BORINGLOG

Proje	ct Nan	ne:	Yerington Groundwater In	vestigation		_ v	Vell Nı	umber:	B/W-	-8	
Soil l	Boring	Ľ	Monitoring Well	Project Num	ber:			1212	43.021		Sheet <u>1</u> of <u>17</u>
Borir	ng Loca	ation:	North of mine tailings, west	of residential area	000000	Elev	ation:	4465	.8 feet amsl		East: 320292 North: 1565005.7
Drilli	ing Co	ntract	or: WDC	Driller: D. Tonnancour	. 80			d: 8/	15/05		7 inished: 8/21/05
Drilli	ng Equ	iipme	nt: Gus Pech GP24-400RS, D	iedrich Sonic Head		Tota Dep	l th: (fee	t) 21	4.5	(feet)	Depth: 146.5' / 139.27'
Samp	oling N	letho	d: Core Barrel	Borehole Diameter: 6''		Wel and	l Diam Materi	eter al: 2	-inch PVC		
Drilli	ng Me	thod:	Sonic, utilized 6'' casing and	l a 4.5'' core barrel	000000		ened Iı Well E		181.6-201.	.6 ft., l	bottom at 201.8 ft.
Well	Seal:	Ber	ntontite and Cement		000000	Slot	Size:	0.020	" Filter Ma	terial:	#10-20 Silica Sand
Logg	ed By:	C.	Gardner		000000	Dev	elopme	ent Metl	nod: Swabl	oed, b	ailed, pumped
0000000	t)	nbol	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			(Graphic	Log	-		
(feet)	n (fee	Group Symbol			e No.	e	gy				
Depth (feet)	Elevation (feet)	Grou	Description		Sample No.	Sample	Lithology	Well			Remarks
	Ele	USCS				02	Ξ				
		SM	SILTY SAND with GRAVEL (0-1 f Dry, loose, no odor.	eet)					Description on ASTM N		led cuttings based D-2488 (the
-	4465		Primarily medium to fine sand with ~ and ~15% silt and clay. The sand is a	ingular to subrounded,					visual-manu determination	al proc	edure), grain-size nomenclature
	1105	SW-	the gravel is angular to subangular. T are brown, and have a strong to no rea	action to HCl.							d Soil Classification lors described wet.
-		SM	WELL-GRADED SAND with SILT feet) Dry, loose, no odor.	and GRAVEL (1-5.5							
			Primarily coarse to medium sand with and ~10% silt and clay. The sand is s	~30% gravel to 35 mm					the Nevada Nevada We	State Pl	
			subrounded, the gravel is angular to s are nonplastic, are brown, and have a	ubangular. The fines	1					st zone,	in leet.
-			,,,,,	-							
				-					Sharp conta	cts indi	cated by solid lines,
-				-						contact	s indicated by
									All depths a unless state		w land surface vise.
-				-							
5-				-							
-		SM	SILTY SAND (5.5-6.5 feet)						WELL DES		r B/W-8D: 181.6-201.6 feet.
_	4460	19101	Dry, medium dense, no odor. Primarily medium to fine sand with ~	5% fine gravel to 12 –					Bottom of s		
			mm and ~15% silt and clay. The san subrounded, the gravel is angular to s	d is subangular to ubangular. The fines					Cement Gro	out: 0-16	58.5 feet.
-		SW- SM	are nonplastic, are brown, and have a WELL-GRADED SAND with SILT	strong reaction to HCl.	1				Bentonite C	hips: 16	58.5-178 feet.
-		2.11	feet) Dry, medium dense, no odor.	-	1				#10-20 San	d 178.5	nd 178-178.5 feet, -203.3 feet.)3.3-214.5 feet
-			Primarily coarse to medium sand with and $\sim 10\%$ silt and clay. The sand is subrounded the gravel is angular to subrounded the gravel is	ubangular to					Bentonne C	ps. 20	5.5-214.5 1001
_			subrounded, the gravel is angular to s are nonplastic, are brown, and have a	strong reaction to HCl.							
		SM	SILTY SAND with GRAVEL (8-11 Dry, medium dense, no odor.						Depth to W Top of PVC		asuring Point is
-			Primarily medium to fine sand with ~ and ~15% silt and clay. The sand is subrounded the gravel is angular to s	ubangular to	1				Top of PVC amsl.	Elevat	ion: 4,468.33 feet
-			subrounded, the gravel is angular to s are nonplastic, are brown, and have a		1					up: 2.5 t	feet above land
-				-							

SONIC METHOD LOG YERINGTON. GPJ BRN&CALD.GDT 1/31/06

Proj	ect Nan	ne:	Yerington Groundwater Investigation		_ \	Vell N	umber:	B/W-8		
Soil	Boring		Monitoring Well X Project Num	ber:			12124	43.021	Sheet	2_ of _17
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Trithology Lithology	e Log MeII		Remarks	
	4455	SM	SILTY SAND with GRAVEL (11-12.5 feet)				<u>KUKUK</u>			
_	-	SIVI	Dry, medium dense, no odor. Primarily coarse to medium sand with ~20% gravel to 30 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl.							
-	-	SM	SILTY SAND with GRAVEL (12.5-14.75 feet) Dry, medium dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~15% gravel to 20 mm, and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCI.							
15-	-	SM	SILTY SAND with GRAVEL (14.75-15.5 feet) — Dry, dense, no odor. — Primarily medium to fine sand with ~15% gravel to 20 mm and ~15% silt and clay. The sand is angular to subrounded,							
-	4450	SW- SM	the gravel is angular to subangular. The fines are nonplastic and are dark gray. WELL-GRADED SAND with SILT (15.5-16.75 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 15 mm and ~10% silt and clay. The sand is subangular to							
-	-	SW	subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (16.75-18 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% gravel to 45 mm and ~5% silt and clay. The sand is subangular to where we are not be to explore the subangular.							
-		SM	subrounded, the gravel is angular to subangular. The fines vare nonplastic, are brown, and do not react to HCl. <u>SILTY SAND</u> (18-20 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 15 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines							
D.GDT 1/31/06			are nonplastic, are brown, and have a weak to no reaction to HCl.							
-02 R	1	CL	SANDY LEAN CLAY (20-20.5 feet) Dry, very very hard, no odor.							
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4445	GW- GM	Primarily silt and clay with ~40% medium to fine sand and trace fine gravel to 8 mm. The sand is angular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are very dark grayish brown (10YR 3/2), and do not react to HCl. WELL-GRADED GRAVEL with SILT and SAND (20.5-22.25 feet) Dry, very dense, no odor.							
SONIC METHOD L		GM	Primarily gravel to 30 mm with ~35% coarse to medium sand and ~10% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl. SILTY GRAVEL with SAND (22.25-24.5 feet) Dry, medium dense, no odor.							

Proje	ect Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-8			
Soil	Boring		Monitoring Well X Project Nu	umber	: .			12124	43.021	Sheet	3_ of	17
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No		Sample	Lithology	Mell		Remarks		
		SP	Primarily gravel to 40 mm with ~35% coarse to medium sand and ~20% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines have low plasticity and toughness, are brown, and have a strong reaction to HCl. POORLY GRADED SAND (24.5-26 feet) Dry, medium dense, no odor. Primarily medium to fine sand to 2 mm with ~5% silt and	-								
	4440		clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	-								
-		SW	WELL-GRADED SAND (26-27.75 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 15 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have a weak reaction to HCl.									
-		SC	CLAYEY SAND (27.75-30.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~10% gravel to 20 mm and ~30% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown, and have a strong reaction to HCl.	-								
30-	4435	SM	SILTY SAND with GRAVEL (30.5-33 feet) Dry, dense, no odor. Primarily coarse to medium sand with ~20% gravel to 20 mm and ~15% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl.									
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		SM	SILTY SAND with GRAVEL (33-35 feet) Dry, dense, no odor. Primarily sand with ~20% gravel to 20 mm and ~25% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines have low plasticity and toughness, are brown, and have a strong reaction to HCl.	-								
SONIC METHOD LOG	4430	SW- SM	WELL-GRADED SAND with SILT and GRAVEL (35-36.5 feet) Dry, dense, no odor. Primarily coarse to medium sand with ~15% gravel to 20 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines	-								

Proje	ct Nan	ne:	Yerington Groundwater Investigation			Well Nu	mber:	B/W-8		
Soil	Boring	Ľ	Monitoring Well X Project Num	nber:	_		12124	3.021	Sheet 4	of <u>17</u>
		lodi				Graphic	Log			
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Well		Remarks	
			are nonplastic, are brown, and have a strong reaction to HCl.							
- - - - - - - - - - - - - - - - - - -	4425	SM	SILTY SAND with GRAVEL (36.5-42.25 feet) Dry, dense, no odor. Primarily sand with ~20% gravel to 40 mm and ~20% silt and clay. The sand and gravel are angular to subangular. The fines have low plasticity and toughness, are brown, and have a strong reaction to HCl.				I KUKUKUKUKUKUKUKUKUKUKUKUKU			
-				-						
-		SM	SILTY SAND (42.25-44 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% gravel to 25 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl.	-						
-		SM	SILTY SAND (44-45 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 15 mm and ~20% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines	-						
45	4420	SM	are nonplastic, are brown, and have a strong reaction to HCl. / SILTY SAND with GRAVEL (45-47 feet) Dry, dense, no odor. Primarily medium to fine sand with ~20% gravel to 30 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl.	-						
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		SW- SM	WELL-GRADED SAND with SILT and GRAVEL (47-48 feet) Dry, dense, no odor. Primarily medium to coarse sand with ~15% fine gravel to 15 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl. SILTY SAND (48-52 feet) Dry, very dense, no odor. Primarily coarse to fine sand with ~10% fine gravel to 20 mm and ~15% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines are nonplastic,	-						

Pro	ject Nar	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-8		
Soil	Boring	E	Monitoring Well X Project N	lumbe	er:			12124	43.021	Sheet	<u>5</u> of <u>17</u>
		nbol				C	Graphic	Log			
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks	
50-	- - - -		are brown, and have a strong reaction to HCl.	-							
	-	SC	CLAYEY SAND with GRAVEL (52-54.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~15% fine gravel to 15 mm and ~30% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and low toughness, are brown, and have a strong reaction to HCl.	-							
	-	SM	SILTY SAND with GRAVEL (54.5-55 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 25 mm								
55-	- 4410 -	SC SM SW	And ~25% silt and clay. The sand and gravel are angular to subangular. The fines have low plasticity and toughness, are brown, and have a strong reaction to HCl. CLAYEY SAND with GRAVEL (55-55.25 feet) Dry, dense, no odor. Primarily coarse to fine sand with ~15% gravel to 20 mm and ~25% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are dark gray, and have a strong reaction to HCl. SILTY SAND with GRAVEL (55.25-55.5 feet)								
-	-	SW- SM	Dry, dense, no odor. Primarily coarse to medium sand with ~20% gravel to 30 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl. WELL-GRADED SAND with GRAVEL (55.5-57 feet)								
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06		SW- SM	Dry, dense, no odor. Primarily coarse to medium sand with ~20% gravel to 50 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl. WELL-GRADED SAND with SILT (57-58 feet) Dry, dense, no odor. Primarily medium to fine sand with ~5% gravel to 30 mm	-							
INGTON.GPJ BRI 09		SW-	and ~10% silt and clay. The sand is angular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have a weak to strong reaction to HCl. WELL-GRADED SAND with SILT (58-60.5 feet) Dry, dense, no odor. Primarily medium sand with ~10% gravel to 35 mm and	_							
ETHOD LOG YER	4405	SM	~10% silt and clay. The sand is angular to subrounded, the gravel is angular. The fines are nonplastic, are brown, and have a strong reaction to HCl. WELL-GRADED SAND with SILT (60.5-61.5 feet) Dry, dense, no odor. Primarily medium sand with ~10% gravel to 20 mm and	_							
SONIC ME	-	SM	~10% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl.	_							

Project Name:	Yerington Gro	oundwater Investigatio	n		v	Vell Nu	mber:	B/W-8		
Soil Boring	Monitorin		Project Nun	iber:			12124	43.021	Sheet <u>6</u> of	f <u>17</u>
Depth (feet) Elevation (feet)		Description		Sample No.	Sample	Lithology	Mell		Remarks	
	and ~40% silt and c subangular. The fin are brown, and have SILTY SAND (62-C Dry, dense, no odor. Primarily coarse to n and ~15% silt and c subangular. The fin strong reaction to Hit SILTY SAND (62-C Dry, very dense, no Primarily medium to and ~25% silt and c subrounded, the gra have low plasticity a strong reaction to Hit SANDY LEAN CL Dry, very hard, no o Primarily silt and cla ~5% gravel to 20 m subangular. The fin toughness, are brow to HCl. SANDY LEAN CL Dry, very hard, no o Primarily silt and cla 60 mm. The sand a fines have medium p (7.5YR 5/3), and have SANDY LEAN CL Dry, very dense, no Primarily medium to and ~25% silt and c subangular. The fin are brown, and have SANDY LEAN CL Dry, very dense, no Primarily silt and cla ~10% gravel to 20 r subangular. The fin are dark yellowish b reaction to HCl. SILTY SAND (69- Dry, very dense, no Primarily medium to mand ~30% silt and cla to subangular. The fin are dark gray, and h SILTY SAND (69- Dry, very dense, no Primarily coarse to f ~20% silt and clay. subangular. The fin are brown, and have SILTY SAND with Dry, very dense, no Primarily coarse to f ~20% silt and clay. subangular. The fin are brown, and have SILTY SAND with Dry, very dense, no Primarily coarse to f ~20% silt and clay. subangular. The fin are brown, and have SILTY SAND with Dry, very dense, no Primarily coarse to f ~15% silt and clay.	odor. of fine sand with ~10% gravel ay. The sand and gravel are as have medium plasticity and 22.5 feet) medium sand with ~10% gravel ay. The sand and gravel are es are nonplastic, are brown, Cl. -64.5 feet) odor. of fine sand with ~10% gravel ay. The sand is subangular. Ind toughness, are brown, and Cl. AY (64.5-66 feet) dor. by with ~35% medium to fine n. The sand and gravel are as have medium plasticity and n (10YR 5/3), and have a stroce AY (66-66.5 feet) dor. by with ~30% sand and ~20% dor. by with ~30% sand and ~20% of gravel are angular to suban plasticity and toughness, are by ve a strong reaction to HCI. AY (67.5-69 feet) dor. by with ~30% medium to fine m. The sand and gravel are as have medium plasticity and a strong reaction to HCI. AY (67.5-69 feet) dor. by with ~30% medium to fine m. The sand and gravel are as have medium plasticity and a strong reaction to HCI. AY (67.5-69 feet) dor. by with ~30% medium to fine m. The sand and gravel are as have medium plasticity and a strong reaction to HCI. GRAVEL (70-71.5 feet) odor. of fine sand with ~10% fine gravel fines have low plasticity and as astrong reaction to HCI. GRAVEL (71.5-73 feet) odor. of fine sand with ~20% gravel to The sand and gravel are angules as re nonplastic, are brown, Cl. GRAVEL (71.5-73.5 feet) odor. of fine sand with ~40% gravel to The sand and gravel are subar as strong reaction to HCI. GRAVEL (73-73.5 feet) odor. The sand and gravel are subar as are nonplastic, are brown, Cl. GRAVEL (73-73.5 feet) odor. The sand and gravel are subar as are nonplastic, are brown, Cl. GRAVEL (73-73.5 feet) odor. The sand and gravel are subar as are nonplastic, are brown, Cl. GRAVEL (73-73.5 feet) odor. The sand and gravel are subar as are nonplastic, are brown, Cl. GRAVEL (73-73.5 feet) odor. The sand with ~40% gravel to The sand with ~40% gravel to	angular to d toughness, vel to 20 mm angular to and have a to 20 mm to The fines d have a e sand and angular to d low ong reaction b gravel to ngular. The orown - t) to 30 mm angular to d toughness, a strong avel to 15 l are angular to 20 mm angular to d toughness, a strong - - - - - - - - - - - - - - - - - - -				LORO ROBOLIO RO			

Proj	ect Nan	ne:	Yerington Groundwater Investigation			_ \	Vell Nu	mber:	B/W-8		
Soil	Boring		Monitoring Well X Project N	umbe	er:			1212	43.021	Sheet _	7 of 17
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology Lithology	Mell		Remarks	
		CL CL	Dry, very dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 10 mm and ~30% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCI. SILTY SAND with GRAVEL (74-75 feet) Dry, very dense, no odor. Primarily sand with ~20% gravel to 40 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCI. WELL-GRADED SAND with SILT and GRAVEL (75-76.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~20% gravel to 20 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCI. SILTY SAND (76.5-78.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~10% gravel to 30 mm and ~30% silt and clay. The sand and gravel are angular to subangular. The fines have low plasticity and toughness, are brown, and have a strong reaction to HCI. SANDY LEAN CLAY (78.5-79 feet) Dry, very hard, no odor. Primarily silt and clay with ~35% medium to fine sand to 2 mm. The sand is subangular to subangular. SANDY LEAN CLAY (79-81.5 feet) Dry, very hard, no odor. Primarily silt and clay with ~35% medium to fine sand and ~10% gravel to 30 mm. The sand is angular to subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCI. SANDY LEAN CLAY (81.5-82 feet) Dry, very hard, no odor. Primarily silt and clay with ~30% medium to fine sand and ~10% gravel to 30 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are pale brown (10YR 6/3), and do not react to HCI. SILTY SAND with GRAVEL (82-85.5 feet) Dry, very hard, no odor. Primarily silt and clay with ~30% medium to fine sand and ~10% gravel to 20 mm. The sand is angular to subangular. The fines have low plasticity and toughness, are brown, and do no								

Proje	ct Nan	ne:	Yerington Groundwater Investigation		Well Number	B/W-8		
Soil I	Boring		Monitoring Well X Project Numb	er:	121	243.021	Sheet	of <u>17</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Crabhic For Contract		Remarks	
- 90 - - - -	4375	CL SM SM SW- SW-	SANDY LEAN CLAY (88.5-89 feet) Dry, very hard, no odor. Primarily silt and clay with ~35% coarse to medium sand and ~5% gravel to 20 mm. The sand is angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and have a weak to no reaction to HCl. SILTY SAND (89-90.25 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~10% gravel to 25 mm and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (90.25-92.25 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~20% fine sand, ~10% gravel to 20 mm and ~20% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are yellowish brown, and do not react to HCl. WELL-GRADED SAND with SILT and GRAVEL (92.25-94.5 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 25 mm and ~10% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are yellowish brown, and do not react to HCl. WELL-GRADED SAND with SILT and GRAVEL (92.25-94.5 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 25 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.					
- 95 - -	4370	CL SM	react to HCl. SANDY LEAN CLAY (94.5-96.75 feet) Dry, very hard, no odor. Primarily silt and clay with ~35% coarse to medium sand and ~5% fine gravel to 15 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and do not react to HCl. SILTY SAND (96.75-98.5 feet) Dry, very dense, no odor.					
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4365	SW- SM	Primarily coarse to medium sand with ~20% fine sand, ~10% gravel to 50 mm, and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are reddish brown, and do not react to HCl. <u>WELL-GRADED SAND with SILT and GRAVEL</u> (98.5-99.5 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 20 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are yellowish brown, and do not react to HCl. <u>SANDY LEAN CLAY</u> (99.5-101.5 feet) Dry, very dense, no odor. Primarily silt and clay with ~50% medium to fine sand with trace fine gravel to 15 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are light brown, and do not react to HCl.					

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Soil	Boring		Monitoring Well X Project Num	ber:			12124	43.021	Sheet _9	17
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks	
-	-	SW- SM	WELL-GRADED SAND with SILT and GRAVEL (101.5-104 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 20 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.	-						
-		SM	SILTY SAND with GRAVEL (104-104.5 feet) Dry, very dense, no odor.							
105 - -	4360	CL	Primarily medium to fine sand with ~20% gravel to 30 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. <u>SANDY LEAN CLAY</u> (104.5-106.5 feet) Dry, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and trace fine gravel to 6 mm. The sand and gravel are subangular. The fines have medium plasticity and toughness, are light olive brown (2.5Y 5/3), and do not react to HCl.	-						
-	-	SM	SILTY SAND with GRAVEL (106.5-108.5 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~15% fine gravel to 15 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.	-						
-	-	CL	SANDY LEAN CLAY (108.5-109.75 feet) Dry, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and trace fine gravel to 7 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and do not react to HCl.							
110-	4355	GW- GM	WELL-GRADED GRAVEL with SILT and SAND (109.75-111 feet) Dry, very dense, no odor. Primarily gravel to 30 mm with ~25% medium to fine sand, ~15% coarse sand, and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, era brown and do not react to UCL							
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	-	CL	are brown, and do not react to HCl. <u>SANDY LEAN CLAY</u> (111-113 feet) Dry, very hard, no odor. Primarily silt and clay with ~20% medium to fine sand and ~5% fine gravel to 10 mm. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are brown (7.5YR 5/4), and do not react to HCl.	-						
SONIC METHOD LOG YERI	-	SM SW- SM	SILTY SAND with GRAVEL (113-114 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 45 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are reddish brown, and do not react to HCl. WELL-GRADED SAND with SILT and GRAVEL (114-115 feet)	-						

Proje	ct Nan	ne:	Yerington Groundwater Investigation		v	Vell Nu	mber:	B/W-8		
Soil	Boring	Γ	Monitoring Well X Project Nur	nber:			12124	43.021	Sheet _	<u>10</u> of <u>17</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks	
115-		SM	Dry, very dense, no odor. Primarily medium to fine sand with ~15% gravel to 45 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (115-115.75 feet)	-						
-	4350		Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 45 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are reddish brown, and do not react to HCl.	-						
-		SC	SILTY SAND with GRAVEL (155.75-116.5 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~35% gravel to 60 mm, and ~15% silt and clay. The sand and created are angular to subangular. The fine ore population							
-			gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY with GRAVEL (116.5-117 feet) Dry, very hard, no odor. Primarily silt and clay with ~25% coarse to medium sand and ~15% gravel to 20 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl.	-						
-		CL	CLAYEY SAND with GRAVEL (117-119 feet) Dry, very dense, no odor. Primarily coarse to fine sand with ~20% gravel to 30 mm and ~30% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness,							
120-		SC	are brown, and do not react to HCl. SANDY LEAN CLAY (119-119.75 feet) Dry, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and							
-	4345	SM	trace fine gravel to 15 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCI. CLAYEY SAND with GRAVEL (119.75-120.5 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~25% gravel to 40 mm, and ~25% silt and clay. The sand and	-						
-			gravel are angular to subangular. The fines have medium plasticity and toughness, are brown, and do not react to HCl. SILTY SAND with GRAVEL (120.5-122 feet) Dry, very dense, no odor.							
-		SM	Primarily coarse to medium sand with ~25% gravel to 20 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (122-122.5 feet)	-						
34LD.GDT 1/31/06		CL	Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 45 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. <u>SILTY SAND with GRAVEL</u> (122.5-123.5 feet) Dry, very dense, no odor.	_						
125 -	4340		Primarily coarse to medium sand with ~25% gravel to 20 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (123.5-126.5 feet)	-						
G YERING			Dry, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and trace fine gravel to 15 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and	1						
SONIC METHOD LOG VERINGTON GPJ BRN&CALD.GDT 1/31/06		SW- SM	toughness, are brown (10YR 5/3), and do not react to HCl. / WELL-GRADED SAND with SILT and GRAVEL (126.5-127.75 feet) Dry to moist, very dense, no odor. Primarily medium to fine sand with ~15% fine sand, ~30% gravel to 40 mm, and ~10% silt and clay. The sand and							

Proje	ct Nan	ne:	Yerington Groundwater Investigation		Well Number:	B/W-8	
Soil I	Boring		Monitoring Well X Project Number:		1212	43.021	Sheet <u>11</u> of <u>17</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description Sample No.	Sample	Graphic Log Graphic Log Mell Kell		Remarks
-		CL	gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. <u>SANDY LEAN CLAY</u> (127.75-129.75 feet) Dry to moist, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and trace fine gravel to 7 mm. The sand and gravel are subangular. The fines have medium plasticity and toughness, are strong brown (7.5YR 5/6), and do not react to HCl.				
130 — - - -	4335	SM	SILTY SAND with GRAVEL (129.75-132.5 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~15% gravel to 30 mm and ~25% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.				
-		CL	SANDY LEAN CLAY (132.5-134 feet) Dry, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and ~5% gravel to 30 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl.				
- 135 -		SM	WELL-GRADED SAND with SILT and GRAVEL (134-134.75 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~25% fine gravel to 17 mm, and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic,				
_		SM	are brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (134.75-135.25 feet)				
-	4330	SW-	Dry, very dense, no odor. Primarily medium to fine sand with ~25% gravel to 28 mm and ~5% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (135.25-135.5 feet)				
&CALD.GDT 1/31/0			Dry, very dense, no odor. Primarily coarse to fine sand with ~20% gravel to 50 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrouned. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (135.5-136 feet)				
RINGTON.GPJ BRN			Dry, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 40 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with SILT and GRAVEL (136-146.5 feet)				
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	× -		Dry to moist, dense, no odor. Primarily coarse to medium sand with ~40% gravel to 55 mm and ~10% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.				

Project N	Nam	e:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-8		
Soil Bor	ing		Monitoring Well X Project N	Numb	er:			12124	43.021	. Sheet	<u>12</u> of <u>17</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Mell		Remarks	
	-	SC	WELL-GRADED SAND with GRAVEL (146.5-150 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with -20% gravel to 40 mm and ~5% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. CLAYEY SAND with GRAVEL (150-154.5 feet) Dry to moist, dense, no odor. Primarily coarse to medium sand with ~15% fne sand, ~15% gravel to 40 mm, and ~25% silt and clay. The sand and gravel are angular to subrounded. The fines have medium plasticity and toughness and do not react to HCl.								

Proje	ect Nan	ne:	Yerington Groundwater Investigation		W	ell Nu	mber:	B/W-8		
Soil I	Boring		Monitoring Well X Project Number:				1212	43.021	Sheet 13	of <u>17</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	•	Sample	Lithology	Log Mell		Remarks	
	4310		WELL-GRADED GRAVEL with SILT and SAND (154.5-156 feet) Moist to saturated, very dense, no odor. Primarily gravel to 60 mm with ~30% coarse to medium sand and ~10% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (156-157.5 feet)							
-			Saturated, medium dense, no odor. Primarily coarse to medium sand with ~15% gravel to 20 mm and ~35% silt and clay. The sand nad gravel are angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.							
-		SM	SILTY SAND with GRAVEL (157.5-159 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~20% gravel to 45 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.							
- 160 -	4305	CL	SANDY LEAN CLAY with GRAVEL (159-162.25 feet) Moist, very hard, no odor. Primarily silt and clay with ~30% coarse to fine sand and ~20% gravel to 40 mm. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl.							
-		ML								
ALD.GDT 1/31/06		IVIL	Moist, very hard, no odor. Primarily silt and clay with ~40% sand and ~10% fine gravel to 15 mm. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown (10YR 5/3), and do not react to HCl.							
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4300	SC	CLAYEY SAND with GRAVEL (164-166 feet) Moist, dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~20% gravel to 30 mm, and ~25% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness and do not react to HCl.	Privite Privit						
SONIC METHOD	-	SW	WELL-GRADED SAND (166-168 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~10% fine gravel to 10 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are	<u></u>						

Р	rojeo	ct Nan	ne:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-8		
S	oil E	Boring		- Monitoring Well 🛛 Project N	lumbe	r:	_		1212	43.021	Sheet <u>14</u>	of <u>17</u>
	Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	-	Sample No.	Sample	Lithology	Mell		Remarks	
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06 L1 21 22 22 22 22 22 22 22 22 22 22 22 22	- - - - 5-	4295	CL SC SM	SANDY LEAN CLAY with GRAVEL (168-169 feet) Moist, hard, no odor. Primarily silt and clay with ~25% sand and ~25% gravel to 30 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCL. CLAYEY SAND with GRAVEL (169-176 feet) Moist, dense, no odor. Primarily coarse to medium sand with ~20% fine sand, ~15% gravel to 30 mm, and ~25% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown, and do not react to HCl. SILTY SAND with GRAVEL (176-179 feet) Moist to saturated, dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~35% gravel to 60 mm, and ~15% silt and clay. The sand is and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown, and do not react to HCl. SILTY SAND with GRAVEL (176-179 feet) Moist to saturated, dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~35% gravel to 60 mm, and ~15% silt and clay. The sand is and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (179-184 feet) Saturated, medium dense, no odor.	-	B/W/8 @ 165 - 170 Ft.						
SONIC ME	-			Primarily coarse to medium sand with $\sim 25\%$ fine sand, trace fine gravel to 15 mm, and $\sim 15\%$ silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic,	-							

Project Name:	Yerington Groundwater Investigation		Well Number:	B/W-8	
Soil Boring	Monitoring Well X Project Number:	:	1212	43.021	Sheet <u>15</u> of <u>17</u>
Depth (feet) Elevation (feet) USCS Group Symbol	Description	Sample	Graphic Log		Remarks
4285 - - - - - - - - - - - - - - - - - - -	are brown, and do not react to HCl. WELL-GRADED SAND with SILT and GRAVEL (184-185.5 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~35% gravel to 42 mm, and ~10% silt and clay. The sand and gravel to 42 mm, and ~10% silt and clay. The fines are nonplastic, are brown, and do not react to HCl. CLAYEY SAND (185.5-187.25 feet) Moist to saturated, dense, no odor. Primarily medium to fine sand with ~5% fine gravel to 12 mm and ~25% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and low toughness, are brown, and do not react to HCl. SILITY SAND (187.25-188 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% gravel to 20 mm and ~15% silt and clay. The sand sis subangular to subrounded. The fines have medium plasticity and low toughness, are brown, and do not react to HCl.				
SONIC METHOD LOG VERNAGTON.GPU BRN&CALD.GDT 131/06	subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl. <u>SILTY SAND with GRAVEL</u> (176-179 feet) Dry to moist, dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~35% gravel to 60 mm, and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. <u>WELL-GRADED SAND</u> (189.5-190.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% fine gravel to 8 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. <u>SILTY SAND with GRAVEL</u> (190.5-194.25 feet) Saturated, dense, no odor. Primarily sand with ~20% gravel to 40 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.				

Proje	ct Nan	ne:	Yerington Groundwater Investigation		_ \	Well Nu	mber:	B/W-8	
Soil	Boring		Monitoring Well 🗴 Project Nu	mber:			1212	43.021	Sheet <u>16</u> of <u>17</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Graphic Lithology	Mell		Remarks
- - 195 -	4270	SM	SILTY SAND with GRAVEL (190.5-194.25 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~20% coarse sand, ~20% gravel to 25 mm, and ~15% silt and clay. The sand and gravel are angular to subangular. The fines have low plasticity and toughness, are brown, and do not react to HCl.	-					
	4265	SM SM CL	 WELL-GRADED SAND with SILT (197-197.5 feet) Dry to moist, very dense, no odor. Primarily coarse to medium sand with ~20% fine sand, ~5% gravel to 35 mm, and ~10% silt and clay. The sand and gravel are subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (197.5-198 feet) Dry to moist, very hard, no odor. Primarily silt and clay with ~30% coarse to medium sand, ~15% fine sand, and ~5% fine gravel to 15 mm. The sand and gravel are subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and do not react to HCl. SILTY SAND (198-199.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% gravel to 20 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines have low plasticity and toughness, are brown, and do not react to HCl. SILTY SAND (199.5-201 feet) Dry to moist, very dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~5% fine gravel to 10 mm, and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY with GRAVEL (201-204 feet) Dry to moist, very hard, no odor. Primarily silt and clay with ~30% sand and ~20% gravel to 50 mm. The sand and gravel are angular. The fines have medium plasticity and toughness and the upper 0.5 feet have a weak reaction to HCl, the lower 2.5 feet have a strong reaction to HCl. 						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4260	GW- GM	WELL-GRADED GRAVEL with SILT and SAND (204-206.5 feet) Dry, very dense, no odor. Primarily gravel to 25 mm with ~30% coarse to medium sand and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic and have a strong reaction to HCl. The upper 1.25 feet are pinkish white (5YR 8/2), the lower 1.25 feet are pale red (10R 6/4).	-					

Proje	ect Nan	ne:	Yerington Groundwater Investigation			_ \	Vell Nu	mber:	B/W-8	
Soil	Boring	[Monitoring Well X Project N	lumbe	er:			1212	43.021	Sheet <u>17</u> of <u>17</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	-	Sample No.	Sample	Lithology	Mell		Remarks
SONIC METHOD LOG VERNGTON.GPJ BRN&CALD.GDT 1/3//06	4255		DECOMPOSED GRANITE (206.5-213.5 feet) Dry, very dense, no odor. Fractured decomposed granite with ~15 to 25% secondary silt and clay. The fines have medium plasticity and toughness, have a strong reaction to HCl, and are light reddish brown (2.5YR 6/4) to reddish yellow (5YR 6/6) to pink (5YR 8/3).							

Proje	ct Nan	ne:	Yerington Groundwater In	vestigation			W	ell Nun	nber:	B/W	-9	
Soil	Boring	[Monitoring Well	Project I	Numbe	r:]	1212	243.021		eet <u>1</u> of <u>13</u>
Borir	ng Loca	ation:	North of mine tailings, east	of Sunset Hills Driv	e	Ε	leva	ation: 4	135 1	.3 feet amsl		323810.1 1558835.3
Drilli	ing Co	ntract	or: WDC	Driller: B. Zamow		-8		Started:	9	/11/05	Date Finished:	9/14/05
Drilli	ng Equ	iipme	ent: Gus Pech GP24-400RS, I	Diedrich Sonic Head			'otal Depti	h: (feet)	10	5.5	Water Depth: (feet)	22.5' / 17.11'
Sam	oling N	letho	d: Core Barrel	Borehole Diameter: 6'	•	g a	nd N	Diamete Material	er	2-inch PVC		
Drilli	ng Me	thod:	Sonic, utilized 6'' casing an	d a 4.5'' core barrel		MC		ened Inte Well Dej		144.8-164	.8 ft., bottom	at 165.0 ft.
Well	Seal:	Bei	ntontite and Cement			S S	lot S	Size: 0	.02	0'' Filter Ma	terial: #10-20) Silica Sand
Logg	ed By:	C.	Gardner			XXXXX D	Deve	lopment	Me	hod: Swab	bed, bailed, j	pumped
0000000		nbol	***************************************	***************************************	~~~~~~			raphic L		_		***************************************
(feet)	n (fee	Group Symbol			Ň	6 NO.	e	gy				
Depth (feet)	Elevation (feet)	Grou	Description		Inne	Sample No.	Sample	Lithology	Well		Remar	ks
	Ele	USCS			0	2	2	E				
		SC	CLAYEY SAND (0-1.5 feet) Dry, loose, no odor.								s of drilled cutti Method D-2488	
-			Predominately medium to fine sand v ~5 mm and ~20% silt and clay. The	sand is subangular to	-					visual-man determinati	ual procedure), g	rain-size lature
	12.50		subrounded. The fines have medium toughness, are brown, and have a we	plasticity and low ak reaction to HCl.	-						e Unified Soil C insell colors des	
-	4350	SC	CLAYEY SAND (1.5-8 feet)							Horizontal	survey data is ex	pressed in
_		30	Dry to moist, medium dense, no odor Predominately medium to fine sand v	with trace coarse sand to						the Nevada	State Plane syst est zone, in feet.	em,
			~5 mm and ~20% silt and clay. The subrounded. The fines have medium	sand is subangular to plasticity and low							,	
-			toughness, are brown, and have a we	ak reaction to HCl.	1							
-					-					Sharp conta	acts indicated by contacts indicat	solid lines,
-					-					dashed line		ed by
-					_					All depths :	are below land s	urface
-										unless state	d otherwise.	
_										Š.		
5-										WELL DE	SIGN for B/W-9	D:
-					-					Screened Ir	nterval: 144.8-16	
31/06	4345				-					8	sump: 165 feet.	
GDT 1,					-						out: 0-132.2 feet Chips: 132.2-142	
CALD.										Filter Pack:	#60 Sand 142.5 0 Sand 143.5-16	5-143.5
BRN&												
DN.GPJ												
		CL	SANDY LEAN CLAY (8-9.5 feet) Dry to moist, stiff, no odor.							Depth to W Top of PVO	ater Measuring	Point is
- JG VEL			Predominately silt and clay with ~40 to 1 mm. The sand is subangular to	subrounded. The fines	-					Top of PVC	C Elevation: 4,35	3.84 feet,
- 100 FC			have medium plasticity and toughnes (10YR 5-2), and have a strong reaction		-					amsl. PVC Stick- surface.	up: 2.5 feet abov	ve land
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		SM	SANDY LEAN CLAY (10.5-12 feet							Surfuce.		
SONIC		JIVI	Dry to moist, stiff, no odor.				, ,		§ [8		

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-9		
Soil	Boring	Γ	Monitoring Well X Project Nu	nber:			12124	3.021	Sheet <u>2</u>	of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks	
	4340	CL SM SC	Predominately silt and clay with ~30% medium to fine sand to 1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and have a weak to strong reaction to HCl. SANDY LEAN CLAY (10.5-12 feet) Dry to moist, stiff, no odor. Predominately silt and clay with ~30% medium to fine sand to 1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and have a weak to strong reaction to HCl. SILTY SAND (12-14 feet) Dry, medium dense, no odor. Predominately medium to fine sand with ~5% coarse sand to 4 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl.				NONONONONONONONONONON			
15 – -	4335	SM CL SM CL	Dry to moist, medium dense, no odor. Predominately fine sand (<0.5 mm) with ~35% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are brown, and do not react to HCl. <u>SILTY SAND</u> (15-15.5 feet) Moist, medium dense, no odor. Predominately medium to fine sand with trace fine gravel to 5 mm and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic and are light brown.	-						
	<u>+333</u> -		SANDY LEAN CLAY (15.5-15.75 feet) Dry to moist, soft, no odor. Predominately silt and clay with ~40% medium to fine sand to 0.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4-3), and do not react to HCl. SILTY SAND (15.75-16 feet) Moist, loose, no odor. Predominately medium to fine sand with trace fine gravel to 5 mm and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic and are light brown.	-						
- 02 - 02 - 02 - 02 - 02 - 02 - 02 - 02			SANDY LEAN CLAY (16-21.5 feet) Dry to moist, stiff, no odor. Predominately silt and clay with ~40% medium to fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4-3), and do not react to HCl.	-						
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4330 	SC SW- SM SP-	CLAYEY SAND (21.5-22 feet) Moist, medium dense, no odor. Predominately medium to fine sand with trace fine gravel to 10 mm and ~30% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and low toughness, are brown, and do not react to HCl.	-						
SONIC METHOD I	¥	SM	10 mm and ~30% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity							

Pr	oje	et Nan	ne:	Yerington Groundwater Investigation			_ \	Vell Nu	mber:	B/W-9		
So	oil E	Boring	Γ	Monitoring Well X Project N	Numb	er:			1212	43.021	Sheet 3	of <u>13</u>
(40	er)	feet)	Symbol			Io.	(Graphic	Log	-		
Danth (fact)	ar) Indari	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks	
25		1005	SP	Predominately medium to fine sand with trace coarse sand to ~5 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. POORLY-GRADED SAND with SILT (22.5-22.75 feet) Moist, dense, no odor. Predominately medium to fine sand to 1 mm with ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (22.75-25.5 feet) Saturated, medium dense, no odor. Predominately medium to fine sand with ~5% fine gravel to 12 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic and are brown. POORLY-GRADED SAND (25.5-25.75 feet) Saturated, medium dense, no odor.	-							
	_	4325	CL	Predominately fine sand (<0.5mm) with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (25.75-26.25 feet)	_							
	_		SM	Moist, dense, no odor. Predominately fine sand (<0.5mm) with ~25% silt and clay. The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown, and do not react to HCl. POORLY-GRADED SAND (26.25-26.75 feet) Saturated, dense, no odor. Predominately fine sand (<0.5mm) with ~5% silt and clay.	-	31 Ft.						
	_		SW- SM	The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (26.75-27 feet) Dry to moist, firm, no odor. Predominately silt and clay with ~40% medium to fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown	_	B/W-9 @ 26 -						
				(10YR 4-3), and do not react to HCL. POORLY-GRADED SAND with SILT (27-28.25 feet)								
30)		SM	Saturated, medium dense, no odor. Predominately medium to fine sand to 2 mm with ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with SILT (28.25-29.5 feet) Moist, dense, no odor.	-							
06	_	4320		Predominately medium to fine sand with ~5% fine gravel to 8mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are gravish brown, and do not react to HCl. SANDY LEAN CLAY (29.5-29.75 feet) Dry to moist, firm, no odor. Predominately silt and clay with ~40% medium to fine sand	-							
.GDT 1/31/	-		SW	to 0.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4-3), and do not react to HCl.	-							
SONIC METHOD LOG VERINGTON.GPJ BRN&CALD.GDT 1/31/06	-			WELL-GRADED SAND with SILT (29.75-31 feet) Predominately medium to fine sand with trace fine gravel to 6 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are yellowish brown, and do not react to HCl. SANDY LEAN CLAY (31-32.25 feet)	-							
YERINGTO	-		20	Dry to moist, stiff, no odor. Predominately silt and clay with ~40% fine sand (<0.5mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and do not react to HCl								
907 GO	5 –		CT	do not react to HCl. WELL-GRADED SAND (32.25-33 feet) Saturated, medium dense, no odor.								
SONIC METH	-			Predominately medium to fine sand to 1 mm with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. CLAYEY SAND (33-34 feet)								

Proje	ect Nar	ne:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-9		
Soil	Boring		Monitoring Well X Project	Numl	oer:			1212	43.021	Sheet 4	of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Mell		Remarks	
		고 SCS W W W W W W W W W W W W W W W W W W	 Moist, stiff, no odor. Predominately medium to fine sand to 1 mm with ~45% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and do not react to HCl. CLAYEY SAND (34-34.75 feet) Moist, medium dense, no odor. Predominately medium to fine sand with ~10% coarse sand to 4 mm and ~45% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and do not react to HCl. WELL-GRADED SAND (34.75-35 feet) Saturated, medium dense, no odor. Predominately medium to fine sand to 1 mm with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (35-35.5 feet) Moist, hard, no odor. Predominately silt and clay with ~40% medium to fine sand to 1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4-3), and do not react to HCl. WELL-GRADED SAND with SILT (35.5-36.75 feet) Saturated, medium to fine sand with ~10% fine gravel to 10 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (37.37 feet) Moist, stiff, no odor. Predominately silt and clay with ~35% medium to fine sand and ~5% coarse sand to 3 mm. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (37-38.25 feet) Saturated, medium dense, no odor. Predominately medium to fine sand to 1 mm with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (37-38.25 feet) Saturated, medium dense, no odor. Predominate		B/W-9 @ 38 - 43 Ft. Sa		Litt	LA CHARTANA NA CHARTANA CHARTAN			
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4305	CL SM- CL CL	subounded. The fines have medium plasticity and toughness, are dark grayish brown (10YR 4-2), and do not react to HCl. SANDY LEAN CLAY (45.25-45.5 feet) Moist, hard, no odor. Predominately silt and clay with ~40% medium to fine sand to 2 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (7.5YR 5-4), and do not react to HCl. SANDY LEAN CLAY (45.5-46 feet) Moist, no odor. Predominately silt and clay with ~50% medium to fine sand to 2 mm. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are brown (10YR 5-3), and do not react to HCl. WELL-GRADED SAND with SILT (46-46.75 feet) Saturated, medium dense, no odor. Predominately coarse to medium sand with ~15% fine sand, ~10% fine gravel to 8 mm and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are								

Projec	rt Nan	ne:	Yerington Groundwater Investigation		Well Nu	mber:	B/W-9		
Soil B	oring		Monitoring Well X Project Number:	_		12124	43.021	Sheet	5_ of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description Output State	Sample	Graphic Fithology	Mell		Remarks	
50	<u>4300</u>	CL CL	nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (46.75-47.5 feet) Moist, firm, no odor. Predominately silt and clay with ~50% medium to fine sand to 2 mm. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are brown (10YR 4-3), and do not react to HCl. SANDY LEAN CLAY (47.5-49.5 feet) Moist, stiff, no odor. Predominately silt and clay with ~40% fine sand (<0.5mm). The fines have medium plasticity and low toughness, are brown (10YR 5-3), and do not react to HCl. LEAN CLAY (49.5-51 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~10% fine sand (<0.5mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and do not react to HCl. SANDY LEAN CLAY (51-54 feet) Dry to moist, firm to hard, no odor. Predominately silt and clay with ~30% fine sand (<0.5mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and do not react to HCl. SANDY LEAN CLAY (51-54 feet) Dry to moist, firm to hard, no odor. Predominately silt and clay with ~30% fine sand (<0.5mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3) to yellowish brown (10YR 5-4), and have a strong reaction to						
	4295	CL	HCl. LEAN CLAY (54-55 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~10% fine sand (<0.5mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and have a strong reaction to HCl. SANDY LEAN CLAY (55-56 feet) Moist, hard, no odor. Predominately silt and clay with ~35% medium to fine sand to 1.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are dark yellowish brown (10YR 4-4), and do not react to HCl. SILTY SAND (56-57.5 feet) Saturated, medium dense, no odor. Predominately medium to fine sand with ~5% coarse sand to 3 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						
SONIC METHODLOG YEKINGTONGEN BRIN&CALD.GDI 7/37/06			SANDY LEAN CLAY (57.5-58.75 feet) Moist, hard, no odor. Predominately silt and clay with ~35% medium to fine sand to 1.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are dark yellowish brown (10YR 4-4), and do not react to HCl. CLAYEY SAND (58.75-59.5 feet) Moist, dense, no odor. Predominately medium to fine sand to 1 mm with ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and do not react to HCl. SILTY SAND (59.5-61 feet) Moist, medium dense, no odor. Predominately medium to fine sand to 1 mm with ~20% silt and clay. The sand is subangular to subrounded. The fines have medium dense, no odor. Predominately medium to fine sand to 1 mm with ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						
	<u>4290</u>		SANDY SILT (61-61.75 feet) Moist, stiff, no odor. Predominately silt and clay with ~40% medium to fine sand to 2 mm. The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown (10YR 5-3), and do not react to HCl. WELL-GRADED SAND (61.75-64 feet)						

Proj	ect Nar	ne:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-9	
Soil	Boring		Monitoring Well X Project Numb	er:			1212	43.021	Sheet <u>6</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks
-	-		Saturated, medium dense, no odor. Predominately medium to fine sand with trace coarse sand to ~5 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	/-9 @ 60 - 65 Ft.					
65 -	-	SC	CLAYEY SAND (64-67.5 feet) Moist, dense, no odor. Predominately fine sand (<0.5mm) with ~40% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a weak reaction to HCl.	B/W-9					
-	4285	CL	SANDY LEAN CLAY (67.5-70.75 feet) Dry to moist, hard, no odor.						
-			Predominately silt and clay with ~40% medium to fine sand and ~5% fine gravel to 8 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness and are brown (10YR 4-3).						
70-		SW- SM	WELL-GRADED SAND with SILT (70.75-71.5 feet) Saturated, medium dense, no odor.						
CALD.GDT 1/31/06	4280	CL	Predominately medium to fine sand with trace fine gravel to 5 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (71.5-78.5 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~30% medium to fine sand to 15 mm. The send is explained at the fines						
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06 			to 1.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown (10YR 5-2), and do not react to HCl.						
SONIC METHOD LC			_						

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-9		
Soil	Boring		Monitoring Well X Project Numb	er:	_		1212	43.021	Sheet _	7 of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Graphic Lithology	Mell		Remarks	
	4275	SM SW SM	WELL-GRADED SAND with SILT (78.5-80 feet) Saturated, medium dense, no odor. Predominately medium to fine sand with ~5% coarse sand to 3 mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (80-81.75 feet) Saturated, medium to fine sand with trace fine gravel to 10 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (81.75-83.75 feet) Saturated, dense, no odor. Predominately fine sand (<0.5mm) with ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.	B/W-9 @ 78 - 83 Ft.						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4265	SM SW CL	Saturated, medium dense, no odor. Predominately medium to fine sand with trace coarse sand to 3 mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are light brown, and have a weak to strong reaction to HCl. <u>SILTY SAND</u> (81.75-83.75 feet) Dry to moist, very dense, no odor. Predominately medium to fine sand to 0.5 mm with ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and have a weak to strong reaction to HCl. <u>WELL-GRADED SAND</u> (85-86.5 feet) Saturated, medium dense, no odor. Predominately coarse to medium sand to 4 mm and ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. <u>SANDY LEAN CLAY</u> (86.5-87.5 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~35% medium to fine sand to 1.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and have a strong reaction to HCl. <u>WELL-GRADED SAND</u> (87.5-88 feet) Saturated, medium dense, no odor.							

Projec	et Nan	ne:	Yerington Groundwater Investigation			Well Number:	B/W-9	
Soil E	Boring	[Monitoring Well X Project Nu	nber:		12124	43.021	Sheet <u>8</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Graphic Log Solopoly MeII MeII		Remarks
90-	4260		Predominately coarse to medium sand to 4 mm and ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (88-89 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~30% medium to fine sand to 1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4-3), and do not react to HCl. SILTY SAND (89-90.75 feet) Saturated, medium dense, no odor. Predominately medium to fine sand to 1 mm with ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. LEAN CLAY (90.75-91 feet) Dry to moist, firm, no odor. Predominately silt and clay with ~10% fine sand (<0.5mm). The fines have medium plasticity and toughness, are reddish brown (5YR 5-3), and have a strong reaction to HCl. CLAYEY SAND (91-93 feet) Moist, medium dense, no odor.					
95 -	4255	sc	 Predominately medium to fine sand with ~10% coarse sand to 3 mm and ~25% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. CLAYEY SAND (93-94 feet) Moist, dense, no odor. Predominately medium to fine sand with ~10% coarse sand to 3 mm and ~25% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are brown, and have a weak reaction to HCl. SANDY LEAN CLAY (94-96.75 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~30% medium to fine sand to 1 mm. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are brown (10YR 4-3), and do not react to HCl. 					
2J BRN&CALD.GDT 1/31/06			CLAYEY SAND (96.75-98.5 feet) Dry to moist, dense, no odor. Predominately fine sand (<0.5mm) and ~30% silt and clay.					
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4250	00	SILTY SAND (100.5-101 feet) Moist to saturated, medium dense, no odor. Predominately medium to fine sand with trace coarse sand to 3 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not					

Project N	Jame	e:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-9		
Soil Bori	ing		Monitoring Well X Project	Numb	er:			12124	43.021	Sheet 9	of <u>13</u>
Depth (feet) Elevation (feet)		USCS Group Symbol	Description		Sample No.	Sample	Tithology Lithology	Mell		Remarks	
SONIC METHOD LOG VERINGTON.GPJ BRN&CALD.GDT 1/3/06	45	SC SC	Teact to HCI. CLAYEY SAND (101-102 feet) Dry to moist, dense, no odor. Predominately fine sand (<0.5mm) and ~20% silt and clay.					A A A A A A A A A A A A A A A A A A A			

Proje	ct Nan	ne:	Yerington Groundwater Investigation	_ ,	Well Nun	nber:	B/W-9	
Soil I	Boring		Monitoring Well X Project Number:			12124	43.021	Sheet <u>10</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample	Graphic I Tithology	Mell 60		Remarks
	4235	C						
- 120		SM	SANDY LEAN CLAY (118-120 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~40% medium to fine sand and ~5% coarse sand to 4 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4-3), and do not react to HCl. SILTY SAND (120-121 feet) Saturated, medium dense, no odor. Predominately medium to fine sand to 0.5 mm with ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.					
SONIC METHOD LOG VERINGTON.GPJ BRN&CALD.GDT 1/31/06	4230	GIV	SILTY SAND (121-121.5 feet) Saturated, medium dense, no odor. Predominately medium to fine sand to 0.5 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (121.5-122 feet) Saturated, medium dense, no odor. Predominately medium to fine sand with trace coarse sand to 3 mm and ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (122-127 feet) Saturated, medium dense, no odor. Predominately medium to fine sand to 0.5 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.					
SONIC METHOD LOG YERI	4225	CL	SANDY LEAN CLAY (127-132.5 feet) Dry to moist, hard, no odor. Predominately silt and clay with ~40% fine sand (<0.5mm).					

Proje	ct Nan	ne:	Yerington Groundwater Investigation			_ \	Vell Nu	mber:	B/W-9		
Soil E	Boring	Γ	Monitoring Well X Project	Numb	er:			12124	43.021	Sheet <u>11</u> of	13
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Mell		Remarks	
	4220		The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are dark gray (GLEY N4-1), and do not react to HCl.								
		SP	POORLY-GRADED SAND (132.5-135 feet) Saturated, dense, no odor. Predominately medium to fine sand to 1 mm with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.								
SONIC METHOD LOG VERINGTON GPJ BRN&CALD/GDT 1/31/06	4215	SC	CLAYEY SAND (135-139.25 feet) Moist, dense, no odor. Predominately fine sand (<0.5mm) and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are yellowish brown, and do not react to HCl.	- - - -							
SONIC METHOD LOG YE		SP SP- SM	POORLY-GRADED SAND (139.28-140 feet) Saturated, dense, no odor. Predominately medium to fine sand to 2 mm with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are reddish brown, and do not react to HCl. POORLY-GRADED SAND with SILT (140-143.25 feet) Saturated, dense, no odor. Predominately medium to fine sand to 1 mm with ~10% silt								

Proje	ct Nan	ne:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-9	
Soil I	Boring		Monitoring Well X Project Numb	er:			1212	43.021	Sheet <u>12</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks
-	4210	1	and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						
-		SC	CLAYEY SAND (143.25-145 feet) Moist, dense, no odor. Predominately fine sand (<0.5mm) and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are yellowish brown, and do not react to HCl.						
145 — - - -	4205	SP	POORLY-GRADED SAND (145-147.25 feet) Saturated, dense, no odor. Predominately medium to fine sand to 0.5 mm with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						
-		SM SP	SILTY SAND (147.25-148 feet) Saturated, dense, no odor. Predominately fine sand (<0.5mm) with ~30% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. POORLY-GRADED SAND (148-149 feet) Saturated, dense, no odor. Predominately medium to fine sand to 0.5 mm with ~5% silt and clay. The sand is subangular to subrounded. The fines						
	4200	CL SP	are nonplastic, are brown, and do not react to HCl. LEAN CLAY with SAND Dry to moist, hard, no odor.						
		CL SM CL	SANDY LEAN CLAY (151.5-152 feet) Moist, stiff, no odor. Predominately silt and clay with ~40% fine sand (<0.5mm).						

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ `	Well Nu	mber:	B/W-9	
Soil	Soil Boring Monitoring Well Project Number:				1212	43.021	Sheet <u>13</u> of <u>13</u>		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Graphic Lithology	Mell		Remarks
SONIC METHOD LOG YERNRCALD.GDT 1/31/06	4195	SM	Predominately silt and clay with -35% medium to fine sand to 1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5-3), and do not react or HCI. SILTY SAND (155.5-156 feet) Moist to saturated, medium dense, no odor. Predominately medium to fine sand to 1.5 mm with ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCI. SILTY SAND (156.157 feet) Saturated, medium dense, no odor. Predominately medium to fine sand with ~10% coarse sand to 3 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCI. WELL-GRADED SAND (157-163 feet) Saturated, medium dense, no odor. Predominately medium to fine sand with ~5% coarse sand to ~5 mm with ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCI.						
SONIC									

Proj	ect Nan	ne:	Yerington Groundwater In	nvestigation			Well Nu	ımbe	er:	B/W-	-10		
Soil	Boring		Monitoring Well	Project 1	Numbe	r: _		12	124	3.021			t <u>1</u> of <u>13</u>
Bor	ing Loc	ation:	North of Sunset Hills reside	ential area		Ele	evation:	43	41.0	6 feet amsl			324460.1 1569181.6
Dril	ling Co	ntract	or: WDC	Driller: B. Zamow		-04	te Starte	ed:	7/2	6/05		inished:	8/5/05
Dril	ling Equ	iipme	ent: Gus Pech GP24-400RS, I	Diedrich Sonic Head		To De	tal pth: (fee	et)	165	5.0	Water (feet)		22' / 19.49'
Sam	pling N	letho	d: Core Barrel	Borehole Diameter: 6'	,	W an	ell Diam d Materi	eter al:	2-	inch PVC			
Dril	ling Me	thod:	Sonic, utilized 6'' casing an	d a 4.5" core barrel		N	reened Iı d Well E			100.6-120.	6 ft., b	ottom a	at 120.8 ft.
Wel	l Seal:	Ber	ntontite and Cement			Slo	ot Size:	0.0)20'	Filter Mat	erial:	#10-20	Silica Sand
Log	ged By:	C.	Gardner			De	evelopme	ent N	1eth			ailed, pu	
000000		abol 8	*****		~~~~~		Graphic		3	000000000000000000000000000000000000000	000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000
feet)	ı (feet	p Syn			Ĩ	. 100.	, A						
Depth (feet)	Elevation (feet)	Grou	Description			Sample 100.	Lithology	II ~ IM	меп			Remarks	
	Ele	USCS Group Symbol			2		rr: "						
		CL	LEAN CLAY (0-14 feet) Dry, hard, no odor.			╈		匒		Descriptions on ASTM M			
	-		Primarily silt and clay with ~10% m trace coarse sand to ~3 mm. The same	nd is subangular to	-					visual-manu determinatio	al proce	edure), gra nomencla	in-size ture
-	-		subrounded. The fines have medium toughness, are brown ($10YR 4/3$), and	n plasticity and nd have a strong reaction	_					based on the System. Mu			
	- 4340		to HCl.		_								
_													
										Horizontal s the Nevada	State Pla	ane syster	essed in n,
										Nevada Wes	st zone,	in feet.	
-					-					Sharp contac gradational	cts indic	ated by so	olid lines,
	-				-			Ø		dashed line.	contacts	mulcaleu	l by
-	-				_			×.		All depths a	re helov	v land sur	face
	_									unless stated	l otherw	vise.	luce
5-										WELL DES	IGN for	• B/W-10I).
	-									Screened Int	terval: 1	00.6-120.	
31/06	-				-					Bottom of su	-		
3DT 1/	- 4335				-					Cement Gro Bentonite C			
- CALD.	-									Filter Pack: #10-20 Sand	#60 Sar	nd 96-96.5	feet,
BRN&										Bentonite C			eet
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06													
-										Depth to Wa Top of PVC			oint is
IG YEF	1				-			Ø	Ď	Top of PVC	-		08 feet,
- 10D LC	-				-			\mathbb{X}		amsl. PVC Stick-u surface.	ıp: 2.5 f	eet above	land
C METH	-				_					Surrace.			
SONIC								\mathbb{N}					

Project Nam	e:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-10	
Soil Boring	Γ	Monitoring Well X Project Numb	er:			12124	43.021	Sheet <u>2</u> of <u>13</u>
Depth (feet) Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Craphic Lithology	Mell		Remarks
- <u>4330</u> - - - - - - - - - - - - - - - - - - -	CL	SANDY LEAN CLAY (14-15.5 feet) Dry, hard, no odor. - Primarily silt and clay with ~50% medium to fine sand and trace coarse sand to 4 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. WELL-GRADED SAND with GRAVEL (15.5-17 feet) Moist to dry, loose, no odor. Primarily coarse to medium sand with ~20% fine gravel to ~15 mm and ~5% silt and clay. The sand and gravel are				YAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYA		
NGPJ BRN8CALD.GDT 1/31/06	SM CL SM	subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (17-18 feet) Moist, medium dense, no odor. Primarily coarse to medium sand with ~40% gravel and ~25% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (18-19.5 feet) Moist to dry, medium dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~5% fine gravel to ~8 mm, and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. GRAVELLY LEAN CLAY with SAND (19.5-20.5 feet) Moist, hard, no odor. Primarily silt and clay with ~20% sand and ~30% gravel to ~25 mm. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4/3), and do not react to HCl. SILTY SAND with GRAVEL (20.5-21 feet) Dry, medium dense, no odor. Primarily medium to fine sand with ~20% gravel and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subrounded. The fines have low plasticity and toughness, are brown, and do not react to HCl. WELL-GRADED SAND (21-24.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~25 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fines are nonplastic, are brown, and do not react to HCl.				XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		

P	roje	ct Nan	ne:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-10		
S	oil E	Boring		Monitoring Well X Project Nur	ber:			1212	243.021	Sheet _	<u>3 of 13</u>
	Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks	
2		4315		 WELL-GRADED SAND (24.5-25 feet) Saturated, medium dense, no odor. Primarily medium to fine sand to ~1.5 mm with trace silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (25-26 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~20% fine sand, ~35% gravel to ~30 mm, and trace silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (26-27.5 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~35% gravel to ~30 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular to subrounded, the gravel to rounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED SAND (27.5-29.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% coarse sand to ~4 mm with trace silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. 	B/W-10 @ 26 - 31 Ft.			II.K.U.K.U.K.U.K.U.K.U.K.U.K.U.K.U.K.U.K			
3	- 0 -		ML	WELL-GRADED GRAVEL with SILT and SAND (29.5-30 feet) Saturated, medium dense, no odor. Primarily gravel to ~20 mm with ~20% medium to fine sand, ~15% coarse sand, and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. SILT (30-32 feet) Moist, soft, no odor.							
1/31/06	-	4310	CL	Primarily silt and clay with ~10% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have low to medium plasticity and low toughness, are olive brown (2.5Y 4/3), and do not react to HCl. Some black organic streaks.							
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06			ML CL	Dry to moist, stiff, no odor. Primarily silt and clay with ~10% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. SILT (32.5-33.5 feet) Moist, soft, no odor. Primarily silt and clay with ~10% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have low to medium plasticity and low toughness, are olive brown (2.5Y 4/3), and do not react to HCl. Some black organic streaks.							
SONIC METHOD LOG Y	5 —		CL	LEAN CLAY (33.5-35.5 feet) Dry to moist, stiff, no odor. Primarily silt and clay with ~10% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. Some black organic streaks. LEAN CLAY (35.5-37.5 feet) Moist, very soft, no odor.							

Pro	ject Na	ime:		Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-10		
So	1 Borin	<u> </u>	Ľ	Monitoring Well X Project Num	ber:	121243 Graphic Log		12124	43.021	Sheet <u>4</u>	of <u>13</u>
Denth (feet)	Elevation (feet)	USCS Group Symbol	toon of an	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks	
	- <u>430</u>	5		Primarily silt and clay with ~20% medium to fine sand and trace coarse sand to ~3 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. Some black organic streaks.	-						
	_	CI	L	SANDY LEAN CLAY (37.5-38.5 feet) Moist, stiff, no odor. Primarily silt and clay with ~30% medium to fine sand and trace fine gravel to ~15 mm. The sand and gravel are subangular to subrounded. The fines have medium plasticity							
40	-	SW SN	v - I	and toughness, are brown (10YR 5/3), and do not react to HCI. WELL-GRADED SAND with GRAVEL (38.5-40.5 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~20% coarse sand, ~25% gravel to ~25 mm, and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCI.	-						
	-	CI		SANDY LEAN CLAY (40.5-41.5 feet) Moist, hard, no odor. Primarily silt and clay with ~35% medium to fine sand and trace coarse sand to ~4.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and							
	- <u>430</u> 	SN	М	toughness, are brown (10YR 4/3), and do not react to HCl. SILTY SAND with GRAVEL (41.5-44.5 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~15% gravel to 20 mm, and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines have low plasticity and toughness, are brown, and do not react to HCl.							
45 ۲	-	SN	Л	SILTY SAND with GRAVEL (44.5-48.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~15% – fine gravel to ~15 mm, and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are	-						
2J BRN&CALD.GDT 1/3	- - <u>429</u>	5		nonplastic, are brown, and do not react to HCl.	-						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	-			-							
SONIC METH	-	SN SV		SILTY SAND (48.5-49 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% fine gravel to ~15 mm and ~20% silt and clay. The sand and gravel are							

Proje	ect Nan	ne:	Yerington Groundwater Investigation		v	Vell Nu	mber:	B/W-10	
Soil	Soil Boring		:	_		12124	43.021	Sheet <u>5</u> of <u>13</u>	
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	out orduing	Sample	Lithology Lithology	Mell		Remarks
50 	4290	SW- SM	subangular to subrounded. The fines are nonplastic, and are brown. WELL-GRADED SAND (49-55 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~25 mm with ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED SAND with SILT (55-58 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% fine gravel to ~15 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are	- 0.C @)					
-	4285	SW	brown, and do not react to HCl. From 55-56.5 feet the interval has elongated gravel, from 56.5-58 the interval has no gravel.						
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4280	GW- GM SM- SM	Saturated, medium dense no odor. Primarily medium to fine sand with ~20% coarse sand, ~15% fine gravel to ~15 mm, and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED GRAVEL with SILT and SAND (59-60 feet) Saturated, medium dense, no odor. Primarily gravel to ~25 mm with ~15% medium to fine sand, ~15% coarse sand, and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (60-60.25 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~5% gravel to 20 mm, and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fines are nonplastic, are reddish brown, and to						
SONIC ME			not react to HCl. Red oxidized staining. WELL-GRADED SAND with GRAVEL (60.25-63.5 feet) Saturated, medium dense, no odor.						

Proje	ct Nan	ne:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-10	
Soil	Boring		Monitoring Well X Project Number	er:			12124	43.021	Sheet <u>6</u> of <u>1</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks
	<u><u><u></u></u><u>4275</u></u>	D WS WS WS MS	Primarily medium to fine sand with ~15% gravel to ~25 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. No gravel in the interval from 61.5-63.5 WELL-GRADED SAND (63.5-64.5 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~5% gravel to ~25 mm with trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. Some reddish brown iron oxide streaks at ~63 feet. WELL-GRADED SAND (49-55 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% gravel to ~20 mm with trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	B/W-10 @ 64 - 69 Ft.					
SONIC METHODLOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4270	SP- SM CL SW- SM	LEAN CLAY with SAND (69.5-72 feet) Moist to saturated, loose, no odor. Primarily silt and clay with ~20% fine sand (<0.5 mm). The sand is subrounded. The fines have low to medium plasticity and low toughness, are dark yellowish brown (10YR 4/4), and do not react to HCl. Interval has some reddish brown iron oxide streaks.						
SONIC SONIC			Primarily medium to fine sand to ~2 mm with ~10% silt and clay. The sand is subangular to subrounded. The fines are						

	Proje	ct Nan	ne:	Yerington Groundwater Investigation	_ `	Well Nu	mber:	B/W-10		
	Soil I	Boring		Monitoring Well X Project Number:	_		12124	43.021	Sheet	7_ of <u>13</u>
	Depth (feet)	Elevation (feet)	USCS Group Symbol	Description Sample No.	Sample	Graphic Fithology	Mell		Remarks	
		4265	SW	WELL-GRADED SAND with GRAVEL (79-84 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~15% gravel to ~30 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.			KOKOKOKOKOKOKOKOKOKOKOKOKOKOKOKOKOKOKO			
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		4255	SW- SM SM	WELL-GRADED SAND with SILT (84-87.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel to ~10 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. Siltry SAND (87.5-89.5 feet) Saturated, medium dense, no odor.						
SONIC ME	_			Primarily medium to fine sand with ~25% coarse sand, trace fine gravel to ~10 mm, and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are						

Proje	ct Nan	ne:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-10	
Soil E	Boring		Monitoring Well X Project 1	Numbe	er:			1212	43.021	Sheet <u>8</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Mell		Remarks
90-	4250	CL	nonplastic, are brown, and do not react to HCl. LEAN CLAY with SAND (89.5-92 feet) Moist, hard, no odor. Primarily silt and clay with ~20% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. Some black organic streaks.							
- - - 95 - -		CL	LEAN CLAY with SAND (94.5-95 feet) Moist, stiff to hard, no odor. Primarily silt and clay with ~20% medium to fine sand to ~1.5 mm. The sand is subangular to subrounded. The fines low to medium plasticity and low toughness in the upper and lower portions of the interval, medium plasticity and toughness in the middle portion of the interval, are brown (10YR 5/3), and do not react to HCl. Some black organic streaks.							
SONIC METHOD LOG YERNING FON GRU BRN& CALD GDT 1/31/06	4245	SW	WELL-GRADED SAND (97-101 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel to ~10 mm with ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and do not react to HCl.							
		SW	WELL-GRADED SAND (101-102.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~20 mm							

Project Na	ime:	Yerington Groundwater Investigation			We	ell Nur	nber:	B/W-10	
Soil Borin	g [Monitoring Well X Project	Number	: .			1212	43.021	Sheet <u>9</u> of <u>13</u>
Depth (feet) Elevation (feet)	USCS Group Symbol	Description	Samula Mo	Sumprovo.	Sample	Lithology	Mell		Remarks
Solic METHOD LOG VERINGED 131/06	5 CL SM	 with ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (102.5-107 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~10% gravel to ~25 mm with ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. LEAN CLAY (107-107.5 feet) Moist, stiff, no odor. Primarily silt and clay with ~10% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are dark grayish brown (10YR 4/2), and do not react to HCl. WELLGANDED SAND with SUT (107.5-115 feet) Saturated, medium do fine sand with trace fine gravel to ~6 mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. 							

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-10	
Soil	Boring		Monitoring Well X Project Num	nber:			1212	43.021	Sheet <u>10</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks
115 - - - -	- <u>4225</u>	GW- GM	WELL-GRADED GRAVEL with SILT and SAND (115-116.5 feet) Saturated, medium dense, no odor. Primarily gravel to 40 mm with ~15% sand and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to rounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (116.5-122.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	-					
	4220	SW	WELL-GRADED SAND with GRAVEL (119.5-121.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~15% gravel to ~30 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (121.5-122.5 feet)						
07 1/31/06		SW	Saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel to ~6 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (122.5-124 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~20% gravel to ~30 mm, and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (124-124.5 feet)	B/W-10 @ 120 - 125 Ft.					
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	- <u>4215</u>	SW- SM	Saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel to ~10 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with SILT (124.5-127.75 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~20% fine sand, trace fine gravel to ~9 mm, and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl.						

Proj	ect Nar	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-10		
Soil	Boring	Γ	Monitoring Well X Project N	Jumber	:			1212	43.021	Sheet <u>11</u> of <u>1</u>	3
		lodi				G	Braphic	Log			
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Samule No	out admine	Sample	Lithology	Well		Remarks	
			SANDY SILT (127.75-128.5 feet)								
-	-		Moist, firm, no odor. Primarily silt and clay with ~30% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. <u>SANDY LEAN CLAY</u> (128.5-129.5 feet) Moist, stiff, no odor. Primarily silt and clay with ~30% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have	_							
130-		ML	medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. SANDY SILT (129.5-130.5 feet) Moist, firm, no odor. Primarily silt and clay with ~30% medium to fine sand to ~1	_							
-	- 4210	CL	mm. The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. <u>LEAN CLAY</u> (130.5-132 feet) Moist, hard, no odor.	_							
	4210		Primarily silt and clay with ~10% sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium								
-	-	SM	plasticity and toughness, are light olive brown (2.5Y 5/3), and have a strong reaction to HCl. <u>SILTY SAND with GRAVEL</u> (132-133 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~20% gravel to ~20 mm and ~25% silt and clay. The sand and gravel are angular to								
-		CL	subangular. The fines have low plasticity and toughness, are brown, and to not react to HCl.								
	-	SM	LEAN CLAY (130.5-132 feet) Moist, hard, no odor.								
-		~~~~	Primarily silt and clay with ~10% sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are light olive brown (2.5Y 5/3), and have a strong reaction to HCl. SILTY SAND with GRAVEL (132-133 feet)	_							
		SC	Saturated, medium dense, no odor.				///				
135-	-	CL	Primarily medium to fine sand with ~20% gravel to ~20 mm and ~25% silt and clay. The sand and gravel are angular to subangular. The fines have low plasticity and toughness, are brown, and to not react to HCI. CLAYEY SAND (134.5-135 feet) Moist to saturated, dense, no odor.								
-	-	SM	Primarily medium to fine sand with \sim 5% fine gravel to \sim 12 mm and \sim 35% silt and clay. The sand and gravel are angular								
	4205		to subangular. The fines have medium plasticity and toughness and are brown.								
1/06		SM	LEAN CLAY with SAND (135-136 feet) Moist, hard, no odor.								
D.GDT 1/31		SW	Primarily silt and clay with ~20% medium to fine sand to ~1.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are yellowish brown			-	;1-;-k-;- 				
BRN&CAL	-		(10YR 5/4), and do not react to HCl. SILTY SAND (136-136.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel to ~8	_		•	· · · · · · · · · · · · · · · · · · ·				
JGTON.GPJ			mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (136.5-137 feet)			•					
LOG YERI	-		Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% fine gravel to ~10 mm and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, and do	-		•					
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06 10 -			not react to HCl. WELL-GRADED SAND (137-145 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~5% gravel to ~30 mm, and ~5% silt and clay. The sand and								

Proje	ect Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-10	
Soil	Boring		Monitoring Well X Project Nu	ımbeı	: .			12124	43.021	Sheet <u>12</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Samula No	contractions	Sample	Lithology	Mell		Remarks
- - - - - - - - - - - - - - - - - - -	4200	SW	 gravel are subrounded. The fines are nonplastic, are brown, and do not react to HCl. The interval from 145-147.5 feet has ~15% gravel to 50 mm. The gravel is subrounded. WELL-GRADED SAND (145-147.5 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~15% gravel to ~50 mm, and ~5% silt and clay. The sand and gravel are subrounded. The fines are nonplastic, are brown, and do not react to HCl. 		B/W-IU @ 140 - 145 F.					
BRN&CALD.GDT 1/31/06	-	GW- GM	 WELL-GRADED GRAVEL with SILT (147.5-149.5 feet) Saturated, dense, no odor. Primarily gravel to ~30 mm with ~10% coarse to medium sand and ~10% silt and clay. The sand is angular to subrounded, the gravel is subangular to subrounded. The fines are nonplastic, are dark brown, and do not react to HCl. LEAN CLAY (149.5-151 feet) Dry to moist, hard, no odor. Primarily silt and clay with ~10% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4/3 to 10YR 5/3), and do not react to HCl. 							
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	- <u>4190</u> -	SM	SILTY SAND (152-153.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace coarse sand to ~4.5 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (153.5-154 feet)							

Project Nam	Yerington Groundwater Investigation	Well Number: B/W-10
Soil Boring	Monitoring Well X Project Number	121243.021 Sheet <u>13</u> of <u>13</u>
Depth (feet) Elevation (feet)	CS Group Symbol Description Sample No.	Graphic Log eld Sample Remarks
155 -	Saturated, dense, no odor. Primarily medium to fine sand with trace fine gravel to ~8 mm and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (154-154.5 feet) WW- Dry to moist, hard, no odor. Primarily silt and clay with ~20% coarse to medium sand and ~10% fine gravel to ~15 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and have a strong reaction to HCl. SILTY SAND with GRAVEL (154.5-155 feet) Saturated to moist, medium dense, no odor. Primarily coarse to medium sand with ~20% fine gravel to ~15 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are vellowish brown, and have a strong reaction to HCl. WELL-GRADED GRAVEL with SILT and SAND (155-55.5 feet) Saturated, medium dense, no odor. Primarily gravel to ~75 mm with ~20% coarse to medium sand and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are olive brown, and have a strong reaction to HCl. WELL-GRADED GRAVEL with SILT and SAND (155.5-160 feet) Saturated, medium dense, no odor. Primarily gravel to ~55 mm with ~25% coarse to medium sand and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. CL SANDY LEAN CLAY (160-161.75 feet) Moist,	
	Moist to dry from 161.75-162 feet, dry from 162-165 feet, very hard, no odor. Primarily silt and clay with ~35% coarse to medium sand and ~10% gravel to 20 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (7.5YR 5/2), and have a strong reaction to HCl.	

Proj	ect Nan	ne:	Yerington Groundwater In	rvestigation			Well N	lumbe	r:	B/W-	-11		
Soil	Boring	Ľ	Monitoring Well	Project I	Number	r:		12	124	3.021			t <u>1</u> of <u>19</u>
Bori	ng Loc	ation:	On mine site, near lined ev	aporatin ponds		Ele	vation:	430	68.1	feet amsl		East: A North:	321936 1554614.6
Drill	ing Co	ntract	or: WDC	Driller: B. Zamow		-8	te Start	ed:	9/28	8/05		inished:	9/27/05
Drill	ing Equ	lipme	ent: Gus Pech GP24-400RS, I	Diedrich Sonic Head		To De	tal pth: (fe	et) 2	233	.5	Water (feet)	Depth:	45' / 35.84'
Sam	pling N	letho	d: Core Barrel	Borehole Diameter: 6'	•	We and	ell Dian 1 Mater	neter rial:	2-i	nch PVC			
Drill	ing Me	thod:	Sonic, utilized 6" casing an	d a 4.5'' core barrel		DI ~~~~	eened i Well			170.3-190.	3 ft., l	bottom a	at 190.5 ft.
Well	Seal:	Ber	ntontite and Cement			Slo	t Size:	0.0	20''	Filter Mat	terial:	#10-20	Silica Sand
Log	ged By:	C.	Gardner	****		De	velopm		letho			ailed, pı	
	Ę	Iodm					Graphi			~~~~~~	~~~~~		
(feet)	n (fee	up Sy:			o No	e NU.	gy					D 1	
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		[Sample 190.	Lithology	Well				Remarks	•
	El				-								
		VLT	Dry, loose, no odor.							Descriptions on ASTM N	Iethod 1	D-2488 (tl	ne
	1		Primarily coarse to medium sand wir ~40% gravel to 20 mm and ~20% si gravel is angular. The fines are nonp	t and clay. The sand and						visual-manu determination based on the	ons and	nomencla	ture
-	1		react to HCl.	lastic, yenow, and do not	-					System. Mu			
	-				-								
-	4				_					Horizontal s	urvev d	lata is exn	ressed in
		SW- SM	WELL-GRADED SAND WITH S Dry, medium dense, no odor.	LT (2.25-7.75 feet)						the Nevada Nevada Wes	State Pl	lane syster	n,
	1265	5111	Primarily medium to fine sand with $\sim 10\%$ silt and clay. The sand is sub	race gravel to ~5mm and angular to subrounded,									
	4365		the gravel is subangular. The fines a react strongly to HCl.	re nonplastic, brown, and						Sharp contagradational	contacts	cated by so so indicated	olid lines, l by
	1				1					dashed line.			
-	1				-					All depths a	re belov	w land sur	face
· ·	-				-					unless stated	1 otnerv	vise.	
5-	4				_								
									Ň	WELL DES			
5										Screened In Bottom of s			3 feet.
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06										Cement Gro	out: 0-16	50.5 feet.	
D.GDT	1				1					Bentonite C	hips: 16	50.5-167 f	
N&CAL					-					Filter Pack: #10-20 Sand	d 167.5	-194 feet.	
PJ BR	-				-					Bentonite C	hips: 19	94-233.5 f	eet
1 NON.G	4360	SC	CLAYEY SAND (7.75-8.5 feet) Dry, medium dense, no odor.										
YERING			Primarily medium to fine sand with and ~35% silt and clay. The sand is	subangular to						m			
907		SM	subrounded, the gravel is subangular plasticity and toughness, are brown, HCl.	and react strongly to						Top of PVC amsl.			
THOD	1		SILTY SAND (8.5-9.5 feet) Dry, medium dense, no odor.							PVC Stick-u surface.	лр. 2.3 I	ieei above	Iallu
NIC M	1	SM	Primarily medium to fine sand with and ~20% silt and clay. The sand is	subangular to									
S			subrounded, the gravel is subangular	. The fines are				\mathbb{N}					

Project Name:	Yerington Groundwater Investigation	Well Number: B/W-11
Soil Boring	Monitoring Well X Project Number	121243.021 Sheet <u>2</u> of <u>19</u>
Depth (feet) Elevation (feet) USCS Group Symbol	Description	Graphic Log Plane S Remarks Remarks
15 - CL 50/12/ LOGOTIVO3NUE 20 - SC 20 - SC 20 - SC	Inimity costs to fine sand statistics is balarquiar to a subrounded, the gravel is angular to subangular. The fines are nonplastic, brown, and have a strong to no reaction to HCI. SILTY SAND with GRAVEL (10.5-11 feet) Dry, medium dense, no odor. Primarily coarse to medium sand with ~15% gravel to ~20 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, brown, and have a strong to no reaction to HCI. WELL-GRADED SAND with SILT and GRAVEL (11-13.5 feet) Dry, medium dense, no odor. Primarily coarse to medium sand with ~20% gravel to ~40mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, brown, and have a strong reaction to HCI. SILTY SAND with GRAVEL (13.5-14.75 feet) Dry, medium dense, no odor. Primarily coarse to fine sand with ~20% gravel to ~20 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, reddish brown, and have no reaction to HCI. SANDY LEAN CLAY (14.75-15 feet) Dry to moist, hard, no odor. Primarily silt and clay with ~45% medium to coarse sand and trace gravel to ~5 mm. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic; reddish brown, and have no reaction to HCI. SANDY LEAN CLAY (15.5-15 feet) Dry, dense, no odor. Primarily silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, reddish brown, and have no reaction to HCI. SANDY LEAN CLAY (15.5-16 feet) Dry, dense, no odor. Primarily silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are dark yellowish brown (10YR 4/6), and do not react to HCI. CLAYEY SAND (15-15.5 feet) Dry, dense, no odor. Primarily silt and clay. The san	

Proje	ct Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-11		
Soil I	Boring	Ľ	Monitoring Well X Project	Numł	ber:			12124	43.021	Sheet 3	of 19
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Mell		Remarks	
2011 WETHOD LOG VERINGTON GPJ BRN8CALD.GDT 1/31/06	4340	SM SM SC SM SM	Primarily medium to fine sand with trace gravel to ~5 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and do not react to HCI. CLAYEY SAND (19.5-20.5 feet) Dry, dense, no odor. Primarily medium to fine sand with trace gravel to ~5 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCI. CLAYEY SAND (20.5-23 feet) Dry, dense, no odor. Primarily medium to fine sand with trace gravel to ~10 mm and ~25% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a weak reaction to HCI. SULTY SAND with GRAVEL (23-24.5 feet) Dry, medium dense, no odor. Primarily coarse to medium sand with ~40% gravel to ~20 nm and ~20% silt and clay. The sand and gravel is angular to subangular. The fines are nonplastic, yellowish brown, and have no reaction to HCI. SULTY SAND with GRAVEL (24.5-26.5 feet) Dry, dense, no odor. Primarily coarse to fine sand with ~30% gravel to ~20 mm and ~15% silt and clay. The sand is subangular. The fines are nonplastic, brown, and have no reaction to HCI. SULTY SAND (26.5-28.5 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% gravel to ~10 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, brown, and have no reaction to HCI. SULTY SAND (32.5-30 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, brown, and have no reaction to HCI. WELL-GRADED SAND with SILT (30-32 feet) Dry, dense, no odor. Primarily medium to fine sand with trace gravel to ~15 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines have medium plasticity and toughn								

Project Nar	ne:	Yerington Groundwater Investigation			v	Vell Numb	er:	B/W-11		
Soil Boring		Monitoring Well X Project N	lumbe	er:		12	2124	3.021	Sheet 4	of <u>19</u>
Depth (feet) Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Traphic Lo Crithology	Well of		Remarks	
	SC	CLAYEY SAND (36-38 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with trace gravel to ~10 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.	-							
40-	SM	SILTY SAND (38-41.5 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~10% gravel to ~8 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines have low plasticity and toughness, brown, and have no reaction to HCl.								
-4325	SC	CLAYEY SAND (41.5-45 feet) Moist, dense, strong acid odor. Primarily medium to fine sand with ~5% gravel to ~30 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.	-							
SONIC METHOD LOG VERINGTON GPU BRN&CALD.GDT 1/31/06	SW- SM	WELL-GRADED SAND with SILT and GRAVEL (45-46.5 feet) Saturated, medium dense, strong acid odor. Primarily coarse to medium sand with ~15% gravel to ~20mm and ~10% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, brown, and have no reaction to HCl. CLAYEY SAND (46.5-49 feet) Moist, medium dense, strong acid odor. Primarily medium to fine sand with ~10% coarse sand to ~3 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.		@ 45 - 50 Ft.						
4320 - 4320 - 4320 - 4320	SM		-	B/W-11 @			NUX NAME			

Proje	ct Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-11		
Soil	Boring		Monitoring Well X Project N	umbe	r:			1212	43.021	Sheet <u>5</u> of	<u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Comple Mo	Sample INO.	Sample	Lithology Lithology	Mell		Remarks	
50-			Saturated, medium dense, strong acid odor. Primarily medium to fine sand with $\sim 10\%$ gravel to ~ 20 mm and $\sim 15\%$ silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, brown, and have no reaction to HCl.	-							
-		SW- SM	WELL-GRADED SAND with SILT (50.5-52.5 feet) Saturated, medium dense, strong acid odor. Primarily medium to fine sand with ~5% gravel to ~20 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, brown, and have no reaction to HCl.	-							
-	<u>4315</u>	SM	SILTY SAND (52.5-55 feet) Dry to moist, medium dense, strong acid odor. Primarily medium to fine sand with ~10% gravel to ~20 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, brown, and have no reaction to HCl.	-							
55	4310		SILTY SAND (55-55.75 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~15% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, brown, and have no reaction to HCl. CLAYEY SAND (55.75-59 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~10% coarse sand to ~4 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.								
SONIC METHODLOG YERINGTON GPJ BRN&CALD.GDT 1/31/06		SC	CLAYEY SAND (59-62.5 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with trace gravel to ~5 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.								

BORINGLOG

Proje	ct Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-11		
Soil I	Boring	Γ	Monitoring Well Project N	umbe	r:			1212	243.021	Sheet <u>6</u>	19
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Comple No	oampie tvo.	Sample	Lithology	Mell	_	Remarks	
- - - 65 -	4305	SC	CLAYEY SAND (62.5-66.75 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~5% coarse sand to ~5 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.								
-		SM	SILTY SAND (66.75-68 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~5% gravel to ~5 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, brown, and have no reaction to HCl.								
-	4300	SC	CLAYEY SAND (68-70 feet) Moist, dense, strong acid odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~25% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.	-							
70-		SM	SILTY SAND (70-72 feet) Moist, dense, strong acid odor. Primarily medium to fine sand with trace coarse sand to ~5 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and have no reaction to HCl.								
	4295	SC	CLAYEY SAND (72-74.5 feet) Moist, medium dense, strong acid odor. Primarily medium to fine sand with trace gravel to ~10 mm and ~30% silt and clay. The sand and gravel is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.								
75-		SM	<u>SILTY SAND</u> (74.5-75.5 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~10% gravel to ~10 mm and ~25% silt and clay. The sand is subangular to	_							

SONIC METHOD LOG YERINGTON. GPJ BRN&CALD.GDT 1/31/06

Proj	ect Nan	ne:	Yerington Groundwater Investigation		_ \	Well N	Numł	ber:	B/W-11		
Soil	Boring		Monitoring Well X Project Num	ber:			1	2124	43.021	Sheet <u>7</u> or	f <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology		Well		Remarks	
SONIC METHODLOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4290	SM SM SC	subrounded, the gravel is angular. The fines have low plasticity and toughness, are brown, and have no reaction to HCL. SILTY SAND (75.5-76.25 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~10% gravel to ~10 mm and ~25% silt and clay. The sand and gravel is subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCL. SILTY SAND (77.75.79 feet) Saturated, medium dense, strong acid odor. Primarily nedium to fine sand with ~15% coarse sand to ~5 mm and ~15% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, brown, and have no reaction to HCL. SILTY SAND (77.75.79 feet) Moist, medium dense, strong acid odor. Primarily medium to fine sand with ~15% coarse sand to ~5 mm and ~25% silt and clay. The sand as gravel to ~12 mm and ~20% silt and clay. The sand and gravel is subangular to angular. The fines have low plasticity and toughness, are light brown, and have no reaction to HCL. SILTY SAND (79-80 feet) Saturated, medium dense, strong acid odor. Primarily medium to fine sand with ~10% gravel to ~12 mm and ~20% silt and clay. The sand and gravel is subangular to angular. The fines are nonplastic, brown, and have no reaction to HCL. CLAYEY SAND (80-88 feet) Moist, dense, strong acid odor. Primarily medium to fine sand with ~15% coarse sand to ~5 mm and ~25% silt and clay. The sand is subangular to angular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.								
SONK		SM	Saturated, medium dense, strong acid odor.								

Proje	ct Nan	ne:	Yerington Groundwater Investigation			We	ell Nu	nber:	B/W-11		
Soil I	Boring		Monitoring Well X Project Nu	umber	:			1212	43.021	Sheet _	8 of <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Samula No	Sampe 100.		Lithology	Log M ^e II		Remarks	
-			Primarily medium to fine sand with \sim 5% coarse sand to \sim 5 mm and \sim 15% silt and clay. The sand is subangular to angular. The fines are nonplastic, brown, and have no reaction to HCl.	_							
90-		SC	CLAYEY SAND (90-91.5 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~15% coarse sand to ~5 mm and ~25% silt and clay. The sand is subangular to angular. The fines have medium plasticity, low toughness, are brown, and have no reaction to HCl.	-							
-	4275	SC	CLAYEY SAND (91.5-94 feet) Dry, very dense, strong acid odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.	-							
95 — 95 — -		SM SM	SILTY SAND (94-95 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with ~5% coarse sand to ~5 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and have no veaction to HCL. SILTY SAND (95-98 feet) Saturated and medium dense from ~95-96 feet, moist and dense from ~96-98 feet, strong acid odor. Primarily medium to fine sand with trace gravel to ~8 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCl.		- 100 PC						
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4270	SC	CLAYEY SAND (98-103 feet) Dry to moist, dense, strong acid odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity, low toughness, are brown, and have no reaction to HCl.	(

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-11		
Soil	Soil Boring		Monitoring Well X Project Numbe	er:			12124	43.021	Sheet	9_of <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Trithology Lithology	Mell		Remarks	
-	4265	SC	CLAYEY SAND (103-105.5 feet) Moist, dense, strong acid odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~30% silt and clay. The sand is subangular to							
- 105 -		SM	subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.							
-	• <u>4260</u>	SM	SILTY SAND (105.5-108.5 feet) Saturated and medium dense from 105.5-106.5 feet, moist and dense from 106.5-108.5 feet, strong acid odor. Primarily medium to fine sand with ~10% gravel to ~15 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have low plasticity and toughness, are brown, and have no reaction to HCl.							
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		SM	CLAYEY SAND (108.5-109.5 feet) Moist, dense, acid odor. Primarily medium to fine sand with trace gravel to ~12 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCI. SILTY SAND (109.5-110.5 feet) Dry to moist, dense, weak acid odor. Primarily medium to fine sand with trace gravel to ~10 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCI. SILTY SAND (110.5-113 feet) Dry to moist, dense, weak acid odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have slight plasticity, low toughness, are brown, and have no reaction to HCI.							
SONIC METHOD LOG YERING	4255	SC	CLAYEY SAND (113-115 feet) Dry to moist, dense, weak acid odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.							

Proje	ct Nar	ne:	Yerington Groundwater Investigation		Well N	umber:	B/W-11	
Soil	Boring	Ľ	Monitoring Well X Project Numb	er:		12124	43.021	Sheet <u>10</u> of <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Craphic Craphic Lithology	e Log		Remarks
115 — - - - -		SM	SILTY SAND (115-118 feet) Dry to moist, dense, weak acid odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~20% silt and clay. The sand and gravel is subangular to subrounded. The fines have low plasticity and toughness, are brown, and have no reaction to HCl.					
	4250	SM	CLAYEY SAND (118-119 feet) Moist, dense, slight acid odor. Primarily medium to fine sand with trace gravel to ~8 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCI. SILTY SAND (119-121.5 feet) Moist, dense, slight acid odor. Primarily medium to fine sand with ~5% coarse sand to ~5 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown, and have no reaction to HCI.			IN AN		
-	4245	SC	CLAYEY SAND (121.5-123.5 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~15% coarse sand to ~5 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity, low toughness, are brown, and have a strong reaction to HCl. Some strongly developed caliche present.					
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06		SM	SILTY SAND (123.5-125.5 feet) Moist, dense, no odor. Primarily medium to fine sand with ~15% coarse sand to ~5 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and have a weak reaction to HCl.			AND		
HOD LOG YERINGTON.GF		SW- SM	WELL-GRADED SILTY SAND (125.5-127 feet) Moist to saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have no reaction to HCl.					
SONIC MET		SM	SILTY SAND (127-128 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~8 mm					

Project	Narr	ne:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-11	
Soil Bo	oring	[Monitoring Well X Project Number	er:			12124	43.021	Sheet <u>11</u> of <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks
	1240	SW-SM	-	B/W-11 @ 130 - 135 Ft.			UAN AAN AAN AAN AAN AAN AAN AAN AAN AAN		
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	1230	SW-SM	WELL-GRADED SAND with SILT (135.5-138.75 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCl. CLAYEY SAND (138.75-140 feet) Moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~5 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity, low toughness, are brown, and have no reaction to HCl. CLAYEY SAND (140-142 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~4 mm and ~35% silt and clay. The sand is subangular to						

Project N	Name	:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-11		
Soil Borii		Ľ	Monitoring Well X Project Number	r:			12124	43.021	Sheet <u>12</u> c	of <u>19</u>
Depth (feet) Elevation (feet)	Elevation (leet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks	
	20 20	SM SM SM	subrounded. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. SILTY SAND (142-142.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace gravel to ~10 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have no reaction to HCl. WELL-GRADED SAND with SILT (142.5-144 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~20 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCl. SILTY SAND (144-149.5 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl. SULTY SAND (149.5-150.5 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% gravel to ~10 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl.				NOROW AND			
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	15		plasticity and toughness, are brown, and have a weak reaction to HCl. CLAYEY SAND (150.5-153 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~5% sand to ~4 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a weak to strong reaction to HCl. CLAYEY SAND (153-154.75 feet) Dry to moist, dense, no odor.							
901 doht_421	<u>15 </u>	SC	<u>CLAYEY SAND</u> (153-154.75 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~10% gravel to ~12 mm and ~20% silt and clay. The sand is subangular to							

Proje	ect Nan	ne:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-11	
Soil	Boring	Γ	Monitoring Well X Project N	Numbe	er:			12124	43.021	Sheet <u>13</u> of <u>19</u>
et)	èet)	Symbol			0.	(Graphic	Log		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks
-		<u></u>	subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a weak to strong reaction to HCl.	-						
155 -			SILTY SAND with GRAVEL (154.75-155.5 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~15% gravel to ~12 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are	_						
_	-	SC	Substanced, the graver is substantiation. The fines are nonplastic, brown, and have a weak to strong reaction to HCl. SANDY LEAN CLAY (155.5-156 feet)							
-	-		Dry, hard, no odor. Primarily silt and clay with ~35% medium to fine sand and ~5% gravel to ~15 mm. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are brown (7.5YR 4/3), and do not react to HCl.	-						
	4210	SC	CLAYEY SAND (156-157.5 feet) Dry, dense, no odor. Primarily medium to fine sand with trace gravel to ~8 mm and ~30% silt and clay. The sand is subangular to							
-	4210		subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. CLAYEY SAND (157.5-159 feet)	-						
		SM	Dry to moist, dense, no odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~25% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. SILTY SAND (159-160.9 feet)	-						
-		SC	Moist, dense, no odor. Primarily medium to fine sand with ~10% coarse sand to ~4 mm and ~15% silt and clay. The sand is subangular to	-	4 Ft.					
-	-	SW- SM	subrounded. The fines are nonplastic, brown, and have no reaction to HCl. <u>CLAYEY SAND</u> (160.9-161 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~35% silt and clay. The sand is subangular to subrounded the original subangular.	-	1 @ 159 - 16					
-	-	SC	subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. <u>WELL-GRADED SAND with SILT</u> (161-162 feet) Moist to saturated, medium dense, no odor. Primarily medium to fine sand with ~5% coarse sand to ~4		B/W-1					
3DT 1/31/06	4205	SC	mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and have no reaction to HCl. CLAYEY SAND (162-163 feet)							
BRN&CALD.	-		Moist, dense, no odor. Primarily medium to fine sand with ~5% coarse sand to ~3 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness,	_						
- ICN.GPU		SC	are brown, and have no reaction to HCl. CLAYEY SAND (163-164.5 feet) Dry to moist, dense, no odor.							
165 -		SC SC	Primarily medium to fine sand with ~5% coarse sand to ~4 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl.							
SONIC METHOD LOG YERINGTON GPJ BRN&CALD GDT 1/31/06		20	CLAYEY SAND (164.5-165 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~30% silt and clay. The sand is subangular to	-						
- SONIC A			subrounded. The fines have medium plasticity and toughness, are brown, and have a weak to strong reaction to HCl. CLAYEY SAND (165-165.5 feet)	-			$\langle \rangle \rangle$			

Proje	ct Nan	ne:	Yerington Groundwater Investigation			Well Nu	mber:	B/W-11	
Soil	Boring		Monitoring Well X Project Nur	nber:			1212	43.021	Sheet <u>14</u> of <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Graphic	Mell		Remarks
SONIC METHOD LOG VERINGTON.GPJ BRN&CALD.GDT 1/31/06	4195 4190	D SM SC SC SC SC SC SM SC SSM SC SSM SC SSM	Dry, very dense, no odor. Primarily medium to fine sand with ~10% gravel to 20 mm and ~40% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. CLAYEY SAND (165.5-167 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a weak to strong reaction to HCl. SILTY SAND (167-167.5 feet) Moist, medium dense, slight acid odor. Primarily medium to fine sand with ~15% coarse sand to ~5 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines neare nonplastic, brown, and have no reaction to HCl. CLAYEY SAND (167.5-169.5 feet) Moist, medium to fine sand with ~15% coarse sand to ~5 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity, low toughness, are brown, and have a no reaction to HCl. CLAYEY SAND (169.5-170.5 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~5% gravel to 15 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. CLAYEY SAND (170.5-171.5 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~35% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCL. SILTY SAND (171.5-172 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~35% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCL. VELL-GRADED SAND with SILT (173-177 feet) Saturated, medium dense, no odor. Primarily mediu						
SONIC METHOD LOG YER		SM	SILTY SAND (178.25-180 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~10% coarse sand to ~3 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown, and have no reaction to HCl.	-					

Project Name:	Yerington Groundwater Investigation		v	Vell Nu	mber:	B/W-11	
Soil Boring	Monitoring Well X Project Number	r:			1212	43.021	Sheet <u>15</u> of <u>19</u>
Depth (feet) Elevation (feet) USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks
- <u>4185</u> - <u>4185</u> - <u>4185</u> - <u>4185</u> - <u>5</u> - <u>5</u>	WELL-GRADED SAND with SILT and GRAVEL (180-181.5 feet) Saturated, medium dense, no odor. Primarily coarse to medium sand with ~15% gravel to ~15 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCl. CLAYEY SAND (181.5-187 feet) Moist from ~181-183 feet, dry to moist from ~183 to 187 feet, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~25% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. WELL-GRADED SAND (187-188.5 feet) Saturated, medium dense, slight acid odor. Primarily medium sand with ~10% coarse sand to ~5 mm and ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and have a strong to no reaction to HCl. WELL-GRADED SAND with SILT (188.5-189.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% coarse sand to ~5 mm and ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and have a strong to no reaction to HCl. WELL-GRADED SAND with SILT (188.5-189.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% coarse sand to ~5 mm and ~10% silt and clay. The sand is subangular to subrounded, the fines are nonplastic, brown, and have no veaction to HCl. CLAYEY SAND (189.5-191 feet) Dry to moist, dense, no odor. <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
SOUND METHOD LOG	the gravel is subangular. The fines have medium plasticity and toughness, are brown (7.5YR 5/4), and have a strong to no reaction to HCl. CLAYEY SAND (192.5-193.5 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~4						

Proje	ct Nan	ne:	Yerington Groundwater Investigation			Well Nu	mber:	B/W-11	
Soil I	Boring		Monitoring Well X Project N	umber:			12124	43.021	Sheet <u>16</u> of <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Craphic Lithology	Mell		Remarks
	4170 4165	CL SC SC SM SC SM SC SM SC SM SC SM	are brown, and nave a strong reaction to HCI. CLAYEY SAND (194.5-195 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a strong to no reaction to HCI. CLAYEY SAND with GRAVEL (195-195.75 feet) Moist to saturated, dense, no odor. Primarily coarse to fine sand with ~30% gravel to ~20 mm and ~20% silt and clay. The sand and gravel is angular to subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCI. SILTY SAND (195.75-198 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCI. CLAYEY SAND with GRAVEL (198-198.5 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~20% gravel to ~60 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCI. WELL-GRADED SAND with SILT (198.5-199 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with race gravel to ~8 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCI. WELL-GRADED SAND with SILT (198.5-199 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace gravel to ~8 mm and ~10% silt and clay. The sand is subangular to subrounded the gravel is oubangular. The fines orn	I I I I I B/W-11 @ 195 - 200 Ft.					
			reaction to HCL. SILTY SAND with GRAVEL (201.5-204 feet) Dry to moist, dense, no odor. Primarily coarse to medium sand with ~20% gravel to ~10	_		<i></i>			

Proje	ect Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-11			
-	Boring	Ľ	Monitoring Well Project	Numb	er:			1212	43.021	Sheet _	17 of	19
		lodi				0	Graphic	Log				
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks		
		SC	mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are									
210- 215- 9	4160	SM	subrounded, the gravel is subangular. The fines are nonplastic, brown, and have a strong reaction to HCl. CLAYEY SAND with GRAVEL (204-205 feet) Dry to moist, dense, no odor. Primarily coarse to fine sand with ~30% gravel to ~20 mm and ~40% silt and clay. The sand and gravel is angular to subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl. SILTY SAND (205-206 feet) Saturated, medium dense, no odor. Primarily coarse to fine sand with ~10% gravel to ~15 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have a strong to no reaction to HCl. CLAYEY SAND with GRAVEL (206-206.5 feet) Moist to saturated, medium dense, no odor. Primarily coarse to fine sand with ~15% gravel to ~8 mm and ~30% silt and clay. The sand is angular to subangular, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. WELL-GRADED SAND with SILT and (206.5-209 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~15% gravel to ~10 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCl. SILTY SAND (209-212 feet) Moist, dense, no odor. Primarily coarse to fine sand with trace gravel to ~8 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have low plasticity and toughness, are brown, and have a weak to strong reaction to HCl. CLAYEY SAND (212-213 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with trace gravel to ~20 mm and ~40% silt and clay. The sand is angular to subangular, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl. CLAYEY SAND (213-214 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with race gravel to ~20 mm and ~40% silt and clay. T									
ONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	- 4150	SC	subrounded. The fines are nonplastic, brown, and have no reaction to HCl. <u>CLAYEY SAND</u> (217.5-218.5 feet) Dry to moist, very dense, no odor. Primarily medium to fine sand with ~5% coarse sand to ~5 mm and ~30% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. Some well-developed gravel-sized caliche is present. CLAYEY SAND									
NO -	1		CLAYEY SAND (218.5-220 feet) Dry to moist, dense, no odor.									

Projec	t Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-11	
Soil B	oring		Monitoring Well X Project N	lumbe	er:			12124	43.021	Sheet <u>18</u> of <u>19</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Mell		Remarks
-			Primarily medium to fine sand with ~5% coarse sand to ~5 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity, low toughness, are brown, and have a strong to no reaction to HCI. WELL-GRADED SAND with SILT (220-222.5 feet) Saturated, dense, no odor. Primarily medium to fine sand with ~10% coarse sand to ~3 mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and have no reaction to HCl.	-	B/W-11 @ 219 - 224 Ft.					
	4145	CL	CLAYEY SAND (222.5-223 feet) Moist, very dense, no odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl. SANDY LEAN CLAY (223-224.5 feet) Dry to moist from ~223-223.5 feet, dry from ~223.5-224.5 feet, very hard, no odor. Primarily silt and clay with ~30% medium to fine sand with ~5% gravel to ~10 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and have a strong reaction to HCl. CLAYEY SAND with GRAVEL (224.5-228.25 feet) Dry, very dense, no odor. Primarily coarse to fine sand with ~25% gravel to ~75 mm and ~35% silt and clay. Cobbles to ~10 cm comprise ~20% of the interval. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are brown, and have a strong reaction to HCl.							
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4140	SC	CLAYEY SAND (228.25-228.75 feet) Dry, very dense, no odor. Primarily medium to fine sand with trace gravel to ~10 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are strong brown, and have a strong reaction to HCl. CLAYEY SAND with GRAVEL (228.75-229 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~20% gravel to ~10 mm and ~35% silt and clay. The sand and gravel is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and have no reaction to HCl. COBBLES with SANDY CLAY (229-233.5 feet) Dry, very dense, no odor. Primarily cobbles comprised of weathered and non weathered tuff with ~35% sandy clay. The tuff has a gray groundmass with angular to subangular clasts to ~5 mm. The sandy clay is primarily silt and clay with ~40% medium to fine sand to ~2 mm. The sand is angular to subangular. The fines have medium plasticity and toughness, and are yellowish brown (10YR 5/4). The fines have a strong reaction to HCl from							

Pi	rojec	t Nan	ne:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-11			
S	oil B	oring			oject Numb	ber:			12124	43.021	Sheet	19 of	<u>19</u>
	Τ		lodr				C	Graphic	Log				
	Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks		
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		4135		-229 to 231 feet, and a weak reaction to HCl from ~231 233.5 feet.									

Proje	ct Nan	ne:	Yerington Groundwater In	vestigation		1	Boring	Number	B/W	V-12	
Soil I	Boring		Monitoring Well	Project N	umber	:		12124	43.021		et <u>1</u> of <u>10</u>
Borir	ig Loc	ation:	South of Pit Lake, west of h	ighway		Ele	vation:	4640.	0 feet amsl	East: North:	324600 1536992
Drilli	ng Co	ntract	or: WDC	Driller: B. Zamow		g		d: 7/2	2/05	Date Finished:	7/25/05
Drilli	ng Eq	uipme	ent: Gus Pech GP24-400RS, I	Diedrich Sonic Head		Tot Dep		t) 17 2	2.0	Water Depth: (feet)	
Samp	oling N	Ietho	d: Core Barrel	Borehole Diameter: 6''		and	ll Diam Materi	al: N	A		
Drilli	ng Me	thod:	Sonic, utilized 6'' casing an	d a 4.5'' core barrel			eened Iı Well D		NA		
Well	Seal:	Ab	andonded with Cement-Bento	onite Grout		Slot	Size:	NA	Filter Ma	terial: NA	
Logg	ed By:	C.	Gardner			Dev	velopme	ent Meth	od: NA		
00000000		nbol	***************************************	***************************************		(Graphic	Log	000000000000000000000000000000000000000		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Backfill		Remark	s
	4635	GM GM	 SILTY GRAVEL with SAND (0-5 Dry, very dense, no odor. Predominately gravel to 70 mm with sand, ~10% coarse sand, and ~15% s is subangular to subrounded, the gra subangular. The fines are nonplastic have a strong reaction to HCl. SILTY GRAVEL with SAND (5-6 Dry, very dense, no odor. Predominately gravel to 50 mm with sand, ~10% coarse sand, and ~15% s is subangular. The fines have low plas light brown, and have a strong reacti SILTY GRAVEL with SAND (6-10 Dry, very dense, no odor. Predominately gravel to 70 mm with sand, ~10% coarse sand, and ~15% s is subangular. The fines have low plas light brown, and have a strong reacti SILTY GRAVEL with SAND (6-10 Dry, very dense, no odor. Predominately gravel to 70 mm with sand, ~10% coarse sand, and ~15% s is subangular. The fines are nonplastic have a strong reaction to HCl. 	 ~30% medium to fine silt and clay. The sand yel is angular to, are light brown, and feet) ~30% medium to fine silt and clay. The sand yel is angular to tricity and toughness, are on to HCl. feet) ~30% medium to fine silt and clay. The sand yel is angular to fine silt and clay. The sand yel is angular to fine silt and clay. The sand yel is angular to to fine silt and clay. The sand yel is angular to to fine silt and clay. The sand yel is angular to to fine silt and clay. The sand yel is angular to to fine silt and clay. The sand yel is angular to to to the sand yel is angular to to to to the sand yel is angular to to to to the sand yel is angular to to to to to to to to the sand yel is angular to to					on ASTM N visual-manu determinatio based on the System. Mu Horizontal s the Nevada Nevada We Sharp conta gradational dashed line. Dry borehol borehole ab	le, no well install	he ain-size ature assification ribed wet. pressed in m, solid lines, d by ed,
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	1000	CL	SANDY LEAN CLAY (10-13 feet) Dry, very very hard, no odor. Predominately silt and clay with ~45 and trace fine gravel to 10 mm. The subrounded, the gravel is angular to have medium plasticity and low toug 4/3), and have a strong reaction to H	sand is subangular to subangular. The fines hness, are brown (10YR Cl.							
SONIC METHOD LOC	4625	SM	SILTY SAND with GRAVEL (13-1 Dry, very dense, no odor. Predominately coarse to medium san 20 mm and ~15% silt and clay. The angular to subangular. The fines are brown, and do not react to HCl.	d with ~30% gravel to sand and gravel are	-						

BORINGLOG

Proje	ct Nan	ne:	Yerington Groundwater Investigation		_ F	Boring N	Jumber:	B/W-12	1		
Soil I	Boring		Monitoring Well Project Num	ber:			12124	43.021	Sheet	2	of <u>10</u>
	()	nbol			(Graphic	Log				
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Backfill		Remarks		
	4620		NO RECOVERY SANDY LEAN CLAY (18-21 feet) Dry, very very hard, no odor. Predominately silt and clay with ~50% medium to fine sand and trace gravel to 60 mm. The sand is angular to subangular, the gravel is angular to subrounded. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and have a weak to strong reaction to HCl.								
	4615	GM	SILTY GRAVEL with SAND (21-25 feet) Dry, very dense, no odor. Predominately gravel to 50 mm with ~30% coarse to fine sand and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are light brown, and have a weak to strong reaction to HCl.								
25	4610		SILTY SAND with GRAVEL (25-26.5 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~15% coarse sand, ~20% gravel to 30 mm, and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines have slight plasticity and low toughness, are light grayish brown, and have a weak reaction to HCI. SILTY GRAVEL with SAND (26.5-34 feet) Dry, very dense, no odor. Predominately gravel to 40 mm with ~35% sand and ~15% silt and clay. The sand and gravel are angular to subangular. The fines have low plasticity and toughness and have a weak reaction to HCI.								
-		SC	CLAYEY SAND with GRAVEL (34-36.5 feet) Dry, very dense, no odor.								

SONIC METHOD LOG YERINGTON. GPJ BRN&CALD.GDT 1/31/06

Proje	ject Name: Yerington Groundwater Investigation				Ē	Boring N	Number:	B/W-12
Soil	Boring	2	Monitoring Well Project Num	oer:			12124	43.021 Sheet <u>3</u> of <u>10</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Backfill	Remarks
35-	4605		Predominately medium fine sand with ~15% coarse sand, ~15% gravel to 50 mm, and ~35% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown, and have a weak reaction to HCl.					
-	-	SM	SILTY SAND with GRAVEL (36.5-38 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~20% coarse sand, ~20% gravel to 60 mm, and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are light grayish brown, and have a strong reaction to HCl. NO RECOVERY					
40-	4600	~~	-					
	-	SC	CLAYEY SAND with GRAVEL (40-40.75 feet) Dry, very dense, no odor. Predominately sand with ~25% fine gravel to 10 mm and					
	4595	SM SC SW-	 ~35% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and low toughness, are grayish brown, and have a weak reaction to HCl. <u>SILTY SAND with GRAVEL</u> (40.75-44 feet) Dry, very dense, no odor. Predominately coarse to medium sand with ~20% gravel to 50 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have low plasticity and toughness, are grayish brown, and have a weak reaction to HCl. <u>CLAYEY SAND with GRAVEL</u> (44-46 feet) Dry, very dense, no odor. Predominately coarse to fine sand with ~25% gravel to 30 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown (10YR 5/2), and have a strong reaction to HCl. SAND with SILT and GRAVEL (46-50 feet) 					
CALD.GDI 7/37/06	4590		Dry, medium dense, no odor. Predominately medium to fine sand with ~20% coarse sand, ~25% gravel to 20 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are light brown, and do not react to HCl.					
SONIC METHOD FOG YERING TON GFJ BRYKCALDGUT 1/37/06	-	SM	CLAYEY SAND with GRAVEL (50-51 feet) Dry, very dense, no odor. Predominately sand with ~15% gravel to 45 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and low toughness, are light brown, and do not react to HCl. SILTY SAND with GRAVEL (51-54 feet) Dry, medium dense, no odor. Predominately sand with ~35% gravel to 75 mm and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are light grayish brown, and do not react to HCl.					

	Proje	ct Nan	ne:	Yerington Groundwater Investigation		_ 1	Boring I	Number:	B/W-12
_	Soil I	Boring	Σ	Monitoring Well Project Nur	nber:	The second secon			I3.021 Sheet <u>4</u> of <u>10</u>
	Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample		Backfill	Remarks
	- 55 — -	<u>4585</u>	G	SILTY SAND with GRAVEL (54-55 feet) Dry, very dense, no odor. Predominately sand with ~20% fine gravel to 15 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are light gravish brown, and do not react to HCl.	-				
	. . .		SM SM	SANDY LEAN CLAY (55-56.5 feet) Dry, very hard, no odor. Predominately silt and clay with ~35% medium to fine sand and trace fine gravel to 7 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and have a strong reaction to HCl. SILTY SAND (56.5-58 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~10% gravel to 75 mm and ~15% silt and clay. The sand is angular to	-				
	60	4580		subrounded, the gravel is angular to subangular. The fines are nonplastic, are light grayish brown, and do not react to HCl. SILTY SAND with GRAVEL (58-62.5 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~15% coarse sand, ~25% gravel to 30 mm, and ~15% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are light grayish brown, and have a strong reaction to HCl.	-				
			CL	SANDY LEAN CLAY (62.5-65 feet) Dry, very very hard, no odor. Predominately silt and clay with ~40% medium to fine sand and ~5% fine gravel to 15 mm. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown (10YR 5/2), and have a strong reaction to HCl.	-				
	65 —	4575	SC	CLAYEY SAND with GRAVEL (65-66 feet)	-				
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	- - - - 70 - - - - - - - - -	4570	GC	CLAYEY GARAPE With ORACLED (60-00 feet) Dry, very dense, no odor. silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and low toughness, are light brown, and do not react to HCl. CLAYEY GRAVEL with SAND (66-68.25 feet) Dry, very dense, no odor. Predominately gravel to 75 mm with ~20% medium to fine sand and ~20% silt and clay. The sand is subangular. The fines have medium plasticity and toughness, are light grayish brown, and have a strong reaction to HCl. SILTY SAND with GRAVEL (68.25-74 feet) Dry, very dense, no odor. Predominately gravel to 75 mm with ~20% medium to fine sand and ~20% silt and clay. The sand is subangular. The fines have medium plasticity and toughness, are light grayish brown, and have a strong reaction to HCl. SILTY SAND with GRAVEL (68.25-74 feet) Dry, very dense, no odor. Predominately sand with ~20% gravel to 15 mm and ~15% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.					
SONIC	-				-				

Project Name	e:	Yerington Groundwater Investigation	Boring Number: 121243.		B/W-1 2	2					
Soil Boring	Σ	Monitoring Well Project Num	iber:				3.021	Sheet	5	of	10
Depth (feet) Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Trithology Lithology	Backfill		Remarks			
75 4565	CL	SANDY LEAN CLAY (74-77 feet) Dry, very very hard, no odor. Predominately silt and clay with ~40% medium to fine sand and ~5% gravel to 20 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are dark yellowish brown (10YR 4/4), and do not react to HCl.	-								
	GC	CLAYEY GRAVEL with SAND (77-81 feet) Dry, very dense, no odor. Predominately gravel to 20 mm with ~35% coarse to fine sand and ~25% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are light brown, and do not react to HCl.									
	SM SC	SANDY LEAN CLAY (81-81.5 feet) Dry, very very hard, no odor. Predominately silt and clay with ~25% medium to fine sand and ~5% gravel to 40 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are dark gray (10YR 4/1), and have a weak reaction to HCl. SILTY SAND with GRAVEL (81.5-83.5 feet) Dry, very dense, no odor. Predominately coarse to fine sand with ~30% fine gravel to 15 mm and ~30% silt and clay. The sand and gravel are angular to subangular. The fines have slight plasticity and low toughness, are light brown, and do not react to HCl.									
85 <u>4555</u> - - - -	CL	CLAYEY SAND with GRAVEL (83.5-84.5 feet) Dry, very dense, no odor. Predominately coarse to fine sand with ~30% gravel to 20 mm and ~35% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and low toughness, are light brown, and do not react to HCl. SANDY LEAN CLAY (84.5-90 feet) Dry, very hard, no odor. Predominately silt and clay with ~45% medium to fine sand and trace coarse sand to 4 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are dark grayish brown (10YR 5/2), and do not react to HCl.									
DLOG VERINGTON		CLAYEY SAND (90-92 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~10% gravel to 50 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are light brown, and do not react to HCl. SANDY LEAN CLAY (92-96.75 feet) Dry, very hard, no odor. Predominately silt and clay with ~40% medium to fine sand and ~5% fine gravel to 15 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and									

Projec	t Nan	ne:	Yerington Groundwater Investigation		Boring Number:					
Soil B	oring	Σ	Monitoring Well Project Nut	nber:			12124	43.021 Sheet6 of1		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Backfill	Remarks		
95	<u>4545</u>		toughness, are yellowish brown (10YR 5/4), and do not react to HCl.	-						
		SC	CLAYEY SAND (96.75-100 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~5% fine gravel to 10 mm and ~40% silt and clay. The sand is subangular to subrounded, the gravel is subrounded. The fines have medium plasticity and toughness, are light grayish brown, and do not react to HCl.							
	4540		SILTY SAND with GRAVEL (100-101 feet) Dry, very dense, no odor. Predominately medium to fine sand with trace fine gravel to 8 mm and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are light brown, and do not react to HCl. SANDY LEAN CLAY (101-104.5 feet) Dry, very hard, no odor. Predominately silt and clay with ~40% medium to fine sand and ~5% fine gravel to 10 mm. The sand is angular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are light olive brown (2.5Y 5/3), and have a weak reaction to HCl.							
- 105 - 1 - -	4535	SC	CLAYEY SAND (104.5-107 feet) Dry, very dense, no odor. Predominately coarse to medium sand with ~10% fine gravel to 12 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are brown, and do not react to HCl.	-						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4530	SC CL	SANDY LEAN CLAY (107-107.5 feet) Dry, very hard, no odor. Predominately silt and clay with ~30% medium to fine sand and ~5% fine gravel to 15 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness and are brown (10YR 5/3). CLAYEY SAND (107.5-109 feet) Dry, very dense, no odor. Predominately coarse to medium sand with ~10% fine gravel to 10 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are light brown, and do not react to HCl. SANDY LEAN CLAY (109-113 feet) Dry, very hard, no odor. Predominately silt and clay with ~45% medium to fine sand and trace fine gravel to 5 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl.							

Project Na	ne:	Yerington Groundwater Investigation		Boring Number: 12124		B/W	/-12					
Soil Boring		Monitoring Well Project N	lumb				12124	3.021	Sheet	7	of	10
Depth (feet) Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Backfill		Remarks			
115 4525	CL	SANDY LEAN CLAY (113-117 feet) Dry, very hard, no odor. Predominately silt and clay with ~35% medium to fine sand and ~5% coarse sand to 4 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and have a weak reaction to HCl.										
120 4520	SC	CLAYEY SAND (117-121 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~5% gravel to 20 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are brown, and do not react to HCl.										
		SILTY SAND (121-125 feet) Dry, very dense, no odor. Predominately coarse to medium sand with ~10% gravel to 25 mm and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.										
125 4515 125 4515 90/10/127 125 125 4510 120 4510 130 4510 130	CL	 SANDY LEAN CLAY (125-127 feet) Dry, very hard, no odor. Predominately silt and clay with ~40% medium to fine sand and ~5% fine gravel to 15 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are light olive brown (2.5Y 5/3), and do not react to HCl. SANDY LEAN CLAY (127-130 feet) Dry, very hard, no odor. Predominately silt and clay with ~40% medium to fine sand and ~5% fine gravel to 12 mm. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. 	. .									
130 4510 130 - 4510 901	SM GC	SILTY SAND with GRAVEL (130-132 feet) Dry, very dense, no odor. Predominately coarse to medium sand with ~15% gravel to 40 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are grayish brown, and do not react to HCl. CLAYEY GRAVEL with SAND (132-137 feet) Dry, very dense, no odor.										

Project Name					Number:	B/W-12
Soil Boring		Monitoring Well Project Number:	_		12124	13.021 Sheet <u>8</u> of <u>10</u>
Depth (feet) Elevation (feet)	USCS Group Symbol	Description Sample No.	Samula	Graphic Crithology	Backfill	Remarks
- - 135 <u>4505</u> -		Predominately gravel to 65 mm with ~25% coarse to medium sand and ~25% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are grayish brown, and do not react to HCl.				
- - - 140 <u>4500</u>	SC	CLAYEY SAND with GRAVEL (137-141 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~25% gravel to 30 mm and ~40% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are brown, and do not react to HCl.				
	SM CL	SILTY SAND with GRAVEL (141-141.5 feet) Dry, very dense, no odor. Predominately sand with ~20% gravel to 20 mm and ~30% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY with GRAVEL (141.5-147 feet) Dry, very hard, no odor. Predominately silt and clay with ~25% coarse to medium sand and ~20% gravel to 65 mm. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and do not react to HCl. Interval includes some thin gravelly lean clay seams.				
00 AEKINGADA BRUNGCALLA	CL CL SC SM	SANDY LEAN CLAY (147-148 feet) Dry, very hard, no odor. Predominately silt and clay with ~35% medium to fine sand and ~5% gravel to 25 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and do not react to HCl. SANDY LEAN CLAY with GRAVEL (148-150 feet) Dry, very hard, no odor. Predominately silt and clay with ~25% coarse to medium sand and ~20% gravel to 65 mm. The sand is subangular to subonunded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and do not react to HCl. CLAYEY SAND with GRAVEL (150-150.5feet) Dry, very dense, no odor. Predominately sand with ~35% gravel to 35 mm and ~30% silt and clay. The sand is subangular to suborounded, the gravel is angular to subangular. The fines have medium				

Proje	Project Name: <u>Yerington Groundwater Investigation</u>					В	oring N	Jumber:	r: <u>B/W-12</u>	
Soil	Boring	Σ	Monitoring Well Project N	umber	r:			12124	43.021 Sheet	9 of <u>10</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Camula Mo	Dampic 190.	Sample	Lithology	Backfill	Remarks	
- - - 155 - - -	4485	SC	plasticity and toughness, are light grayish brown, and do not react to HCl. SILTY SAND with GRAVEL (150.5-153.5 feet) Dry, very dense, no odor. Predominately coarse to medium sand with ~30% gravel to 30 mm and ~25% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are light brownish gray, and do not react to HCl. CLAYEY SAND with GRAVEL (150-150.5 feet) Dry, very dense, no odor. Predominately sand with ~25% gravel to 25 mm and ~40% silt and clay. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are grayish brown, and do not react to HCl. CLAYEY SAND (155-157 feet) Dry, very dense, no odor.							
- - - 160	4480		Predominately coarse to medium sand with ~5% gravel to 10 mm and ~45% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are light grayish brown, and do not react to HCl. SILTY SAND (157-160 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~10% fine gravel to 10 mm and ~35% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have low plasticity and medium toughness, are light grayish brown, and do not react to HCl.	-						
		SM SC	SANDY LEAN CLAY (160-160.5 feet) Dry, very hard, no odor. Predominately silt and clay with ~30% medium to fine sand to 2 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and do not react to HCl. SILTY SAND with GRAVEL (160.5-161 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~20% coarse sand, ~30% fine gravel to 15 mm, and ~25% silt and clay. The subangular. The fines are nonplastic, are grayish brown, and do not react to HCl.							
-	4475		CLAYEY SAND (161-163 feet) Dry, very dense, no odor. Predominately medium to fine sand with ~10% gravel to 15 mm and ~40% silt and clay. The sand is subangular to	_			\wedge			
165 - - 99/12/			subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown, and do not react to HCl. NO RECOVERY SANDY LEAN CLAY (165-166 feet)	-						
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4470	CL CL	Dry, very hard, no odor. Predominately silt and clay with ~45% medium to fine sand and trace fine gravel to 5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and do not react to HCL. CLAYEY SAND with GRAVEL (166-168.25 feet) Dry, very dense, no odor. Predominately sand with ~35% gravel to 30 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown, and do not react to HCL. SANDY LEAN CLAY (168.25-168.75 feet) Dry, very hard, no odor. Predominately silt and clay with ~45% sand and ~5% fine gravel to 10 mm. The sand and gravel are angular to subangular. The fines have medium plasticity and toughness, are grayish brown (10YR 5/2), and do not react to HCl.							

Proje	ect Nan	ne:	Yerington Groundwater Investigation			Boring	Number	B/W-12	
Soil	Boring	2	Monitoring Well Project Nu	umber	::		1212	43.021	Sheet <u>10</u> of <u>10</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Samula No	Compression	Graphic	Backfill	- Re	emarks
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4465		LEAN CLAY (168.75-169.5 feet) Dry, weakly consolidated, no odor. Predominately silt and clay with ~10% medium to fine sand to 1 mm. The sand is angular to subangular. The fines have medium plasticity and toughness, are grayish brown (10YR 5/2), and do not react to HCI. Two to 10 cm thick bedding planes preserved. SANDY LEAN CLAY with GRAVEL (169.5-171 feet) Dry, moderately consolidated, no odor. Predominately silt and clay with ~15% medium to fine sand and ~25% fine gravel to 15 mm. The sand is subangular to subonuded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and do not react to HCI. CLAYEY SAND with GRAVEL (171-172 feet) Dry, weakly consolidated, no odor. Predominately medium to fine sand with ~25% fine gravel to 15 mm. The sand is subangular to subonuded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are grayish brown, and do not react to HCI.						

Project N	lame:	Yerington Groundwater In	vestigation		_ \	Vell Nu	umber:	F	3/W-	-13		
Soil Borir	ng	Monitoring Well	Project Numb	er:			1212	243.02	21			et <u>1</u> of <u>13</u>
Boring Lo	ocation	South of Pit Lake, west of h	ighway		Elev	ation:	4503	.4 fee	t amsl			326838.9 1535222.9
Drilling C	Contrac	tor: WDC	Driller: M. Wilkerson	2000000		e Starte	d: 7 /	7/05		Date F	inished:	7/13/05
Drilling E	Equipm	ent: GEFCO SS-15K-HL, Ro	ussy Sonic Head		Tota Dep	th: (fee	t) 24	4.0		(feet)	Depth:	126.5' / 124
Sampling	g Metho	d: Core Barrel	Borehole Diameter: 6"	800000	Wel	l Diam Materi	eter		n PVC	000000000	******	200000000000000000000000000000000000000
Drilling N	Method	Sonic, utilized 6'' casing an	d a 4.5'' core barrel	200000		ened Ir Well D		139.	.2-159.	2 ft., k	oottom	at 159.5 ft.
		ntontite and Cement		000000	Slot	Size:	0.020)'' F	ilter Ma	terial:	#10-20	Silica Sand
Logged B	By: C	. Gardner		000000	Development Method: Swabbed, bailed, pumped							
	ipol			00000		Graphic				000000000	*********	*************************
Depth (feet) Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well				Remark	58
	SM SW-SM CL ML 95 GM	Dry, very dense, no odor. Primarily medium to fine sand with gravel to 40 mm, and ~15% silt and angular to subrounded, the gravel an The fines are nonplastic, are light bro	 -15% coarse sand, ~40% clay. The sand is gular to subangular. wwn, and have a strong C and GRAVEL (1.5-4 -20% coarse sand, ~20% -20% coarse to medium sand d gravel are subangular 				IN UN VINUNUNUNUNUNUNUNUNUNUNUNUNUNUNUNUNUNUNU	the investment of the investme	ASTM N ial-manu erminatic ed on the tem. Mu rizontal s Nevada vada We: urp conta dational hed line. depths a ess stated ELL DES eened In tom of s nent Gro ttonite C er Pack: -20 Sam ive Colla totonite C o of PVC sl.	Aethod I lal proce- ons and e Unifie- nsell co- barvey d State PI st zone, cts india contacts re below 1 otherv IGN for terval: 1 ump: 15 hips: 13 #60 Sai 1 136-11 apse: 16 hips: 16 hips: 16 hips: 16 State PI st zone, cts india contacts 1 atter Me	D-2488 (f edure), gr nomencl: d Soil Cla lors descr lata is exp ane syste in feet. cated by s s indicate w land su vise. r B/W-13 (39.2-159 (39.2-159) (39	rain-size ature assification ribed wet. pressed in em, solid lines, d by rface 0.2 feet. -136 feet, et. et. et. et. 5.86 feet,

Proje	ct Nan	ne:	Yerington Groundwater Investigation		Well Number			B/W-13	
Soil	Boring		Monitoring Well X Project N	umber:	_		12124	43.021	Sheet <u>2</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Craphic Trithology	Mell		Remarks
		SM SC SM SM SM SM GM SM SM SM	SILTY SAND with GRAVEL (16-17.25 feet) Dry, very dense, no odor. Primarily coarse to fine sand with ~20% gravel to 30 mm and ~35% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown (10YR 5/3), and have a strong reaction to HCl. Dry, very dense, no odor. Primarily coarse to fine sand with ~20% gravel to 50 mm and ~20% silt and clay. The sand is angular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and have a weak reaction to HCl. CLAYEY SAND with GRAVEL (19.25-20 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~20% fine gravel to 15 mm, and ~35% silt and clay. The sand is subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and have a strong reaction to HCl. SILTY SAND with GRAVEL (20-21.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~30% gravel to 50 mm and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light brown, and have a strong reaction to HCl. SILTY SAND with GRAVEL (21.5-23.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~20% gravel to 20 mm and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are grayish brown, and have a strong reaction to HCl. SILTY SAND with GRAVEL (21.5-25.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~20% gravel to 20 mm and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are grayish brown, and have a strong reaction to HCL. SILTY SAND with GRAVEL (25-26 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~25% coarse sand, ~45% gravel to 25 mm, and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are grayish brown, and have a strong reaction to HCL. SILTY SAND with GRAVEL (26-26.5 feet) Dry, very dense, no odor. Primarily sand with ~30% gravel to 30 mm and ~15% silt and clay.						
			have a strong reaction to HCl. CLAYEY SAND with GRAVEL (3233.25 feet) Dry, very dense, no odor.						

Proje	ct Nan	ne:	Yerington Groundwater Investigation	_ ,					
Soil	Boring	Ľ	Monitoring Well Project Number:			Sheet 3	of <u>13</u>		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description Sample No.	Sample	Graphic Lithology	Mell		Remarks	
35	4465		Primarily sand with ~30% gravel to 20 mm and ~30% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and have a strong reaction to HCl. SILTY SAND with GRAVEL (33.25-35.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~20% coarse sand, ~20% gravel to 30 mm, and ~20% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are light brown, and have a strong reaction to HCl. WELL-GRADED GRAVEL with SAND (35.5-39 feet) Dry, medium dense, no odor.						
			Primarily gravel to 75 mm with ~30% coarse to medium sand and ~5% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and have a strong reaction to HCl. <u>SANDY LEAN CLAY</u> (39-39.25 feet) Dry, very dense, no odor. Primarily silt and clay with ~35% medium to fine sand and ~10% fine gravel to 15 mm. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and have a strong reaction HCl. <u>SANDY LEAN CLAY</u> (39.25-40 feet) Dry, very dense, no odor. Primarily silt and clay with ~40% medium to fine sand and ~5% gravel to 40 mm. The sand is subangular to						
	4460	CL	subrounded, the gravel is angular to subrounded. The fines have medium plasticity and toughness, are gray (5Y 6/1), and have a strong reaction HCL. WELL-GRADED SAND with SILT and GRAVEL (40-41.25 feet) Dry, very dense, no odor. Primarily coarse to medium sand with ~25% gravel to 60 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and have a strong reaction to HCL. SILTY SAND with GRAVEL (41.25-44 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~30% gravel to 20 mm, and ~25% silt and clay. The sand is subangular to subrounded, the gravel is angular to						
V&CALD.GD7 1/31/06	4455	SM	subrounded. The fines are nonplastic, are light brown, and have a strong reaction to HCl. SANDY LEAN CLAY (44-47.25 feet) Dry, very dense, no odor. Primarily silt and clay with ~45% medium to fine sand and ~5% gravel to 50 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are light brownish gray (2.5Y 6/2), and have a strong reaction HCl. SILTY SAND with GRAVEL (47.25-50 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~35% gravel to 50 mm, and ~25% silt and clay. The sand and						
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4450	GW	gravel are subangular to subrounded. The fines are nonplastic, are grayish brown, and have a strong reaction to HCI. WELL-GRADED GRAVEL with SAND (50-52.5 feet) Dry, very dense, no odor. Primarily gravel to 50 mm with ~20% medium to fine sand and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are light brown, and have a weak reaction to HCI. SILTY GRAVEL with SAND (52.5-56 feet) Dry, very dense, no odor. Primarily gravel to 25 mm with ~25% medium to fine sand and ~15% silt and clay. The sand and gravel are subangular						

Proje	Project Name: Yerington Groundwater Investigation				Well Number: B/W-13					
Soil	Boring		Monitoring Well X Project Number:	_		12124	43.021	Sheet <u>4</u> of <u>13</u>		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Sample No.	Sample	Graphic Cithology	Mell		Remarks		
55 -			to subrounded. The fines are nonplastic, are light brown, and have a strong reaction to HCl.							
	4445	GC	CLAYEY GRAVEL with SAND (56-59.5 feet) Dry, medium dense, no odor. Primarily gravel to 40 mm with ~20% medium to fine sand and ~35% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines have medium plasticity and toughness, are light brown, and have a weak reaction to HCl.							
60	-	GW- GM SC	WELL-GRADED GRAVEL with SILT and SAND (59.5-60.75 feet) Dry, medium dense, no odor. Primarily gravel to 50 mm with ~25% medium to fine sand and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and have a strong reaction to HCl. CLAYEY SAND (60.75-63 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 15 mm and ~30% silt and clay. The sand and gravel are							
	4440	SC	subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and have a strong reaction to HCl. <u>CLAYEY SAND with GRAVEL</u> (63-65 feet) Dry, medium dense, no odor. Primarily medium to fine sand with ~30% gravel to 30 mm and ~30% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are brownish gray, and have a strong reaction to							
- - -	-	SC	HCI. CLAYEY SAND (65-70 feet) Dry, medium dense, no odor. Primarily medium to fine sand with ~10% gravel to 30 mm and ~30% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and have a weak reaction to HCI.							
SCALD.GDT 1/31/	4435									
SONIC METHODLOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	-	SM	SILTY SAND with GRAVEL (70-72.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~15% gravel to 40 mm and ~25% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and have a weak reaction to HCl.							
SONIC METHOD	4430	CL SM	SANDY LEAN CLAY (72.5-73 feet) Dry, very hard, no odor. Primarily silt and clay with ~50% medium to fine sand and trace fine gravel to 5 mm. The sand is subangular to							

Proje	Project Name: Yerington Groundwater Investigation				Well Number: B/W-13					
Soil l	Boring		Monitoring Well X Project Nu	mber:	r: Sheet					
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.		Graphic Trithology	Mell		Remarks	
	4425	SM- SM GW- GM SC	subrounded. The fines have medium plasticity and <u>loughness, are brown (10YR 5/3), and do not react to HCl.</u> <u>JITY SAND with GRAVEL</u> (73-74 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~15% gravel to 40 mm and ~25% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and have a weak reaction to HCl. <u>WELL-GRADED SAND with SILT</u> (74-77.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 15 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. <u>WELL-GRADED GRAVEL with SILT and SAND</u> (77.5-79 feet) Dry, very dense, no odor. Primarily gravel to 25 mm with ~20% medium to fine sand and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. <u>CLAYEY SAND</u> (79-80 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~10% gravel to 25 mm and ~35% silt and clay. The sand is subangular. The fines have medium plasticity and low toughness and are brown. <u>WELL-GRADED SAND with SILT and GRAVEL</u> (80-83.5 feet) Dry, medium dense, no odor. Primarily coarse to fine sand with ~30% gravel to 75 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. <u>WELL-GRADED SAND with SILT and GRAVEL</u> (80-83.5 feet) Dry, medium dense, no odor. Primarily coarse to fine sand with ~30% gravel to 75 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. <u>WELL-GRADED GRAVEL with SAND</u> (83.5-86 feet)				YAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYAYA			
		SM	Dry, very dense, no odor. Primarily gravel to 75 mm with ~30% coarse to fine sand and ~5% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (86-90 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~30% gravel to 60 mm and ~15% silt and clay. The sand is subangular. The fines							
SONIC METHODLOG YERINGTON GPJ BRN&CALD/GDT 1/31/06	4415	SM	are nonplastic, are grayish brown, and do not react to HCl. <u>SILTY SAND with GRAVEL</u> (90-97 feet) Dry, very dense, no odor.							
SONIC METHOD LOG YERING	4410		Primarily medium to fine sand with ~30% gravel to 40 mm and ~40% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. Gravel seam in the lower 6-inches of the interval.							

Proje	Project Name: Yerington Groundwater Investigation					Well Number: B/W-13					
Soil I	Boring		Monitoring Well X Project	Numł	ber:			12124	43.021	Sheet <u>6</u> of <u>13</u>	
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Draphic Lithology	Mell		Remarks	
95 —											
SONIC METHODLOG YERINGTON GPJ BRN&CALD.GDT 1/31/06	4400	SM SM SM CL	 SILTY SAND with GRAVEL (97-98.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~25% fine gravel to 15 mm, and ~40% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and have a weak reaction to HCI. WELL-GRADED SAND with SILT (98.5-99.5 feet) Moist to saturated, very dense, no odor. Primarily medium to fine sand with trace fine gravel to 5 mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCI. SILTY SAND (99.5-100 feet) Moist to saturated, very dense, no odor. Primarily medium to fine sand with ~25% gravel to 40 mm and ~25% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have a strong reaction to HCI. SILTY SAND with GRAVEL (100-101.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~30% gravel to 50 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, are brown, and have a strong reaction to HCI. CLAYEY SAND with GRAVEL (101.5-102.5 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~35% gravel to 70 mm and ~25% silt and clay. The sand and gravel are subangular to subrounded, the gravel is subangular. The fines and and velay. Subangular to s								

Proje	Project Name:Yerington Groundwater Investigation				Well Number: B/W-13					
Soil	Boring		Monitoring Well X Project Num	ber:	_		12124	43.021	Sheet <u>7</u> of <u>13</u>	
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks	
- - - - - - - - - - - -	4390	SW-	SILTY SAND (116-117 feet) Dry, very dense, no odor. Primarily medium to fine sand with trace fine gravel to 5 mm and ~35% silt and clay. The sand is subangular to rounded. The fines are nonplastic, are brown, and have a weak reaction to HCl.	-			A NA			
- - 120 -	4385	SC	WELL-GRADED SAND with SILT (117-120 feet) Dry, medium dense, no odor. - Primarily medium to fine sand with trace fine gravel to 10 - mm and ~10% silt and clay. The sand is subangular to - subrounded, the gravel is subangular. The fines are - nonplastic, are brown, and do not react to HCl. - SILTY GRAVEL with SAND (120-120.2 feet) Dry to moist, medium dense, no odor. - Primarily gravel to 30 mm with ~30% medium to fine sand and ~15% silt and clay. The sand and gravel are subangular -	-						
	4380	SW- SM	and ~15% shi and chay. The sand and graver are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. CLAYEY SAND (120.2-121.2 feet) Dry to moist, very dense, no odor. Primarily medium to fine sand with ~5% fine gravel to 10 mm and ~40% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are light brownish gray, and do not react to HCl. WELL-GRADED SAND with SILT (121.2-125 feet) Dry from 121.2-123, moist to saturated from 123-125, dense, no odor. Primarily medium to fine sand to ~1 mm and ~10% silt and	-						
125 - - 90/18/1	- - - -	SM	Year Year Year	-						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4375	SM CL SW- SM	Primarily medium to fine sand with trace fine gravel to 10 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCI. WELL-GRADED SAND with SILT (127.5-129 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% fine gravel to 15 mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCI. SANDY LEAN CLAY (129-129.75 feet)							
SONIC METHOD LOG	-	SM	Dry, no odor. Primarily silt and clay with ~50% medium to fine sand to 2 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are dark gray (10YR 4/1), and have a weak reaction to HCl. WELL-GRADED SAND with SILT (129.75-130.75 feet) Saturated, medium dense, no odor.	-						

Project Nar	ne:	Yerington Groundwater Investigation		Well Nı	umber:	B/W-13	
Soil Boring		Monitoring Well X Project Number	: _		1212	43.021	Sheet <u>8</u> of <u>13</u>
Depth (feet) Elevation (feet)	USCS Group Symbol	Description		Craphic Crithology	Kell		Remarks
20/ICV WEITHOD LOS VERTUPOLI 135- - - - - - - - - - - - - -	GW- GM CL GW- GM GW SM GW	Primarily medium to fine sand with ~10% fine gravel to 15 to subrounded. The fines are nonplastic, are brown, and do hot react to HCL. SILTY SAND with GRAVEL (100-101.5 feet) Moist, very dense, no odor. Primarily medium to fines and with ~45% gravel to 70 mm and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light brown, and have a strong reaction to HCL. WELL-GRADED GRAVEL with SILT and SAND (133.5-136 feet) Moist, very dense, no odor. Primarily gravel to 70 mm with ~20% medium to fine sand and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and have a weat to no reaction to HCL. SANDY LEAN CLAY (136-137 feet) Dry, very hard, no odor. Primarily silt and clay with ~35% medium to fine sand and ~10% gravel to 20 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are gray (10YR 5/1), and have a weak reaction to HCL. WELL-GRADED GRAVEL with SILT and SAND (137-140 feet) Saturated, medium dense, no odor. Primarily gravel to 30 mm with ~30% sand and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular to subrounded, the gravel is angular to subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCL. SILTY SAND with GRAVEL (140-141.25 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~40% gravel to 30 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCL. SILTY SAND with GRAVEL (142.25-143.25 feet) Saturated, medium dense, no odor. Primarily fine gravel to 15 mm with ~20% coarse to medium sand and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCL. WELL-GRADED SAND (144-153 feet) Saturated, medium dense, no odor. Primarily medium to					

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-13	
Soil	Boring		Monitoring Well X Project Num	ber:			12124	43.021	Sheet <u>9</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks
- - - 155 - - - - - - - - - - - - - - - - - - -	<u>4350</u> <u>4345</u>	SM	SILTY SAND with GRAVEL (153-154.75 feet) Moist, very dense, no odor. Primarily medium to fine sand with ~30% gravel to 25 mm and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and have a weak reaction to HCl. SILTY SAND (154.75-155.5 feet) Moist to saturated, very dense, no odor. Primarily medium to fine sand with ~5% fine gravel to 15 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND with GRAVEL (155.5-159 feet) Dry to moist, dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~20% gravel to 20 mm, and ~30% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light brownish gray (2.5Y 2/6), and have a weak to no reaction to HCl.						
 160 		SM GW	SILTY SAND with GRAVEL (159-160 feet) Dry to moist, very dense, no odor. Primarily medium to fine sand with ~20% coarse sand, ~20% gravel to 20 mm, and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (160-161.5 feet) Saturated, medium dense, no odor.	- 164 Ft.					
-	4340	SW- SM	Primarily gravel to 30 mm with ~45% coarse to medium sand and ~5% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (161.5-162 feet) Dry, very hard, no odor. Primarily silt and clay with ~35% sand and trace fine gravel to 8 mm. The sand is angular to subrounded, the gravel is angular to subangular. The fines have medium plasticity and toughness, are strong brown (7.5YR 4/6), and do not react to	B/W-13 @ 159					
SONIC METHOD LOG VERINGTON.GPJ BRN&CALD.GDT 1/31/06	4335	SM							
SONIC METHOD LOG YERINGT		SM CL	 Initially state that of 2.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. SILTY SAND with GRAVEL (164-170 feet) Moist, very dense, no odor. Primarily medium to fine sand with ~15% gravel to 40 mm and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. INTERBEDDED SILTY SAND with GRAVEL and 						

Proje	ect Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-13	
Soil	Boring		Monitoring Well X Project Nu	ımbe	r:			12124	43.021	Sheet <u>10</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	01 - NT-	Sample No.	Sample	Lithology	Log		Remarks
	4330		SANDY LEAN CLAY (170-171.5 feet) SILTY SAND with GRAVEL Moist, medium dense, no odor. Primarily medium to fine sand with ~15% coarse sand, ~20% gravel to 50 mm, and ~30% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY Moist, very hard, no odor. Primarily silt and clay with ~35% medium to fine sand and ~5% fine gravel to 12 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown (10YR 4/3), and do not react to HCl. SANDY LEAN CLAY Moist, very hard, no odor. Primarily silt and clay with ~45% sand and ~5% fine gravel to 12 mm. The sand is subangular to subrounded, the gravel to 12 mm. The sand is subangular to subrounded, the gravel to 12 mm. The sand is subangular to subrounded, the gravel to sangular to subangular. The fines have medium plasticity and ucighness, are mostly brown (10YR 4/3) with some very							
	4325	CL	dark gray sediments (10YR 3/1), and do not react to HCl. SANDY LEAN CLAY with GRAVEL (180-184 feet) Moist, very hard, no odor. Primarily silt and clay with ~30% sand and ~15% gravel to 75 mm. The sand is angular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown (10YR 5/3), and have a weak to no reaction to HCl.							
SONIC METHOD LOG VERINGTON.GPJ BRN&CALD.GDT 1/31/06	4315		NO RECOVERY		B/W-13 @ 185 - 190 Ft.					
SONIC A		GW	WELL-GRADED GRAVEL with SAND (191-192.5 feet) Saturated, medium dense, no odor,							

Proje	ect Nan	ne:	Yerington Groundwater Investigation			Well Nu	umber:	B/W-13	
Soil l	Boring		Monitoring Well X Project Nu	umber	: <u> </u>		1212	43.021	Sheet <u>11</u> of <u>13</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No		Graphic Crithology	Mell		Remarks
	4310	CL	Primarily gravel to 30 mm with ~25% coarse to medium sand and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are grayish brown, and do not react to HCl. <u>SANDY LEAN CLAY</u> (192.5-193.5 feet) Moist, very hard, no odor. Primarily silt and clay with ~30% coarse to fine sand and trace fine gravel to 10 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are brown (10YR 4/3), and do not react to HCl. <u>SILTY SAND with GRAVEL</u> (193.5-200 feet) Moist, very dense, no odor. Primarily medium to fine sand with ~15% gravel to 20 mm and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						
		SC	CLAYEY SAND with GRAVEL (200-203 feet) Dry to moist, very dense, no odor. Primarily medium to fine sand with ~35% gravel to 30 mm and ~25% silt and clay. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are brownish gray, and have a weak to no reaction to HCl.	· · ·					
	4300	SC	CLAYEY SAND with GRAVEL (203-206 feet) Dry, very dense, no odor. Primarily medium to fine sand with ~15% fine gravel to 15 mm and ~45% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and have a strong reaction to HCl.						
SONIC METHOD LOG VERINGTON.GPJ BRN&CALD.GDT 1/31/06	4295		Dry to moist, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and ~5% fine gravel to 12 mm. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are grayish brown (2.5Y 5/2), and have a strong reaction to HCl.						

Project N	Jam	e:	Yerington Groundwater Investigation			v	Vell Nu	nber:	B/W-13		
Soil Bori	ng		Monitoring Well X Project N	umbe	er:			12124	43.021	Sheet	<u>12</u> of <u>13</u>
Depth (feet) Elevation (feet)		USCS Group Symbol	Description	-	Sample No.	Sample	Lithology	Mell		Remarks	
	90 85	СН	subangular to subrounded. The fines have high plasticity and toughness, are dark yellowish brown (10YR 4/4) to yellowish red (5YR 4/6), and have a strong reaction to HCl. SANDY FAT CLAY (212.75-213.75 feet) Dry, very hard, no odor. Primarily silt and clay with ~40% medium to fine sand and trace fine gravel to 10 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have high plasticity and medium toughness, are very dark gray (10YR 3/1), and do not react to HCl. FAT CLAY with SAND (213.75-214.75 feet) Dry, very hard, no odor. Primarily silt and clay with ~20% medium to fine sand and trace coarse sand to 2 mm. The sand is subangular to subrounded. The fines have high plasticity and toughness, are mottled dark yellowish brown (10YR 4/6) to grayish brown (10YR 5/2) to pinkish white (5YR 8/2), and do not react to HCl. WEATHERED GRANITE (219.75-219.75 feet) Dry, very hard, no odor. Fractured and weathered granite with ~55% secondary silt and clay. The fines have high plasticity, medium toughness, are light brownish gray (10Y/R 6/2), and do not react to HCl. FAT CLAY (219.75-220 feet) Dry, very hard, no odor. Primarily silt and clay with ~15% sand and trace fine gravel to 12 mm. The sand is subangular to subrounded, the gravel is subangular. The fines have high plasticity and medium toughness, are light brownish gray (2.5Y 6/2), and do not react to HCl. WEATHERED GRANITE (220-226 feet) Dry, very hard, no odor.								
- 428 	80		Fractured and weathered granite with ~55% secondary silt and clay. The fines have high plasticity, medium toughness, are light brownish gray (10YR 6/2), and do not react to HCl.								
SONIC METHOD LOG YERINGTON GPU BRN&CALD.GDT 1/3/06 2016 2017 20	75		WEATHERED TUFF (228.5-229 feet) Dry, very hard, no odor. Fractured weathered volcanic tuff with ~30% secondary silt and clay, includes some angular quartz clasts to 3 mm. The fines have are nonplastic, are yellowish red (5YR 5/6), and do not react to HCl. WEATHERED TUFF (229-243 feet) Dry, very hard, no odor.) 228 - 233 Ft.						

Project Name	:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-13	
Soil Boring	<u> </u>	Monitoring Well X Project Number	r:	1212 Graphic Log		1212	43.021	Sheet <u>13</u> of <u>13</u>
Depth (feet) Elevation (feet)	USCS Group Symbol	Description	Sample NO.	Sample	Lithology	Mell		Remarks
	СН	Fractured weathered volcanic tuff with ~10% secondary silt and clay, includes some elemental sulfur and angular quartz clasts to 3 mm. The fines have are nonplastic, are pinksh white (5YR 8/2) to light reddish brown (5YR 6/3), and do not react to HCl.						

Proje	ct Nan	ne:	Yerington Groundwater In	vestigation		_ v	Vell Nu	mbe	er:	B/W·	-14	
Soil	Boring	Ľ	Monitoring Well	Project Numb	ber:			12	124	3.021		Sheet <u>1</u> of <u>16</u>
Borir	ng Loc	ation:	Southeast of Pit Lake, east	of highway near river		Elev	ation:	43	94.1	feet amsl		st: 329551.6 orth: 1538561.1
Drilli	ing Co	ntract	or: WDC	Driller: M. Wilkerson			e Starte	d:	6/1	5/05	Date Finish	
Drilli	ing Equ	uipme	ent: GEFCO SS-15K-HL, Ro	ussy Sonic Head		Tota Dep		t) 2	200	.0	Water Dep (feet)	^{th:} 15' / 10.75'
Sam	oling N	letho	d: Core Barrel	Borehole Diameter: 6''		Well and	l Diame Materia	eter al:	2-	inch PVC		
Drilli	ing Me	thod:	Sonic, utilized 6" casing an	d a 4.5'' core barrel			ened Ir Well D			37.2-57.2 1	it., botton	n at 57.5 ft.
Well	Seal:	Ber	ntontite and Cement			Slot	Size:	0.0	20'	Filter Ma	terial: #1()-20 Silica Sand
Logg	ed By:	C.	Gardner		00000	Deve	elopme	nt M	letho			d, pumped
	Ţ.	nbol					Graphic					
(feet)	n (fee	Group Symbol			e No.	e	gy					
Depth (feet)	Elevation (feet)	Gro	Description		Sample No.	Sample	Lithology	Well			Rei	marks
	Ē	USCS (•1	•1	Γ					
		SM	<u>SILTY SAND</u> (0-1.25 feet) Dry, medium dense, no odor.							on ASTM N	Iethod D-24	
-			Primarily medium to fine sand with t mm and ~15% silt and clay. The san	d is subangular to						determination	ons and nom	e), grain-size enclature il Classification
-			subrounded. The fines are nonplastic (10YR 5/4), and have a strong reaction	on to HCl.								described wet.
-	-	SW	WELL-GRADED SAND with GRADry, loose, no odor.	·						Horizontal s	urvey data i	s expressed in
_		CL	Primarily coarse to medium sand wit mm and ~5% silt and clay. The grave subangular to subrounded.	h ~20% fine gravel to 12 el and sand are						the Nevada Nevada We	State Plane st zone, in fe	system, æt.
			LEAN CLAY (2-8.5 feet) Moist, soft, no odor.]						gradational	contacts ind	l by solid lines, icated by
			Primarily silt and clay with trace san subangular to subrounded. The fines	have medium plasticity						dashed line.		
-	1		and toughness, are dark brown (10Y) reaction to HCl.	R 3/3), and have a slight —						Well B/W-1 borehole dri		led in a second et near the
-				-						initial boreh borehole wa	is abandond	ed with
-	4390			-						total depth t	o land surfa	tremied from ce.
-				-					Ň	All depths a unless stated		iu surface
5-				_								
										WELL DES	IGN for B/V	W-14:
-	1			-						Screened In Bottom of s		
1/31/06	1										-	
-				-						Cement Gro Bentonite C		
& CALD				-						Filter Pack: #10-20 San		4.3-35.1 feet, et.
J BRN				-								
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06												
ERING T										Depth to W Top of PVC		ing Point is
- 0G YE	1	SP	POORLY GRADED SAND (8.5-9. Moist, loose, no odor.	25 feet)						Top of PVC amsl.	Elevation:	4,396.56 feet,
HOD F	4385		Primarily medium to fine sand to 2 n clay. The sand is subangular to subr	ounded. The fines are						PVC Stick-u surface.	up: 2.5 feet a	above land
IC MET		CL	nonplastic, are light olive brown (2.5 to HCl.	Y 5/3), and do not react					\mathbb{X}			
SON			LEAN CLAY with SAND (9.25-10 Moist, soft, no odor.	teet)								

Project	t Narr	ne:	Yerington Groundwater Investigation		_ v	Vell Nı	umber:	B/W-14		
Soil Bo	oring		Monitoring Well X Project Numb	er:			121	243.021	Sheet <u>2</u> of	16
Depth (feet)	Elevation (feet)	USCS Group Symbol		Sample No.	Sample	Lithology	Mell	_	Remarks	
	4380		Primarily fine sand with trace medium sand to 1 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are dark gray (2.5Y 4/1), and do not react to HCl. SILTY SAND (11-12.5 feet) Moist, medium dense, no odor. Primarily fine sand with trace medium sand to 1 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are dark gray (2.5Y 4/1), and do not react to HCl. WELL-GRADED SAND (12.5-14.25 feet) Saturated, loose, no odor. Primarily medium to fine sand with trace fine gravel to 5 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are gray (2.5Y 5/1), and do not react to HCl. SANDY LEAN CLAY (14.25-15 feet) Moist, soft, no odor. Primarily silt and clay with ~30% medium to fine sand to 1 mm. The sand is subangular to subrounded. The fines have	B/W-14 @ 12 - 17 Ft.			I REAL RANK AND REAL RANK AND REAL RANK AND RANK			
-			LEAN CLAY (17-18.5 feet) Moist, firm, no odor. Primarily silt and clay with ~5% fine sand to 0.5 mm. The fines have medium plasticity and toughness and do not react to HCl.							
20-	4375	SW SW	Saturated, loose, no odor. Primarily medium to fine sand with trace fine gravel to 10 mm, and trace silt and clay. The sand is angular to subrounded, the gravel is subrounded. The fines are nonplastic, are gray, and do not react to HCl. WELL-GRADED SAND (18.5-19 feet) Saturated, loose, no odor. Primarily medium to fine sand with trace fine gravel to 7 mm, and trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are gray, and do not react to HCl. WELL-GRADED SAND (20.5-21.5 feet) Saturated, loose, no odor. Primarily medium sand with ~20% coarse sand, ~10% gravel				I.K.C.K.C.K.C.K.C.K.C.K.C.K.C.K.C.K.C.K.			
		SW	to 15 mm, and trace silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are gray, and do not react to HCl. WELL-GRADED SAND with GRAVEL (21.5-23 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~40% gravel to 75 mm and trace silt and clay. The sand and gravel are angular to subrounded, some gravel is elongated. The fines are nonplastic, are gray, and do not react to HCl.				NAL NAVEL NAVEL			

Project 1	Nam	ne:	Yerington Groundwater Investigation			W	ell Nu	mber	r: B/W-14	
Soil Bor	ring	[Monitoring Well X Project N	Number	:			121	1243.021	Sheet <u>3</u> of <u>16</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.		Sample	Lithology	Mell		Remarks
		SW	WELL-GRADED SAND (23-35 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~10% coarse sand, ~5% gravel to 20 mm, and trace silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are gray, and do not react to HCl.							
	365				יויניניניניינייייייייייייייייייייייייי					
	360	SW	WELL-GRADED SAND with GRAVEL (35-36 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~25% gravel to 30 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to rounded. The fines are ynonplastic, are gravish brown, and do not react to HCl.							

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ \	Well Nu	mber:	B/W-14	
Soil	Boring		Monitoring Well X Project Num	ber:			1212	43.021	Sheet <u>4</u> of <u>16</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Graphic Tithology	Mell		Remarks
-	4355	SW-SW	WELL-GRADED SAND (36-37.25 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~10% fine gravel to 10 mm and ~10% silt and clay. The sand is angular to subangular, the gravel is angular to subangular. The fines are nonplastic, are gravish brown, and do not react to HCL. WELL-GRADED SAND with GRAVEL (37.25-38 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~15% gravel to 15 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are gravish brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (38-40.75 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~10% gravel to 30 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are gravish brown, and do not react to 30 mm and ~5% silt and clay. The sand is subangular. The fines are nonplastic, are gravish brown, and do not react to HCl.						
40-	-		-						
-		SW- SM	WELL-GRADED SAND (40.75-41.25 feet) Saturated, loose, no odor.						
-	-	SW SW	Primarily coarse to medium sand with ~5% fine gravel to 5 mm and ~10% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (41.25-42.25 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~5% gravel to 20 mm and trace silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines	•					
-	4350	sw	are nonplastic, are grayish brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (42.25-43 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~30% fine sand, ~5% fine gravel to 30 mm and ~5% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						
- 45 -	-		WELL-GRADED SAND with GRAVEL (43-43.25 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~15% fine sand, ~40% fine gravel to 15 mm and ~5% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCL. WELL-GRADED SAND with GRAVEL (43.25-44 feet)	-					
		GW SW-	Saturated, medium dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~40% fine gravel to 15 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to						
SONIC METHOD LOG YERINGTON GPJ BRN&CALD.GDT 1/31/06		SM	subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (44-45.5 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~15% fine gravel to 30 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (45.5-46 feet) Saturated, loose, no odor. Primarily gravel to 40 mm with ~25% coarse to medium sand and trace silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (46-48 feet)	B/W-14 @ 46 - 51 Ft.					
	4345	SW-	Saturated, loose, no odor.	1			目		

Proje	ct Nan	ne:	Yerington Groundwater Investigation		_ \	Well Nu	mber:	B/W-14	
Soil I	Soil Boring						1212	43.021	Sheet <u>5</u> of <u>16</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Craphic Lithology	Mell		Remarks
		SM	mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SILTY SAND (48-48.75 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace coarse sand to 3 mm and ~15% silt and clay. The sand is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (48.75-49 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~10% fine sand, ~35% fine gravel to 15 mm and ~5% silt and clay. The sand is subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (49-54 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~10% silt and clay. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (49-54 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	-					
	. 4340	GW SW	WELL-GRADED GRAVEL with SAND (54-54.5 feet) Saturated, loose, no odor. Primarily gravel to 45 mm with ~20% coarse to medium sand and trace silt and clay. The sand is subangular to subounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (54.5-58 feet) Saturated, loose, no odor. Primarily coarse to medium sand ~20% fine gravel to 20 mm and trace silt and clay. The sand is subangular to subrounded, the gravel is subrounded. The fines are nonplastic, are brown, and do not react to HCl. POORLY GRADED SAND (58-59 feet)						
- 1/31/06	1005	SP	Saturated, loose, no odor. Completely medium to fine sand to 1.5 mm. The sand is angular to subangular.	-					
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4335		WELL-GRADED SAND (59-60 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~5% fine gravel to 20 mm and trace silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (60-61.5 feet) Saturated, loose, no odor. Primarily gravel to 40 mm with ~40% coarse to medium sand and trace silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are light brown, and do not react to HCl.	-					
SONIC METH		GW- GM	WELL-GRADED GRAVEL with SILT and SAND (60-61.5 feet) Saturated, loose, no odor. Primarily gravel to 50 mm with ~40% medium to fine sand						

Project N	Name	e:	Yerington Groundwater Investigation			V	Vell Nu	mber:	B/W-14		
Soil Bor	ring	L	Monitoring Well X Project N	umbe	r:			12124	43.021	Sheet <u>6</u> o	of <u>16</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	01. M.	Sample No.	Sample	Lithology Lithology	Mell		Remarks	
	330	CL SP- SM CL	and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED SAND (63-64 feet) Saturated, loose, no odor. Primarily medium sand with ~5% coarse sand to 2.5 mm and ~10% silt and clay. The sand is subangular to rounded. The fines are nonplastic, are light brown, and do not react to HCl. SANDY LEAN CLAY (64-64.25 feet) Moist, hard, no odor. Primarily silt and clay with ~30% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. POORLY GRADED SAND with SILT (64.25-64.75 feet) Saturated, medium dense, no odor. Primarily medium to fine sand to 0.5 mm with ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. LEAN CLAY with SAND (64.75-68.5 feet) Moist, hard, no odor. Primarily silt and clay with ~20% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines are monplastic, are light brown, and do not react to HCl. LEAN CLAY with SAND (64.75-68.5 feet) Moist, hard, no odor. Primarily silt and clay with ~20% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are light olive brown (2.5Y 5/3) with some black organic staining, and do not react to HCl.								
- 43 70	325 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	SW CL SW GW CL SW GW	 Saturated, soft, no odor. Primarily silt and clay with ~40% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. WELL-GRADED SAND with GRAVEL (70-70.75 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~35% gravel to 30 mm and ~10% silt and clay. The sand is subangular to rounded, the gravel is subrounded to rounded. The fines have medium plasticity and toughness, are brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (70.75-71 feet) Saturated, loose, no odor. Primarily gravel to 50 mm with ~25% coarse to medium sand and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. SANDY LEAN CLAY (71-71.25 feet) Moist, stiff, no odor. Primarily silt and clay with ~40% medium to fine sand to 0.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (7.5YR 5/2), and do not react to HCl. WELL-GRADED SAND (71.25-72.5 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~5% gravel to 30 mm and ~5% silt and clay. The sand is angular to rounded, the gravel is subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED GRAVEL (72-73.5 feet) Saturated, loose, no odor. Primarily gravel to 30 mm with ~20% coarse to medium sand and ~5% silt and clay. The sand and gravel are subangular to rounded, the gravel is subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED GRAVEL (72-73.5 feet) Saturated, loose, no odor. Primarily gravel to 30 mm with ~20% coarse to medium sand and ~5% silt and clay. The sand and gravel are subangular to rounded, the gravel is subangular. The fines are nonp		B/W-14 @ 70 - 75 Ft.						

Proje	ect Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-14	
Soil	Soil Boring Monitoring Well X Project Number				er:			12124	43.021	Sheet <u>7</u> of <u>16</u>
		lodı				(Graphic	Log		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks
SONIC METHOD LOG YERINGTON.GPJ BRNRCALD.GDT 1/31/06	4310	GC	 Teact to HCI. SANDY LEAN CLAY (73.5-74.5 feet) Primarily silt and clay with ~30% coarse to medium sand and trace gravel to 15 mm. The sand and gravel are subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCI. SILTY GRAVEL (74.5-75 feet) Saturated, loose, no odor. Primarily gravel to 40 mm with ~10% coarse to fine sand and ~15% silt and clay. The sand and gravel are subangular to subrounded. The fines are brown and do not react to HCI. SANDY SILT (75-75.1 feet) Saturated, medium dense, no odor. Primarily silt and clay with ~40% medium to fine sand and ~5% fine gravel to 15 mm. The sand is subangular to subrounded, the gravel is subrounded. The fines have low plasticity and toughness, are light olive brown (2.5Y 5/3), and do not react to HCI. CLAYEY SAND (75.1-76 feet) Saturated, medium fine sand to 0.5 mm and ~35% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are brown, and do not react to HCI. SANDY SLEAN CLAY (76-76.75 feet) Moist, hard, no odor. Primarily silt and clay with ~40% fine sand to 0.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and low toughness, are bipt olive brown (2.5Y 5/4), and do not react to HCI. WELL-GRADED SAND (76.75-80 feet) Saturated, loose, no odor. Primarily medium sand with ~5% gravel to 10 mm. The sand is subangular to subrounded, the gravel is subangular to subrounded. The fines have medium plasticity and toughness, are bipt olive brown (2.5Y 5/4), and do not react to HCI. WELL-GRADED SAND (76.75-80 feet) Saturated, loose, no odor. Primarily gravel to 30 mm with ~25% coarse to medium sand and ~25% silt and clay. The sand is subangular to subrounded, the gravel is angular to							

Project Name:	Yerington Groundwater Investigation		W	/ell Nu	mber:	B/W-14	
Soil Boring	Monitoring Well X Project Number	r:	Graphic Log		12124	43.021	Sheet <u>8</u> of <u>16</u>
Depth (feet) Elevation (feet) 11SCS Group Symbol	Description	. טאז שווושט	Sample	Lithology	Mell		Remarks
90 - SV 90 - SV - SV - SV - SV - SV - SV - SV - SV	Saturated, loose, no odor. Primarily coarse to medium sand with ~30% fine gravel to 15 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to rounded. The fines are nonplastic, are brown, and do not react to HCl. Thin clay seams at ~89.25 and 89.5 feet. WELL-GRADED SAND with GRAVEL (90-91.25 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~20% gravel to 20 mm. The sand and gravel are subangular to subrounded WELL-GRADED SAND with GRAVEL (91.25-94 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~30% gravel to 25 mm and trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	B/W-14 @ 90 - 95 Ft.					
SONIC METHOD LOG VERINGTON GPU 131/06 - 45627 - 001 - 0	Saturated, loose, no odor. Primarily coarse to medium sand with ~40% fine gravel to 15 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are dark gray, and do not react to HCL. SILTY SAND with GRAVEL (98.5-100 feet) Moist, very dense, no odor. Primarily coarse to medium sand with ~20% gravel to 25 mm and ~40% silt and clay. The sand and gravel are angular to subrounded. The fines have low plasticity and toughness, are dark gray, and do not react to HCl. WELL-GRADED GRAVEL with SAND (100-101 feet) Saturated, loose, no odor. Primarily gravel to 60 mm with ~25% coarse to medium sand and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						

Proje	ect Nan	ne:	Yerington Groundwater Investigation			_ \	Well Nu	mber:	B/W-14		
Soil	Boring		Monitoring Well X Pro	ject Num	ber:			1212	43.021	Sheet	9 of <u>16</u>
	et)	'mbol					Graphic	Log	-		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No	Sample	Lithology	Well		Remarks	
	4290	SW	Saturated, loose, no odor. Primarily coarse to medium sand with ~20% gravel to 20 n and ~10% silt and clay. The sand and gravel are subangul to subrounded. The fines are nonplastic, are light brown, i do not react to HCl.	lar –							
-		SW	WELL-GRADED SAND (105-106.75 feet) Saturated, loose, no odor. Primarily medium sand with ~5% gravel to 40 mm and ~5 silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fines are nonplastic are light brown, and do not react to HCl.		-						
-		GW	WELL-GRADED GRAVEL with SAND (106.75-107.5 feet)	_		=					
			Saturated, loose, no odor. Primarily gravel to 35 mm with ~25% coarse to medium s: and ~5% silt and clay. The sand and gravel are subangula to subrounded. The fines are nonplastic, are light brown, a do not react to HCl.	r 🗌	-						
			WELL-GRADED SAND with GRAVEL (107.5-108 fee Saturated loose no odor								
-	4285	SW	Primarily coarse to medium sand with ~15% gravel to 25 f and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fin are nonplastic, are light brown, and do not react to HCI. WELL-GRADED GRAVEL with SAND (108-108.5 fee	es _	7 - 112 Ft.						
110- 90/-		SW	Saturated, loose, no odor. Primarily gravel to 70 mm with ~35% coarse to medium st and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fin are nonplastic, are light brown, and do not react to HCl. WELL-GRADED SAND Saturated, loose, no odor. Primarily coarse to medium sand with ~10% fine gravel to	es –	B/W-14 @ 107						
I&CALD.GDT 1/3	-	GW	mm and trace silt and clay. The sand is angular to rounde the gravel is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. <u>WELL-GRADED SAND</u> (109.5-111 feet) Saturated, loose, no odor.								
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		GW	Primarily medium sand with ~5% fine gravel to 15 mm an trace silt and clay. The sand is angular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, light brown, and do not react to HCl. <u>WELL-GRADED GRAVEL with SAND</u> (111-112 feet) Saturated, loose, no odor. Primarily gravel to 25 mm with ~45% coarse to medium si and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fine are nonplastic, are light brown, and do not react to HCl. <u>WELL-GRADED GRAVEL with SAND</u> (112-115.5 fee Saturated, loose, no odor. Primarily gravel to 50 mm with ~30% coarse to medium si and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fine	and	-						

Proje	ct Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-14	
Soil E	Boring	Γ	Monitoring Well X Project	Numb	er:			12124	43.021	Sheet <u>10</u> of <u>16</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Mell		Remarks
115-			are nonplastic, are light brown, and do not react to HCl.	_						
-		SP- SM	POORLY GRADED SAND with SILT and GRAVEL (115.5-117 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~15% gravel to 20 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.							
-		SP- SM	POORLY GRADED SAND with SILT (117-118.5 feet) Saturated, loose, no odor. Primarily medium to fine sand with trace coarse sand to 3 mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl.	-						
	4275	SM	SILTY SAND (118.5-120.5 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~5% fine gravel to 15 mm and ~20% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl.	-						
-			SANDY LEAN CLAY (120.5-120.75 feet)							
-		SW SW	Moist, hard, no odor. Primarily silt and clay with ~35% fine sand to 0.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. WELL-GRADED SAND with GRAVEL (120.75-121.25							
-		CL	feet) Saturated, loose, no odor.							
-		SP	Primarily coarse to medium sand with ~40% gravel to 30 mm and ~10% silt and clay. The sand and gravel are angular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl.							
31/00	4270	GW- GM	WELL-GRADED SAND (121.25-122 feet)							
	4270	SW	SANDY LEAN CLAY (122-122.5 feet) Moist, stiff, no odor. Primarily silt and clay with ~30% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are light olive brown (2.5Y 5/3), and do not react to HCl. POORLY GRADED SAND (122.5-123 feet) Saturated, medium dense, no odor. Primarily medium to fine sand to 0.5 mm with ~5% silt and clay. The sand is subangular to rounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED GRAVEL with SILT and SAND (123-124 feet)	-						
			Saturated, loose, no odor. Primarily gravel to 35 mm with ~25% coarse to medium sand and ~10% silt and clay. The sand is subangular to subrounded, the gravel angular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (124-130 feet) Saturated loose no odor	-						

Proje	ct Nan	ne:	Yerington Groundwater Investigation			W	ell Nu	mber:	B/W-14	
Soil I	Boring		Monitoring Well X Project Nu	mber	:			1212	43.021	Sheet <u>11</u> of <u>16</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No	-	Sample	Lithology	Mell		Remarks
-	4265		Primarily coarse to medium sand with ~15% gravel to 50 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subrounded. The fines are nonplastic, are light brown, and do not react to HCl.	-						
130— - - - -		GW	WELL-GRADED GRAVEL with SAND (130-133.25 feet) Saturated, loose, no odor. Primarily gravel to 70 mm with ~25% coarse to medium sand and ~5% silt and clay. The sand is angular to subangular, the gravel is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.		1111111111111111111					
- - 135	4260	CL SP- SM	LEAN CLAY (133.25-134 feet) Dry, hard, no odor. Primarily silt and clay with ~10% fine sand (<0.5 mm). The fines have medium plasticity and toughness, are light yellowish brown (2.5Y 6/3), and do not react to HCl. POORLY GRADED SAND with SILT (134-136 feet) Saturated, medium dense, no odor. Primarily fine sand (<0.5 mm) with ~10% silt and clay. The sand is subangular to subrounded. The fines have low plasticity, are brown, and do not react to HCl.							
		SP	POORLY GRADED SAND (136-138.75 feet) Saturated, medium dense, no odor. Primarily fine sand (<0.5 mm) with ~5% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	-						
	4255	SW	WELL-GRADED SAND (138.75-141.75 feet) Saturated, loose, no odor. Primarily medium sand with ~5% fine gravel to 15 mm and ~5% silt and clay. The sand is angular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.	-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					

Proje	ct Nan	ne:	Yerington Groundwater Investigation			v	Vell Nu	mber:	B/W-14	
Soil I	Soil Boring		Monitoring Well X Project N	lumbe	r:			12124	3.021	Sheet <u>12</u> of <u>16</u>
et)	feet)	Symbol			40. -	C	Graphic	Log		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	N - [0	Sample INO.	Sample	Lithology	Well		Remarks
-				-						
-		SW	WELL-GRADED SAND with GRAVEL (141.75-143.5 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~50% gravel to 35 mm and trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are dark brown, and do not react to HCl.	-	B/W-14 @ 140 - 145 Ft.					
-	4250	CL SW	SANDY LEAN CLAY (143.5-143.7 feet) Moist, stiff, no odor. Primarily silt and clay with ~40% medium to fine sand and trace coarse sand to 3 mm. The sand is subangular to subrounded. The fines have medium plasticity and	_						
- 145 — -		SP	toughness, are grayish brown (2.5YR 5/2), and do not react to HCl. WELL-GRADED SAND (143.7-144.8 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~20% fine sand, ~10% gravel to 20 mm, and ~5% silt and clay. The sand is angular to subrounded, the gravel is angular to subrounded. The fines are nonplastic, are dark brown, and do not react to HCl. INTERBEDDED POORLY-GRADED SAND and SANDY LEAN CLAY (144.8-147.5 feet)	-						
-		SP	Beds are 0.1 to 0.4 feet thick. POORLY-GRADED SAND Saturated, medium dense, no odor. Primarily fine sand (<0.5 mm) with ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown (10YR 4/3), and do not react to HCl. LEAN CLAY with SAND Moist, hard, no odor.	-						
-		SP	Primarily silt and clay with ~20% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. Some iron oxide and organic staining. POORLY GRADED SAND (147.5-148.5 feet) Saturated, medium dense, no odor.	-						
90/100	4245	SP	Primarily fine sand (<0.5 mm) with ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown (10YR 5/3), and do not react to HCl. INTERBEDDED POORLY-GRADED SAND and SANDY LEAN CLAY (144.8-147.5 feet) POORLY-GRADED SAND							
120		CL	Saturated, medium dense, no odor. Primarily fine sand (<0.5 mm) with ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown (10YR 4/3), and do not react to HCl. LEAN CLAY with SAND Moist, hard, no odor. Primarily silt and clay with ~20% fine sand (<0.5 mm). The	-						
YERINGTON.GPJ		SP	sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. POORLY GRADED SAND (149.75-150 feet) Saturated, medium dense, no odor. Primarily fine sand (<0.5 mm) with ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic,							
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06			are brown (10YR 5/3), and do not react to HCl. LEAN CLAY (150-152 feet) Dry to moist, hard, no odor. Primarily silt and clay with ~5% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are light brownish gray (2.5Y 6/2), and do not react to HCl.							

Project Name:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-14	
Soil Boring	Monitoring Well X Project Number	r:			12124	3.021	Sheet <u>13</u> of <u>16</u>
Depth (feet) Elevation (feet) USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks
- 4240 - 155 - SF - SW	Saturated, loose, no odor. Completely medium to fine sand to 1 mm. The sand is subangular to subrounded. WELL-GRADED SAND (156-161.5 feet) Saturated, loose, no odor. Primarily medium sand with ~5% gravel to 40 mm, and trace silt and clay. The sand is subangular to subrounded, the	0 Ft.					
4235	-	B/W-14 @ 155 - 160 Ft					
90/16/1 - SW - SW - SW - SW 	Saturated, loose, no odor. Primarily medium to fine sand with ~5% fine gravel to 10 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic,						
90/102 AERINGTON GPU BRN&CALD.GDT 1370 - 4520 - 1922 - 1922 - 102 -	Moist, stiff, no odor. Primarily silt and clay with ~20% fine sand (<0.5 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not						

Р	rojec	et Nan	ne:	Yerington Groundwater Investigation		_ v	Vell Nu	mber:	B/W-14	
S	Feet) Soil Bound I (feet) Contract of the set of the se			Monitoring Well 🗴 Project Numl	ber:			1212	43.021	Sheet <u>14</u> of <u>16</u>
	Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Kell Well		Remarks
	_		CL	are yellowish brown (10YR 5/4), and do not react to HCl. – Significant iron oxide staining.						
	-	4225	CL.	Moist to saturated, firm to stiff, no odor. Primarily silt and clay with ~30% medium to fine sand and ~5% gravel to 30 mm. The sand is angular to subrounded, the gravel is subrounded to rounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl.						
17	- 0		SC SW	CLAYEY SAND with GRAVEL (169.25-170 feet) Moist to saturated, medium dense, no odor. Primarily medium sand with ~40% gravel to 40 mm, and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fines have medium plasticity and toughness, are dark brown, and do not react to HCI. WELL-GRADED SAND with GRAVEL (170-171 feet)						
	-		GW	Saturated, loose, no odor. Primarily coarse to medium sand with ~50% gravel to 40 mm and trace silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fines are nonplastic, are dark brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (171-173.5 feet) Saturated, loose, no odor. Primarily gravel to 40 mm with ~30% sand and ~10% silt and clay. The sand is subangular to rounded, the gravel is subrounded to rounded. The fines are nonplastic, are brown, and do not react to HCl.						
	-	4220	SW	WELL-GRADED SAND with GRAVEL (173.5-174 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~20% gravel to 30						
	- 5—			mm. The sand is subangular to rounded, the gravel is subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (174-176 feet) Saturated, loose, no odor. Primarily gravel to 60 mm with ~25% sand and ~5% silt and clay. The sand is angular to subrounded, the gravel is subrounded to rounded. The fines are nonplastic, are grayish brown, and do not react to HCl.	14 @ 173 - 178 Ft.					
RN&CALD.GDT 1/31/06	-		GW	WELL-GRADED GRAVEL with SAND (176-177.5 feet) Saturated, loose, no odor. Primarily gravel to 45 mm with ~30% coarse to medium sand and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are grayish brown, and do not react to HCl.	B/W-14					
GPJ B	-		SW	WELL-GRADED SAND with GRAVEL (177.5-178 feet) Saturated, loose, no odor.						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	-	4215	SM	Saturated, 1008e, no odor. Primarily coarse to medium sand with ~35% gravel to 40 mm. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. CLAYEY SAND with GRAVEL (178-180 feet) Dry to moist, dense, no odor. Primarily coarse to medium sand with ~35% gravel to 75 mm, and ~25% silt and clay. The sand is subangular to subrounded, the gravel is angular to subrounded. The fines have medium plasticity and low to medium toughness, are						

BORING LOG

Project N	Nam	e:	Yerington Groundwater Investigation			Well Nı	umber:	B/W-14	
Soil Bor	Soil Boring		Monitoring Well X Project Nu	umber	:		12124	43.021	Sheet <u>15</u> of <u>16</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Samnle No.		Graphic Lithology	Mell		Remarks
		GW SP	WELL-GRADED GRAVEL with SAND (180-181 feet) Saturated, loose, no odor. Primarily gravel to 30 mm with ~20% sand and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. POORLY GRADED SAND (181-183.5 feet) Saturated, loose, no odor. Primarily medium to fine sand trace coarse sand to 3 mm. The sand is subangular to subrounded.	-					
	- 2210	GW	WELL-GRADED GRAVEL with SAND (183.5-189.5 feet) Saturated, loose, no odor. Primarily gravel to 40 mm with ~35% coarse to medium sand and ~5% silt and clay. The sand is angular to subrounded, the gravel is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl.						
	,	SP	WELL-GRADED SAND with GRAVEL (189.5-190.25 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~50% gravel to 30 mm and trace silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (190.25-191 feet) Saturated, loose, no odor. Primarily gravel to 30 mm with ~20% sand and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl. POORLY GRADED SAND (191-193.75 feet) Saturated, loose, no odor. Completely medium to fine sand to 1 mm. The sand is angular to subangular.						

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Project Name:	Yerington Groundwater Investigation		_ \	Vell Nu	mber:	B/W-14
Soil Boring	Monitoring Well X Project Num	ber:			1212	43.021 Sheet <u>16</u> of <u>16</u>
Depth (feet) Elevation (feet) USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell	Remarks
- <u>4200</u> SM - <u>4200</u> SM - SM - SM - SM - SM - SM	Saturated, loose, no odor. Primarily medium to fine sand with trace fine gravel to 10 mm and ~20% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light brown, and do not react to HCI. WELL-GRADED SAND Saturated, loose, no odor. Primarily coarse to medium sand with ~15% fine sand, ~10% fine gravel to 15 mm, and ~10% silt and clay. The sand is subangular. The fines are nonplastic, are brown, and do not react to HCI. SILTY SAND Moist to saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel to 10 mm and ~25% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic,					
2000 METHODLOOK VERVINCED INVOCUMENTATION CENTROLOOK CALL 1/31/06	are brown, and do not react to HCL WELL-GRADED SAND with SILT and GRAVEL (195.5-196.75 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~20% fine gravel to 12 mm and ~10% silt and clay. The sand and gravel are angular to subangular. The fines are nonplastic, are brown, and do not react to HCL SILTY SAND (196.75-197.25 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~5% fine gravel to 15 mm and ~25% silt and clay. The sand is subangular. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (197.25-199.25 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% fine gravel to 10 mm and ~10% silt and clay. The sand is angular to subangular, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCL. SILTY SAND (199.25-200 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace coarse sand to 4 mm and ~25% silt and clay. The sand is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl.					

Project	t Nam	ie:	Yerington Groundwater In	vestigation			_ W	ell Num	ber:	B/W-	-15	
Soil Bo	oring		Monitoring Well	Numb	er:		1	2124	3.021		et <u>1</u> of <u>5</u>	
Boring	Loca	tion:	Northeast of Pit Lake, east		Eleva	ation: 4	384.	3 feet amsl		330160.2 1544187.5		
Drillin	g Cor	ntract	or: WDC	Driller: B. Zamow				Started:	7/1	9/05	Date Finished:	7/22/05
Drillin	g Equ	ipme	ent: Gus Pech GP24-400RS, I	Diedrich Sonic Head			Tota Dept	h: (feet)	78.	0	Water Depth: (feet)	5' / 8.75'
Sampli	ing M	lethoo	d: Core Barrel	Borehole Diameter: 6	•		Well and l	Diameter Material:	⁻ 2-	inch PVC		
Drillin	g Met	thod:	Sonic, utilized 6" casing an	l a 4.5'' core barrel				ened Inter Well Dep		35.8-55.8 f	it., bottom at	56 ft.
Well S	eal:	Ber	ntontite and Cement			000000	Slot	Size: 0.	020	Filter Mat	terial: #10-20	Silica Sand
Logged	d By:	C.	Gardner				Deve	lopment	Meth		oed, bailed, p	umped
		nbol	***************************************				G	raphic Lo		000000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description			Sample No.	Sample	Lithology	Well		Remark	s
	1 <u>380</u> 1 <u>375</u>	SM CL SW	 SILTY SAND with GRAVEL (0-2 f Dry, medium dense, no odor. Primarily sand with ~15% gravel to 2 and clay. The sand is subangular to s is angular to subangular. The fines a brown, and have a strong reaction to SANDY LEAN CLAY (2-6 feet) Moist, firm, no odor. Primarily silt and clay with ~35% met trace coarse sand to 3 mm. The sand subrounded. The fines have medium toughness, are dark grayish brown (1 react to HCl. WELL-GRADED SAND (6-15 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~ and trace silt and clay. The sand is s subrounded, the gravel is subrounded are nonplastic, and do not react to HC 	0 mm and ~15% silt ubrounded, the gravel re nonplastic, are light HCl. dium to fine sand and is subangular to plasticity and 0YR 4/2), and do not		B/W-15 @ 10 - 15 Ft.				on ASTM M visual-manu determinatio based on the System. Mu Horizontal s the Nevada Wes Sharp conta- gradational dashed line. All depths a unless stated WELL DES Screened Im Bottom of st Cement Gro Bentonite C Filter Pack: #10-20 Sand Bentonite C Depth to Wa Top of PVC Top of PVC amsl.	re below land su d otherwise. SIGN for B/W-15 terval: 35.8-55.8 ump: 56 feet. bips: 29-33.5 fee #60 Sand 33.5-3 d 34-60 feet. hips: 60-78 feet. ater Measuring F	he ain-size ature assification ribed wet. pressed in m, solid lines, d by rface : feet. : feet. 4 feet, 20int is 5.76 feet,

Proje	ct Narr	ne:	Yerington Groundwater Investigation		,	Well Nu	mber:	B/W-15	
Soil E	Boring		Monitoring Well X Project Nu	umber:			1212	43.021	Sheet <u>2</u> of <u>5</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.		Craphic Fithology	Mell		Remarks
SONIC METHODLOG YERNGTON GPJ BRN&CALD.GDT 1/31/06	4365	SW GW SW SW	WELL-GRADED SAND (15-16.5 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~10% gravel to 25 mm and trace silt and clay. The sand is subangular to subrounded, the gravel is subrounded to rounded. The fines are nonplastic, are light gravish brown, and do not react to HCL. WELL-GRADED GRAVEL with SAND (16.5-17.5 feet) Saturated, loose, no odor. Primarily fine gravel to 30 mm with ~30% coarse to medium sand and trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light gravish brown, and do not react to HCL. WELL-GRADED SAND (17.5-27.5 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~5% fine gravel to 15 mm and trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light gravish brown, and do not react to HCl. MELL-GRADED SAND vith GRAVEL (27.5-33 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~25% gravel to 30 mm and ~5% silt and clay. The sand and gravel are subangular to rounded. Subrounded, The fines are nonplastic, are light gravish brown, and do not react to HCl. WELL-GRADED SAND with GRAVEL (27.5-33 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~25% gravel to 30 mm and ~5% sit and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light gravish brown, and do not react to HCl. Interval has a gravel layer from 30 to 30.5 feet. This						
	4350		Primarily coarse to medium sand with ~40% gravel to 33 mm and ~5% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are light grayish	_					

Proje	Project Name: Verington Groundwater Investigation			Well Number: B/W-15				
Soil	il Boring D Monitoring Well X Project Nun						1212	43.021 Sheet <u>3</u> of <u>5</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell	Remarks
35 - - - - - - - - - - - - - - - - - - -	4345		brown, and do not react to HCl. WELL-GRADED SAND with SILT and GRAVEL (35-36.75 feet) Dry, dense, no odor. Primarily coarse to medium sand with ~15% fine sand, ~40% gravel to 45 mm, and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED SAND (36.75-39.25 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~5% gravel to 40 mm and trace silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, are brown, and do not react to HCl. SANDY SILT (39.25-42.5 feet) Saturated, stiff, no odor. Primarily silt and clay with ~30% medium to fine sand to 2					
	4340	SW	WELL-GRADED SAND (42.5-45.5 feet) Saturated, loose, no odor. - Primarily medium to fine sand with trace fine gravel to 15 mm and trace silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. -	-				
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4335	CL SW GW	LEAN CLAY with SAND (45.5-46.5 feet) Moist, stiff, no odor. Primarily silt and clay with ~15% fine sand and trace medium sand to 1.5 mm. The sand is subangular to subrounded. The fines have medium plasticity and low toughness and do not react to HCl. WELL-GRADED SAND Saturated, loose, no odor. Primarily medium to fine sand with trace coarse sand to 3.5 mm and trace silt and clay. The sand is subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (47.5-54.5 feet) Saturated, loose, no odor. Primarily gravel to 45 mm with ~30% coarse to medium sand and trace silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, are brown, and do not react to HCl.	B/W-15 @ 50 - 55 Ft.				

Proje	ect Nan	ne:	Yerington Groundwater Investigation		_ `	Vell Nu	mber:	B/W-15		
Soil	Soil Boring		Monitoring Well X Project Num	ber:			1212	43.021	Sheet <u>4</u> of _	5
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology Lithology	Mell		Remarks	
	-	GW	SILTY SAND with GRAVEL (54.5-55 feet) Moist to saturated, medium dense, no odor. Primarily medium to fine sand with ~20% coarse sand, ~30% gravel to 20 mm, and ~25% silt and clay. The sand and gravel are subangular to subrounded. The have low plasticity and toughness, are brown, and do not react to HCl. WELL-GRADED SAND (55-55.5 feet) Saturated, loose, no odor. Primarily coarse to medium sand with ~10% gravel to 30 mm and ~5% silt and clay. The sand and gravel are subangular	-						
- - - - - - - - - - - - -	4325	SW CL CL SP- SM	to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WELL-GRADED GRAVEL with SAND (55.5-56 feet) Saturated, loose, no odor. Primarily gravel to 30 mm with ~15% sand and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular to rounded. The fines are nonplastic, and do not react to HCl. WELL-GRADED SAND with GRAVEL (56-57.25 feet) Saturated, loose, no odor. Primarily medium to fine sand with ~40% gravel to 40 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic and do not react to HCl. WELL-GRADED SAND (57.25-58 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% fine gravel to 10 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is angular. The fines are nonplastic, are light brown, and do not react to HCl.	i @ 60 - 65 Ft.						
	4320		LEAN CLAY with SAND (58-59.5 feet) Moist, stiff, no odor. Primarily silt and clay with ~20% medium to fine sand to 2 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and do not react to HCl. SANDY LEAN CLAY (59.5-60.75 feet) Moist, firm, no odor. Primarily silt and clay with ~20% fine sand, ~15% coarse to medium sand, and trace fine gravel to 15 mm. The sand is subangular to subrounded, the gravel is subrounded. The fines have medium plasticity and low toughness, are brown (10YR 4/3), and do not react to HCl. POORLY-GRADED SAND with SILT (60.75-63.25 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with trace fine gravel to 10	B/W-15						
SONIC METHOD LOG VERINGTON GPU BRN&CALD.GDT 1/31/06	4315		mm and ~10% silt and clay. The sand and gravel are subangular to subrounded. The fines are nonplastic, are brown, and do not react to HCl. WEATHERED GRANITE (63.25-78 feet) Dry, very dense, no odor. Weathered granite with ~30% fines. The granite is quartz dominated with white orthoclase. The fines have medium plasticity and tougness, are light gray (2.5Y 7/1), and do not react to HCl.	-						
SONIC METHOD L	-									

F	roje	et Nan	ne:	Yerington Groundwater Investigation			_ v	Vell Nu	mber:	B/W-15				
S	Soil E	oring		Monitoring Well	Project Numl	ber:			12124	43.021	Sheet .	5	of .	5
		(lodi				(Graphic	Log					
	Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks			
SONIC METHODLOG VERINGTON.GPJ BRN&CALD.GDT 1/31/06		4310												

Pro	ject Nar	ne:	Yerington Groundwater In	vestigation			We	ell Numb	er:	P-1	
Soi	Boring	Monitoring Well	Project N	Jumbe	r: _		12	2124	3.021	Sheet of	
Boi	ing Loc	On mine site, between lined	evaporatin ponds	E	levat	ion: 4	400.) feet amsl	East: 321698 North: 1556693		
Dri	lling Co	ntract	or: WDC	Driller: B. Zamow		D	ate S	Started:	9/2	7/05	Date Finished: 9/27/05
Dri	lling Eq	uipme	ent: Gus Pech GP24-400RS, I	Dietrich Sonic		To D	otal epth:	: (feet)	58.	0	Water Depth: (feet) 44'
San	npling N	letho	d: Core Barrel	Borehole Diameter: 6'	ı	W ar	vell I nd M	Diameter laterial:	2-	inch PVC	
Dri	lling Me	thod:	Sonic, utilized 6'' casing an	d a 4.5'' core barrel				ned Inter ell Dept		26.6-46.6	ft., bottom at 46.8 ft.
We	ll Seal:	Bei	ntontite and Cement			SI	lot Si	ize: 0.	020	Filter Ma	terial: #10-20 Silica Sand
Log	ged By:	C	Gardner			D	evelo	opment l	Meth		bed, bailed, pumped
			***************************************	***************************************	~~~~~~		Gra	aphic Lo		000000000000000000000000000000000000000	***************************************
feet)	l (feet	p Syr			Ň	100.		S.			
Depth (feet)	Elevation (feet)	Groul	Description		1		Sample	Lithology	Well		Remarks
ď	Elev	USCS Group Symbol			ŭ		ñ	Lit	-		
\vdash	+		Vat Leach Tailings (0-2.25 feet)		-+	+	04 20		×		s of drilled cuttings based
			Dry, loose, no odor. Primarily coarse to medium sand wit	h			04 70 04			visual-manu	Method D-2488 (the ual procedure), grain-size
			~40% gravel to 20 mm and ~20% si gravel is angular. The fines are nonp	astic, yellow, and do not			20 04 20			based on the	ons and nomenclature e Unified Soil Classification
.			react to HCI.		_					System. Mu	unsell colors described wet.
	-				1					Sharp conta	acts indicated by solid lines, contacts indicated by
										dashed line.	
										All dopths s	are below land surface
	-				-					unless state	d otherwise.
							2L 04 2L				
·					-		04 20 04				
	_						04 04 04	7 4 0 4 4 0 4 0 7 4 0 4		WELL DES	
											nterval: 26.6-46.6 feet. sump: 46.8 feet.
.					-		04 \?[Dottoin of 5	ump. 40.0 reet.
							$\Diamond L$			Cement Gro	out: 0-18.5 feet.
	1				1						Chips:18.5-23.5 feet.
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	4395						04			#10-20 San	#60 Sand 23.5-24 feet, d 24-50 feet.
GDT							04 20			Bentonite C	Chips: 50-58 feet
CALD.	-				-						
BRN&											
I.GPJ	1				1					Depth to W Top of PVC	ater Measuring Point is Casing.
IGTON	-				4		20			Top of PVC amsl.	C Elevation: ~xxxx feet
YERIN											up: 2.5 feet above land
907	1				-					surface.	
THOD							21 04 21				
IIC ME	1				1		\ 04				
SOA							₽2				

Pro	ject Nar	ne:	Yerington Groundwater Investigation			_ \	Vell Nu	mber:	P-1		
Soi	Boring		Monitoring Well	Project Numl	ber:			1212	43.021	Sheet <u>2</u> of .	7
		lodi				(Graphic	Log			
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology	Well		Remarks	
SONIC METHODLOG VERINGTON GPJ BRN&CALD.GDT 1/31/06	-	GC	CLAYEY GRAVEL with SAND (16.5-17 feet) Moist to saturated, loose, no odor. Primarily gravel to ~20 mm with ~35% coarse to find and ~25% silt and clay. The sand and gravel is angul subangular. The fines have medium plasticity and to are yellow, and do not react to HCI. ASPHAULT LINER (17-17.1 feet) CLAYEY GRAVEL with SAND (17.1-18 feet) Moist to saturated, loose, no odor. Primarily gravel to ~20 mm with ~35% coarse to find and ~25% silt and clay. The sand and gravel is angul subangular. The fines have medium plasticity and to are yellow, and do not react to HCI.	e sand							

Proj	ect Nar	ne:	Yerington Groundwater Investigation				mber:	P-1	
Soil	Soil Boring		Monitoring Well X Project Number:				12124	43.021	Sheet <u>3</u> of <u>7</u>
feet)	ı (feet)	p Symbol		No.		Graphic Sc	Log		
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Well		Remarks
-	-		SANDY LEAN CLAY (18-21 feet) Dry to moist, firm, no odor. Primarily silt and clay with ~40% medium to fine sand to ~2 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are yellowish brown (10YR 5/4), and do not react to HCl.	-					
20-	4380		-	-					
		SM SM	SILTY SAND (21 -21.5 feet) Dry to moist, medium dense, no odor. Primarily medium to fine sand with trace coarse sand to ~3 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and have a weak reaction to HCl.						
-		SM	SILTY SAND (21.5 -22.5 feet) - Dry to moist, medium dense, no odor. Primarily medium to fine sand to ~2 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines have low plasticity and toughness, are brown, and do not react to						
-	-	5101	HCl. <u>SILTY SAND</u> (22.5-25 feet) Dry, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~20% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl.	-					
-	-		-						
25-	4375	SC	CLAYEY SAND (25-25.5 feet) Moist, medium dense, no odor.						
/31/06		SC	Primarily medium to fine sand with ~5% gravel to ~8 mm and ~40% silt and clay. The sand and gravel is subangular to subrounded. The fines have medium plasticity and toughness, are yellowish brown, and do not react to HCL.						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		SC	CLAYEY SAND (25.5-26 feet) Dry, dense, no odor. Primarily medium to fine sand with ~5% gravel to ~10 mm and ~30% silt and clay. The sand and gravel is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and do not react to HCl. CLAYEY SAND (26-27 feet)						
NGTON.GPJ		CL	Dry, dense, no odor. Primarily medium to fine sand with ~5% coarse sand to ~5 mm and ~40% silt and clay. The sand and gravel is subangular to subrounded. The fines have medium plasticity						
OG YERI		SM	and toughness, are brown, and react strongly to HCl. SANDY LEAN CLAY (27-27.5 feet) Dry to moist, stiff, no odor. Dry to moist, stiff, no odor.						
SONIC METHOD L		SM	Primarily silt and clay with ~50% medium to fine sand and trace gravel to ~8 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4/3), and reacts strongly to HCl. WELL-GRADED SAND with SILT (27.5-28 feet) Dry, medium dense, no odor.						

Proj	ect Nar	ne:	Yerington Groundwater Investigation			Well Number:			P-1	
Soil	Soil Boring		Monitoring Well X Project	Numb	er:			1212	43.021	Sheet <u>4</u> of <u>7</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description		Sample No.	Sample	Lithology Lithology	Mell	-	Remarks
30-	4370	CL	Primarily medium to fine sand with trace fine gravel to 10 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and do not react to HCl. SILTY SAND (28-29 feet) Dry, dense, no odor. Primarily medium to fine sand with ~5% coarse sand to ~3							
-	-	SC SM	mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl. <u>SANDY LEAN CLAY</u> (29-30 feet) Dry to moist, stiff, no odor. Primarily silt and clay with ~30% fine sand (<1/2 mm). The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 5/3), and react	-						
-	-		strongly to HCl. CLAYEY SAND (30-31 feet) Dry, dense, no odor. Primarily medium to fine sand with ~10% gravel to ~12 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines have medium plasticity, low toughness, are yellowish brown, and do no react to strongly react to HCl. SILTY SAND (31-33 feet) Dry to moist, medium dense, no odor.	-						
-	-	SW- SM	Primarily medium to fine sand with ~5% gravel to ~8 mm and ~20% silt and clay. The sand and gravel is subangular to subrounded. The fines are nonplastic, brown, react strongly at the top of the interval, and do not react to HCl in the lower portion of the interval. WELL-GRADED SAND with SILT (33-35 feet) Dry to moist, medium dense, no odor. Primarily medium to fine sand with ~5% fine gravel to ~10 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and do not react to HCl.	 - 						
	4365			-						
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06	-	SW-SM	WELL-GRADED SAND with SILT (35-39 feet) Dry to moist, medium dense, no odor. Primarily medium to fine sand to ~10 mm and ~10% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl.	-						
SONIC		SM	SILTY SAND (39-40 feet) Dry to moist, medium dense, no odor.							

BORING LOG

Project Name:Yerington Groundwater Investigation						Vell Nu	mber:	P-1	
Soil Boring Monitoring Well X Project Number:							1212	43.021	Sheet <u>5</u> of <u>7</u>
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Mell		Remarks
40-	4360	SM	Primarily medium to fine sand with ~5% gravel to ~10 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, brown, and do not react to HCl. SILTY SAND (40-41 feet)						
-			Dry, medium dense, no odor. Primarily medium to fine sand with ~10% gravel to ~12 mm and ~15% silt and clay. The sand is subangular to subrounded, the gravel is angular to subangular. The fines are nonplastic, brown, and do not react to HCl.						
		SM	SILTY SAND (41-43 feet) Dry, medium dense, no odor. Primarily medium to fine sand with ~5% coarse sand to ~4 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl.						
			SANDY LEAN CLAY (43-43.25 feet) Dry to moist, stiff, no odor. Primarily silt and clay with ~40% medium to fine sand to ~2 mm. The sand is subangular to angular. The fines have medium plasticity and toughness, are brown (10YR 4/3), and						
	<u>7</u>	SW	react strongly to HCl. SILTY SAND (41-43 feet) Moist, medium dense, no odor. Primarily medium to fine sand to ~2 mm and ~15% silt and						
- 45—	<u>4355</u>		clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl. WELL-GRADED SAND (44-45.5 feet) Saturated, medium dense, no odor. Primarily medium to coarse sand with ~15% gravel to ~10 mm and ~5% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCl.						
		SW- SM	WELL-GRADED SAND with SILT (45.5-47.75 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~5% gravel to ~8 mm and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and have no reaction to HCl.						
			-						
		SM	SILTY SAND (47.75-49 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% coarse sand to ~5 mm and ~20% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines are nonplastic, brown, and do not react to HCl.						
		SW- SM	WELL-GRADED SAND with SILT (49-50 feet) Saturated, medium dense, no odor. Primarily medium to coarse sand with ~15% gravel to ~15 mm, ~15% fine sand, and ~10% silt and clay. The sand is subangular to subrounded, the gravel is subangular. The fines						

SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06

Project N	ame:	Yerington Groundwater Investigation		Well Nu	mber:	P-1		
Soil Bori	ng	Monitoring Well X Project N	umber	: _		1212	43.021	Sheet of
	lodi				Graphic	Log		
Depth (feet) Elevation (feet)	USCS Group Symbol	Description	Samula No	Comple	Lithology	Well		Remarks
50 435	SM SC	are nonplastic, brown, and have no reaction to HCl. SILTY SAND (50-51.25 feet) Saturated, medium dense, no odor. Primarily medium to coarse sand to ~5 mm, ~15% fine sand, and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl. CLAYEY SAND (51.25-52 feet) Moist, medium dense, no odor. Primarily medium to fine sand to ~2 mm and ~25% silt and clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and react strongly to HCl. SILTY SAND (52-54 feet) Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% coarse and to ~3 mm and ~15% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl.						
	SM CL	Saturated, medium dense, no odor. Primarily medium to fine sand with ~10% coarse and to ~3 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not						
55 434	45	SANDY LEAN CLAY (54.5-54.75 feet) Moist, stiff, no odor.	-					
	CL SM CL	Primarily silt and clay with ~50% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4/3), and react strongly to HCl. SILTY SAND (54.75-55.25 feet)						
	SM SC	Saturated, medium dense, no odor. Primarily medium to fine sand to ~2 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl. SANDY LEAN CLAY (55.25-55.5 feet)	_					
90	SM	Moist, stiff, no odor. Primarily silt and clay with ~50% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have						
3DT 1/31/(medium plasticity and toughness, are brown (10YR 4/3), and react strongly to HCl. SILTY SAND (55.5-55.75 feet) Saturated, medium dense, no odor.	-					
V&CALD.0		Primarily medium to fine sand to ~2 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl.						
SONIC METHODLOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06		SANDY LEAN CLAY (55.75-56 feet) Moist, stiff, no odor. Primarily silt and clay with ~50% medium to fine sand to ~1 mm. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown (10YR 4/3), and react strongly to HCl. SILTY SAND (56-56.25 feet) Saturated, medium dense, no odor. Primarily medium to fine sand to ~2 mm and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl. CLAYEY SAND (56.25-57 feet) Dry to moist, dense, no odor. Primarily medium to fine sand to ~2 mm and ~40% silt and						

Project Name: Yerington Groundwater Investigation					_ \	Well Nu	mber:	P-1	
Soil	Boring		Monitoring Well X Project Num	nber:			1212	43.021	Sheet of
		lodn				Graphic Log			
Depth (feet)	Elevation (feet)	USCS Group Symbol	Description	Sample No.	Sample	Lithology	Well		Remarks
SONIC METHOD LOG YERINGTON.GPJ BRN&CALD.GDT 1/31/06			clay. The sand is subangular to subrounded. The fines have medium plasticity and toughness, are brown, and react strongly to HCL. SulTY SAND (57-58 feet) Saturated, medium dense, no odor. Primarily medium to coarse sand to -4 mm, -20% fine sand, and ~20% silt and clay. The sand is subangular to subrounded. The fines are nonplastic, brown, and do not react to HCl.						