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11:02 am, Apr 08, 2009

Alameda County
Environmental Health



SYMBOL KEY

LITHOLOGIC SYMBOL KEY (Unified Soil Classification System)

Fill

SW Well Graded Sand

SP Poorly Graded Sand

SM Silty Sand

SC Clayey Sand

PT Peat

OL Low Plasticity Organic Silt

OH High Plasticity Organic Silt

ML Low Plasticity Silt

MH High Plasticity Silt

o • 0 D.o. 4

GW Well Graded Gravel

900

GP Poorly Graded Gravel

000

GM Silty Gravel

380

GC Clayey Gravel

Cl. Low Plasticity Clay

H High Plasticity Clay

SAMPLER SYMBOL KEY

Continuous Core Barrel



Standard Penetration Test



Modified California Sampler



Shelby Sampler



Auger Cuttings

WELL CONSTRUCTION SYMBOL KEY



Sand Pack w/Slotted Casing



Sand Pack



Concrete Grout/Fill



Bentonite Grout/Seal



Cement/Bentonite Grout

WATER LEVEL SYMBOL KEY



Water Level at Time of Drilling.

Stabilized Water Level.

UNIFIED SOIL CLASSIFICATION SYSTEM

	Majo Olvisio			Group Symbols	Typical Names		ntification Pro articles larger t ctions on estin	han 3 Inches	Information Required for Describing Solia		
1		2		3	4		5		6		
Coarse grained Soils More than half of meterita is larger than No. 200 sieve size. t particle visible to the naked eye.	Gravels More than half of charse fraction is larger than No. 4 siere size.		Clean Gravels (Little or no lines)	GW	Well-graded gravels, gravel-sand mixtures, little or no lines.	Wide sange in grai all intermediate pa		ential amounts of	For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions, and drainage characteristics.		
. 200	Gravets of Gravets of No. 4			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.	Predominantly one intermediate sizes		if sizes with some	•		
Soils Than N	then he	4 SYBYB 5	Gravels with Fines (Appreciable amount of fines)	GМ	Silly gravels, gravel-sand-silt mixture.	Nonplastic lines or (for identification p			Give typical name: Indicate approximate percentage of sand and gravel, maximum size; angularity, surface condition, and hardness of the		
Paris	More the leave.		£ \$ £	GC	Clayey gravels, gravel-sand-clay mixtures.	Plastic lines (for id	lentification see C	L below)	coarse grains; local or geologic name and other pertinent descriptive information; and symbol in		
Coarse-grains More than half of metarits is large smallest particle visible to the naked 6ye.	nacion se size	- 2 [(Little or no fines) (/	S₩	Well-graded sends, gravelly sands, little or no lines.	Wide range in grai all intermediate pa		ntial amounts of	parenthases.		
Talk of my	Course to 4 pien	Several Party	Clean: (Clean no fit	SP	Poorly graded sands or gravelly sands, little or no lines.	Predominantly one intermediate sizes	size or a range of sizes with some		Example: Sity_sand, graveBy; about 20% hard, angular gravel particles t/2 in, maximum size; rounded and		
re than h	Sands More than half of course tradition is ametic than No. 4 piece size	ľ		SM	Slity sands, sand-sin mistures.	Nonplastic fines or lines with low plasticity (for identification procedures see ML below)			subengular sand grains, course to fine; about 15% nonplease fines with low dry strength; well compacted and moist in place; alluvial sand; [SM]		
N 2	More th	-	Sands with Fines (Appreciable amount of fines)	sc	Clayey sands, sand-clay mixtures.	Plastic lines (lori below)	dentification proce	edures see CL	combanes are most til baset enerse same fourt		
8							ntification Proced Smaller than No.		· —·		
Vo. 200 siewe sizie. Siewe sizie la about						Dry Strength (Crushing characteristics)	Oliatency (Reaction to shaking)	Toughness (Consistency near PL)			
1 2 8		<u> </u>	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ML	inorganic sits and very line sands, rock flour, sलाप or clayey line sands or clayey sits with slight plasticity.	None to slight	Quick to slow	None	For undisturbed soils add information on structure, atratitication, consistency in undisturbed and remoided states, moisture and drainage conditions.		
grained Sc is smaller The No	The No		Liquid finit is less from 50	CL	Inorganic days of low to medium plasticity, gravelly clays, sandy days, silly clays, lean clays.	Medium to high	None to very slow	Medium			
Fine g				O.	Organic sits and organic sitty clays of low plasticity.	Skyru to medium	Slow	Slight	Give typical name; indicate degree and character of plasticity; amount and maximum size of coarse grains; color in wet condition; odor, il any; local or		
8		ķ	# S	МН	Inorganic sitts, micaceous or distomaceous fine sandy or sitty soils, elastic sitts.	Slight to medium	Slow to none	Slight to medium	geologic name and other pertinent descriptive information; and symbol in parentheses.		
More than half		Soits and Clays Liquid limit is greater than So		СН	Intergenic clays of high plasticity, fat clays.	High to very high	None	High			
3		B	28.	ОН	Organic clays and sits of medium to high plasticity.	Medium to high	None to very slow	Slight to medium	Exemple: <u>Clayery sit</u> , brown; slighly plastic; smell percentage of fine pand; numerous vertical root holes; firm and		
	Highly Organic Soils			Pi	Peat and other highly organic soits.		led by color, odor, vently by Rbrous t		dry in place; lossa; (ML).		



	96 MACARTHUR B	Completed: 10/5/92		of Well	devation (ft	\· 76	5,61	Tare	d Depth (ft)	. 15 A	
	tarted: 10/5/92				ng Drilling (1.0	,	u Deput (11): pilized (ft):	12.4	
oggo	d By: K. Bishop	Checked By: T. Ramsde	~		dule 40 P	• •			l Bit Diamet		10
rillin	g Co: Gregg Drilling		-	ion: 0.02		••		from		to	10 f
rillin	g Method: Hollow Stem At	идег			tar Sand			from	• • • • • • • • • • • • • • • • • • • •	to	9 (
	g Equipment: Mobile B-61	1 2 2 1 1 1 1 1 1					MEM				7 6
	er: CA Modified Split Spo	оп		Scal: Bentonite Pellots Cement Grout					from 9 ft from 7 ft		0.0
(jest)		GIC DESCRIPTION	Litholo	Mo Con	nitoring well	Blow	Myo (mqq)	7		MARK	
	Asphalt		SM	\$ - q	 %:						
- 1	Baserock SILTY SAND, Medium brown	, 80% sandy, 20% silt, dry, so odor.		8888	XXX				– OVM ma	Ifunction	u: no
ŀ	weathering.	silt, damp, no odor, red/brown	CL						rcadings tal		-,
- }	SANDY CLAY, Medium brow some 1/4° gravel.	n, 80% clay, 20% sand, damp, no odor	· [/]								
	CLAYEY SAND, Light brown	, 60% aand, 40% clay, damp, no odor,		****		5 16		67			
_	red/brown staining.					32					
5											
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			Bol	龖							
ſ	CIDAVUI I V SAND Vellow 1	rown with blue-grey weathering, 60%	00000			25		67			
ŀ	sand, 40% graves, damp, no oc		P.91		$=$ \cdots \times	30		"			
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			80		$\equiv \cdots$						
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-	.		<u> </u>								
	SANDY CRAVEL, Grey blue	50% sand, 50% gravel, wet, no odor.	5000	의 ::		37		56			
	sand, 40% gravel, damp, no oc		6,8		⋽ ₩Х	50 50/3	•				
15	-		많이			1					
ŀ			- D91c1	— :::: <u> </u>							
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ŀ	- I arrange on the best first to the	i, 90% clay, 10% silt, wet, no odor.			≣‱∟	1 .					
H	- SILLI CLAI, Menimi brown	i, 50% cary, 10% sait, wor, no coor.			∄∷N	5 10		100			
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		um brown, 90% clay, 10% silt, wet, no			 	10	1	100			
Γ	odor.					15 25					
25	Bottom of Hole at 25.0'	11 IN 1 11 11 11	 	<i></i>	12,2,2	1		1			
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·						-					<u> </u>	<u> </u>
Project:	UNOCAL SERVICE STATIO 96 MACARTHUR BLVD., OA		L	og of	Well I	٧o.	MW	'-3				
Date Star	rted: 10/6/92 Com	pleted: 10/6/92	Meas	uring F	oint Ele	vation (fi): 7 7	.48	Tota	d Depth (ft):	25.5	
Logged 1	By: K. Bishop Chee	kod By: T. Ramsde n	Watcı	r Levei	During	Drilling	(ft): 15	.0	Stab	ilized (ft):	14.6	
Drilling	Co: Gregg Drilling		Casin	g: 4"	Sched	ule 40 P	VC		Dril	Bit Diamete	r (in):	10
	Method: Hollow Stem Auger				0.020				from		to	9 ft
	Equipment: Mobile B-61					r Sand		69999	from		to	8 ft
	CA Modified Split Spoon				onite P			55050	from		to	6 ft
▎	CA Mounted Spot Spoot			Ceme	ent Gro	. ,	۱ "	<u>\$8888</u>	from	6 ft	to	0 ft
(feet)	LITHOLOGIC DESC	CRIPTION	Lithe	•	W. Constr		Blow	OVM (ppm)	Recove (%)	REM	[ARK:	S
-	Asphalt Baserock GRAVELLY CLAYEY SAND, Dark brown, 20% clay, damp, no odor.	, 40% sand 40% gravel,		CL		7 € 7				- OVM mali readings take	Unction	ı; no
	SANDY CLAY, Black, 80% clay, 20% sand		\mathbb{Z}	P			8 27		100			
	GRAVELLY COARSE SAND, Light brown, gravel.	, damp, no odor, 1/4"	liii '	PF :	***		32					
5	Same as above.						27 30 32	_	67			
-												
I }	Same as above. GRAVELLY SAND, Blue-grey, 60% coarse	tand, 30% gravel, 10%					27 39		67			
-	clay, damp, no odor, red-brown weathering. GRAVELLY SAND, Blue-grey, 60% coarse	· · · · · · · · · · · · · · · · · · ·					50/5 28		67			
10	slight odor.						50 50/2					
	Same as above. Varying amounts of Sand.						22 40		100			
	Same as above. Wet with Strong hydrocarbon	odor					50					
	and an above. We will be suggested as				▓≣		22 32 50/5*		89			
-	(X)ARSE SAND and SH.T, Blue-grey, 90% and odor, some gravel.	sand, 10% silt, wet, no	s	ic 🐺		X	15 31 42		100			
15	Same as above.			<u></u>		X	20 30 38	-	100			
 - -	CTAY, Medium brown, wet, no odor.		, and the second se	T.								
20	SILTY CLAY, Medium brown, 90% clay, 10)% sik, wet, zo odor.				×	10 16 27					
35	SHAY SAND, Medium brown, 60% sand, 30 odor, 1/4" occasional gravels.	0% silt, 10% clay, wet, no	s	Ċ _			18 32	-				
25	Bottom of Boring 25.5'.						50/3**					
Proj	 ect: 2700 3	Roux	Asso	ciate	S					Page	1 of	1

				0.0	BOR	ING LOG														
Project KEI-P94	I-0601		670 81021	Casin	g Diameter g Diameter	8.75" NA"	Logged By 566 T.S. 656 1633													
I -		Unocal Blvd., Oa	S/S #1871 ikland	Well	Cover Eleva C	non N/A	Date Drilled 3/20/96													
Boring 1 EB1	No.			Drillin Metho		Hollow-stem Auger Drilling Company Woodward Drilling														
Pene- tration blows/6"	G.W level	O.V.M. (ppm)	Depth (feet) Samples	Stratigrap USCS	oliy		Description													
			()		Conc	rete slab over sand b	pase.													
			 	CL	Clay,	estimated at 5-15%	sand, firm, moist, dark greenish gray.													
9/13/22			5 -			estimated at 10-159 ish gray.	6 fine-grained sand, very stiff to hard, moist,													
											 	= -		ML ==		Clayey silt, estimated at 10-20% fine-grained sand, very stiff, moist, pale olive.				
9/12/16		ı	10-	SP		Poorly graded sand, sand is very fine to fine-grained, trace silt, mediu dense, moist to wet, light office gray.														
7/13/14	-					Claycy silt, estimated at 10-20% silt, sand is very fine to fine-grai medium dense, wet, gray.														
5/10/16				ML ==		sand, estimated at 1 um dense, wet, gray	5-20% silt, sand is very fine to fine-grained,													
15						TC	TAL DEPTH: 13.5'													
							10.													

						BORING I	OG.	
Project KEI-P94	1-0601.				Boring Dia	ameter	8.75" NA"	Logged By 766 T.S. 666 1633
_		Unocal Blvd., Oa	S/S #187 akland		Well Cover Elevation N/A			Date Drilled 3/20/96
Boring I EB2	Ño.				Drilling Method	Hollow Auger	-stem	Drilling Company Woodward Drilling
Pene- tration blows/6" G.W. O.V.M. Depth (ppm) (feet) Samples					ratigraphy USCS		De	escription
9/13/16 7/11/13	<u></u>		5	SI	M III.	Clay with sil	t, trace sand and	gravel, firm, moist, dark greenish gray. Inthorporation of the grained, trace granules, medium In the fine of the grained sand, and 10-20% h gray.
					W- M	Well graded inch in diam saturated, gra	eter, and 5-15% seenish gray.	d gravel, estimated at 25-30% gravel to I silt, medium dense to dense, wet to

						BORING LOG				
Project KEI-P94		.P2		<u> </u>	Boring Dia		Logged By T66 T.S. CEC 1633			
Project 96 Mac/		Unocal Blvd., Oa	S/S #1871 ikland		Well Cover	r Elevation N/A	Date Drilled 3/20/96			
Boring MW4	No.				Drilling Method	Hollow-stem Auger	Drilling Company Woodward Drilling			
tration level (ppm) (feet) Samples					atigraphy USCS		Description			
						Asphalt over base gravel				
				CI		Clay with sand, estimate dark greenish gray.	d at 15-25% fine-grained sand, firm, moist,			
8/13/16				,		Sandy clay, estimated at 25-30% very fine to coarse-grained sand, and 5-10% gravel to 3/4 inch in diameter, very stiff, moist, light olive brown.				
				SP SN		Poorly graded sand with silt, sand is predomiantly fine-grained, estimated at 5-15% silt, medium dense, moist to wet, greenish gray. Poorly graded sand with silt, predominantly fine-grained, estimated at 5-10% silt, medium dense, wet, greenish gray.				
16/32/40			15	GG	C 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		, gravel to 1 1/4 inches in diameter, estimated ine to coarse-grained sand, and 10-20% clay, trated, yellowish brown.			
12/19/30						Clay, trace sand, very sti	iff to hard, moist, light olive brown.			
6/13/22				CI		Clay, estimated at 5-109 light olive brown.	% fine-grained sand, very stiff to hard, moist,			
						7	'OTAL DEPTH: 20'			

WELL CONSTRUCTION DIAGRAM

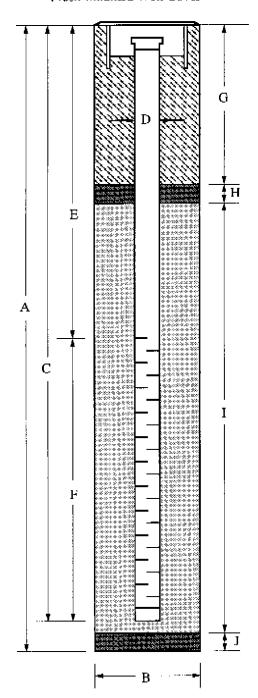
PROJECT NAME: Unocal S/S #1871, 96 MacArthur Blvd., Oakland

WELL NO.: MW4

PROJECT NUMBER: KEI-P94-0601.P2

WELL PERMIT NO.: ACFC & WCD #96164

Flush-mounted Well Cover



A.	Total Depth:	20'
В.	Boring Diameter:	8.75"
	Drilling Method:	Hollow Stem Auger
C.	Casing Length:	20'
	Material:	Schedule 40 PVC
D.	Casing Diameter:	OD = 2.375"
		ID = 2.067"
E.	Depth to Perforations:	5'
Г.	Perforated Length:	15'
	Perforation Type:	Machine Slotted
	Perforation Size:	0.010"
G.	Surface Seal:	21
	Seal Material:	Neat Cement
Н.	Seal:	1'
	Scal Material:	Bentonite
T.	Filter Pack:	16'
	Pack Material:	RMC Lonestar Sand
	Size:	#2/12
J.		None
	Seal Material:	

						BORING LOG	"	
Project KEI-P94	-0601		S/S #1871		Boring Dia Casing Dia Well Cover	meter 2"	Logged By	
•		Blvd., Oa			Wen cover	N/A	3/20/96	
Boring No. MW5					Drilling Method	Hollow-stem Auger	Drilling Company Woodward Drilling	
Pene- tration blows/6"	G.W. level	O.V.M. (ppm)	Depth (feet) Samples		atigraphy USCS	Desc	ription	
						A.C. pavement over sand and gr	ravel,	
				CL		Clay, estimated at 10-15% fine to 1 inch in diameter, soft, moist, g	to medium-grained sand, trace gravel to greenish gray.	
5/12/17					r	Silt, estimated at 10-20% clay, and 10-20% fine-grained sand, firm, moist, olive. Silty sand, estimated at 15-25% silt, sand is very fine to fine-grained, medium dense, moist, grayish green.		
9/14/16						Silty sand, estimated at 15-20% fine-grained, medium dense, me		
10/12/18	∑: -		10	SP- SM		Poorly graded sand, sand is pred 5-10% silt, medium dense, mois	dominantly fine-grained, estimated at at, greenish gray.	
						·————		
14/20/31					1		gravel, estimated at 10-20% gravel to 1 lilt, dense to very dense, wet, dark	
9/14/17			20	CL		Clay, very stiff, moist, pale oliv	e.	
						TOTAL	DEPTH: 20'	

WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #1871, 96 MacArthur Blvd., Oakland

WELL NO.: MW5

PROJECT NUMBER: KEI-P94-0601.P2

WELL PERMIT NO.: ACFC & WCD #96164

Flush-mounted Well Cover

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Α.	Total Depth:	20'
В.		8.75"
		Hollow Stem Auger
C.	Casing Length:	20'
	Material:	Schedule 40 PVC
D,	Casing Diameter:	
		fD = 2.067"
E.	Depth to Perforations:	5'
F.	Perforated Length:	15'
	Perforation Type:	Machine Slotted
	Perforation Size:	0.010"
G.	Surface Scal:	31
	Scal Material:	Neat Cement
II.	Seal:	1'
	Seal Material:	Bentonite
T.	Filter Pack:	16'
	Pack Material:	RMC Lonestar Sand
	Size:	#2/12
J.	Bottom Scal:	_
	Seal Material:	N/A

		Ge	ettler-F	łya	an :	Inc.		Log of Boring MW-6				
PRO:	JECT:	For	mer Tosco	76	Bran	nded Fa	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., Oakland, CA				
—	JECT N		140165.04					CASING ELEVATION:				
DAT	E STA	RTED	: 06/03/	99				WL (ft. bgs); #.3 DATE: 06/04/99 TIME: 1:30 pm				
DAT	E FINI	SHEE): <i>06/03,</i>	/99				WL (ft. bgs): 9.12 DATE: 08/04/99 TIME: 4:00 pm				
DRI	LING P	METH	00: 8" h	ollo	w-st	em aug	er	TOTAL DEPTH: 25 Feet				
ORII	LING (COMP	ANY: <i>Gre</i>	gg	Drillii	ng		GEOLOGIST: Joel Greger				
OEPTH feet	FFT. # FFT. # E INT. IC LOS IC LOS							WELL DIAGRAM GEOLOGIC DESCRIPTION				
								illty sand and gravel.				
5—	14	50	MW-6-6	-		ML	NATIVE SOIL.	ML) - greenish gray (5GY 5/1), moist, ISTURBED NATIVE SOIL. 3M) - dark greenish gray (5GY 4/1), see, 10-15% silt, trace clay, see, 10-15% silt, trace clay, see, 10-15% silt, trace clay.				
10	>442 386	58	MW-8-11				Becomes wet to odor. SAND (SM) - d saturated, very	o saturated, strong hydrocarbon ark greenish gray (5GY 4/1), dense, locally with up to 20% angular diameter, trace silt, very fine to ell graded.				
15-	104	47	MW-6-15.5			ML	CLAYEY SILT saturated, hard	(ML) - reddish gray (5YR 5/2), send self self self self self self self self				
20-	20	48	MW-8-20.5				No odor.					
25- -	-				1		* Converted to	standard penetration blows/foot.				

Gettler-Ryan Inc. Log of Boring MW-7 Former Tosco 76 Branded Facility No. 1871 LOCATION: 96 Mac Arthur Blvd., Oakland, CA PROJECT: 140165.04-1 CASING ELEVATION: PROJECT NO.: DATE: TIME: DATE STARTED: 06/11/99 WL (ft. bgs): # 06/11/99 WL (ft. bgs): 8.53 DATE: 06/11/99 TIME: 11:00 am DATE FINISHED: 25 Feet DRILLING METHOD: 8" hollow-stem auger TOTAL DEPTH: Gregg Drilling DRILLING COMPANY: GEOLOGIST: Joel Greger SAMPLE NUMBE **WELL DIAGRAM** CLASS 높 BLOWS/FT. (bbm) GRAPHIC GEOLOGIC DESCRIPTION SAMPLE DEPTH feet 먑 Concrete. ML CLAYEY SANDY SILT WITH GRAVEL (ML) - brown (7.5YR 6/4), moist, stiff, estimated up to 10% clay, 10-15% very fine to coarse sand, 15% subangular gravel to 3/4" diameter: FILL. ben-tonite 40 PVC 5 Schedule SM SILTY SAND LOCALLY WITH GRAVEL (SM) - dark 33 0 gray (5GY 4/1), moist to very moist, hard, estimated 15% silt, trace clay, variable gravel content up to 20%, gravel subangular, weathered, and fractured, very fine to coarse gravel to >2" diameter. I ML 10 SILT WITH SAND AND GRAVEL (ML) - brown (7.5YR 4/4), gradational from SILTY SAND above, wet to ₹ 26 3 saturated, hard, mottled with weathered gravel clasts, estimated at 16-25% fine to coarse sand, trace clay, 15-25% subangular gravel to 1/2" diameter, gravel highly weathered, fractured. machine-stotted PVC (0.02 inch) sand Lonestar 15-Becomes saturated. 29 4 CLAYEY SILT (ML) - light gray (10YR 7/2). saturated, hard, homogenous. 20-Ü 27 Trace to 10% very fine sand. 18 0 25 * Converted to standard penetration blows/foot.

		Ge	ettler-l	₹у	an	Inc.		Log of Boring	3 MW-8
PRO-	JECT:	For	mer Tosco	76	Brai	nded Fa	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., 0	akland, CA
	JECT N		140165.04					CASING ELEVATION:	
<u> </u>	E STA					•		WL (ft. bgs): 9.0 DATE: 06/04/99	TIME: 4:00 pm
⊢—			D: <i>06/03</i> ,		j			WL (ft. bgs): DATE:	TIME:
			10D: 8" h			tem aud	er	TOTAL DEPTH: 25 Feet	
			ANY: Gre					GEOLOGIST: Joel Greger	
						Ĭ			
DEPTH feet	PIO (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE JNT.	GRAPHIC LOG	SOIL CLASS	GE	OLOGIC DESCRIPTION	WELL DIAGRAM
<u> </u>		 					Concrete.		T 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
-				-		ML	brownish gray (2 10% clay, 10-15%	SILT WITH GRAVEL (ML) — light 2.5Y 6/2), moist, stiff, estimated at very fine to coarse sand, 15% et to 3/8" diameter: FILL.	PVC + + + + + + + + + + + + + + + + + + +
5-	O						brownish gray (2 estimated up to	SILT WITH GRAVEL (ML) - light 2.5Y 6/2), moist, very stiff, 10% clay, 10% very fine to coarse ar gravel to 1-3/4" diameter.	TRESCENSION OF THE PROPERTY OF
10-	0	28	MW-8-10.5				CLAYEY SILT (N		
-						. SM	SILTY SAND (S) moist, very densi at 30% silt.	4) – pale brown (10YR 8/3), very e, very fine to fine sand, estimated	
15—	0	83	MW-8-15.5	Z		- - - - -	dense, estimated	H GRAVEL (SM) – saturated, very 1 at 15% silt, 35–45% subangular iameter, highly weathered gravel, and.	A Secretary Secretary (0.02 inch) (0.02 inch) (0.02 inch) (0.02 inch) (0.02 inch) (0.02 inch) Secretary Secretary (0.02 inch) Lanester (0.02)
20 20		50		2		ML	CLAYEY SILT (N saturated, hard,	4L) - light gray (10YR 7/2), homogenous.	2" machine-statted foot inchi (0.02 inchi
25-		36			-		* Converted to	standard penetration blows/foot.	
JOB	NUME	 BER:	140165.0)4-	1				Page 1 of 1

		Ge	ettler-F	₹у	an 1	inc.		Log of Boring B-4
PRO	JECT:	For	mer Tosco	76	Bran	ded Fa	acility No. 1871	LOCATION: 96 Mac Arthur Bivd., Oakland, CA
PRO	JECT N	10. :	140165.04	1 -1				CASING ELEVATION:
DAT	E STA	RTED	: 06/01/	99			_	WL (ft. bgs); 10.5 DATE: 06/01/99 TIME: 7:50 am
DAT	E FIN	SHE): <i>06/01/</i>	99				WL (ft. bgs): DATE: TIME:
DRIL	LING	METH	OD: 2" g	eop	robe			TOTAL DEPTH: 16 Feet
DRIL	LING	COMP	ANY: Gre	gg	Drillir	g		GEOLOGIST: Joel Greger
DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS		SEOLOGIC DESCRIPTION REMARKS
-		-				ML	SANDY CLAYE 5/2), slightly m	of broken concrete. Y SILT (ML) - grayish brown (10YR bist, stiff, estimated at 30% very fine -25% clay: FILL.
					\mathbb{Z}	SC	6/4), moist, me	(SC) - light yellowish brown (10YR dum dense, estimated 10-15% clay, ninantly very fine to fine: FILL.
5-				H		SM	SILTY SAND W	ITH GRAVEL (SM) - brown (10YR t, medium dense, estimated at 20% silt, subrounded to subangular gravel to 1
-	0		B-4-7.5		•	GW GM	1/4" diameter, GRAVEL WITH (10YR 5/4), very fine to co	fine to coarse sand. SAND (GW-GM) - yellowish brown ry moist, dense, estimated at 35% parse sand, 10% silt & clay, subangular red gravel to 3/4" diameter.
10-	0		B-4-9			MŁ	SILT (ML) - III ∇ brownish gray	tht yellowish brown (2.5Y 6/4) to light (2.5Y 6/2), wet to saturated at 10.5
	0		B-4-11.5				raet, very stir	, trace clay & very fine sand.
15-								-
-	G	!			<u> </u>			
20-				_	- - -			- -
 - 25- -				_				
<u></u>	<u> </u>	<u> </u>			1	<u> </u>	<u> </u>	Page 1 of 1

		Ge	ttler-f	₹у	an I	nc.		Log of Boring B-5
PRO	JECT:	Fort	ner Tosco	76	Bran	ded Fa	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., Oakland, CA
			140165.04					CASING ELEVATION:
DAT	E STAI	RTED	: 06/01/8	99				WL (ft. bgs): 10.5 DATE: 08/01/99 TIME: 9:40 am
DAT	E FINI	SHEC): 06/01/	99				WL (ft. bgs): DATE: TIME:
DRIL	LING	MĘTH	0D: 2" g	eop	robe			TOTAL DEPTH: 16 Feet
ORIL	LING	COMP	ANY: Gre	gg	Drittin	g		GEOLOGIST: Joel Greger
DEPTH feet	PID (ppm)	BLONS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GE	OLOGIC DESCRIPTION REMARKS
-	•					SM	1 8/4), moist, medi	te. I) - light yellowish brown (10YR Im dense, estimated 15% silt, ry fine to fine sand: FILL.
5-						SP	(10YR 8/4), mois estimated at 10-	/EL (SP) — light yellowish brown t to very moist, medium dense, 15% subrounded to engular gravel to ery fine to fine sand, poorly graded:
-	O		g-5-7.5			ML SP GW GM	(10YR 8/4), mois estimated at 10- 3/8" diameter, v graded.	/EL (SP) - light yellowish brown t to very moist, medium dense, 15% subrounded to angular gravel to ery fine to fine sand, poorly
10-	0		8-5-10.5			3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	(10YR 5/4), very very fine to coa subangular grave weathered. SAND WITH GRA gravel, otherwise GRAVEL WITH S:	LT AND SAND (GW-GM) - yellowish -
15-	o					ML	coarse sand, 157	l), saturated, dense, 25% fine to silt & clay, well graded. wn (10YR 5/3), saturated, very stiff,
20-				-	-			
25— - -				_				- -

		Ge	ettler-l	Ryan	Inc.		Log of Borin	g B-6
PRO	JECT:	For	mer Tosco	78 Bran	nded Fa	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., O.	akland, CA
			140165.04			<u> </u>	CASING ELEVATION:	
	E STA					•	WL (ft. bgs); #.7 DATE: 06/01/99	TIME: 10:15 am
DAT	Ę FINI	SHE	D: <i>06/01/</i>	/99			WL (ft. bgs): DATE:	TIME:
DRIL	LING	METH	IOD: 2" g	eoprobe			TOTAL DEPTH: 14 Feet	
DRIL	LING	COMP	ANY: Gre	gg Drillii	ng		GEOLOGIST: Joel Greger	10 10 10
DEPTH feet	PIO (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT. GRAPHIC LOG	SOIL CLASS	GE	OLOGIC DESCRIPTION	REMARKS
5					SP	medium dense, ve FILL.	lowish brown (10YR 6/4), moist, ery fine to fine sand, poorly graded:	- -
10-	o o		B-6-11.4		GG SH GG G	brown (10YR 6/4 estimated 35% ve subangular grave weathered grave SAND WITH GRAV (10YR 4/6), mots subrounded grave medium sand, poor GRAVEL WITH SA brown (10YR 6/4 estimated 35% ve	VEL (SW-SM) - dark yellowish brown t, medium dense, estimated 15% el to 3/4" diameter, predominantly priy graded. AND AND SILT (GW-GM) - yellowish l), moist, medium dense to dense, ery fine to coarse sand, 10-15% silt, el to 3/4" diameter, deeply	
15-								-
20-								-
25-								Page Lot I

		Ge	ettler-	Ry	an 1	Inc.		Log of Borin	g B-7
PRO	JECT:	Fort	mer Tosco	76	Bran	ded Fa	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., O	akland, CA
PRO	JECT N	10. :	140165.0	4-1				CASING ELEVATION:	
DAT	E STA	RTED	: 06/01/	99		·		WL (ft. bgs): 10 DATE: 06/01/99	TIME: 10:50 am
DAT	E FINI	SHED): <i>06/01,</i>	/99				WL (ft. bgs): DATE:	TIME:
DRIL	LING	METH	00: <i>2" g</i>	eop	robe			TOTAL DEPTH: 16 Feet	
ORIL	LING	COMP	ANY: Gre	99	Drillin	ng		GEOLOGIST: Joel Greger	
DEPTH feet	PIO (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GE	EOLOGIC DESCRIPTION	REMARKS
							Concrete.		
5	0		B-7-9.5			S M ML	3/3) changing to feet, sightly mois silt, 25% subangu predominantly ve SILT (ML) - blacklay & fine sand SANDY SILT (MI moist, stiff, esting to subangular gweathered.	_) – yellowish brown (10YR 5/4), nated 15–20% very fine sand, up to gravel to 1/4" diameter, gravel highly	water sample 8-7-10 —
15-				-		GW GM ML	brown (10YR 5/4) dense.	AND AND SILT (6W-6M) - yellowish 4), saturated, medium dense to (L) - grayish brown (10YR 5/2), stiff.	
20-				-					-
				-					4
- - 25—				-					-
									-

		Ge	ettler-	Rya	an i	Inc.	"	Log of Borin	ng B-8
PRO	JECT:	Fori	ner Tosco	o 76	Bran	nded F	acility No. 1871	LOCATION: 98 Mac Arthur Blvd., (Dakland, CA
PRO-	JECT 1	10. :	140165.0	4-1			<u> </u>	CASING ELEVATION:	
DAT	E STA	RTED	: 06/01/	/99			•	WL (ft. bgs): 8.5 DATE: 06/03/99	TIME: 12:10 am
DAT	E FIN	ISHEC): <i>06/01</i>	/99				WL (ft. bgs): DATE:	TIME:
DRI	LING	METH	0D: <i>2" (</i>	je op	robe	,		TOTAL DEPTH: 12 Feet	
DRII	LING	COMP	ANY: <i>Gr</i>	egg	Drillil	ng		GEOLOGIST: Joel Greger	<u>.</u>
DEPTH feel	PIO (ppm)	BLOWS/FT. X	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GE	OLOGIC DESCRIPTION	REMARKS
-				-		ML.	CLAYEY SILT (M changing to light FILL OR DISTURE	L) – dark grayish brown (2.5Y 3/2) olive brown (2.5Y 5/4) at 1.5 feet: BED NATIVE SOIL.	-
5-							Color change to	olive (5Y 5/2).	Poor recovery.
10			6-8-8	/ - - -			1 * saturated, estima	TH GRAVEL (ML) — ollve (5Y 5/2), ated 10% clay, 15-35% subangular diameter, highly weathered gravel.	water sample B-8-8.5
15-									
20— - -									-
25-				1 1					

:		Ge	ttler-f	₹уа	an ∶	Inc.		Log of Boring	ı B−9 `
PRO.	JECT:	Fort	ner Tosco	76	Bran	nded Fa	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., Oal	kland, CA
			140165.04				<u> </u>	CASING ELEVATION:	
			: 06/01/			•		WL (ft. bgs): 13.5 DATE: 08/01/99	TIME: 12:45 pm
DAT	E FINI	SHEL	: <i>06/01/</i>	99				WL (ft. bgs): DATE:	TIME:
ORIL	LING	METH	OD: 2" g	eopi	robe			TOTAL DEPTH: 14 Feet	
DRIL	LING	COMP.	ANY: Gre	gg .	Dritti	ng		GEOLOGIST: Joel Greger	·
DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GE	OLOGIC DESCRIPTION	REMARKS
-	<u>-</u>			-		SM	brown (10YR 4/6 very fine to coa gravel to 2" dian	H GRAVEL (SM) - dark yellowish), moist, dense, estimated 15% silt, se sand, up to 30% subangular eter: FILL. TH GRAVEL (ML) - dark greenish	- - -
5-	o		B-9-7.5	-			gray (5GY 4/1). CLAYEY SILT (No changing to blace firm, organic odd SANDY CLAYEY	moist, firm. iL) - dark greenish gray (5GY 4/1) k (2.5YR N2 5/) at 6.5 feet, moist, r. SILT (ML) - dark gray (N4 /), very l, estimated 15-20% very fine to fine	
10-	0 0		B-9-11 B-9-13	-			₹		Water sample 8-9-13.5
15-					-				
20-				-					_
25— - -				-					Page Lot I

	ı	Ge	ettler-f	Ryan	Inc.		Log of Boring B-10
PRO	JECT:	For	mer Tosco	76 Bra	nded F	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., Oakland, CA
PRO-	JECT I	10. :	140165.04	5 -1	0.00		CASING ELEVATION:
DAT	E STA	RTEC	: <i>06/01/</i> 3	99			WL (ft. bgs): 15.2 DATE: 08/03/99 TIME: 7:40 am
DAT	E FIN	ISHE	D: <i>06/01/</i>	99	· ·		WL (ft. bgs): DATE: TIME:
DRIL	LLING	METH	100: <i>2" g</i>	eoprob	e		TOTAL DEPTH: 18 Feet
DRIL	LLING	COMP	ANY: Gre	gg Drill	ling		GEOLOGIST: Joel Greger
DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	SOIL CLASS	GE	OLOGIC DESCRIPTION REMARKS
5— 10— 15—	OI O O 28 440	BLO	HYS	SAN GRA	IOS ML	Drown (10YR 5/6 15-30% very fine subrounded grav Color change to feet. SANDY SILT (ML moist, firm to stifmedium sand, transcript sand, transcript sand), moist to 25-30% fine to migravel content to weathered, slight CLAYEY SILT (Moist, firm to stifmedium sand, transcript sand) CLAYEY SILT (Moist, firm to stifmedium sand) CLAYEY SILT (Moist, firm to stifmedium sand) GRAVEL WITH SAND (56 4/1), very migravel sand sand sand sand sand sand sand sand	H GRAVEL (ML) - greenish gray o very moist, stiff, estimated at edium sand, trace clay, variable o 10%, subangular gravel, highly hydrocarbon odor. L) - light brownish gray (2.5Y 8/2), f, trace very fine sand. ND (GW-GM) - dark greenish gray oist, dense to very dense, estimated e to coarse sand, trace silt & clay, Water sample B-10-15.2
	386		8-10-17.5		00 W W V V V V	weathered and f Becomes 10% silt predominantly me	to 3/4" diameter, highly actured, strong hydrocarbon odor. t0% clay, 35% very fine to dium to coarse sand, strong r, wet to saturated around gravel.
20-						:	- -
25							

		Ge	ettier-	Ry	an	Inc.		Log of Borin	g B-11
PRO	JECT:	For	mer Tosco	76	Brai	nded Fä	acility No. 1871	LOCATION: 96 Mac Arthur Blvd., 0	akland, CA
PRO	JECT I	40. :	140165.0	4-1				CASING ELEVATION:	
DAT	E STA	RTED): 06/03.	/99				WL (ft. bgs): 16.2 DATE: 06/03/99	TIME: 11:30 am
DAT	EFIN	ISHE	D: <i>06/03</i>	/98	,			WL (ft. bgs): DATE:	TIME:
ORI	LING	METH	iod: 8" h	ollo	w-st	em aug	er	TOTAL DEPTH: 31.5 Feet	
DRI	LLING	COMP	ANY: Gra	<i>99</i>	Drillii	ng		GEOLOGIST: Joel Greger	
OEPTH feet	PID (ppm)	BLONS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GE	OLOGIC DESCRIPTION	REMARKS
-	ō					ML CL	i slightly moist, stir	(ML) – very dark gray (5YR 3/1), ff, estimated at 15-30% subangular diameter, trace sand: FILL.	
5	v					SW SC	SILTY CLAY (CL moist to very moi sand.) – yellowish brown (10YR 5/8), st, stiff, trace very fine to medium	-
10	0		B-11-10.5			ML	brown (10YR 5/8 very dense, estin gravel to 3/4" di well graded. CLAYEY SILT (M	AND GRAVEL (SW-SC) - yellowish), very moist to wet along clasts, nated 10% clay, 35% subangular ameter, very fine to coarse sand, L) - grayish brown (10YR 5/2), very	_
]	٥		B-11-14				moist to wet, stif	.,]
15— - -	6					SW SM ML	brown (10YR 5/6	AND GRAVEL (SW-SM) - yellowish), wet, estimated 10-15% silt, lar gravel to 3/8" diameter, very and, well graded.	— Water sample B−11-15.2 —
20 - -	٥							L) – yellowish brown (10YR 5/6), stiff, homogenous.	-
25-	a		B-11-24.5						-

Gettler-Ryan Inc. Log of Boring B-11 Former Tosco 76 Branded Facility No. 1871 LOCATION: 96 Mac Arthur Bivd., Oakland, CA PROJECT: SAMPLE NUMBE BLOMS/FT. * GRAPHIC LOG SAMPLE INT. SOIL CLASS PID (ppm) GEOLOGIC DESCRIPTION REMARKS DEPTH feet 0 B-11-29 CLAYEY SILT (ML) – dark greenish gray (5G 4/1), saturated, very stiff, homogenous. Hydropunch attempt from 29.5 to 31.5 feet; no water after 1/2 hour. 33-38-43-48-53 58-

		Ge	ttler-f	₹уа	an	Inc.			Log of Boring	J B−12
PRO.	IECT:	Fort	ner Tosco	76	Bra	nded Fa	cility	No. 1871	LOCATION: 96 Mac Arthur Blvd., Oa	akland, CA
			140165.04						CASING ELEVATION:	
			: 06/04/						WL (ft. bgs): 19.5 DATE: 08/04/99	TIME: 2:15 pm
): 06/04						WL (ft. bgs): DATE:	TIME:
			OD: 6" h			tem augi	er		TOTAL DEPTH: 26.5 Feet	
			ANY: Gre						GEOLOGIST: Joel Greger	
OEPTH feet	PJD (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS		GE	OLOGIC DESCRIPTION	REMARKS
_				-		ML		Concrete. CLAYEY SILT (M 4/8), moist, stiff:	L) – dark yellowish brown (10YR FILL.	
5-	,			1 1 1		SM		dense, estimated	4) — strong brown (10YR 4/6), moist, 1 20% silt, trace to 10% subangular ameter, very fine to medium sand:	-
-	0	27				ML.		-{7.5YR N4/}, ver	TH GRAVEL (ML) – dark gray y moist, hard, estimated at 30% o 1.5" diameter: DISTURBED NATIVE	
10-	a	34	B-12-11.5					(10YR 4/8), verv	"H GRAVEL (ML) — strong brown moist, hard, estimated at 15% very ubangular gravel to 3/4" diameter, athered.	-
15-	0	25	B-12-15.5					CLAYEY SILT (N saturated, very	AL) — gray (5Y 5/1), wet to stiff, homogenous.	_
20 20	0	41	8-12-20.5				₩	Trace very fine	to coarse sand.	Water sample 8-12-18.5 (slurry); water came in — after 2.5 hours, hole caved below 19.5 feet.
25— -	o	40	B-12-25 B-12-25.5 B-12-26					As above excep	t no sand.	
1	1		<u>.</u>		1	1	1			Page 1 of

	MAJOR DIV	ISIONS			TYPICAL NAMES
	GRAVELS	CLEAN GRAVELS		GW	Well graded gravels with or without sand, little or no fines
SEVE	MORE THAN HALF	WITH LITTLE OR NO FINES	• •	GP	Poorly graded gravels with or without sand, little or no fines
SOILS No. 200	COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	Gravels with		GM	Silty gravels, silty gravels with sand
1 _		Over 15% fines		GC	Clayey gravels, clayey gravels with sand
щo		CLEAN SANDS WITH LITTLE		SW	Well graded sands with or without gravel, little or no fines
COARS	SANDS MORE THAN HALF	OR NO FINES		SP	Poorly graded sands with or without gravel, little or no fines
JAORE TP	COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	sands with		SM	Silty sands with or without gravel
		OVER 15% FINES		SC	Clayey sands with or without gravel
SEVE	SEA			ML	Inorganic silts and very fine sands, rock flour, silts with sands and gravels
SOILS	SILTS AND			CL	Inorganic clays of low to medium plasticity, clays with sands and gravels, lean clays
RAINED FINER THAN	ELGOLD CIMIT OC	W UK IE35		OL	Organic silts or clays of low plasticity
NE—GRAINED HAJF IS FINER THA	SILTS AND	CLAYS		мн	Inorganic silts, micaceous or diatomaceous, fine sandy or silty soils, elastic silts
FIN THAN HA	LIQUID LIMIT GREA	TER THAN 50%		СН	Inorganic clays of high plasticity, fat clays
MORE				ОН	Organic silts or clays of medium to high plasticity
Н	IGHLY ORGANIC	SOILS		РТ	Peat and other highly organic soils
	PID Volatile	vapors in ppm			Observed contact
(2.5)		or according to or Charts (1993			— — — Inferred contact
BLC		drive hammer w		•	No soil sample recovered
ı	140 por	unds falling 30 i equired to drive	nches.		"Undisturbed" sample
		are indicated on			 ∇ First encountered groundwater level Static groundwater level
<u> </u>	G ETTLER	. D v. u 1.	····	T	UNIFIED SOIL CLASSIFICATION ASTM D 2488-85

GETTLER - RYAN INC.
6747 Sierro Ct., Suite J
Dublin, CA 94568 (925) 551-7555

UNIFIED SOIL CLASSIFICATION
ASTM D 2488-85
AND
KEY TO SAMPLING DATA

PROJECT: Former Tosco [79] Service Station No. 1871 GR PROJECT No.: 140983/0 CASING ELEVATION: UNITED STARTED: 03/20/02 NUTE FINISHED: 03/20/0	Gettler-Ryan, Inc.	Log of Bo	ring SP-A
GR PROJECT NO.: 140165.10 DATE STARTED: 03/20/02 ML (ff. bgs): DATE: TIME: DATE FINISHED: 03/20/02 ML (ff. bgs): DATE: TIME: DATE FINISHED: 03/20/02 ML (ff. bgs): DATE: TIME: DATE FINISHED: 03/20/02 DATE FINISHED: 03/20/02 ML (ff. bgs): DATE: TIME: DATE:	PROJECT: Former Tosco (78) Service Station No. 1871	LOCATION: 96 MacArthur Ro	uldvard Oakland California
DATE STARTED: 03/20/02 NL (fit. bgs): DATE: TIME: DATE FINISHED: 03/20/02 NL (fit. bgs): DATE: TIME: DRILLING FINISHED: 03/20/02 NL (fit. bgs): DATE: TIME: DRILLING COMPANY: Cascade Drilling GEOLOGIST: Clyde Galantine GEOLOGIST DESCRIPTION Concrete and rebar - 6 inches thick. Hell boring was not logged or sampled.	10 T T T T T T T T T T T T T T T T T T T		andvard, Cakland, California
DATE FINISHED: 03/20/02 ML (Ht. bgs): DATE: TIME: DRILLING METHOD: 8 in. Hollow Stem Auger TOTAL DEPTH: 28 feet DRILLING COMPANY: Cascade Drilling GEOLOGIST: Clyde Galantine WELL DIAGRAM WELL DIAGRAM Well boring was not logged or sampled.	THE CONTRACTOR AND THE CONTRACTO	····	TIME:
DRILLING METHOD: 8 in. Hollow Stam Auger DRILLING COMPANY: Cascade Drilling GEOLOGIC DESCRIPTION GEOLOGIC DESCRIPTION Concrete and rebar – 6 inches thick. Well boring was not logged or sampled.			TT N.4
ERTILLING COMPANY: Cascade Drilling GEOLOGIC DESCRIPTION GEOLOGIC DESCRIPTION Concrete and rebar – 6 inches thick. Hell boring was not logged or sampled.	*890.		
EDLOGIC DESCRIPTION Concrete and rebar – 6 inches thick. Well boring was not logged or sampled. 5- 10- 20- 20- 20- 25- 25-			
Concrete and rebar – 6 inches thick. Hell boring was not logged or sampled. 5- 10- 20- 25- 25-	GEOLOGIC DESCRIPTION		WELL DIAGRAM
5— 10— 20— 20— 25— 25— 25— 26— 27— 28— 28— 28— 28— 28— 28— 28— 28— 28— 28			
20— 25— 25—	5—		et cament
25— 			3/4" blank softe.
35—	Bottom of boring at 28 feet bgs, 30—		C sparge par

	Gettler-Ryan, Inc.	Log of Bo	oring SP-BD/BS
	: Former Tosco (76) Service Station N		ur Boulevard, Oakland, California
	CT NO.: 140165,10	CASING ELEVATION:	a Boale var d, Comana, Camorna
	ARTED: 03/20/02	WL (ft. bgs): DATE:	TIME:
	NISHED: 03/20/02	WL (ft. bgs): DATE:	
	METHOD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 30 feet	ıı -
	COMPANY: Cascade Drilling	GEOLOGIST: Clyde Gala	
DEPTH (feet) GRAPHIC LOG	88	IC DESCRIPTION	WELL DIAGRAM
5- 10- 15- 20- 25- 35-	Well boring was not logged or s		C sparge point C solide point

Gettler-Ryan, Inc.	Log of Boring SP-C
PROJECT: Former Tosco (76) Service Station No. 1871	LOCATION: 96 MacArthur Bouldvard, Oakland, California
GR PROJECT NO.: 140185.10	CASING ELEVATION:
DATE STARTED: 03/20/02	WL (ft. bgs): DATE: TIME:
DATE FINISHED: 03/20/02	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 28 feet
DRILLING COMPANY: Cascade Drilling	GEOLOGIST: Clyde Galantine
GEOLOGIC DESCRIPTIO	WELL DIAGRAM
Asphalt - 6 inches thick.	* T
Well boring was not logged or sampled.	3/4" bisnit sohedwie 40 PVC
20-	C soerge point
Bottom of boring at 28 feet bgs.	*Coentonite
35- IOB NUMBER: 140165 to	-

Gett	ler-Ryan, Inc.	Log of Bori	ng SP-DD/DS
PROJECT: Form	er Tosco (76) Service Station No. 1871	LOCATION: 96 MacArthur E	Boulevard, Oakland, California
GR PROJECT NO.		CASING ELEVATION:	
DATE STARTED:	03/18/02	WL (ft. bgs): DATE:	TIME:
DATE FINISHED:	The state of the s	WL (ft. bgs): DATE;	T1ME:
	DD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 27.5 feet	
	NY: Cascade Drilling	GEOLOGIST: Clyde Galanti	ine
GRAPHIC LOG	GEOLOGIC DESCRII Asphalt - 6 inches thick.	•	WELL DIAGRAM
5- 10- 25- 35- 35-	Well boring was not logged or sampled. Bottom of boring at 27.5 feet bgs.		C sparge point

	Gettler-Ryan, Inc.	Log of Boring SP-E
PROJE	ECT: Former Tosco (76) Service Station No. 1871	LOCATION: 96 MacArthur Bouldvard, Oakland, California
	ROJECT NO.: 140165.10	CASING ELEVATION:
DATE	STARTED: 03/18/02	WL (ft. bgs): DATE; TIME:
DATE	FINISHED: 03/18/02	WL (ft. bgs): DATE: TIME:
DRILL	ING METHOD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 28 feet
DRILL	ING COMPANY: Cascade Drilling	GEOLOGIST: Clyde Galantine
DEРТН (feet)	GEOLOGIC DESCRIPTION	WELL DIAGRAM
	Asphalt - 6 inches thick.	
5 - 10 - 15 - 1	Well boring was not logged or sampled.	3/4" blank schoowle 40 PVC
25-		C sparge point
-		
†	Bottom of boring at 28 feet bgs.	
30-		puss jejsəucī CO*
-		
35-		

		ring SP-F
ROJECT: Former Tosco (76) Service Station No. 1871	LOCATION: 96 MacArthur Box	uldvard, Oakland, California
GR PROJECT NO. : 140165.10	CASING ELEVATION:	·
DATE STARTED: 03/19/02	WL (ft. bgs): DATE:	TIME:
DATE FINISHED: 03/19/02	WL (ft. bgs): DATE:	TIME:
DRILLING METHOD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 28 feet	
ORILLING COMPANY: Cascade Drilling	GEOLOGIST: Clyde Galantine	
GEOLOGIC DESCRIPTION		WELL DIAGRAM
Asphalt = 6 inches thick,		7 /
Well boring was not togged or sampled. 10— 15— 20— Bottom of boring at 28 feet bgs.		#66 Lonesfar sand

(Gettler-Ryan, Inc.	Log of E	Boring SP-G
PROJECT:	Former Tosco (76) Service Station No. 187	71 LOCATION: 96 MacArthur	Bouldvard, Oakland, California
GR PROJE	CT NO. : 140165.10	CASING ELEVATION:	
DATE STA	RTED: 03/20/02	WL (ft. bgs): DATE:	TIME:
DATE FIN	ISHED: 03/20/02	WL (ft. bgs): DATE:	TIME:
DRILLING	METHOD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 28 feet	
DRILLING	COMPANY: Cascade Drilling	GEOLOGIST: Clyde Galan	tine
JEPTH (feet)	GEOLOGIC DESCRIP	TION	WELL DIAGRAM
	Asphalt - 4 inches thick.	/	- <u> </u>
5-1	Well boring was not logged or sampled.		
15			3/4" Dients schedole 40 PVC — - 3/4" Dients schedole 40 PVC — - 2991 Cement
20-			Send ** A PA
25-			
· - · · · · · · · · · · · · · · · · · · 	Bottom of boring at 28 feet bgs.		<u>* Edisəsərdi * - </u>
30-			- -
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	Gettler-Ryan, Inc.	Log of Boring SP-H
PROJ	ECT: Former Tosco (76) Service Station No. 1871	LOCATION: 96 MacArthur Bouldvard, Oakland, California
	ROJECT NO. : <i>140185,10</i>	CASING ELEVATION:
	E STARTED: 03/19/02	WL (ft. bgs): DATE: TIME:
-1% -1.	FINISHED: 03/19/02	WL (ft. bgs); DATE: TIME:
	LING METHOD: 8 in. Hollow Stem Auger	TOTAL DEPTH: 27 feet
DRIE	LING COMPANY: Cascade Drilling	GEDLOGIST: Clyde Galantine
DEPTH (feet)	GEOLOGIC DESCRIPTION	WELL DIAGRAM
	Asphalt - 4 inches thick.	
5— 10— 15—	Well boring was not logged or sampled.	3/4" bishi schedule 40 PVC
20 25 30	Bottom of boring at 27 feet bgs.	Sparge point -C sparge point
- - 35—		Gr) The