABOVE
610'				SAND		SAND (610'-620') () SAME AS ABOVE
620'				SAND		SAND (620'-630') () SAME AS ABOVE
630'				SAND		SAND (630'-640') () SAME AS ABOVE
640'				SAND		SAND (640'-650') () SAME AS ABOVE

LOG OF BOREHOLE

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DEPTH	PENE. RATE	CIRC. RET. LOSS	AIRLIFT O (gpm)	MATERIAL	SYM-BOL	DESCRIPTION and COMMENTS
640'				SAND		SAND (640'-650') () DEBRIS (w/ 5 yr 1/2), BRN 1/2 7.5 yr sp, silt-5%, f-med-sd = 95% (GRAC 80%, (300%), WS, sd - SUBANG to SUBRND, STRUCTLESS, N.P., NO STKY, NO CAUSOL, VINK HCL PY.
650'				SAND		SAND (650'-660') () SAME AS ABOVE EXCEPTION: TR OF SD
660'				SAND		SAND (660'-670') () SAME AS ABOVE EXCEPTION: sd is med-cs
670'				SAND		SAND (670'-680') () SAME AS ABOVE
680'				SAND		SAND (680'-690') () SAME AS ABOVE
690'				SAND		SAND (690'-700') () SAME AS ABOVE EXCEPTION: f-cs sd
700'				SAND		SAND (700'-710') SAME AS ABOVE
710'						