

APPENDIX E
Geophysical Borehole Logs

GEOSCIENCE


APPENDIX E:
GEOPHYSICAL BOREHOLE LOGS

CONTENTS

Description	Page
<i>Borehole CX-B1</i>	E-1
<i>Borehole CX-B2</i>	E-6
<i>Borehole CX-B3</i>	E-11
<i>Borehole CX-B4</i>	E-17
<i>Borehole MDW-1</i>	E-22
<i>Borehole ML-1</i>	E-27
<i>Borehole ML-2</i>	E-31
<i>Borehole ML-3</i>	E-35
<i>Borehole ML-4</i>	E-39
<i>Borehole ML-6</i>	E-42
<i>Borehole PR-1</i>	E-46

DUAL INDUCTION GAMMA-RAY

Job No. 17725	Company CASCADE DRILLING, INC.
File No.	Well CX-B1 Field MARINA County MONTEREY State CA

Location OFF OF LAPIS RD. GPS: N 36° 42.797' W 121° 048.360'	Other Services: TEMPERATURE FLUID RESISTIVITY
--	---

Permanent Datum Log Measured From Drilling Measured From	G.L. G.L. G.L.	Elevation above perm. datum 0'	Elevation K.B. D.F. G.L.
--	----------------------	--------------------------------------	-----------------------------------

Date Run Number Depth Driller Depth Logger Bottom Logged Interval Top Log Interval Open Hole Size Type Fluid Density / Viscosity Fluid Level Bentonite Seal Time Well Ready Time Logger on Bottom Equipment Number Location Recorded By Witnessed By	10-26-2013 ONE 305' 304' 304' 0' 9" (0'-100') N/A N/A N/A N/A 1330 1400 PS-3 LA SCHUMACHER B. VILLALOBOS
--	--

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	9"	0'	100'				
TWO	8"	100'	306'				

Casing Record Surface String Prot. String Production String Liner	Size 9" 4" PVC	Wgt/Ft N/A N/A	Top 0'	Bottom 3.5' 305'

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

0.010" SLOT FROM 5'-305' BGS

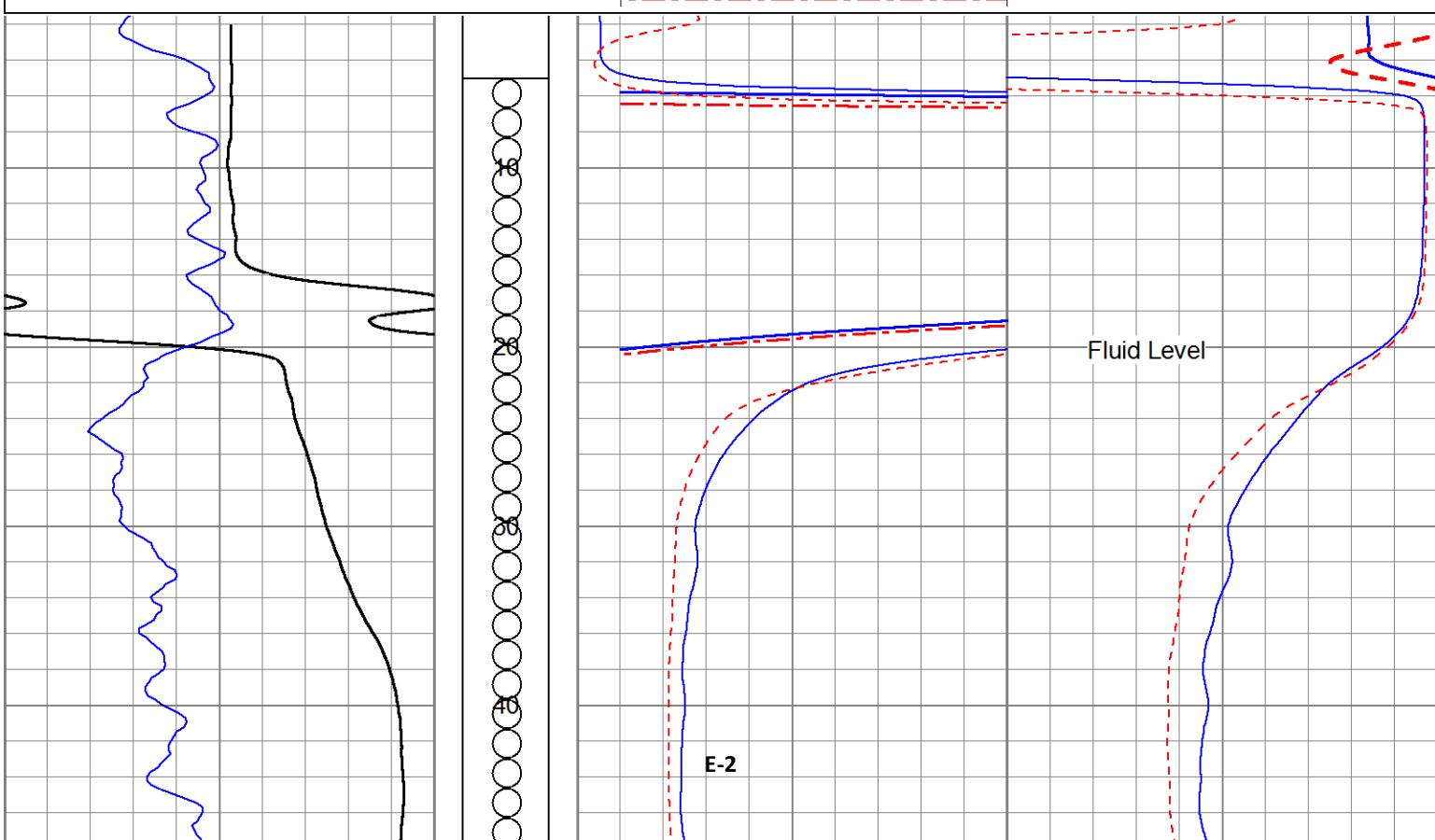
Calibration Report

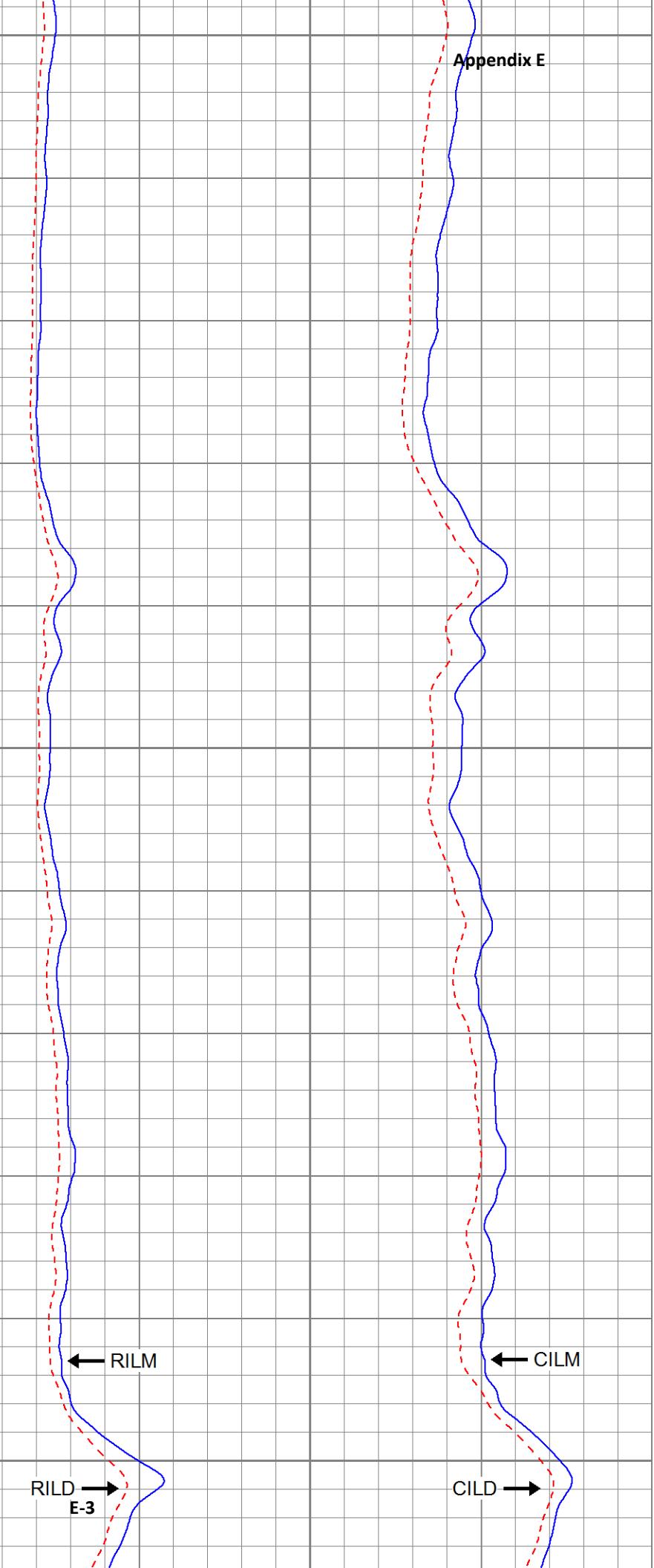
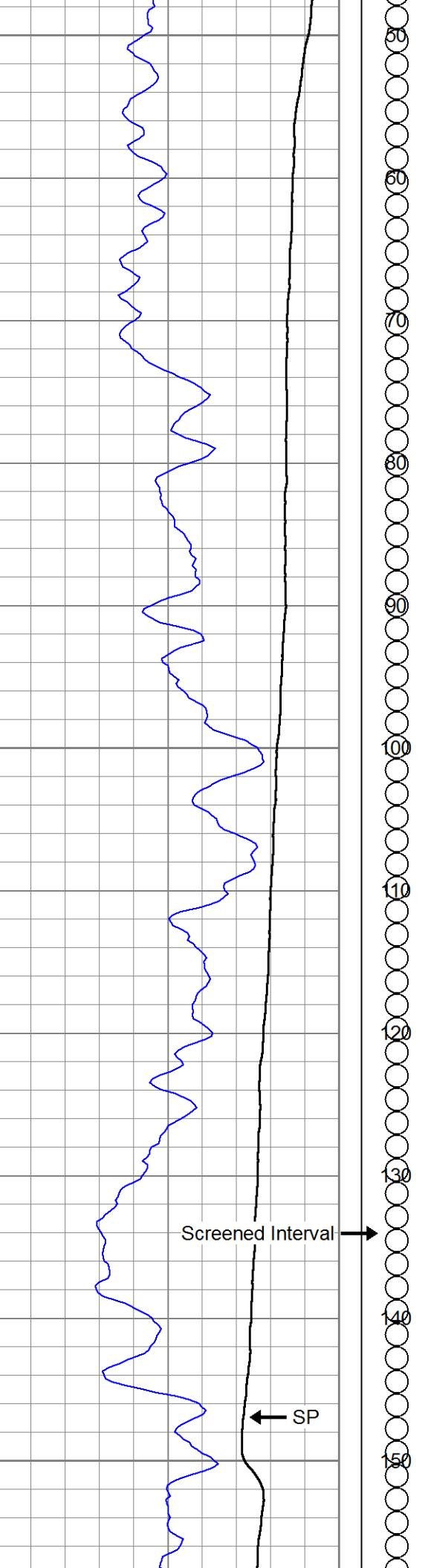
Database File 17725.db
Dataset Pathname DIL
Dataset Creation Sat Oct 26 14:46:45 2013

Dual Induction Calibration Report

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1407.490	3493.640	cps	0.000	612.000	mmho/m
Medium	1908.120	14487.900	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Aug 31 18:22:13 2011					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			

Database File	17725.db				
Dataset Pathname	DIL				
Presentation Format	dil_ps				
Dataset Creation	Sat Oct 26 14:46:45 2013				
Charted by	Depth in Feet scaled 1:120				
10	SP (mV)	160		0	RILM (Ohm-m)
10	Gamma Ray (GAPI)	110		0	RILD (Ohm-m)
				5	RILM backup (Ohm-m)
				5	RILD backup (Ohm-m)
				10	15000 CILM backup (mmho/m)
				10	15000 CILD backup (mmho/m)
				15000	15000

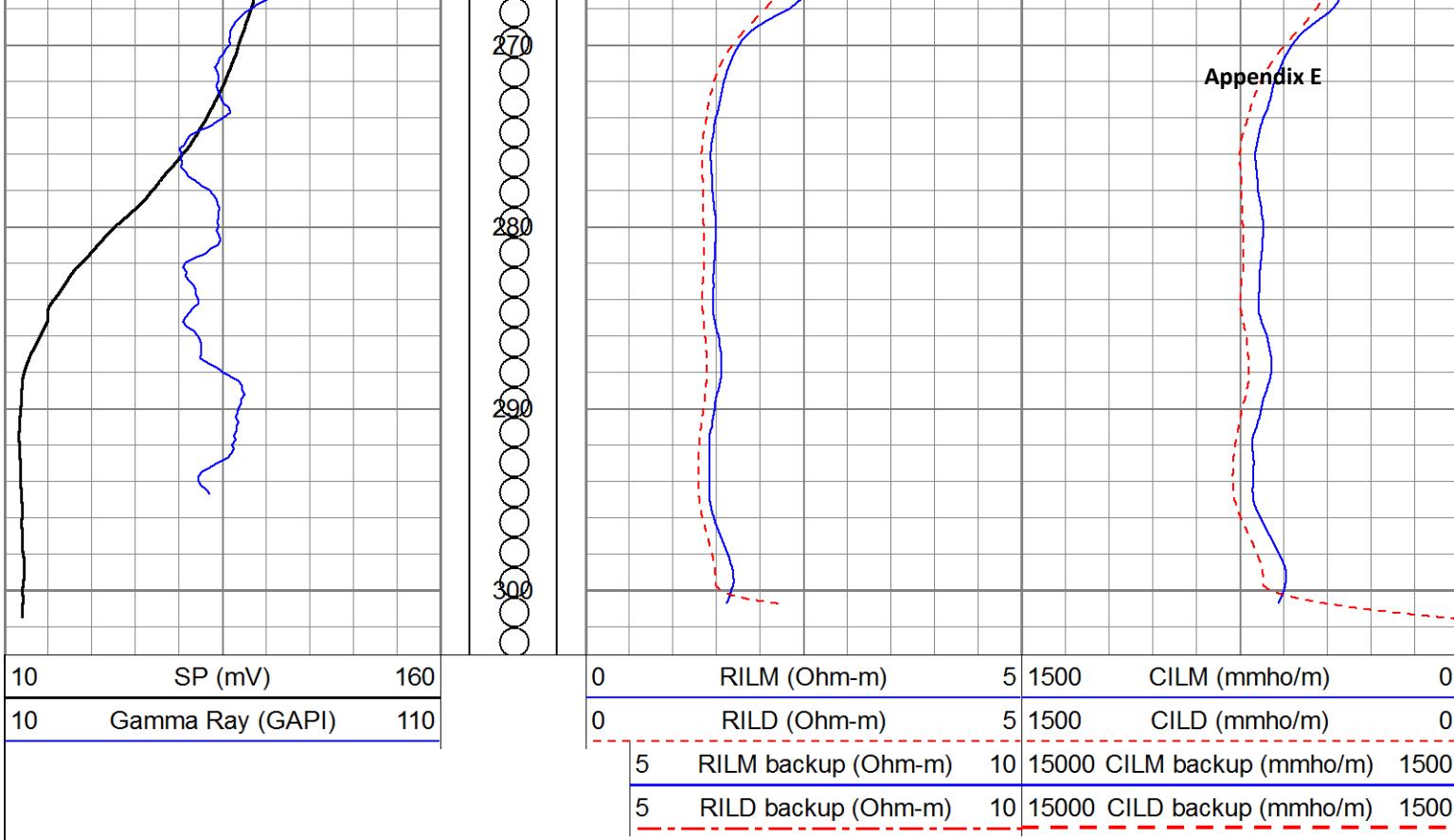




← Gamma-Ray

Appendix E

E-4



Appendix E

PACIFIC
SURVEYS

DUAL INDUCTION
GAMMA RAY

Appendix E

Job No.	Company CASCADE DRILLING INC.		
17805	Well CX-B2		
File No.	Field MARINA		
	County MONTEREY	State CA	

Location	Other Services:
OFF OF LAPIS RD. GPS: N36o42.768' W121o48.226'	TEMPERATURE FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B.
Drilling Measured From	G.L.		D.F.

Date	11-07-2013		
Run Number	ONE		
Depth Driller	305.5'		
Depth Logger	301.5'		
Bottom Logged Interval	300'		
Top Log Interval	0'		
Open Hole Size	7" (0'-30')	6.5" (30'-307')	
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	27'		
Bentonite Seal	N/A		
Time Well Ready	11:00 AM		
Time Logger on Bottom	11:30 AM		
Equipment Number	PS-5		
Location	L.A.		
Recorded By	ABREAU		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7"	0'	30'				
TWO	6.5"	30'	307'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	7.25"	N/A	0'	30'
Prot. String				
Production String	4" PVC	SCH 40	0'	305.5'
Liner				

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

Calibration Report

Database File 17805.db
Dataset Pathname DIL
Dataset Creation Thu Nov 07 12:02:28 2013

Dual Induction Calibration Report

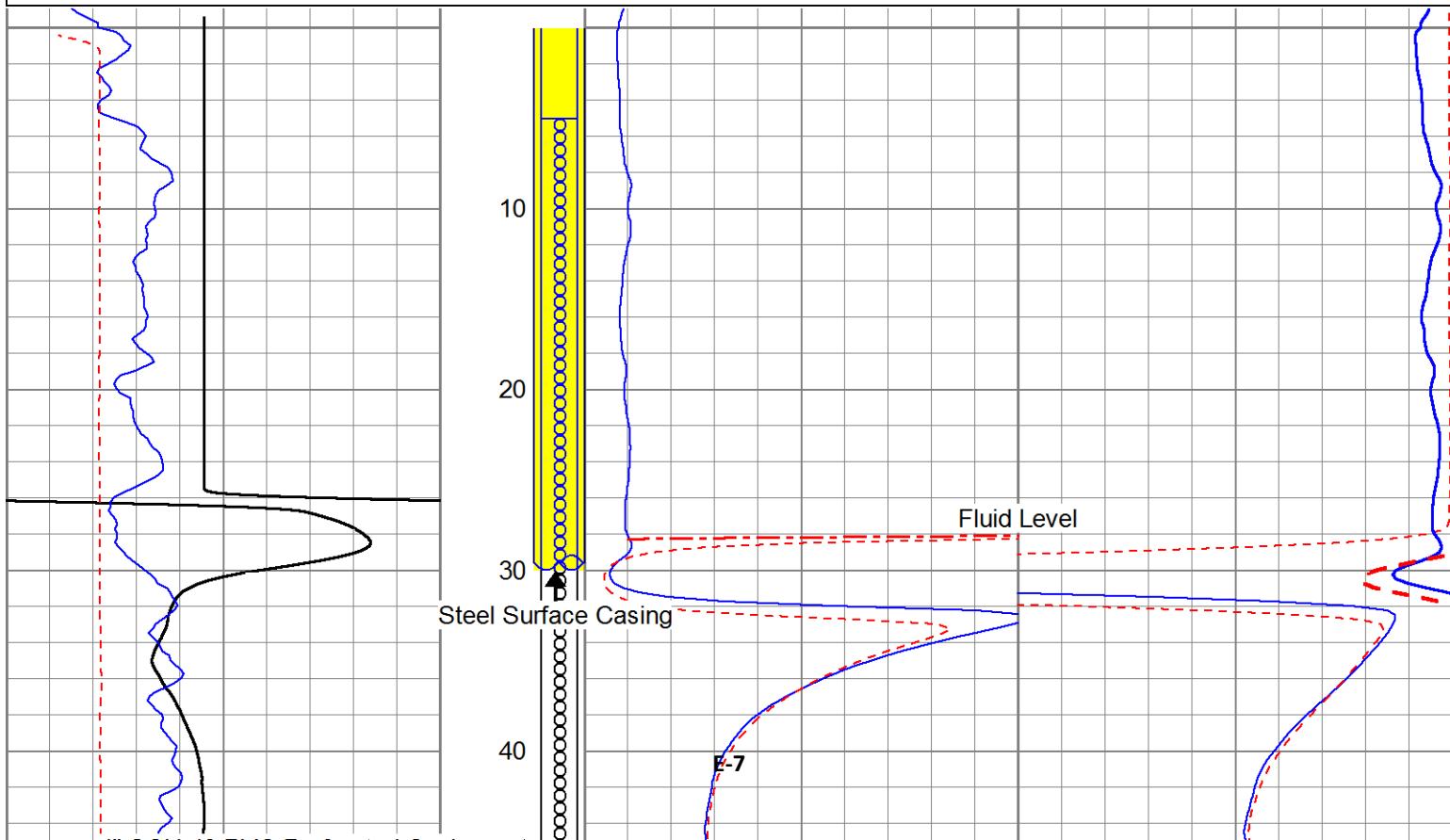
Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1421.120	3677.430	cps	0.000	612.000	mmho/m
Medium	2115.060	14165.800	cps	0.000	1960.000	mmho/m

Gamma Ray Calibration Report

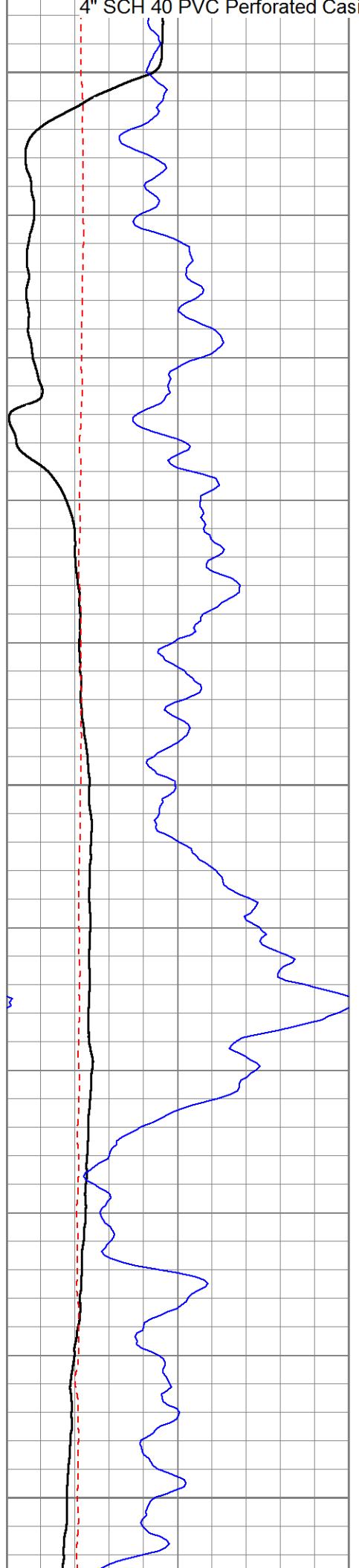
Serial Number:	PS_1
Tool Model:	01
Performed:	Tue Feb 19 09:35:55 2013
Calibrator Value:	162.0
Background Reading:	46.1
Calibrator Reading:	180.8
Sensitivity:	1.2020
	GAPI/cps

Database File 17805.db
 Dataset Pathname DIL
 Presentation Format dil_ps
 Dataset Creation Thu Nov 07 12:02:28 2013
 Charted by Depth in Feet scaled 1:120

-150	SP (mV)	-50	0	RILM (Ohm-m)	5	1500	CILM (mmho/m)	0
10	Gamma Ray (GAPI)	110	0	RILD (Ohm-m)	5	1500	CILD (mmho/m)	0
0	Line Speed (ft/min)	-100	5	RILM backup (Ohm-m)	10	15000	CILM backup (mmho/m)	1500
			5	RILD backup (Ohm-m)	10	15000	CILD backup (mmho/m)	1500

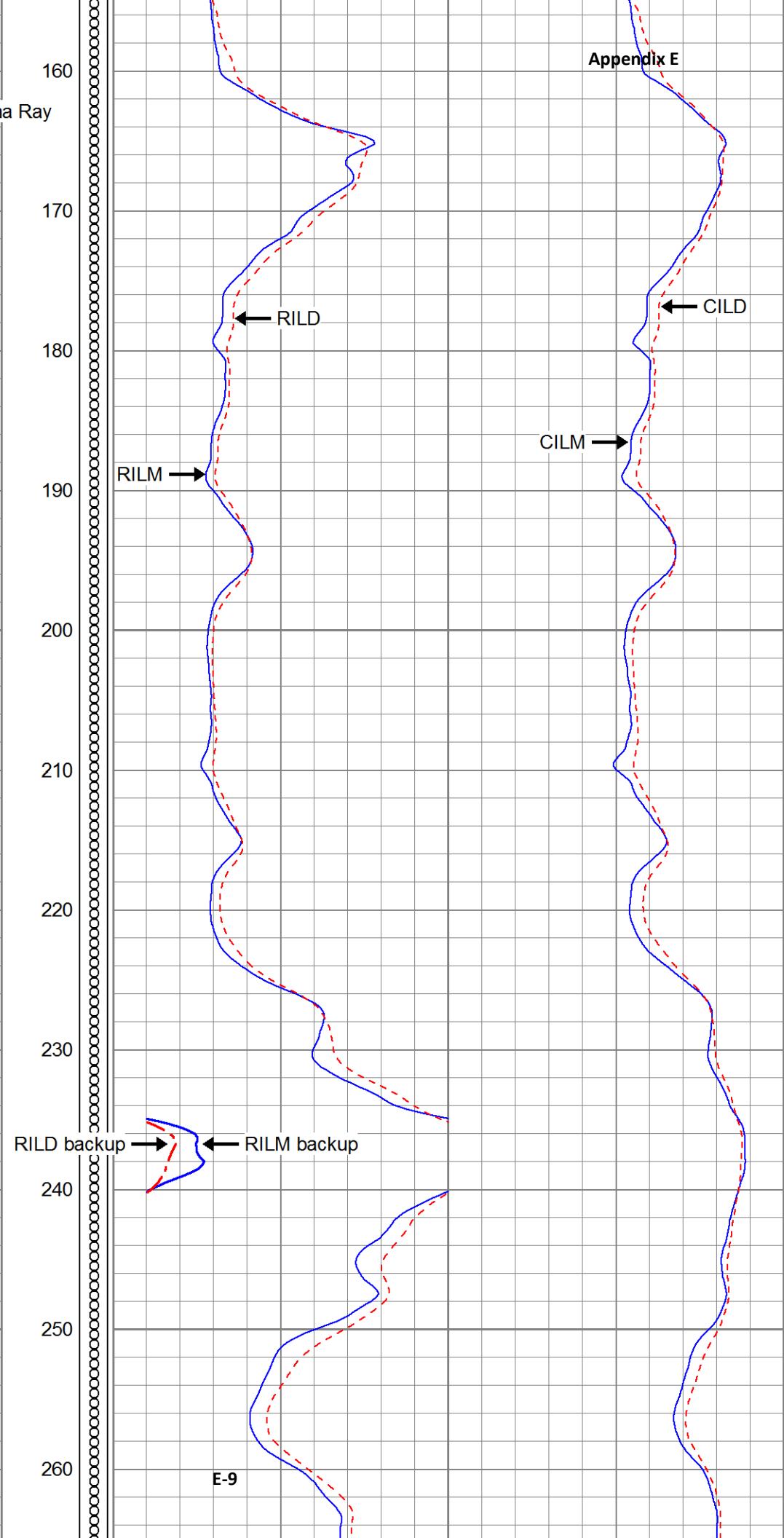


4" SCH 40 PVC Perforated Casing →

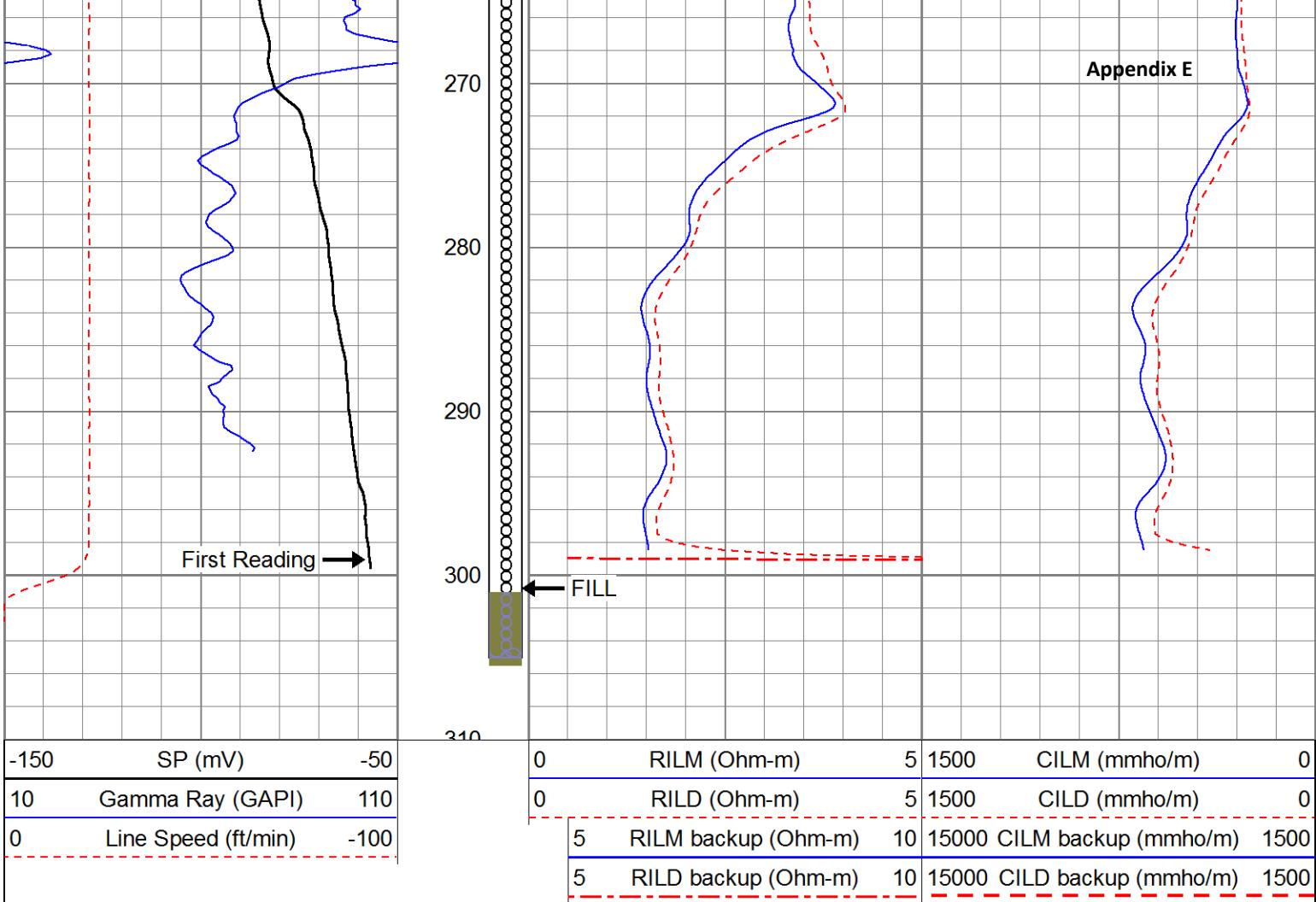


Appendix E





Appendix E



TEMPERATURE
DELTA TEMPERATURE
FLUID RESISTIVITY
DELTA FLUID RESISTIVITY

Job No. 17821	Company	CASCADE DRILLING INC.		
	Well	CX-B3		
File No.	Field	MARINA		
	County	MONTEREY	State	CA

Location OFF OF LAPIS RD. GPS: N36o42.721' W121o47.985'	Other Services: DUAL INDUCTION GAMMA RAY
---	--

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B.
Drilling Measured From	G.L.		D.F.
			G.L.
Date	11-12-2013		
Run Number	ONE		
Depth Driller	348.5'		
Depth Logger	346.5'		
Bottom Logged Interval	346'		
Top Log Interval	0'		
Open Hole Size	7" (0-30')	6.5" (30'-348.5')	
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	26'		
Bentonite Seal	N/A		
Time Well Ready	10:00 AM		
Time Logger on Bottom	10:10 AM		
Equipment Number	PS-5		
Location	L.A.		
Recorded By	ABREAU		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7"	0'	30'				
TWO	6.5"	30'	348.5'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	7.25"	N/A	0'	30'
Prot. String				
Production String	4" PVC	SCH 40	0'	348.5'
Liner				

<< Fold Here >>

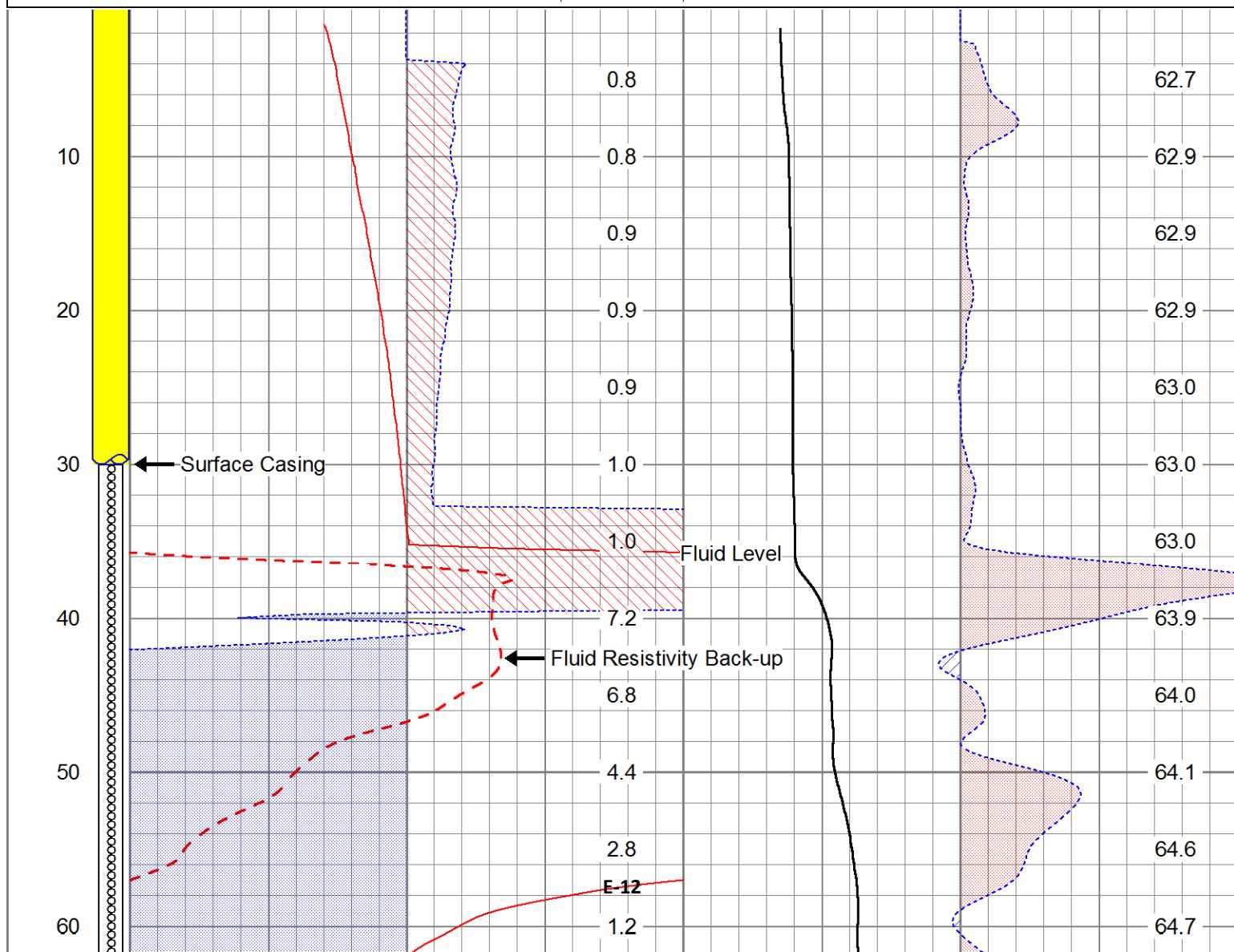
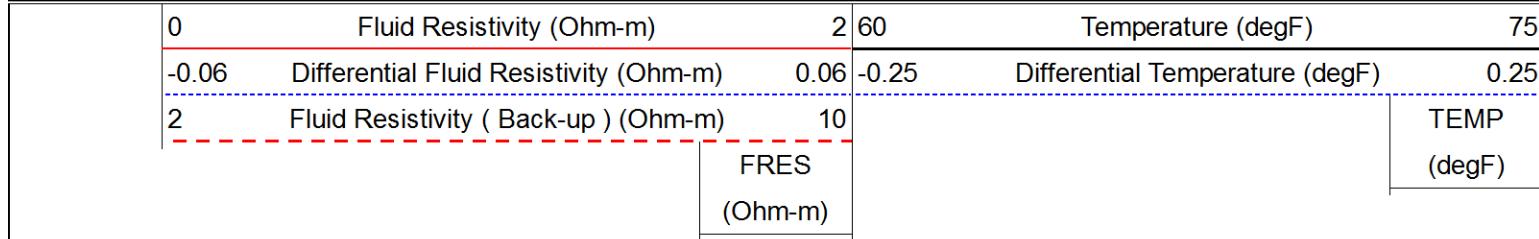
All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

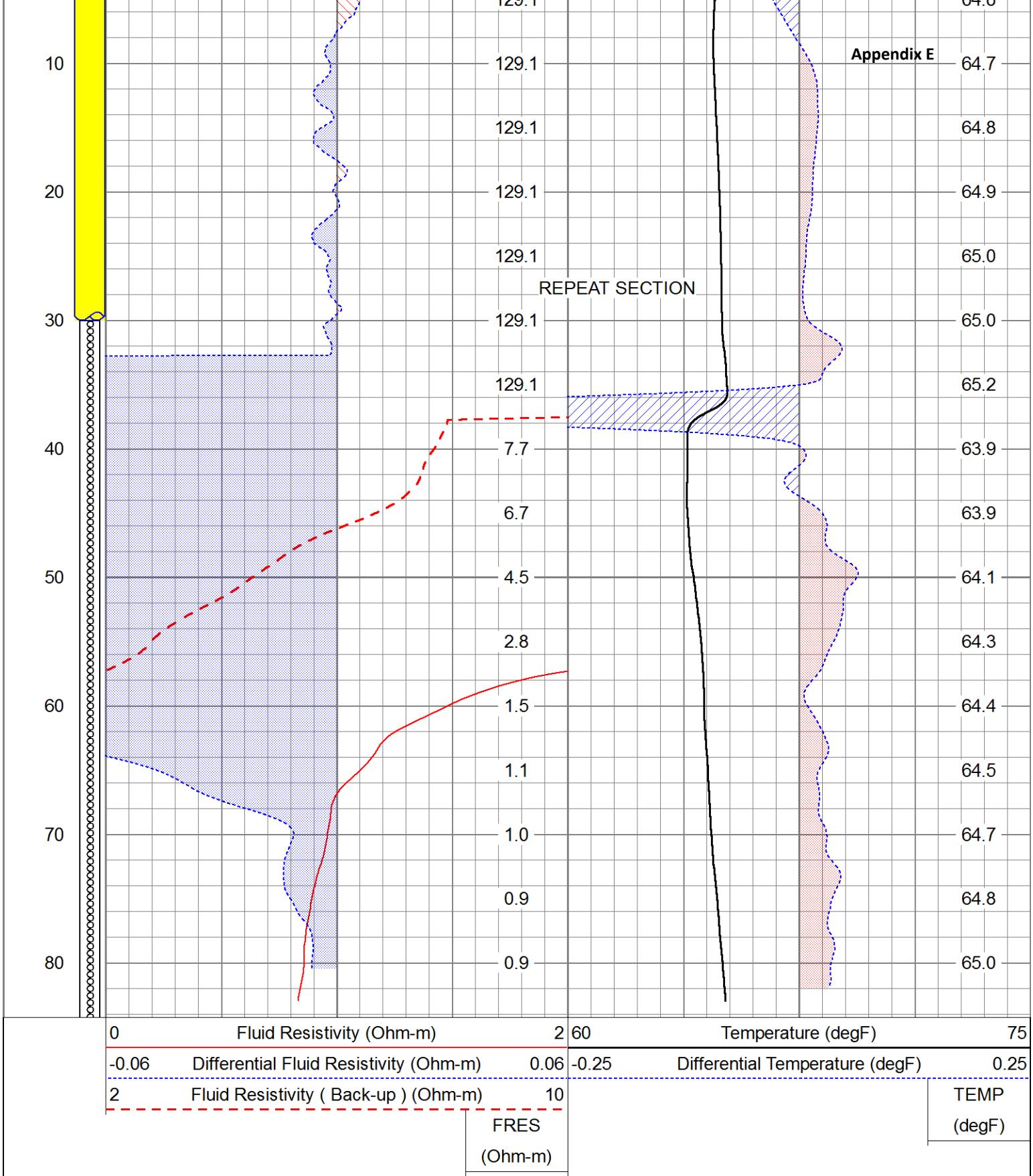
Comments

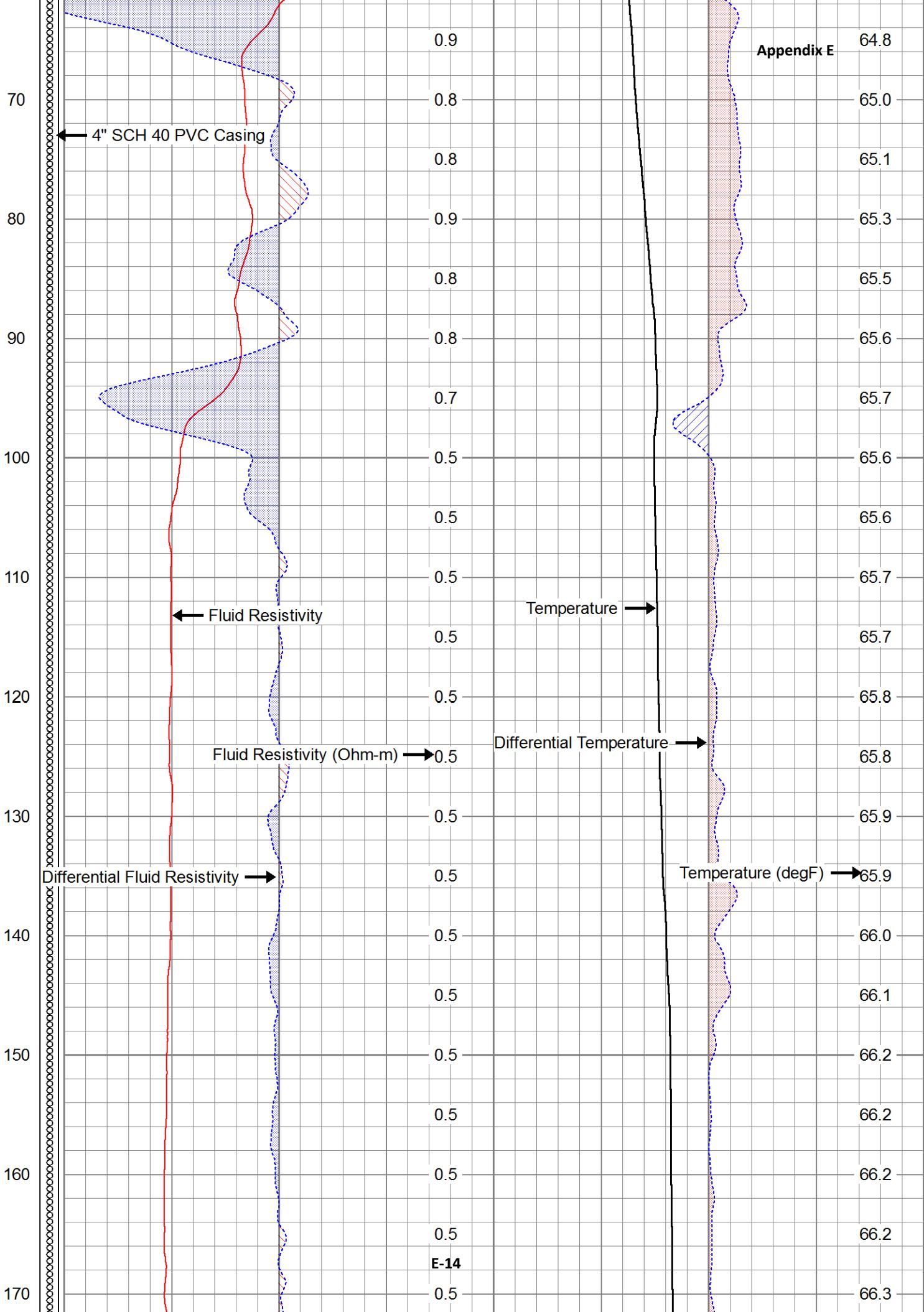
Temperature Calibration Report

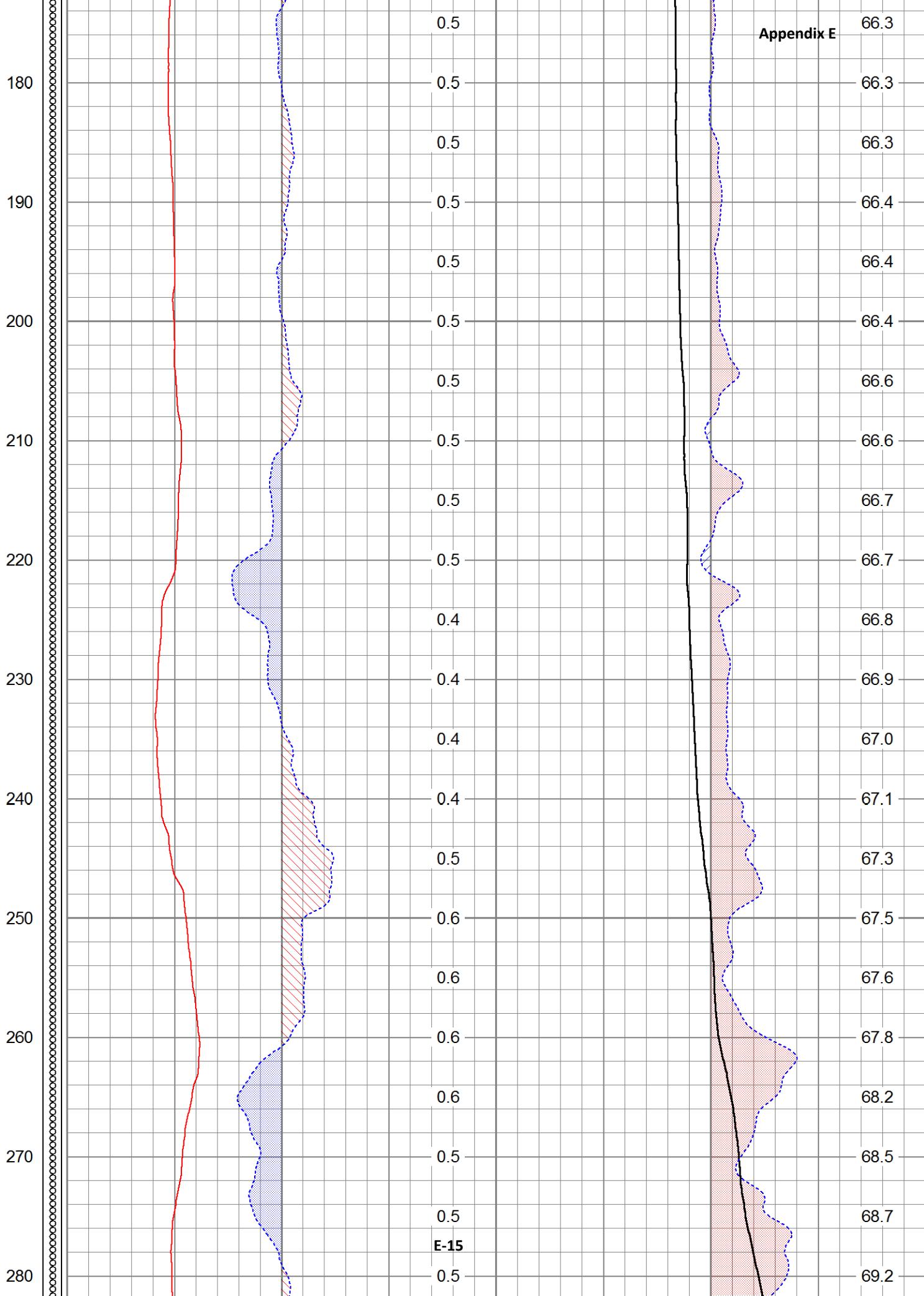
Serial Number:	5269A	Appendix E
Tool Model:	MLS	
Performed:	Fri Nov 30 10:30:16 2012	
	Reference	Reading
Low Reference:	46.04 degF	1527.00cps
High Reference:	146.30 degF	4253.00cps
Gain:	0.04	
Offset:	-9.42	
Delta Spacing	2	

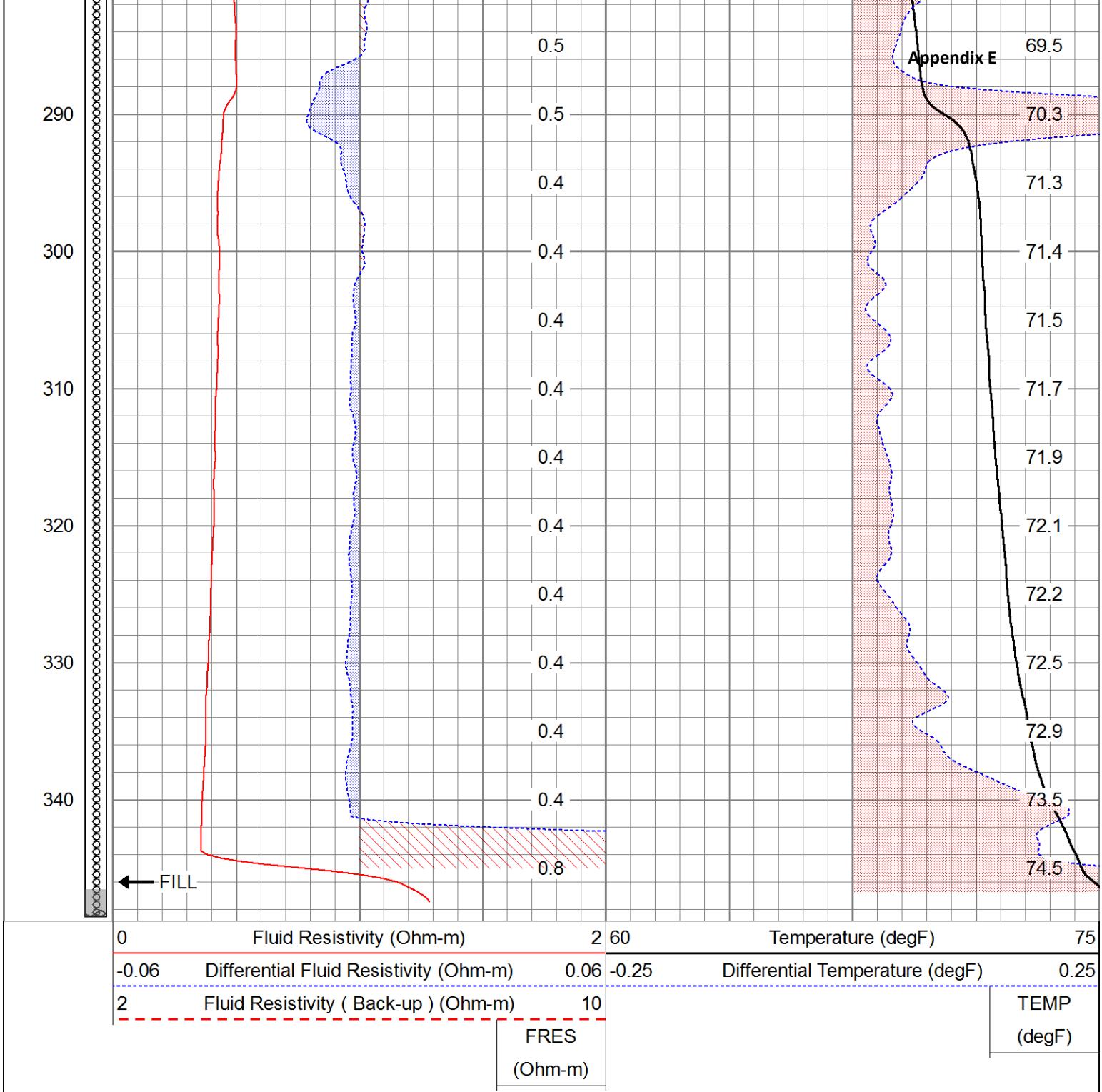
Database File	17821.db
Dataset Pathname	tmp
Presentation Format	frtemp2
Dataset Creation	Tue Nov 12 10:04:04 2013
Charted by	Depth in Feet scaled 1:120











Database File 17821.db
Dataset Pathname tmp_rpt
Presentation Format frttemp2
Dataset Creation Tue Nov 12 10:27:23 2013
Charted by Depth in Feet scaled 1:120

0	Fluid Resistivity (Ohm-m)	2	60	Temperature (degF)	75
-0.06	Differential Fluid Resistivity (Ohm-m)	0.06	-0.25	Differential Temperature (degF)	0.25
2	Fluid Resistivity (Back-up) (Ohm-m)	10			TEMP (degF)

PACIFIC
SURVEYS

DUAL INDUCTION
GAMMA RAY

Appendix E

Job No.	Company CASCADE DRILLING INC.		
18145	Well CX-B4		
File No.	Field MARINA		
	County MONTEREY	State CA	

Location	Other Services:
LAPIS RD GPS: N36o 42.714' W121o 47.910'	TEMPERATURE FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		K.B. D.F. G.L.

Date	3-27-2014		
Run Number	ONE		
Depth Driller	348.5'		
Depth Logger	345'		
Bottom Logged Interval	345'		
Top Log Interval	0'		
Open Hole Size	8" (26-350')		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	35'		
Bentonite Seal	N/A		
Time Well Ready	13:00		
Time Logger on Bottom	13:30		
Equipment Number	PS-7		
Location	LA		
Recorded By	WATKINS		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8"	26'	350'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	10"	N/A	0'	25'
Prot. String				
Production String	4" PVC	N/A	0'	348.5'
Liner				

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

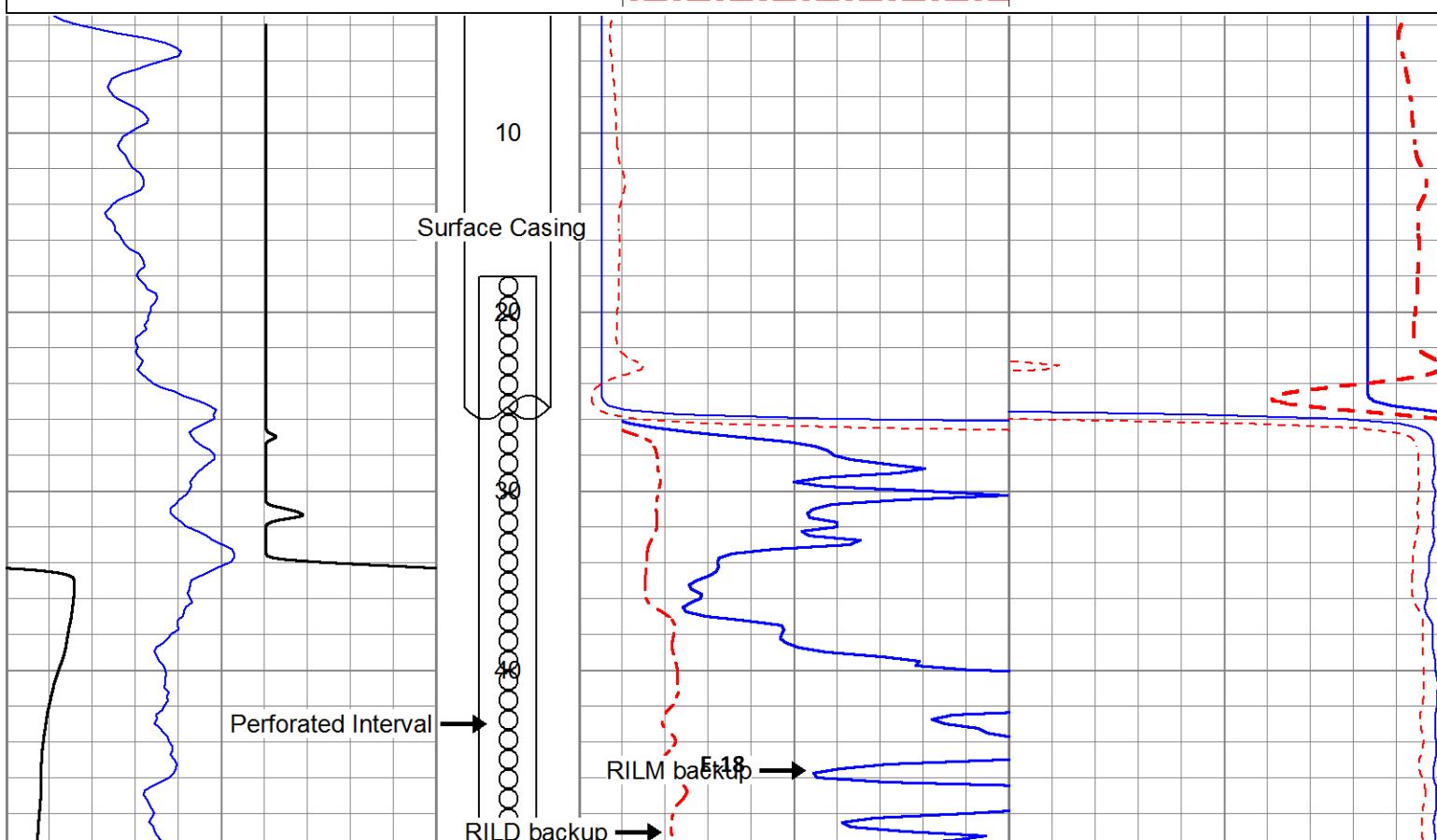
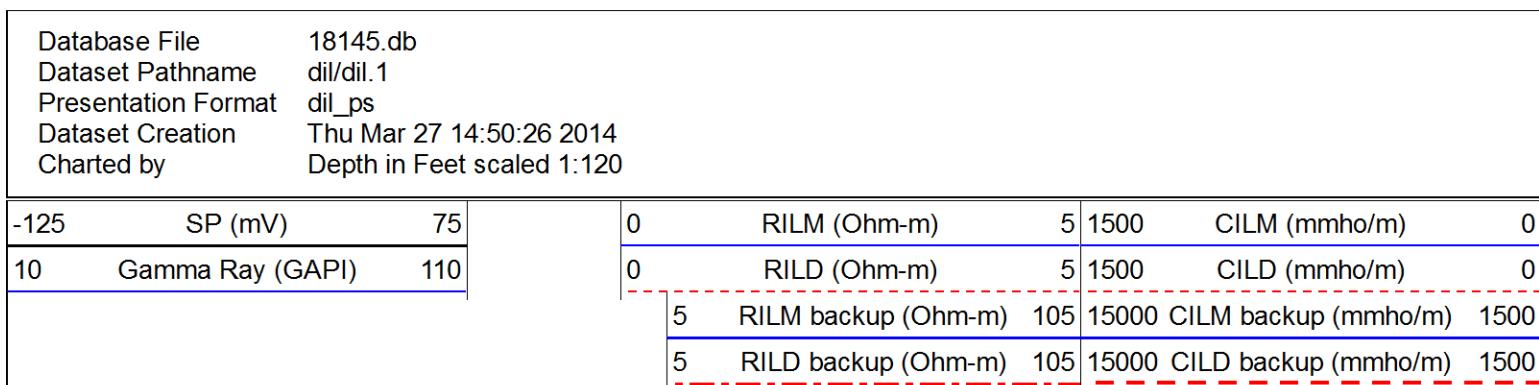
Comments

Calibration Report

Database File 18145.db
Dataset Pathname dli/dli.1
Dataset Creation Thu Mar 27 14:50:26 2014

Dual Induction Calibration Report

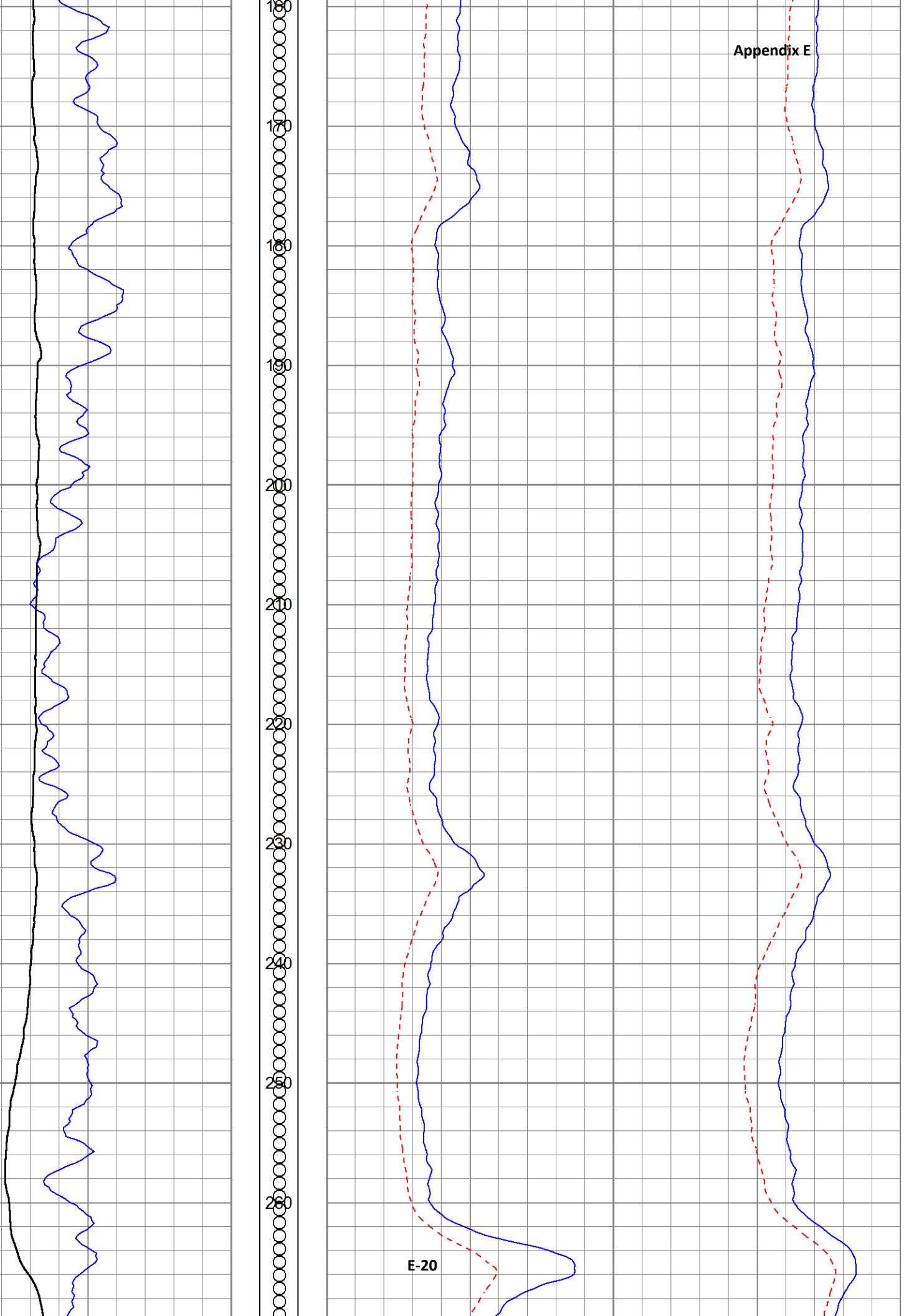
Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1411.390	3440.570	cps	0.000	612.000	mmho/m
Medium	2379.120	14715.100	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Sep 19 16:56:13 2012					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			



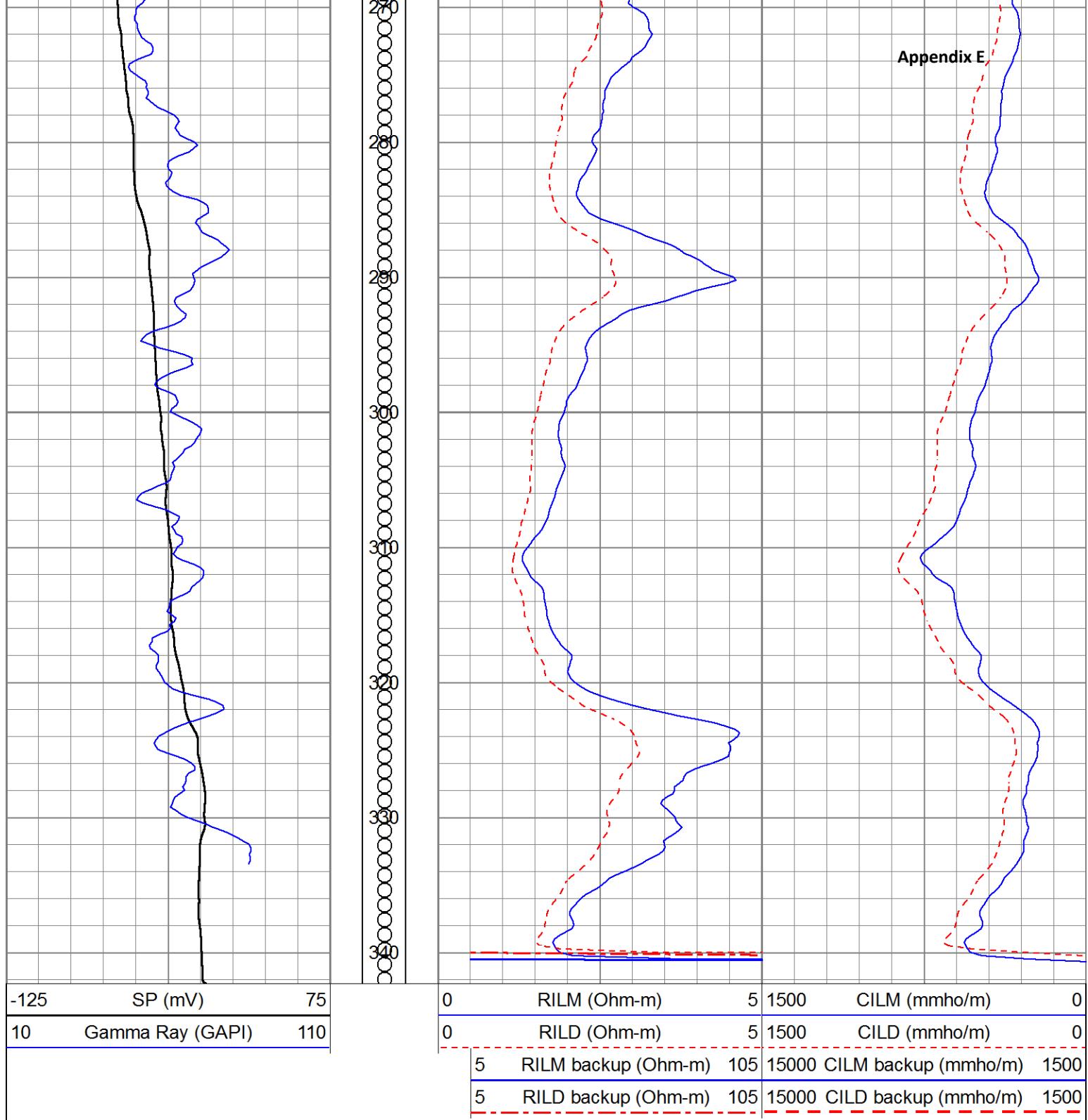
Appendix E



Appendix E



Appendix E



PACIFIC
SURVEYS

DUAL INDUCTION
GAMMA RAY

Appendix E

Job No.	Company CASCADE DRILLING INC.		
18298	Well	MDW-1	
File No.	Field	CASTROVILLE	
	County	MONTEREY	State CA

Location	Other Services:
MONTEREY DUNES WAY GPS: N36° 46.540' W121° 47.694'	TEMPERATURE FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		K.B. D.F. G.L.
Date	4-28-2014		
Run Number	ONE		
Depth Driller	292'		
Depth Logger	291'		
Bottom Logged Interval	291'		
Top Log Interval	0'		
Open Hole Size	9" (17-47')	8" (47-300')	
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	~17'		
Bentonite Seal	N/A		
Time Well Ready	11:00		
Time Logger on Bottom	11:20		
Equipment Number	PS-3		
Location	LA		
Recorded By	WATKINS		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	9"	17'	47'				
ONE	8"	47'	300'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	10"	N/A	0'	17'
Prot. String				
Production String	4"	N/A	0'	292'
Liner				

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

4" CASING INSTALLED TO 294'. FILL MATERIAL TAGGED AT 292'. CASING HAD 0.010" SLOTS.

Comments

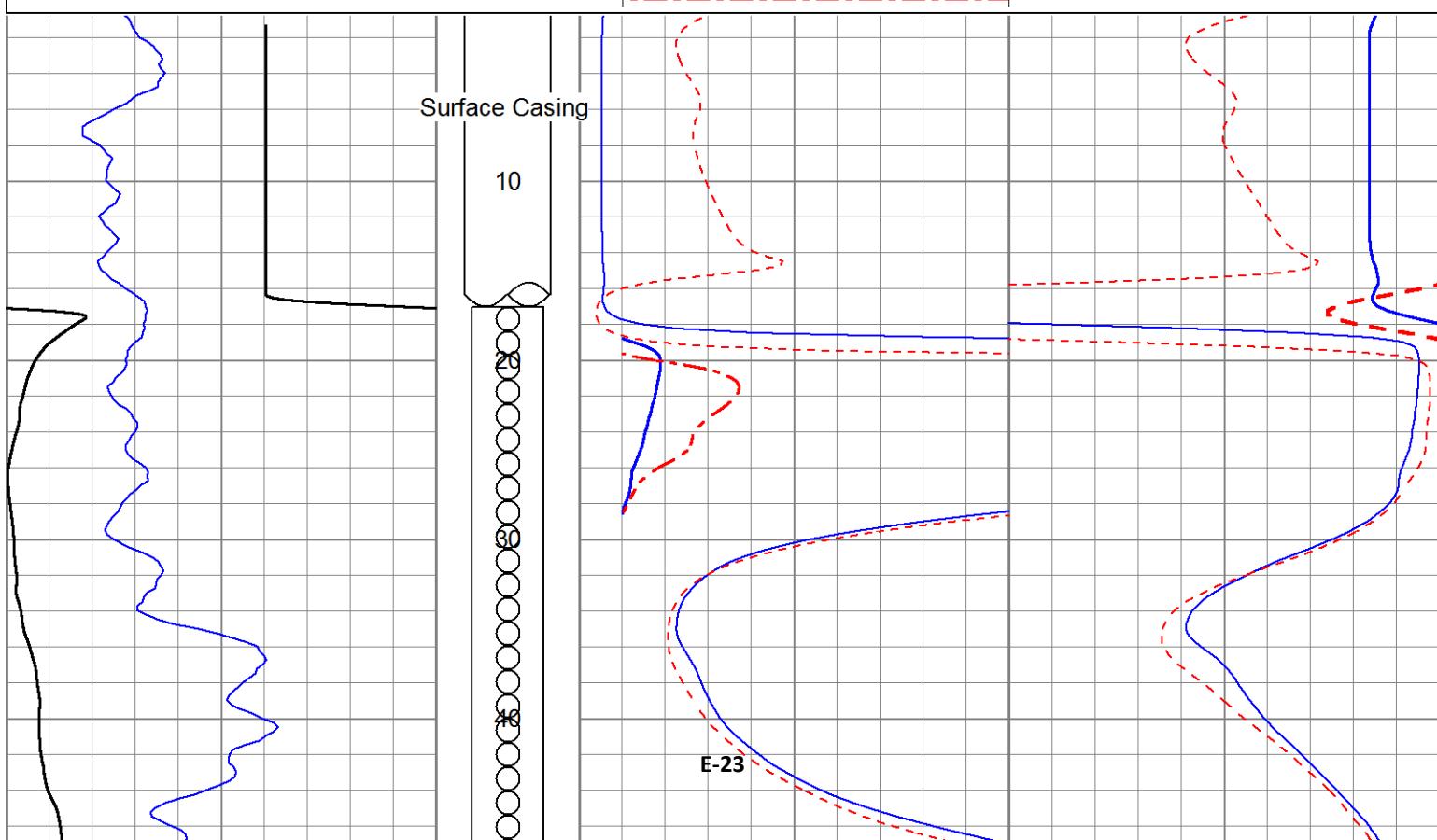
Calibration Report

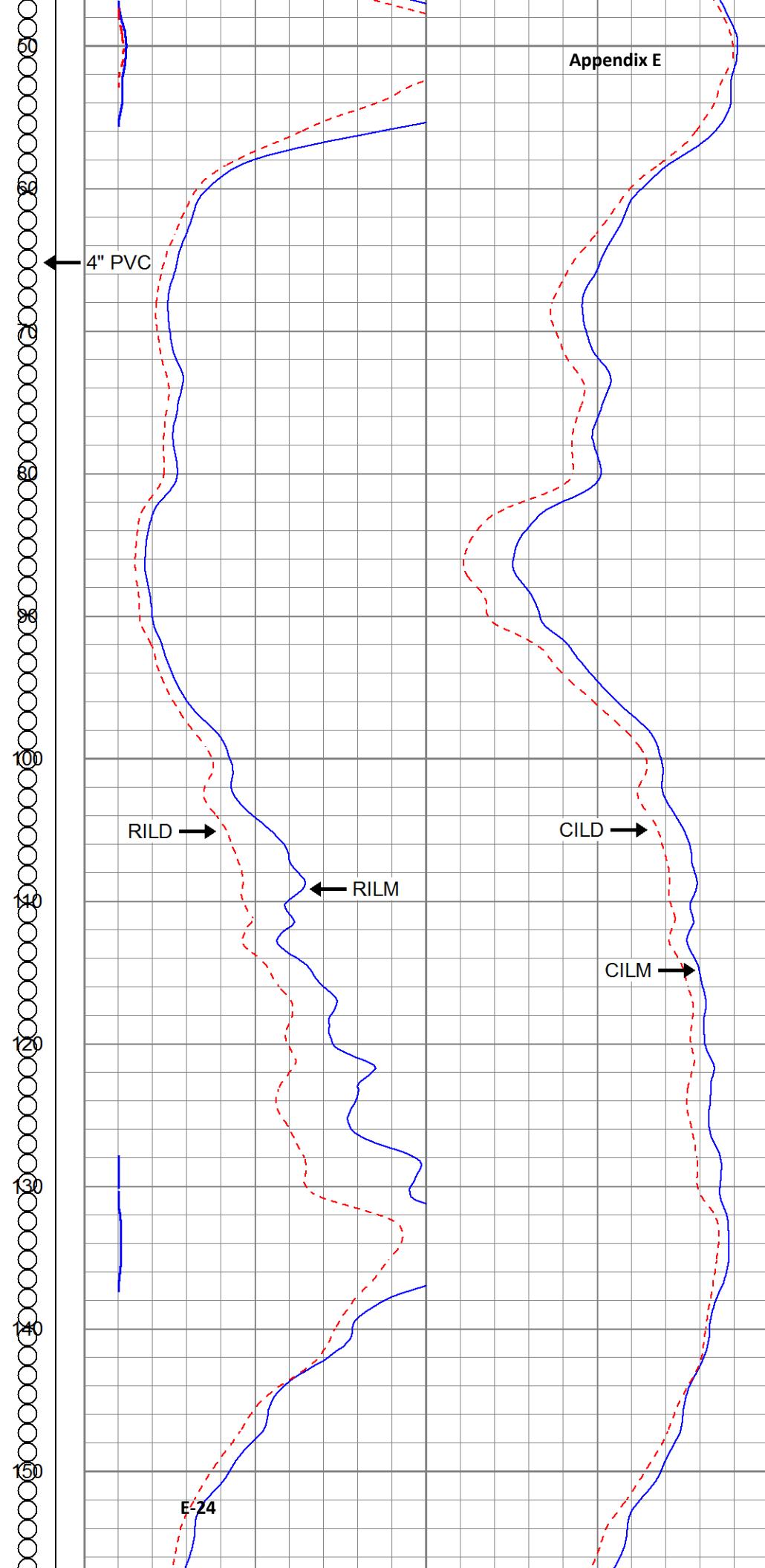
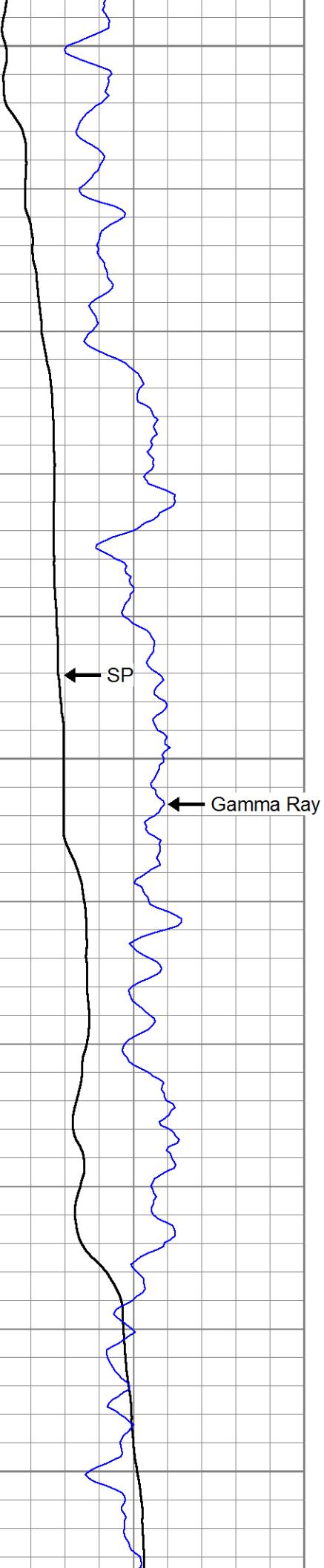
Database File 18298.db
Dataset Pathname DIL
Dataset Creation Mon Apr 28 12:14:40 2014

Dual Induction Calibration Report

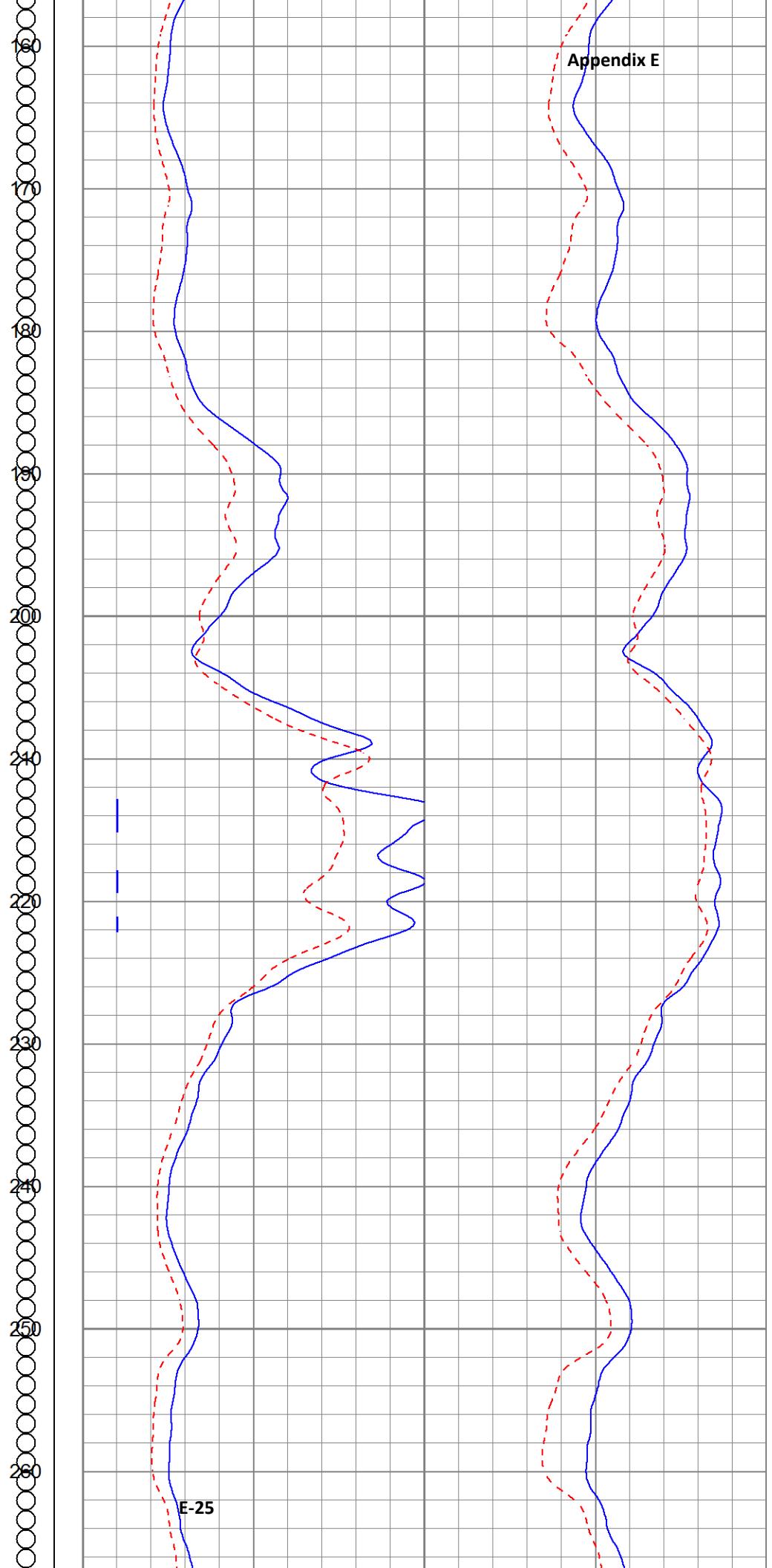
Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1407.490	3493.640	cps	0.000	612.000	mmho/m
Medium	1908.120	14487.900	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Aug 31 18:22:13 2011					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			

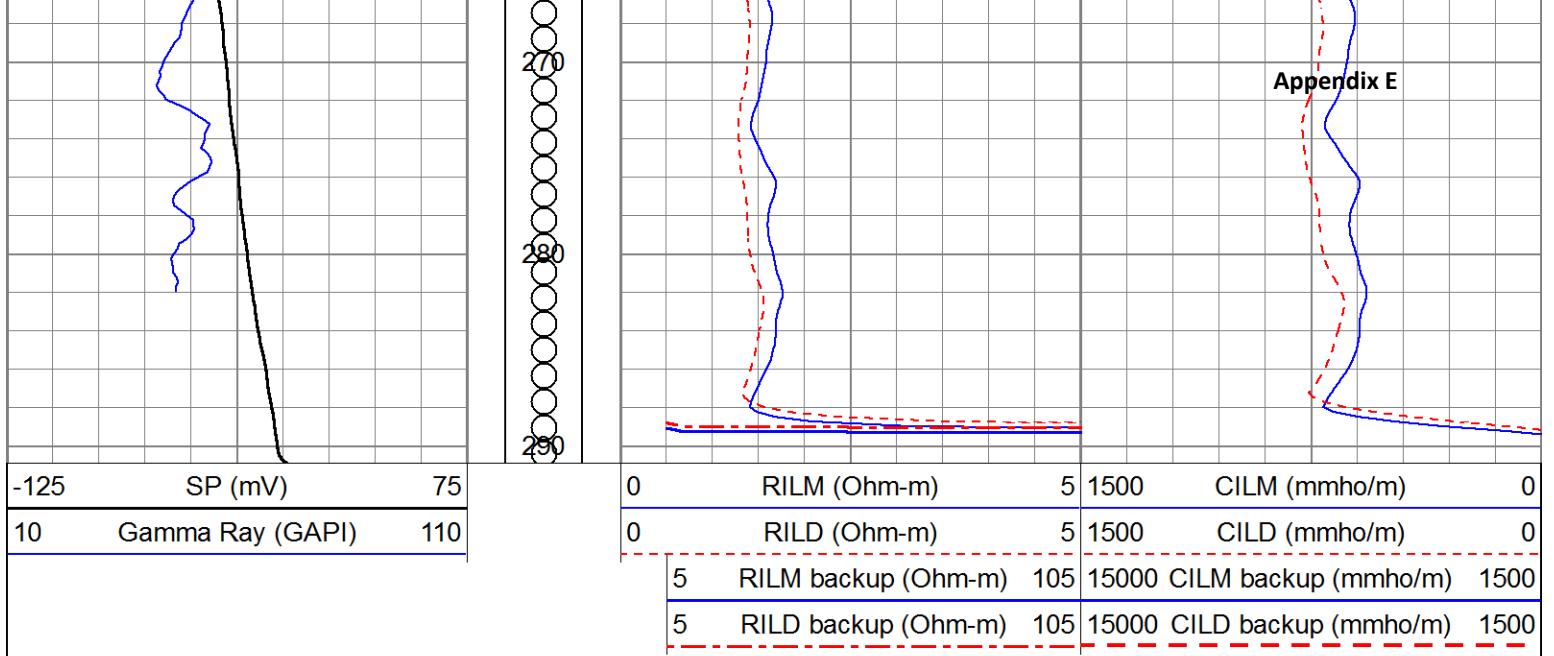
Database File	18298.db					
Dataset Pathname	DIL					
Presentation Format	dil_ps					
Dataset Creation	Mon Apr 28 12:14:40 2014					
Charted by	Depth in Feet scaled 1:120					
-125	SP (mV)	75		0	RILM (Ohm-m)	5
10	Gamma Ray (GAPI)	110		0	RILD (Ohm-m)	5
				5	RILM backup (Ohm-m)	105
				5	RILD backup (Ohm-m)	105
				15000	CILM (mmho/m)	0
				15000	CILD (mmho/m)	0
				15000	CILM backup (mmho/m)	1500
				15000	CILD backup (mmho/m)	1500





Appendix E





PACIFIC
SURVEYS

DUAL INDUCTION
GAMMA-RAY

Appendix E

Job No. 17719	Company CASCADE DRILLING, INC.
File No.	Well ML-1 Field MOSS LANDING County MONTEREY State CA

Location NEAR SANDHOLDT RD GPS: N36° 47.967' W121° 47.343'	Other Services: TEMPERATURE FLUID RESISTIVITY
--	---

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G.L.		
Date	10-4-2013		
Run Number	ONE		
Depth Driller	200'		
Depth Logger	200'		
Bottom Logged Interval	200'		
Top Log Interval	0'		
Open Hole Size	8"		
Type Fluid	N/A		
Density / Viscosity	N/A		
Fluid Level	N/A		
Bentonite Seal	N/A		
Time Well Ready	15:30		
Time Logger on Bottom	15:45		
Equipment Number	PS-3		
Location	LA		
Recorded By	WATKINS		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8"	0'	200'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9"	N/A	0'	10'
Prot. String	4"	N/A	0'	200'
Production String				
Liner				

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

0.010" SLOT FROM 10-200' BGS

Database File 17719.db
Dataset Pathname dil
Dataset Creation Fri Oct 04 15:51:34 2013

Calibration Report

Dual Induction Calibration Report

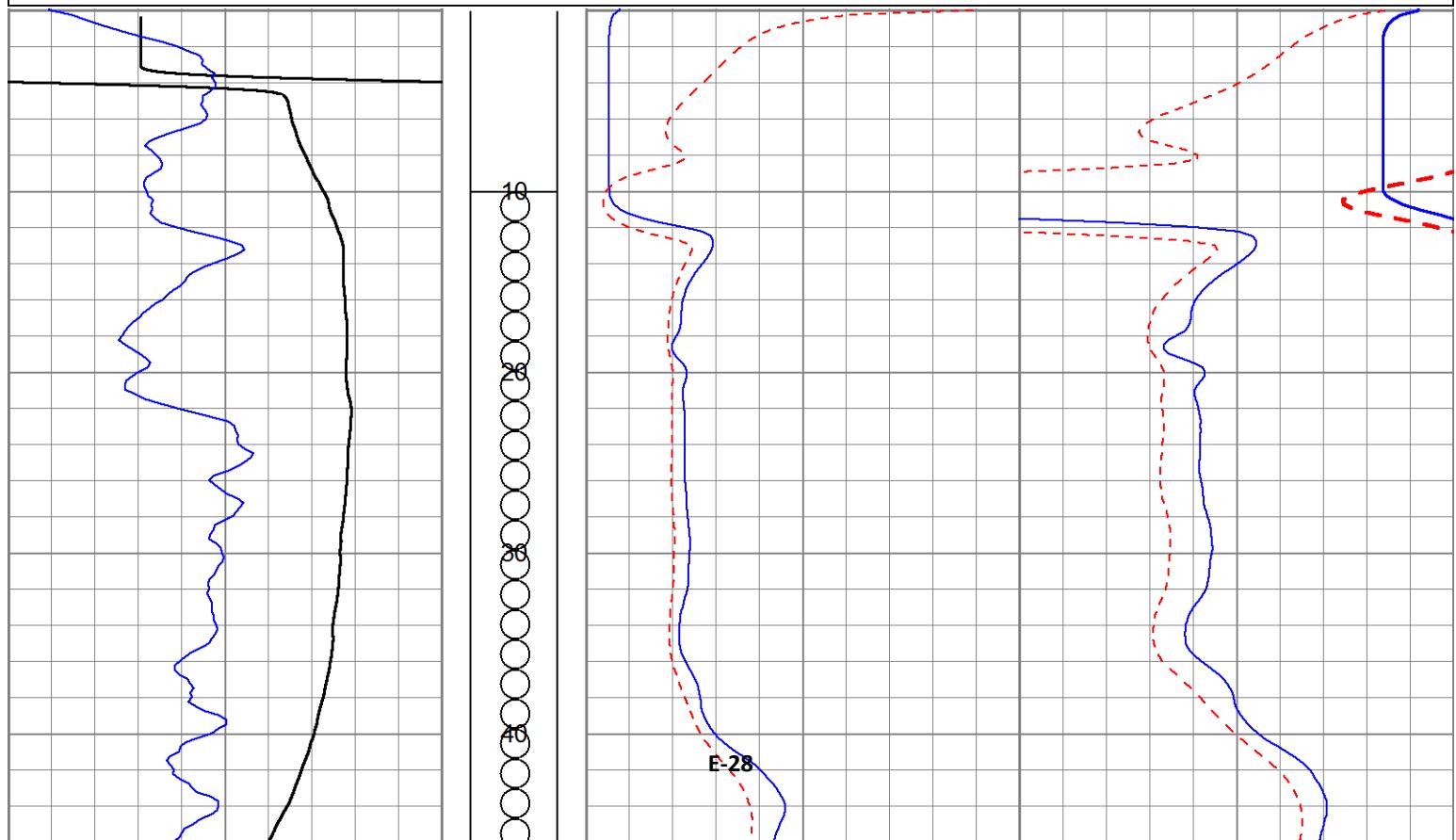
Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1407.490	3493.640	cps	0.000	612.000	mmho/m
Medium	1908.120	14487.900	cps	0.000	1960.000	mmho/m

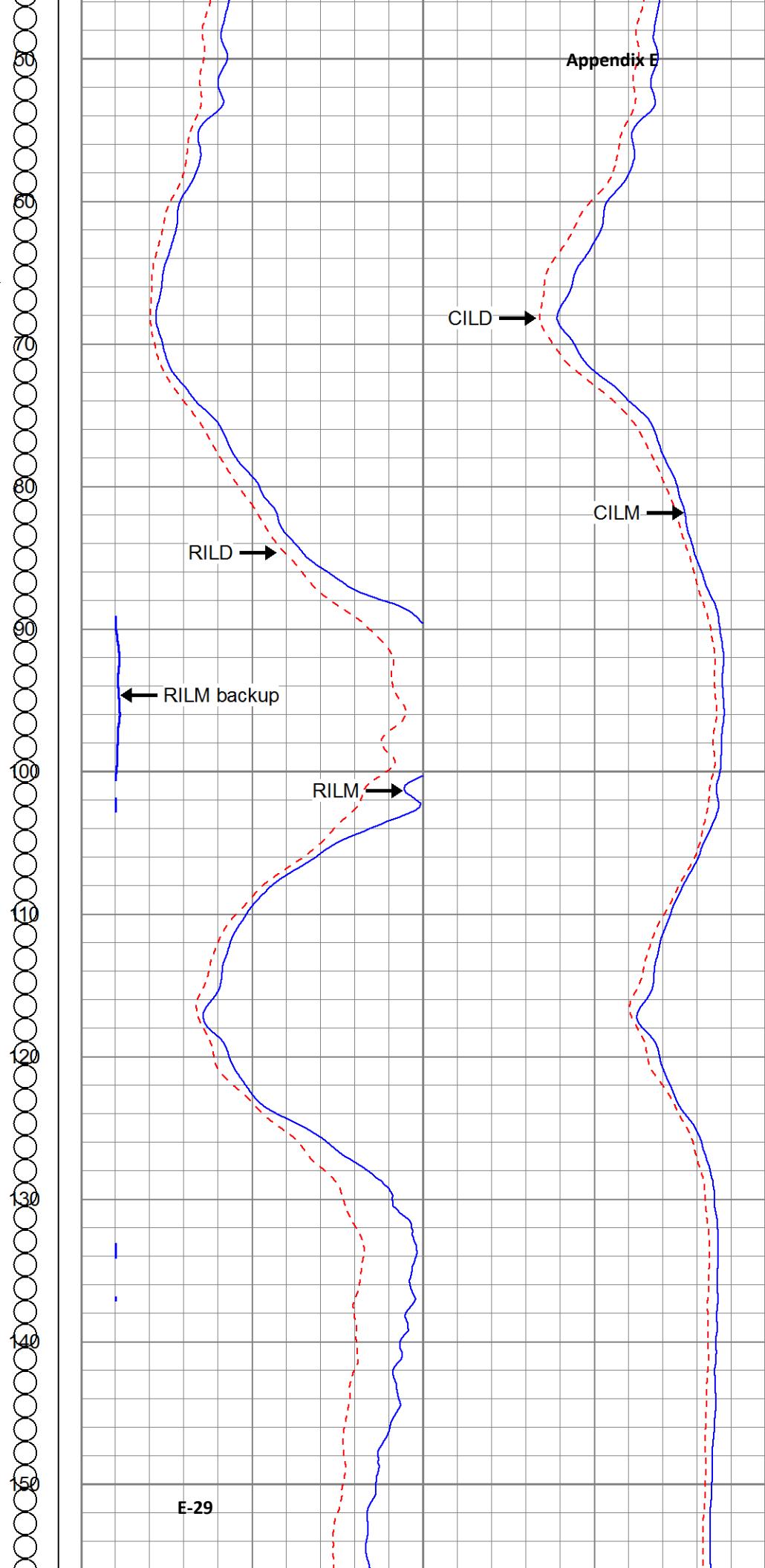
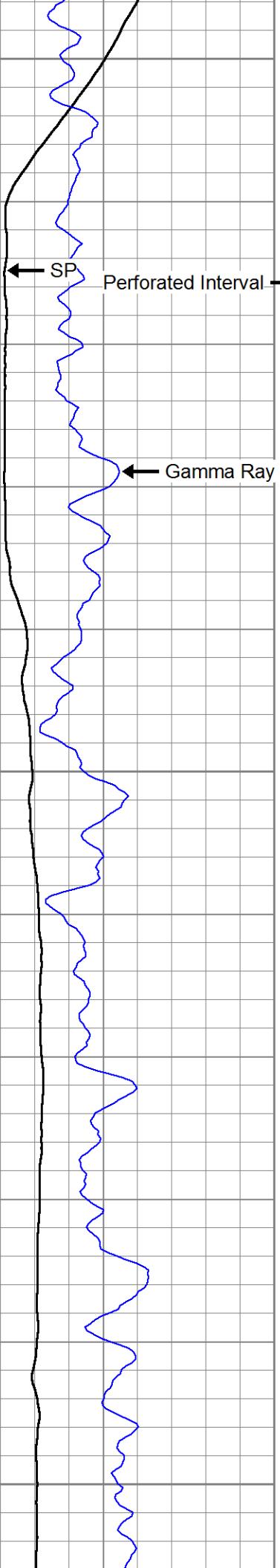
Gamma Ray Calibration Report

Serial Number:	PS_1
Tool Model:	01
Performed:	Wed Aug 31 18:22:13 2011
Calibrator Value:	162.0
Background Reading:	46.1
Calibrator Reading:	180.8
Sensitivity:	1.2020
	GAPI/cps

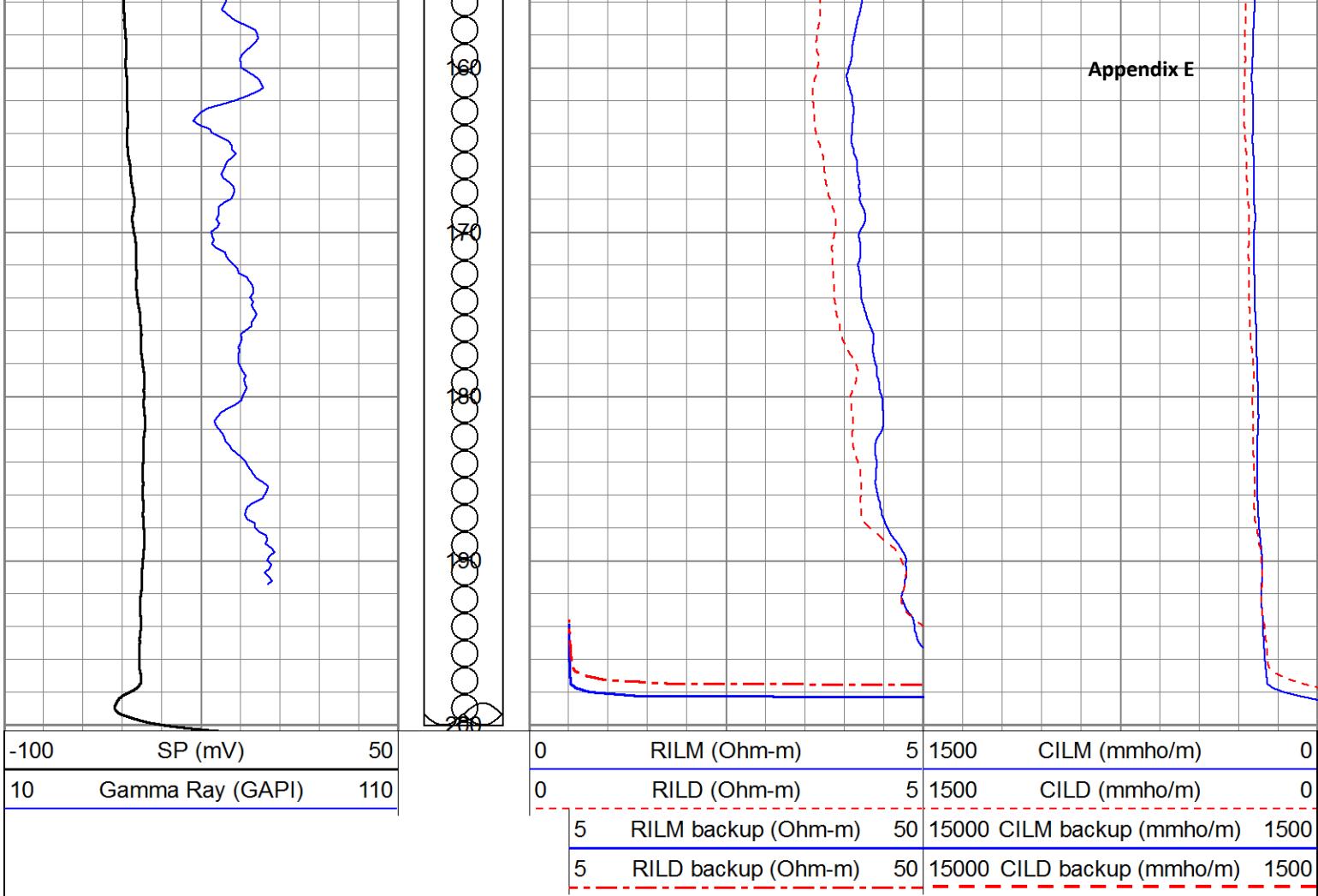
Database File 17719.db
 Dataset Pathname dil
 Presentation Format dil_ps
 Dataset Creation Fri Oct 04 15:51:34 2013
 Charted by Depth in Feet scaled 1:120

-100	SP (mV)	50	0	RILM (Ohm-m)	5	1500	CILM (mmho/m)	0
10	Gamma Ray (GAPI)	110	0	RILD (Ohm-m)	5	1500	CILD (mmho/m)	0
			5	RILM backup (Ohm-m)	50	15000	CILM backup (mmho/m)	1500
			5	RILD backup (Ohm-m)	50	15000	CILD backup (mmho/m)	1500





Appendix E



DUAL INDUCTION GAMMA-RAY

Job No. 17870	Company CASCADE DRILLING
File No.	Well ML-2 Field MOSS LANDING County MONTEREY State CA

Location 7549 SANDHOLDT RD. GPS: N36° 48.205' W121° 47.218'	Other Services: TEMPERATURE FLUID RESISTIVITY
---	---

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G.L.		
Date	12-11-2013		
Run Number	ONE		
Depth Driller	197'		
Depth Logger	194.5'		
Bottom Logged Interval	194.5'		
Top Log Interval	0'		
Open Hole Size	8"		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	3.45'		
Bentonite Seal	N/A		
Time Well Ready	0945		
Time Logger on Bottom	1000		
Equipment Number	PS-7		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8"	0'	200'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8"	N/A	0'	23.5'
Prot. String				
Production String	4" PVC	SCH 40	0'	198'
Liner				

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

NOTE: 0.010" SLOT FROM 18.5' TO 198'.

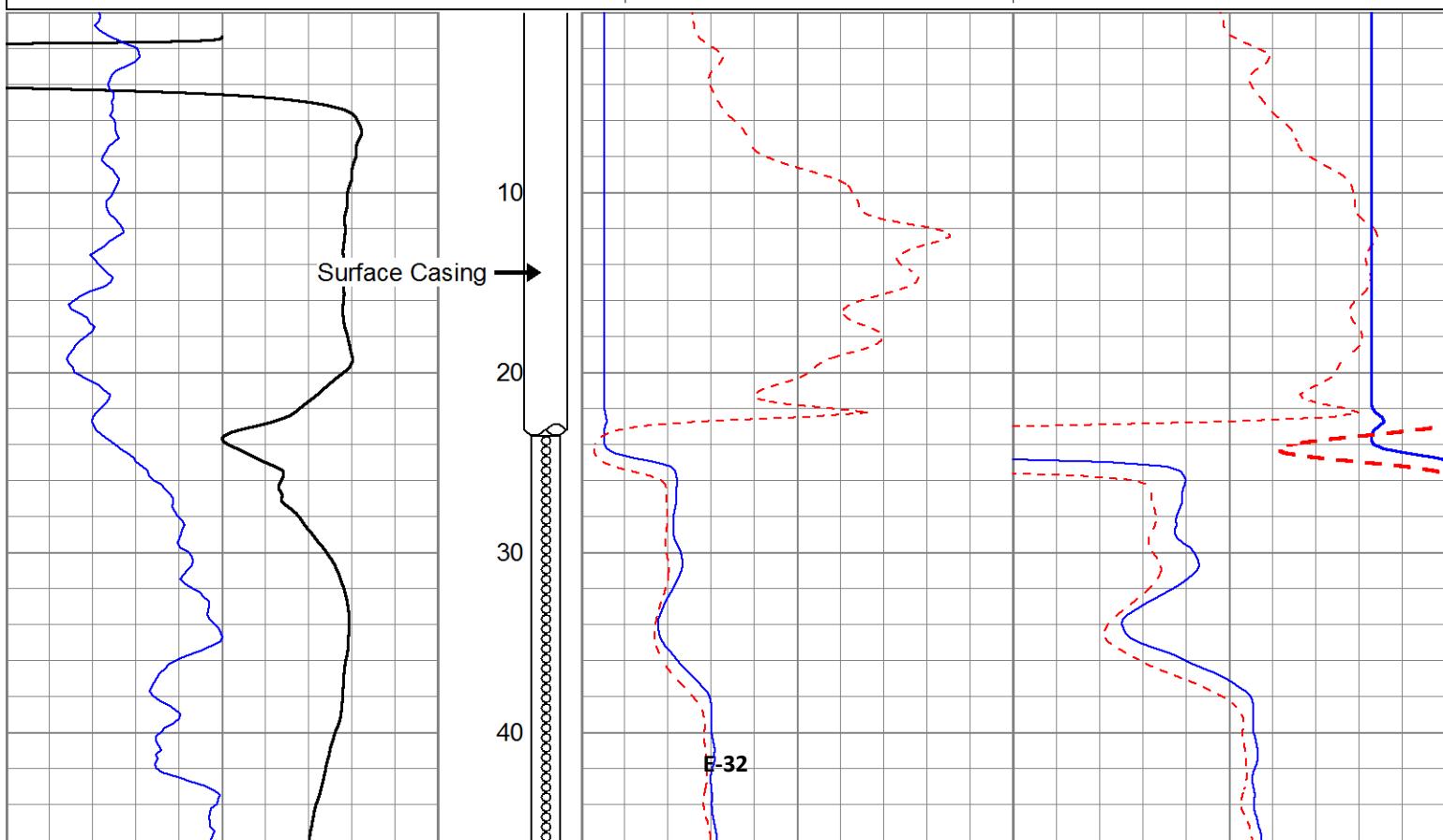
Database File 17870.db
Dataset Pathname DUAL
Dataset Creation Wed Dec 11 11:54:33 2013

Calibration Report

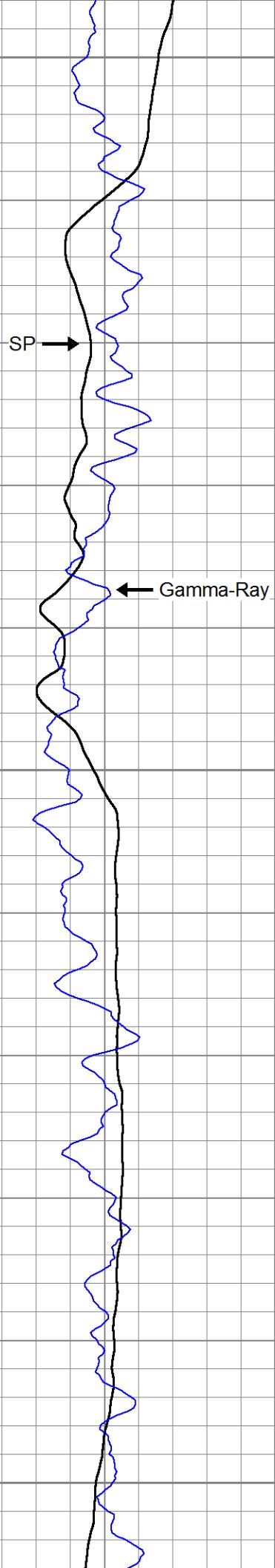
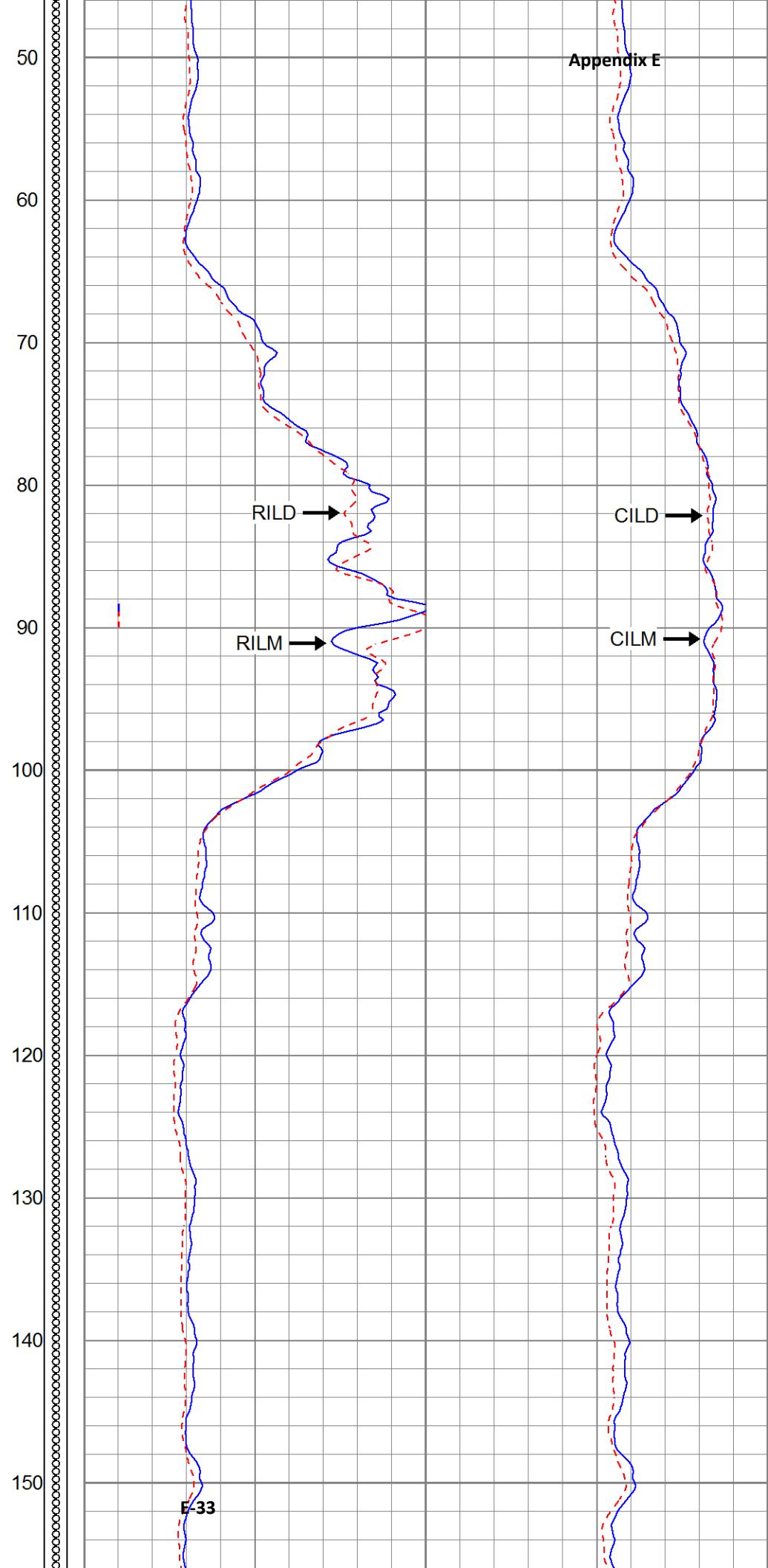
Dual Induction Calibration Report

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1411.390	3440.570	cps	0.000	612.000	mmho/m
Medium	2379.120	14715.100	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Sep 19 16:56:13 2012					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			

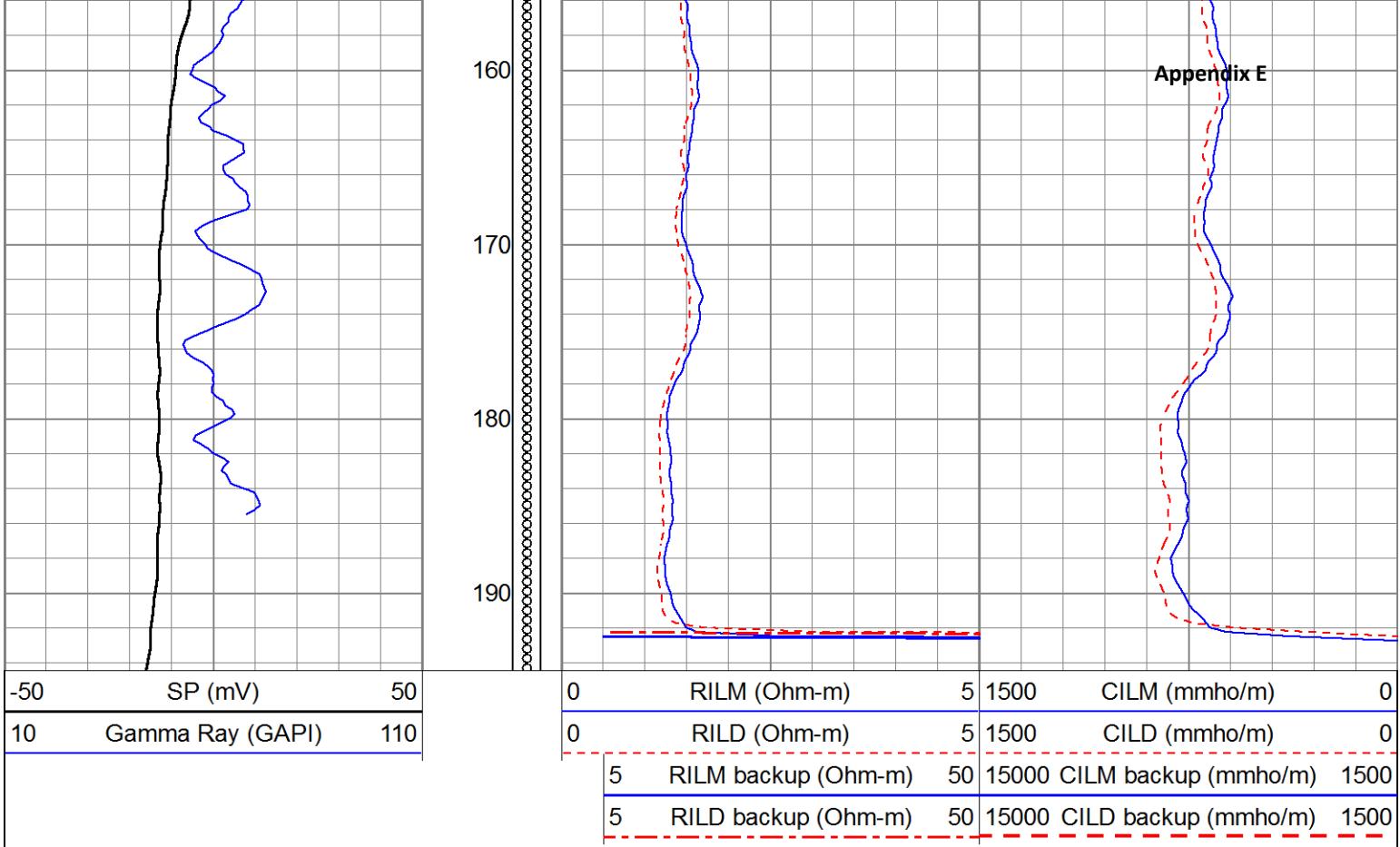
Database File	17870.db					
Dataset Pathname	DUAL					
Presentation Format	dil_ps					
Dataset Creation	Wed Dec 11 11:54:33 2013					
Charted by	Depth in Feet scaled 1:120					
-50	SP (mV)	50		0	RILM (Ohm-m)	5
10	Gamma Ray (GAPI)	110		0	RILD (Ohm-m)	5
				5	RILM backup (Ohm-m)	50
				5	RILD backup (Ohm-m)	50
				15000	CILM (mmho/m)	0
				15000	CILD (mmho/m)	0
				15000	CILM backup (mmho/m)	1500
				15000	CILD backup (mmho/m)	1500



Appendix E



Appendix E



DUAL INDUCTION GAMMA RAY

Job No. 17939	Company CASCADE DRILLING
File No.	Well ML-3 Field MOSS LANDING County MONTEREY State CA

Location Intersection of Moss Landing Rd & Cabrillo Hwy GPS:N36o48.013' W121o47.021'	Other Services: TEMPERATURE FLUID RESISTIVITY
--	---

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G.L.		
Date	01-09-2014		
Run Number	ONE		
Depth Driller	198'		
Depth Logger	197.5'		
Bottom Logged Interval	197.5'		
Top Log Interval	0'		
Open Hole Size	8"		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	10'		
Bentonite Seal	N/A		
Time Well Ready	9:30 AM		
Time Logger on Bottom	10:00 AM		
Equipment Number	PS-7		
Location	LA		
Recorded By	ABREAU		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8"	0'	200'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8"	N/A	0'	14'
Prot. String				
Production String	4" PVC	SCH 40	0'	200'
Liner				

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

NOTE: 0.010" SLOT FOR LENGTH OF PVC

Comments

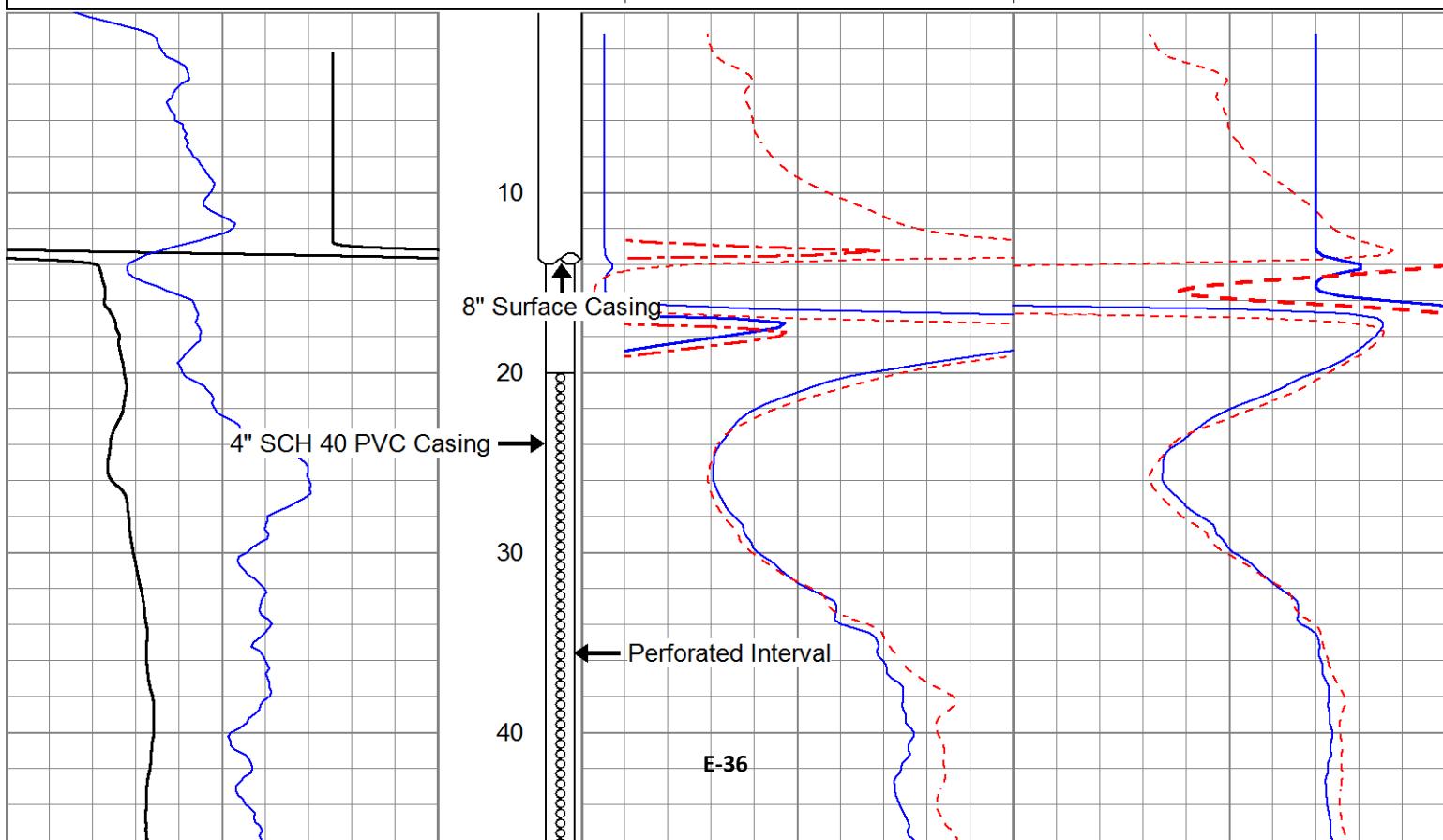
Calibration Report

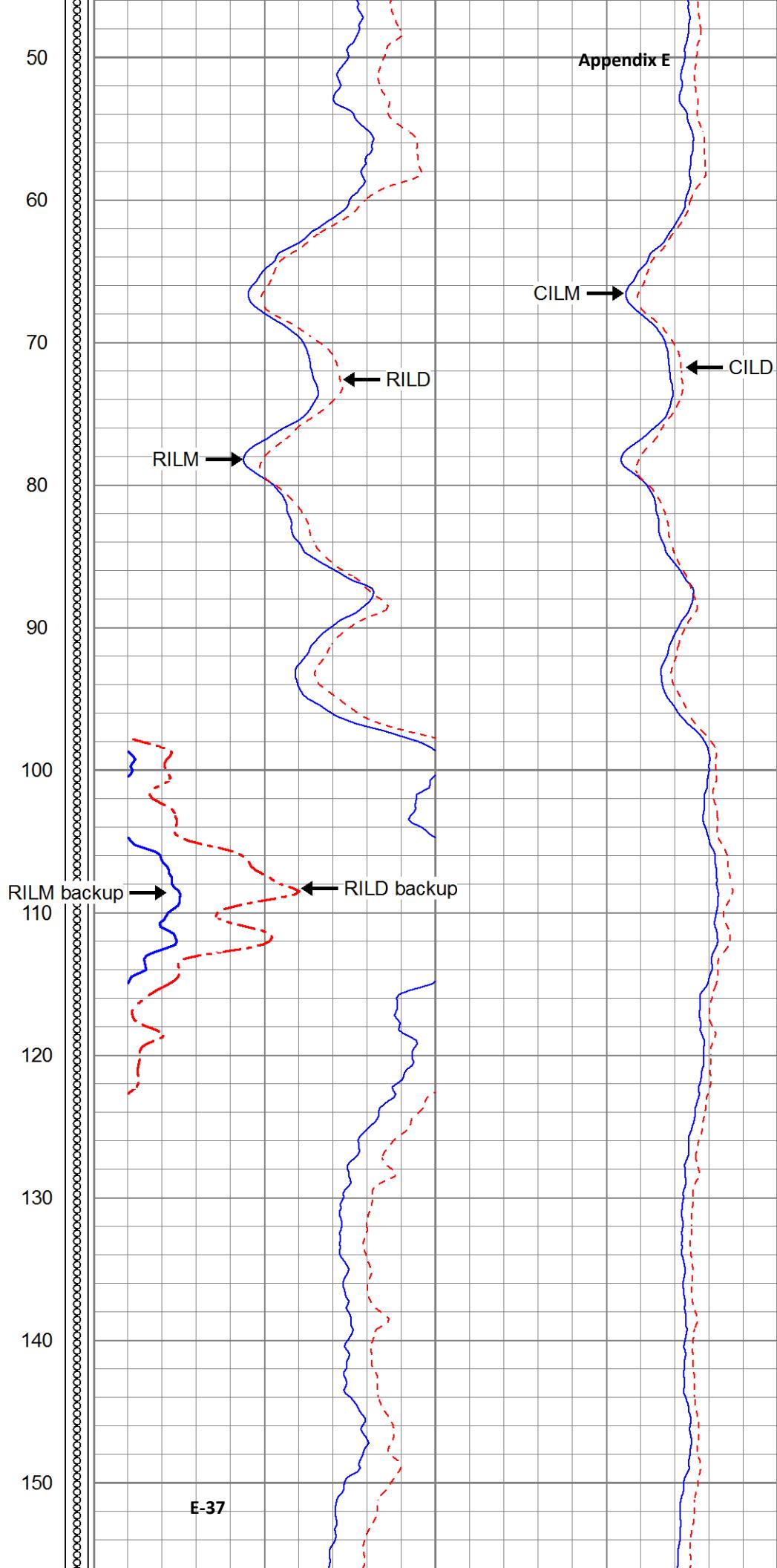
Database File 17939.db
Dataset Pathname dli2
Dataset Creation Thu Jan 09 11:22:56 2014

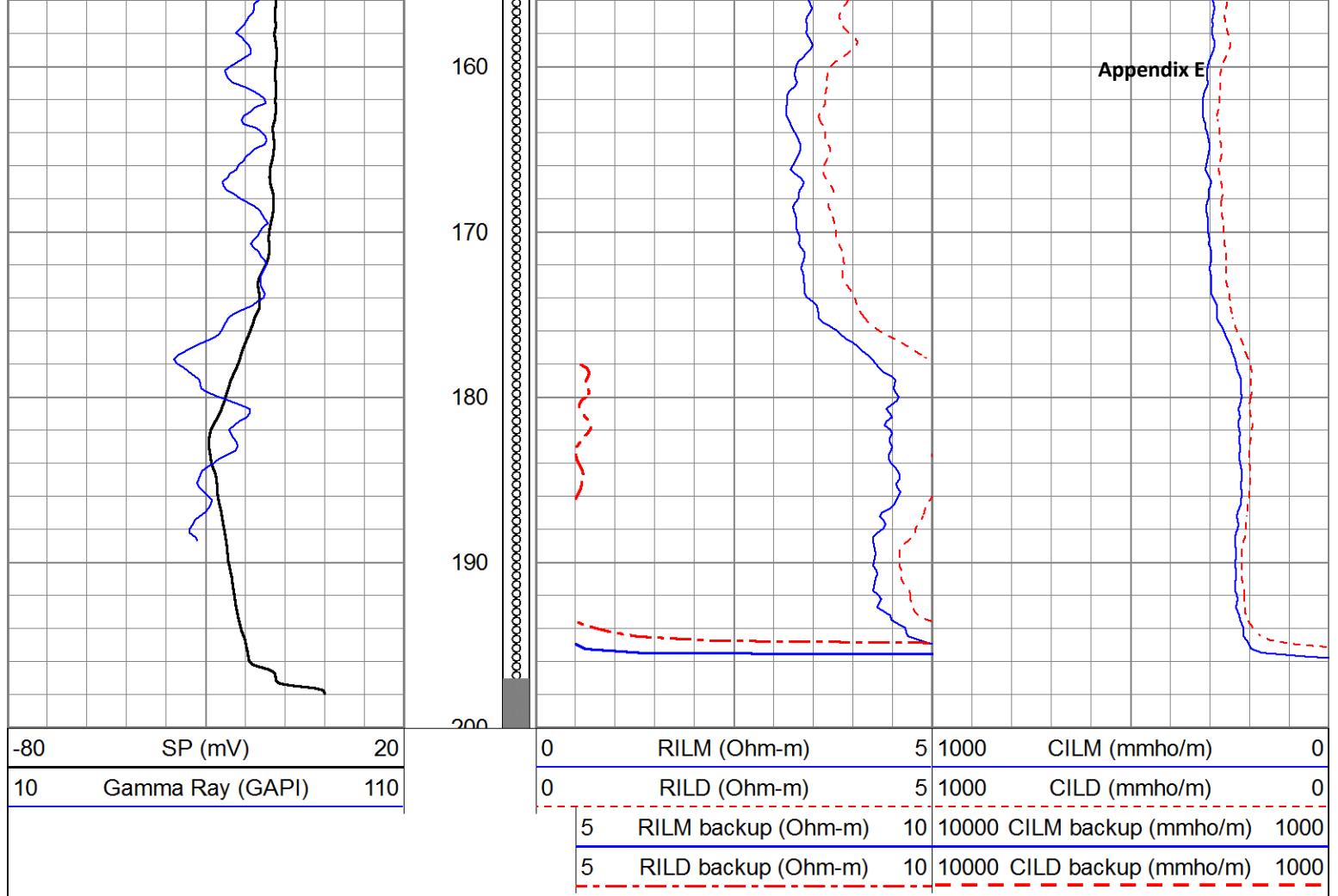
Dual Induction Calibration Report

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1407.490	3493.640	cps	0.000	612.000	mmho/m
Medium	1908.120	14487.900	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Sep 19 16:56:13 2012					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			

Database File	17939.db					
Dataset Pathname	dil2					
Presentation Format	dil_ps					
Dataset Creation	Thu Jan 09 11:22:56 2014					
Charted by	Depth in Feet scaled 1:120					
-80	SP (mV)	20		0	RILM (Ohm-m)	5
10	Gamma Ray (GAPI)	110		0	RILD (Ohm-m)	5
				5	RILM backup (Ohm-m)	10
				5	RILD backup (Ohm-m)	10
				10000	CILM (mmho/m)	0
				10000	CILD (mmho/m)	0
				10000	CILM backup (mmho/m)	1000
				10000	CILD backup (mmho/m)	1000







PACIFIC
SURVEYS

DUAL INDUCTION
GAMMA-RAY

Appendix E

Job No.	Company CASCADE DRILLING		
17859	Well	ML-4	
File No.	Field	MOSS LANDING	
	County	MONTEREY	State CA

Location	Other Services:
SOUTH OF INTERSECTION OF CABRILLO HWY & DOLAN RD GPS: N36° 48.156' W121° 047.030'	TEMPERATURE FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	0'	above perm. datum
Drilling Measured From	G.L.		K.B. D.F. G.L.
Date	12-3-2013		
Run Number	ONE		
Depth Driller	195.5'		
Depth Logger	195.5'		
Bottom Logged Interval	195.5'		
Top Log Interval	0'		
Open Hole Size	8"		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	28'		
Bentonite Seal	N/A		
Time Well Ready	13:00		
Time Logger on Bottom	13:15		
Equipment Number	PS-7		
Location	LA		
Recorded By	WATKINS		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8"	0'	201'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8"	N/A	0'	14.5'
Prot. String				
Production String	4" PVC	SCH 40	0'	195.5'
Liner				

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

NOTE: 0.010" SLOT FOR LENGTH OF PVC

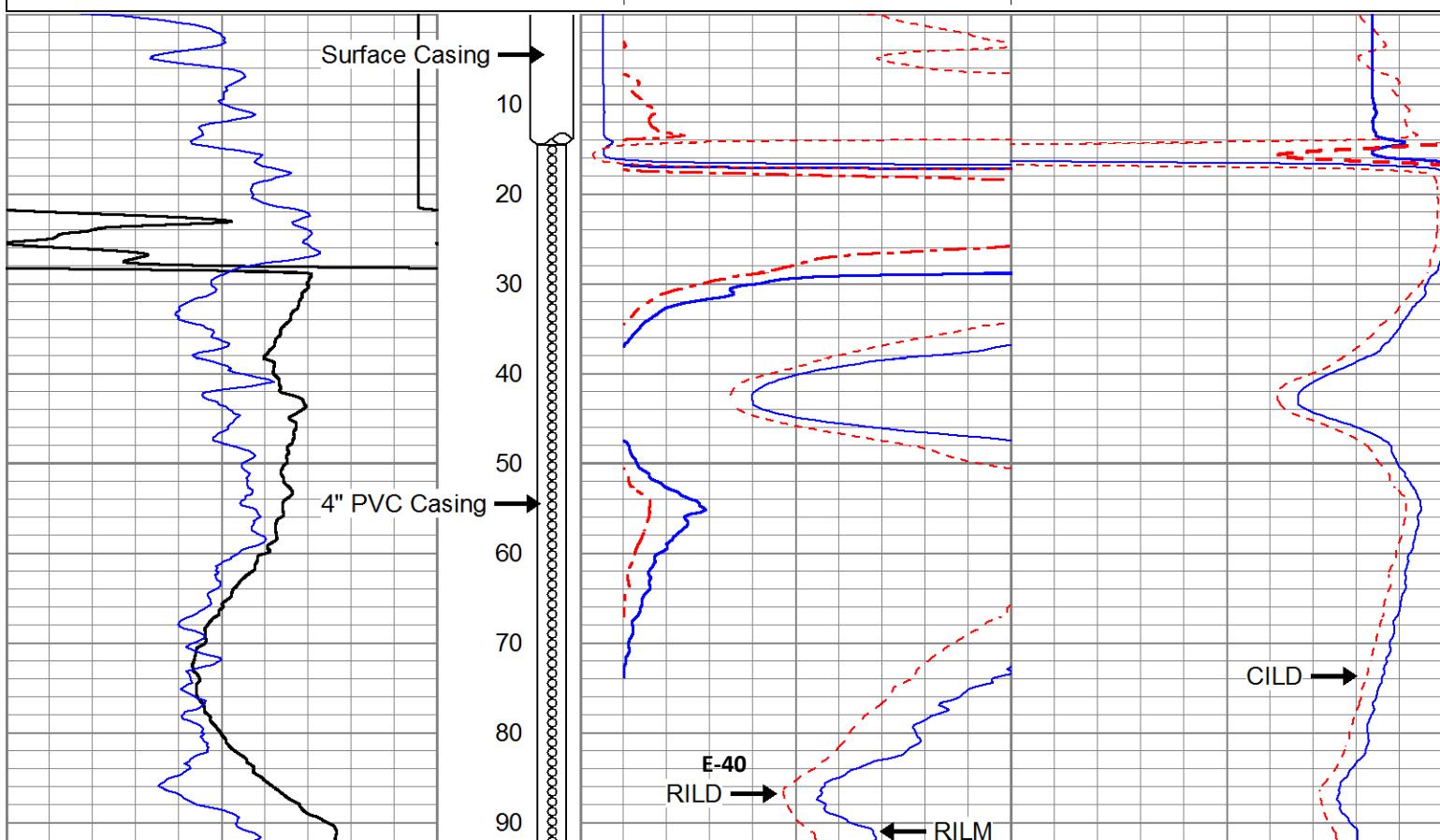
Calibration Report

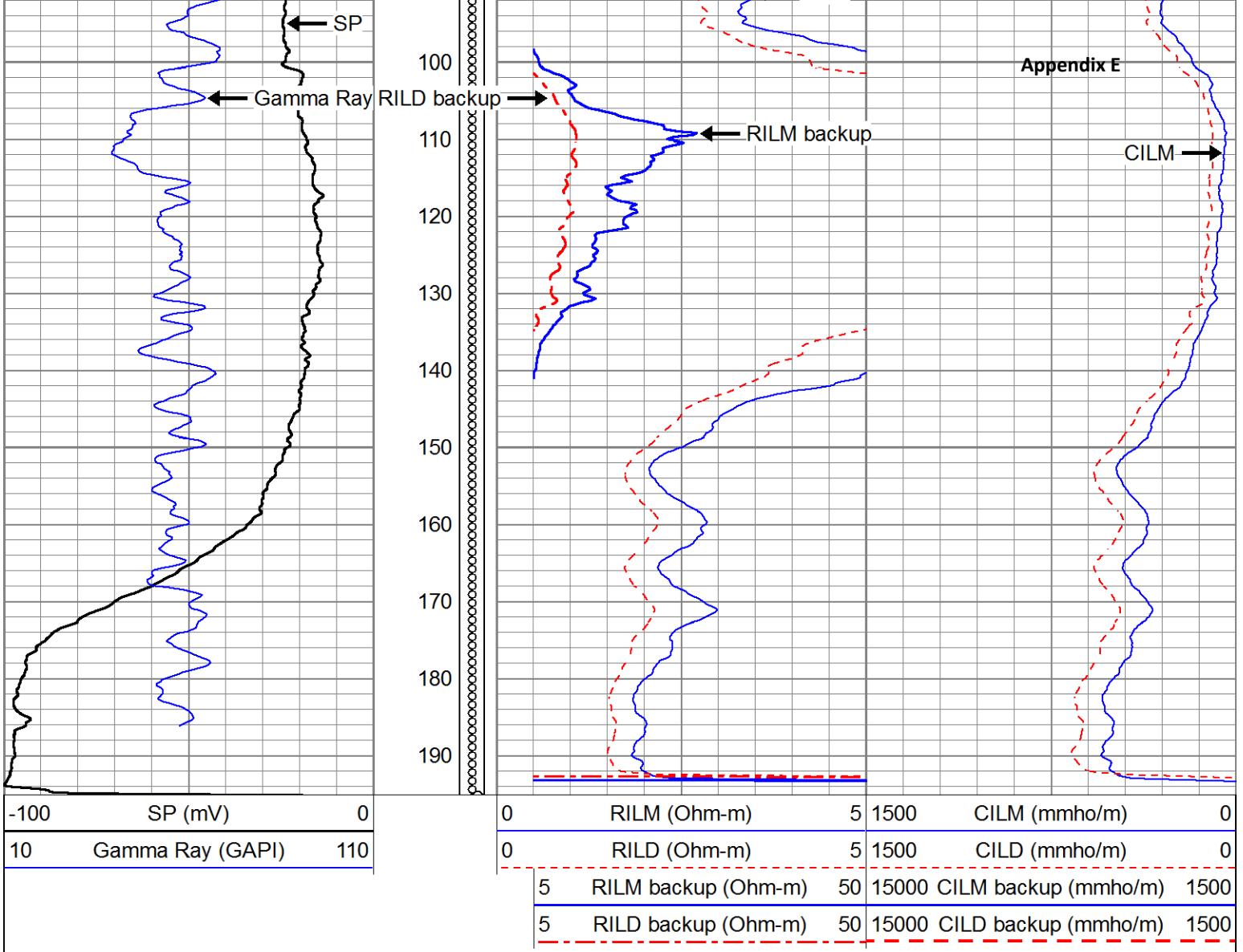
Database File 17859.db
Dataset Pathname dil
Dataset Creation Tue Dec 03 14:01:05 2013

Dual Induction Calibration Report

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1411.390	3440.570	cps	0.000	612.000	mmho/m
Medium	2379.120	14715.100	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Sep 19 16:56:13 2012					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			

Database File	17859.db				
Dataset Pathname	dil				
Presentation Format	dil_ps				
Dataset Creation	Tue Dec 03 14:01:05 2013				
Charted by	Depth in Feet scaled 1:240				
-100	SP (mV)	0			
10	Gamma Ray (GAPI)	110			
			0 RILM (Ohm-m)	5 1500 CILM (mmho/m) 0	
			0 RILD (Ohm-m)	5 1500 CILD (mmho/m) 0	
			5 RILM backup (Ohm-m)	50 15000 CILM backup (mmho/m) 1500	
			5 RILD backup (Ohm-m)	50 15000 CILD backup (mmho/m) 1500	





PACIFIC
SURVEYS

DUAL INDUCTION
GAMMA-RAY

Appendix E

Job No.	Company CASCADE DRILLING		
17787	Well	ML-6	
File No.	Field	MOSS LANDING	
	County	MONTEREY	State CA

Location	Other Services:
7500 SANDHOLDT RD.	TEMPERATURE FLUID RESISTIVITY

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G.L.		
Date	11-20-2013		
Run Number	ONE		
Depth Driller	199.6'		
Depth Logger	199.6'		
Bottom Logged Interval	196.5'		
Top Log Interval	0'		
Open Hole Size	8"		
Type Fluid	WATER		
Density / Viscosity	N/A		
Fluid Level	10'		
Bentonite Seal	N/A		
Time Well Ready	1415		
Time Logger on Bottom	1430		
Equipment Number	PS-7		
Location	LA		
Recorded By	SCHUMACHER		
Witnessed By	N. REYNOLDS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8"	0'	200'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8"	N/A	0'	15'
Prot. String				
Production String	4" PVC	SCH 40	0'	200'
Liner				

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

NOTE: 0.010" SLOT FOR LENGTH OF PVC

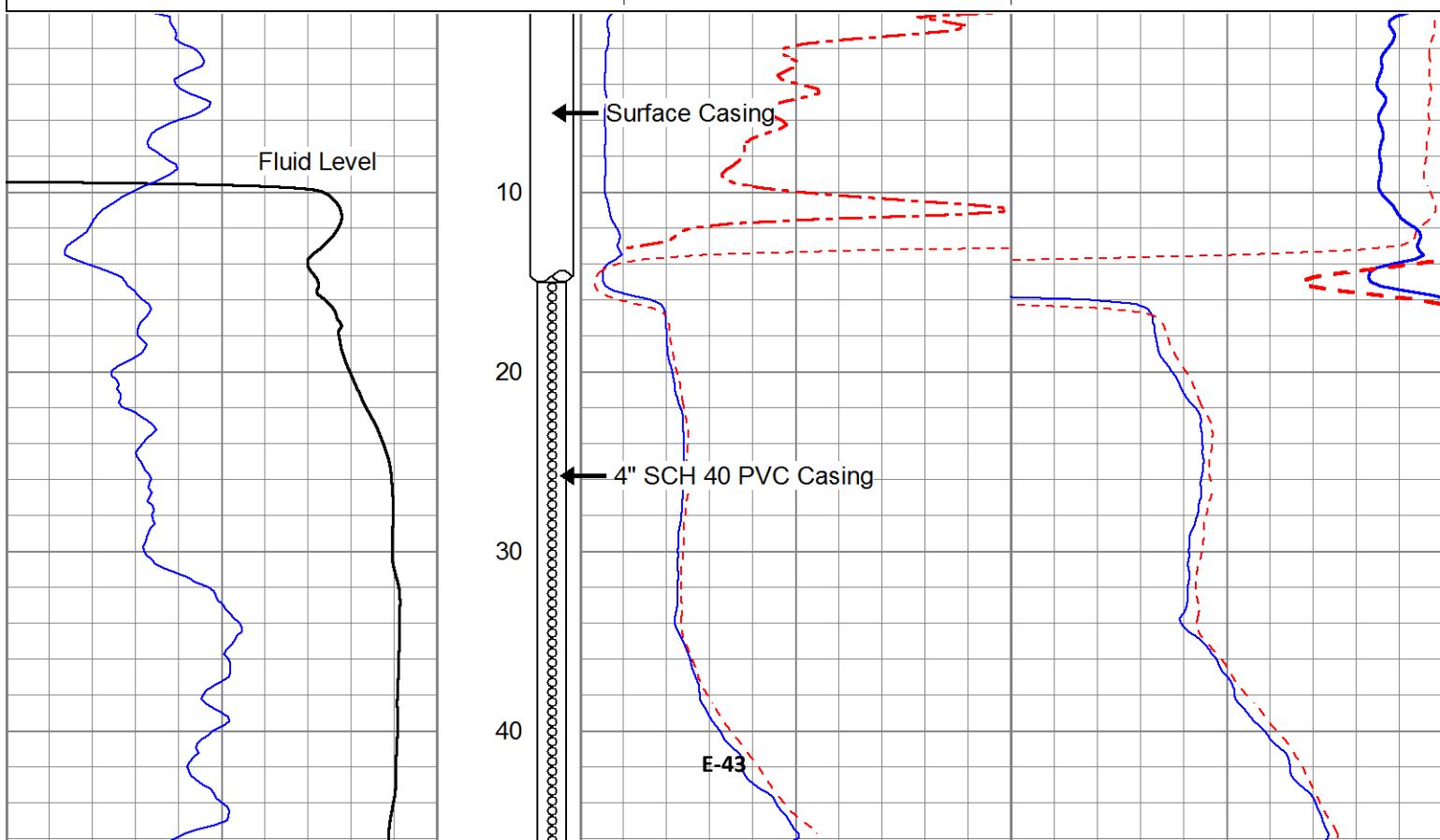
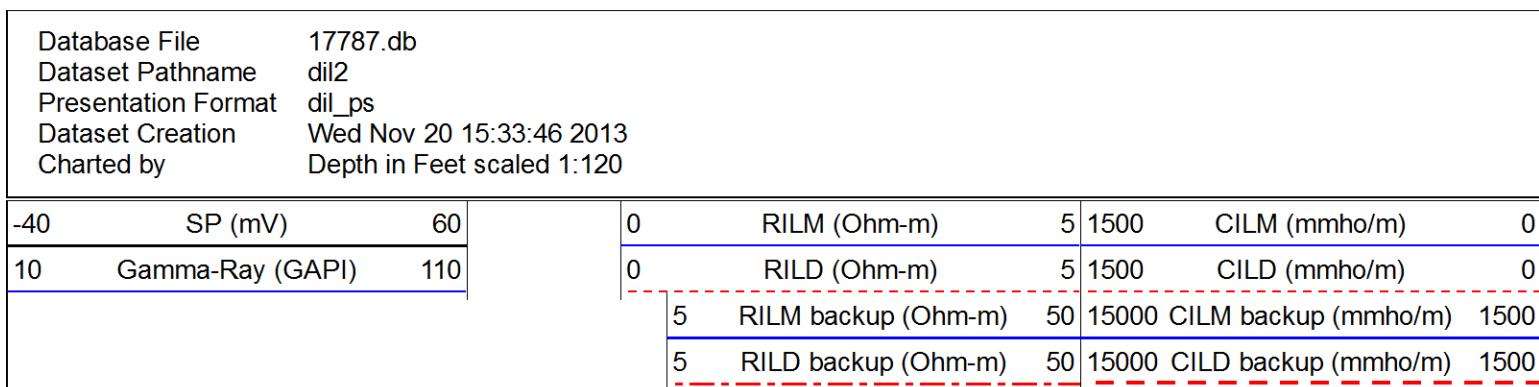
Comments

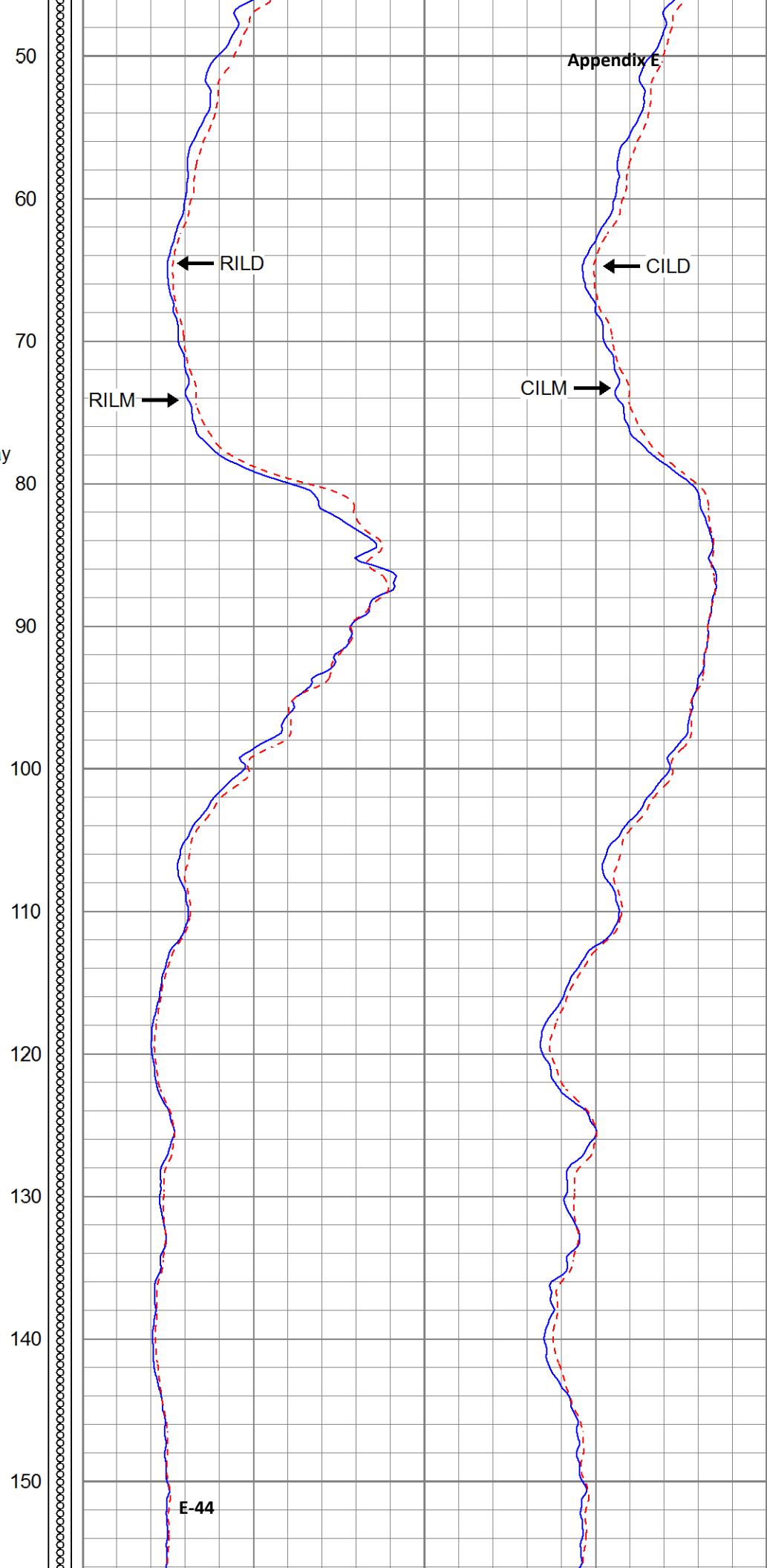
Calibration Report

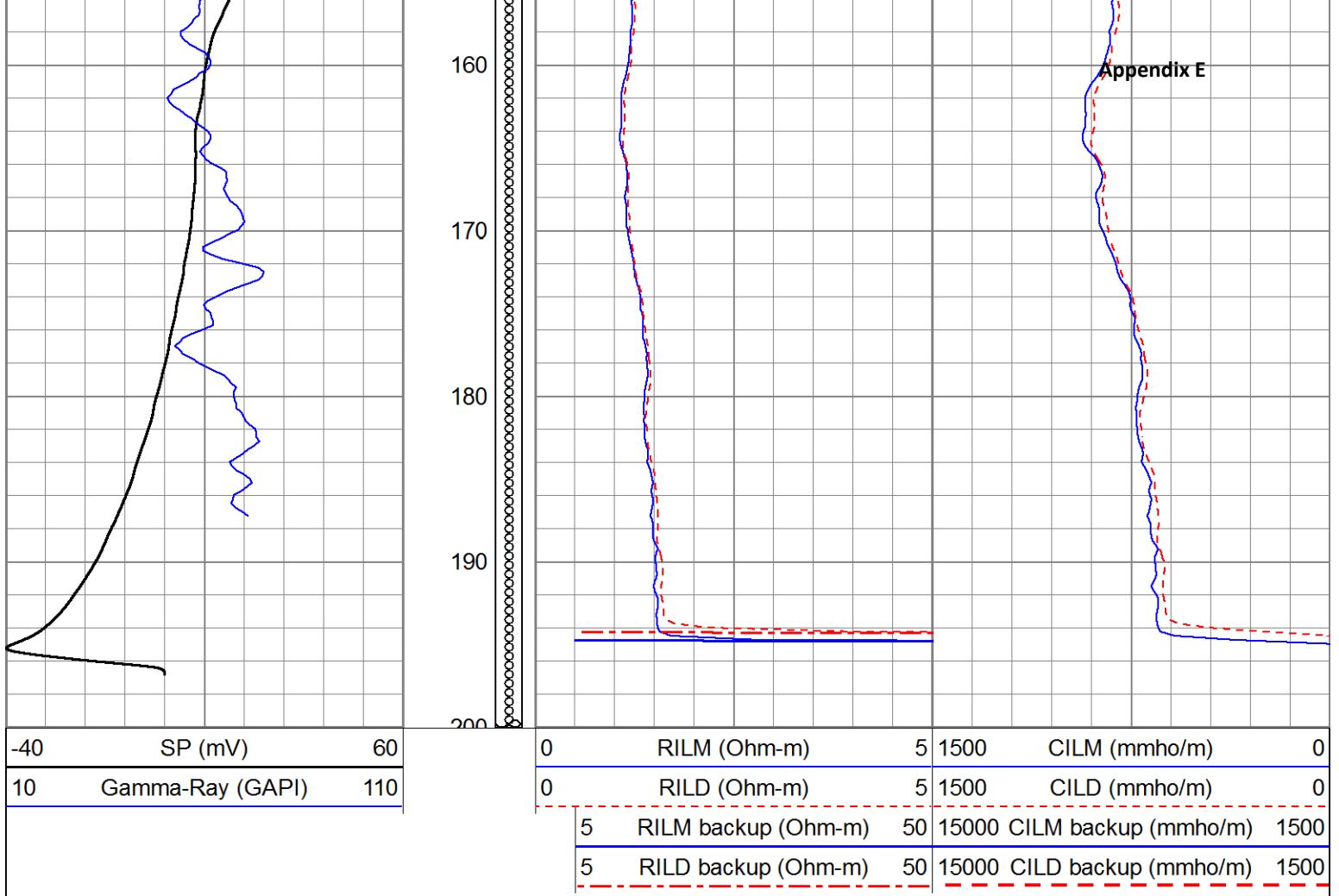
Database File 17787.db
Dataset Pathname dli2
Dataset Creation Wed Nov 20 15:33:46 2013

Dual Induction Calibration Report

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1440.330	3755.270	cps	0.000	612.000	mmho/m
Medium	1967.190	14170.100	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Sep 19 16:56:13 2012					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			







PACIFIC
SURVEYS

DUAL INDUCTION
GAMMA-RAY

Appendix E

Job No. 17689	Company CASCADE DRILLING, INC.
File No.	Well PR-1 Field MOSS LANDING County MONTEREY State CA

Location POTRERO RD GPS: N36° 47.439' W121° 47.509'	Other Services: TEMPERATURE FLUID RESISTIVITY
---	---

Permanent Datum	G.L.	Elevation	Elevation
Log Measured From	G.L.	above perm. datum	K.B. D.F. G.L.
Drilling Measured From	G.L.		

Date	9-23-2013		
Run Number	ONE		
Depth Driller	200'		
Depth Logger	200'		
Bottom Logged Interval	200'		
Top Log Interval	0'		
Open Hole Size	8"		
Type Fluid	N/A		
Density / Viscosity	N/A		
Fluid Level	N/A		
Bentonite Seal	N/A		
Time Well Ready	10:15		
Time Logger on Bottom	10:30		
Equipment Number	PS-3		
Location	LA		
Recorded By	WATKINS		
Witnessed By	B. VILLALOBOS		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8"	0'	200'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9"	N/A	0'	10'
Prot. String	4"	N/A	0'	200'
Production String				
Liner				

<< Fold Here >>

All interpretations are opinions based on inferences from electrical or other measurements and Pacific Surveys cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to Pacific Surveys' general terms and conditions set out in our current Price Schedule.

Comments

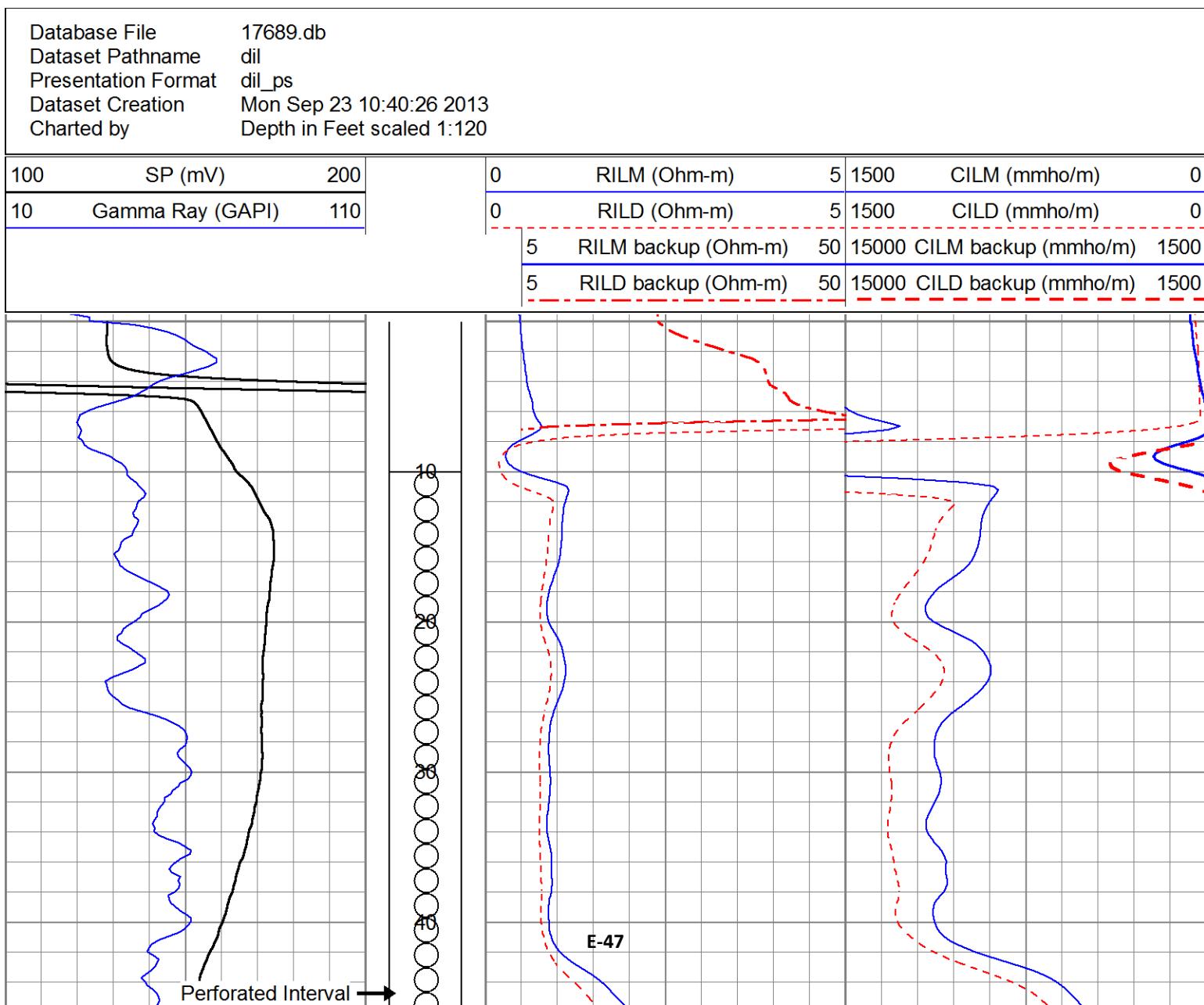
0.010" SLOT FROM 10-180' BGS

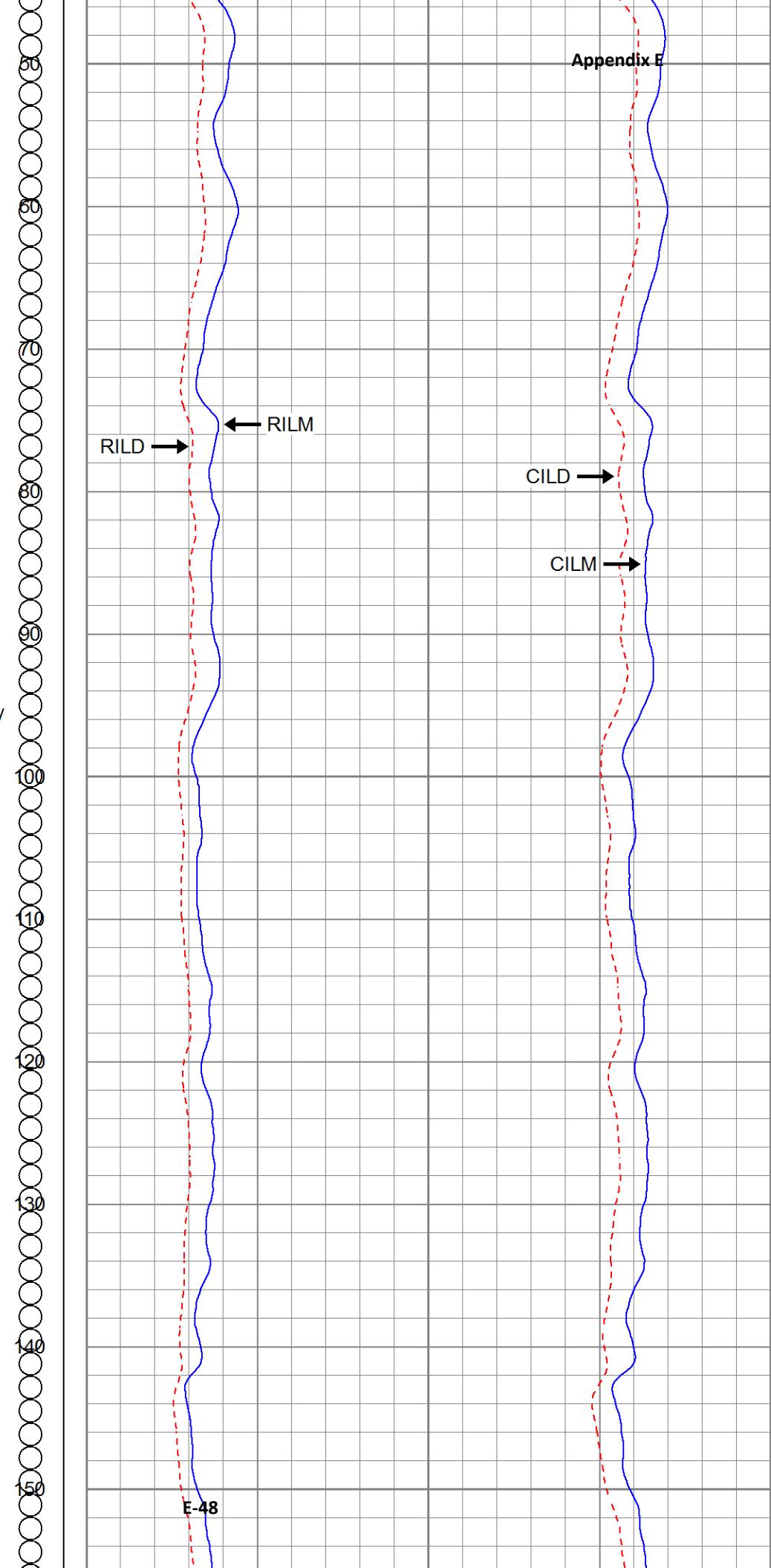
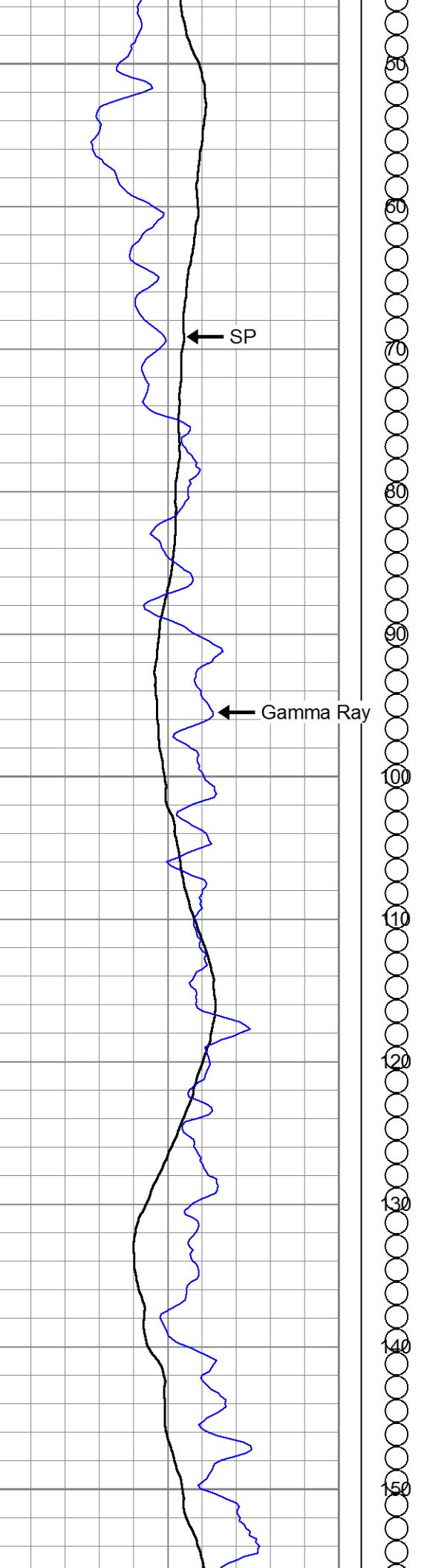
Calibration Report

Database File 17689.db
Dataset Pathname dil
Dataset Creation Mon Sep 23 10:40:26 2013

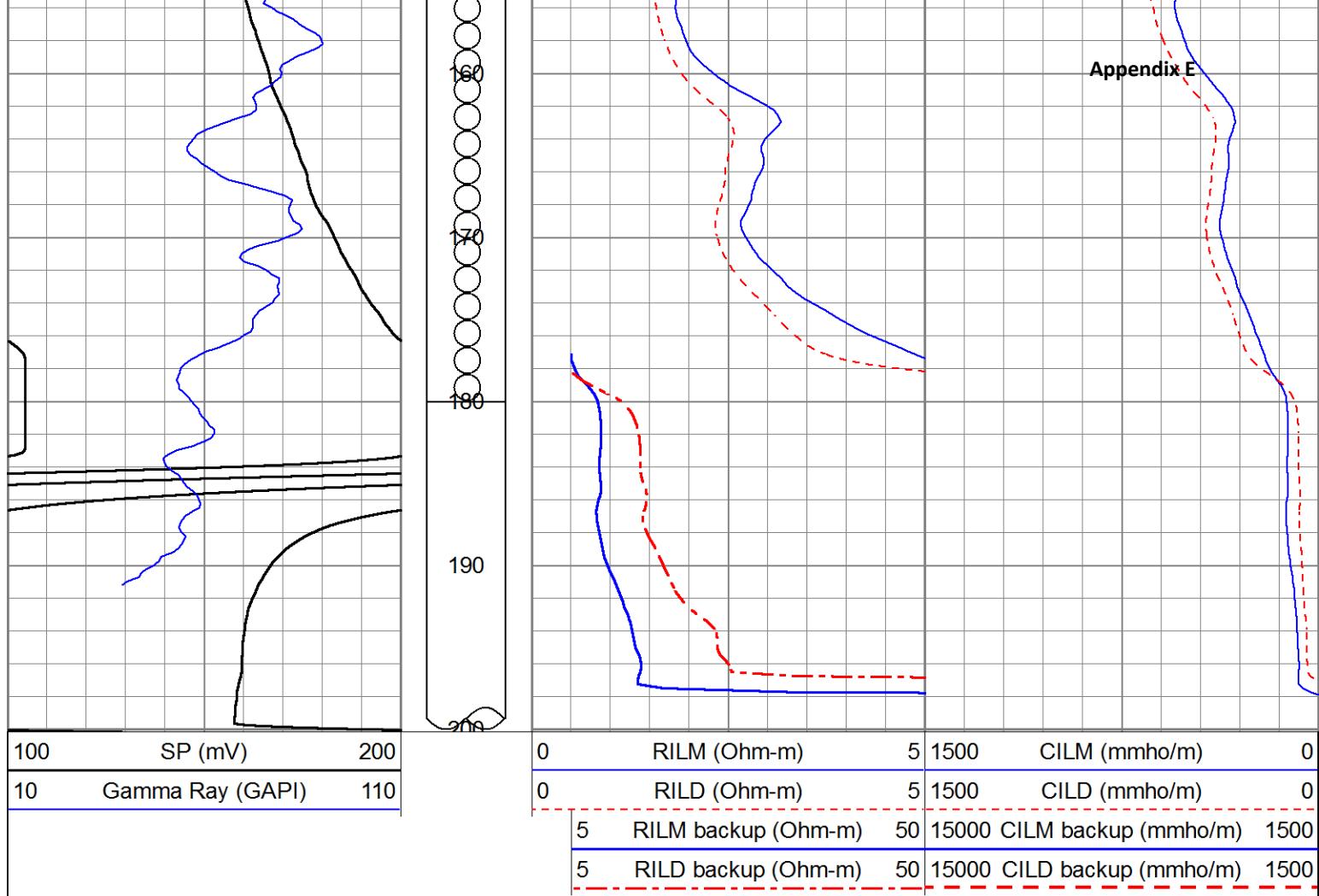
Dual Induction Calibration Report

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	m	b
Deep	1407.490	3493.640	cps	0.000	612.000	mmho/m
Medium	1908.120	14487.900	cps	0.000	1960.000	mmho/m
Gamma Ray Calibration Report						
Serial Number:	PS_1					
Tool Model:	01					
Performed:	Wed Aug 31 18:22:13 2011					
Calibrator Value:	162.0		GAPI			
Background Reading:	46.1		cps			
Calibrator Reading:	180.8		cps			
Sensitivity:	1.2020		GAPI/cps			





Appendix E



APPENDIX F
Isolated Aquifer Zones Construction Forms
And Well Sampling Data Forms

GEOSCIENCE


APPENDIX F:
ISOLATED AQUIFER ZONES CONSTRUCTION
FORMS AND WELL SAMPLING DATA FORMS

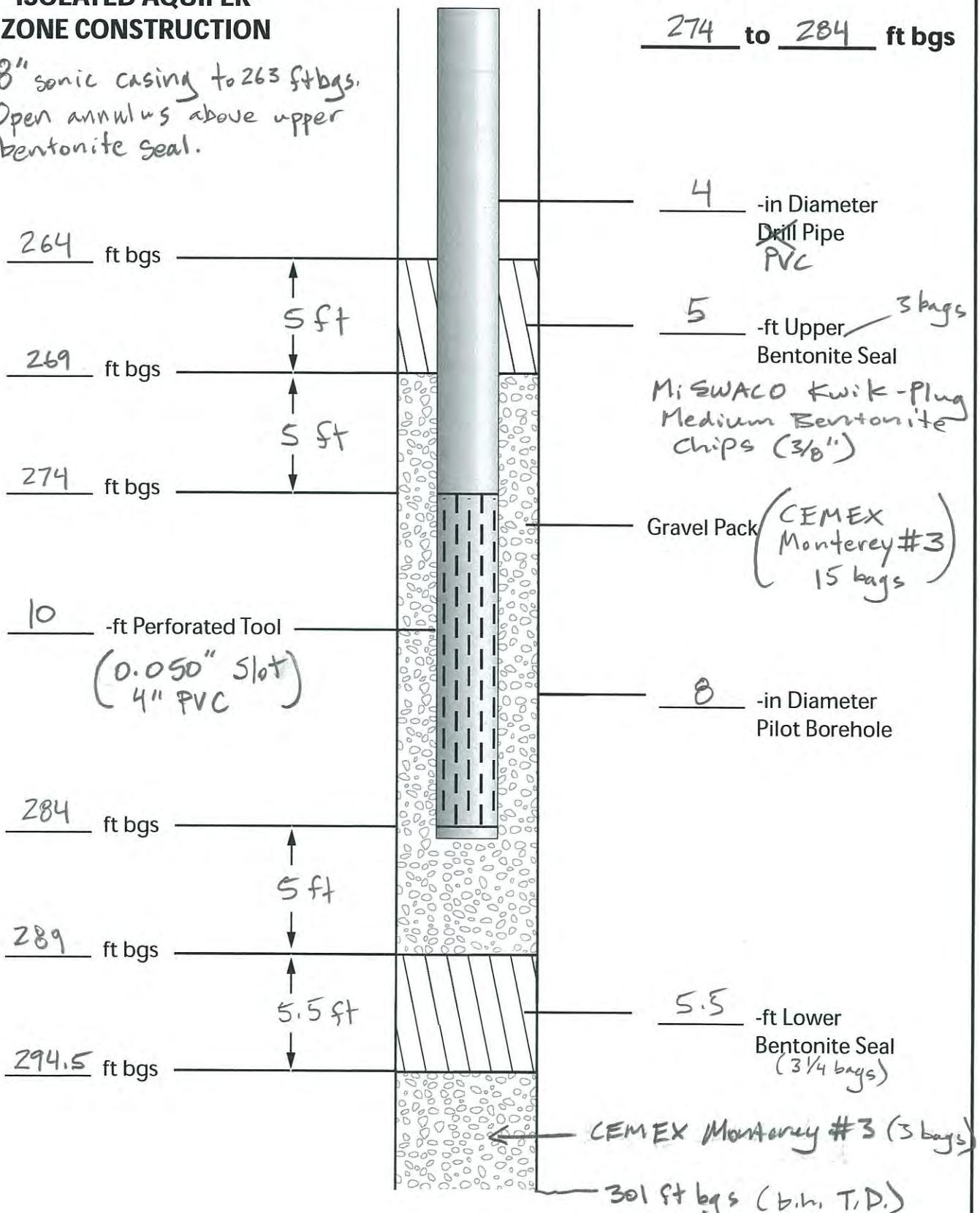
CONTENTS

Description	Page
Borehole CX-B1.....	F-1
Borehole CX-B2.....	F-19
Borehole CX-B4.....	F-28
Borehole MDW-1	F-44
Borehole ML-1.....	F-58
Borehole ML-2.....	F-61
Borehole ML-3.....	F-69
Borehole ML-4.....	F-76
Borehole ML-6.....	F-82
Borehole PR-1.....	F-87

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

8" sonic casing to 263 ft bgs.
Open annulus above upper
bentonite seal.

Zone #1 As-Built

Zone No. 1274 to 284 ft bgs**GEOSCIENCE**

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.Well Name/Number: MPWSP Exploratory Borehole CX-B1WQDate: 2-17-14 / Mon

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #2 As Built

Zone No. 2

237 to 247 ft bgs

8" Sonic casing to 224 ft bgs.
Open annulus above
upper bentonite seal

226 ft bgs

5 ft

231 ft bgs

6 ft

237 ft bgs

10

-ft Perforated Tool

(0.050" Slot)
4" PVC

246.5 ft bgs actual

247 ft bgs

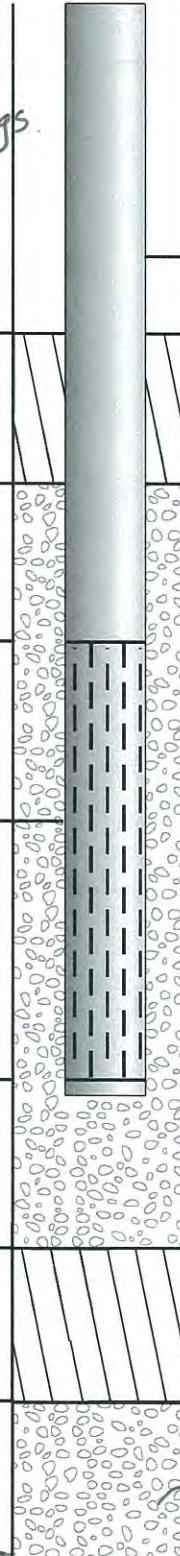
5 ft

252 ft bgs

5 ft

257 ft bgs

273
ft bgs



4 -in Diameter
Drill Pipe
PVC

5 -ft Upper
Bentonite Seal

Mi SWACO Kwik-Plug
Medium Bentonite
chips (3/8") 1 3/4 bags

Gravel Pack CEMEX
Monterey #3
(10 bags)

8 -in Diameter
Pilot Borehole

5 -ft Lower
Bentonite Seal
(4 bags)

CEMEX Monterey #3
273 - 257 ft bgs

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gsswater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole CX-B1WQ

Date: 2-19-14 / Wed

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #3 As Built

Zone No. 3

8" sonic casing to ~~161~~ ft bgs
Open annulus above
upper bentonite seal.

168 ft bgs

161

175 ft bgs

7 ft

182 ft bgs

7 ft

190 ft Perforated Tool

(4" PVC Screen
w/ 0.050" slot)

192 ft bgs

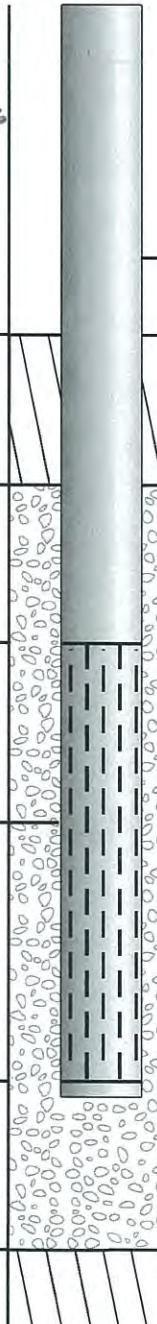
5 ft

197 ft bgs

5 ft

202 ft bgs

247
ft bgs



182 to 192 ft bgs
4 -in Diameter
Drill Pipe
PVC

7 -ft Upper
Bentonite Seal
Mi SWACO Kwik-Plug
Medium Bentonite
chips (3/8")
(2 1/2 bags)
Gravel Pack CEMEX
Monterey #3
Sand
(13 bags)

8 -in Diameter
Borehole
Sonic

5 -ft Lower
Bentonite Seal
(2 1/2 bags)

Backfill w/ CEMEX
Monterey #3 sand
(35 bags)

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole CX-B1WQ

Date: 2-20-14 / Thu.

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #4 As Built

Zone No. 4134 to 144 ft bgs

8" Sono casing to 122 ft bgs
Open annulus above
upper bentonite seal.

124 ft bgs

5 ft

129 ft bgs

5 ft

134 ft bgs10

-ft Perforated Tool

(4" PVC Screen
w/ 0.050" slot)144 ft bgs

5 ft

149 ft bgs

5 ft

154 ft bgs

5 ft

4-in Diameter
~~Drill Pipe~~
PVC5-ft Upper
Bentonite SealMi SWACO Kwik-Plug
Medium Bentonite
Chips ($\frac{3}{8}$ "') (2 bags)

Gravel Pack

CEMEX
Monterey #3
(10 bags)8-in Diameter
~~Pilot Borehole~~
Sonic5-ft Lower
Bentonite Seal
($2\frac{1}{2}$ bags)Backfill w/ #2/12 sand
(46 bags) & Monterey #3
(3 bags)

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole CX-B1 WQ

Date: 2-22-14/Sat

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #5 As Built

Zone No. 584 to 94 ft bgs

8" Sonic casing to 73 ft bgs.
Open annulus above upper bentonite seal.

73 ft bgs

6 ft

79 ft bgs

5 ft

84 ft bgs

84.5 actual

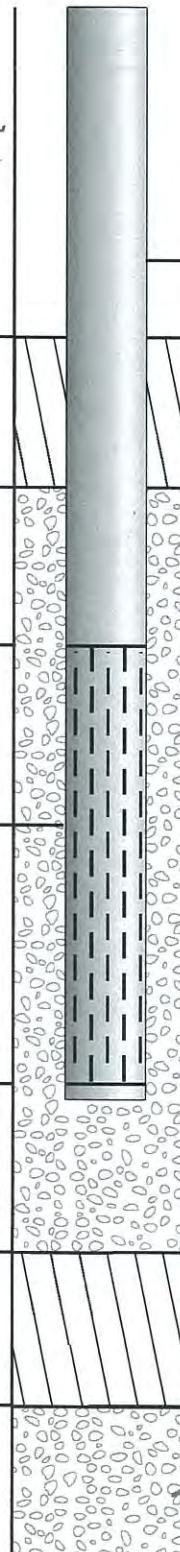
10 ft Perforated Tool(4" PVC Screen)
(w/ 0.050" slots)94 ft bgs

94.5 actual

5 ft

99 ft bgs

5 ft

104 ft bgs4 -in Diameter
Drill Pipe
PVC6 -ft Upper
Bentonite Seal
Mi SWACO Kwik-Plug
medium bentonite
chips (3/8") (2 bags)Gravel Pack CEMEX
Monterey #3
(13 bags)8 -in Diameter
Plot Borehole
sonic5 -ft Lower
Bentonite Seal

Backfill w/ # 2/12 &
Monterey #3
17 bags
13 bags

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole CX-B1WQ

Date: 2-23-14 / Sun

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #6 As Built

Zone No. 651 to 61 ft bgs

9" Sonic casing to 34 ft bgs
Open annulus above upper
bentonite seal.

38.5 ft bgs

7 ft

45.5 ft bgs

5.5 ft

51 ft bgs10 ft Perforated Tool(4" PVC Screen
w/ 0.050" Slots)61 ft bgs

4.5 ft

65.5 ft bgs

5.5 ft

71 ft bgs

4

-in Diameter
Drill Pipe

7

-ft Upper
Bentonite SealMi SWACO Kwik-Plug
medium bentonite
chips ($\frac{3}{8}$ ") (3 bags)

Gravel Pack

CEMEX
Monterey #3
(13 bags)

8

-in Diameter
Pilot Borehole
Sonic

5.5

-ft Lower
Bentonite Seal
(3 bags)Backfill w/ Monterey
#3 (17 bags)**GEOSCIENCE**

Client: RBF Consulting Inc.

 GEOSCIENCE Support Services, Incorporated
 P.O. Box 220, Claremont, CA 91711
 Tel: (909) 451-6650 Fax: (909) 451-6638
www.gsswater.com

Well Name/Number: MPWSP Exploratory Borehole CX-B1WQ

Date: 2-24-14/Mon

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gsswater.com								Zone No. <u>1</u> W.L.'s					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>Cx-B1NQ</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>263</u> ft bgs Static WL: <u>21.0</u> ft brp RP: <u>8.0 ft ags (Top of 8" casing)</u>						Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>2-17-14/Mon</u> Screened Interval: <u>274-284</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>212</u> ft bgs <u>0.68 Constant</u>							
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
16:22:14	0	21.0	0	64079.5	Pump on	~7.1 gpm.							
16:25	3	57.0	36.0	↑ Q to 11.5 gpm									Very
16:30	8	72.3	51.3	64143.4	17.5	18.9	0.6	14000	12693	10111.6	7.13	-131.1	turbid
16:36	14	67.4	46.4		16:36:30 ↑ Q to ~ 19.1 gpm,								Turb improving some.
16:40	18	↑ Q slightly.		to 19.6 gpm									
16:43	21	90.0	69.0	64338.7	19.6	19.5	0.8	36690	32843	24996.8	6.66	-109.6	"over range"
16:49	27	88.7	67.7	64457.3	19.8	19.4	0.7	37156	33211	25268.8	6.62	-108.7	529
16:53:35	31	Pump off.		64546.0									water is aerated.
Total Volume pumped today = <u>466.5 gallons.</u>													

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min F7

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL**DRAFT****Subject to Revision****ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET**

Zone No. 1

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole Drilling

W.L.'s taken w/
an electronic W.L.
indicator.

Borehole Name/Number: CX-B1 WQ

Sonic Casing Dia: 8 in Sonic Casing Depth: 263 ft bgs

Static WL: 34.0 ft brp

RP: 8.0 ft ags (top of 8" casing)

Logged By: N. Reynolds (GSSI) & Cascade Drilling

Test Date: 2-18-14 / Tue

Screened Interval: 274 - 284 ft bgs

Reference Point Elevation: ft amsl

Pump Depth: 212 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
08:01:02	0	34.0	0	64545.1	Pump on @ 31.4 gpm								
08:03	2	88.6	54.6	↓ Q to	21.5 gpm								
08:06	5	84.4	50.4										
08:27	26	85.0	51.0	65128.5	21.7								6.52
08:31:41	~31			↑ Q to ~	38.5 gpm								
08:36	35	119.5	85.5		38.5	08:37	↑ Q to	39.8 gpm					
08:41	40	119.5	85.5	65571.0	40.2								105
09:20	79	114.6	80.6	67147.8	40.4	19.0	2.5	36509	32312	24820	6.51	96.1	11.7
09:30	89	114.9	80.9	67553.5	40.6	19.0	1.0	36353	32175	24718	6.56	57.6	9.04
09:40	99	114.7	80.7	67959.8	40.6	19.0	1.0	36524	32331	24840.4	6.55	48.6	4.40
09:50	109	114.6	80.6	68365.5	40.6	19.0	1.0	36505	32317	24826.8	6.55	47.6	4.08
10:00	119	114.8	80.8	68771.4	40.6	19.0	1.0	36488	32336	24799.6	6.55	49.0	3.43
10:10	129	114.5	80.5	69177.0	40.6	19.0	1.0	36512	32357	24820.0	6.55	50.6	2.82
10:20	139	115.0	81.0	69583.0	40.6	19.0	1.0	36535	32367	24847.2	6.55	51.7	1.98
10:30	149	115.2	81.2	69990.6	40.8	19.0	1.0	36527	32377	24833.6	6.55	53.8	3.36
10:40	159	115.1	81.1	70398.1	40.8	19.0	1.0	36540	32335	24847.2	6.55	54.6	2.23
10:50	169	115.2	81.2	70805.6	40.8	19.0	1.0	36553	32365	24854	6.55	55.4	0.92
11:00	179	115.17	81.17	71213.3	40.8	19.0	1.0	36564	32364	24860.8	6.54	56.4	0.94
11:10	189	115.1	81.1	71621.8	40.9	19.0	1.0	36570	32374	24867.6	6.54	57.3	0.88
11:20	199	114.95	80.95	72029.2	40.7	19.0	1.0	36567	32379	24867.6	6.54	58.1	0.89

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

Flow thru cell = 1548 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEETZone No. 1 W.L.sClient: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-B1 WQSonic Casing Dia: 8 in Sonic Casing Depth: 263 ft bgsStatic WL: 34.0 ft brpRP: 8.0 ft agsLogged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 2-18-14 TueScreened Interval: 274 - 284 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 212 ft bgs D.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)		
11:30	209	115.3	81.3	72436.6	40.7	19.0	1.0	36566	32377	24867.6	6.54	58.6	0.93		
11:40	219	114.9	80.9	72844.4	40.8	19.0	1.0	36581	32394	24874.4	6.54	59.2	1.49		
11:50	229	114.8	80.8	73251.8	40.7	18.9	1.0	36581	32350	24874.4	6.54	59.9	1.20		
12:00	239	115.1	81.1	73659.1	40.7	18.9	1.0	36608	32359	24888.0	6.54	60.5	1.16		
12:10	249	115.0	81.0	74066.2	40.7	18.9	1.0	36601	32361	24888.0	6.54	61.1	0.57		
12:15	Begin	collecting zone #1 WQ samples for lab analysis.													
12:39	278	114.72	80.72	75248.9	40.8	18.9	1.0	36635	32402	24908.4	6.54	62.2	0.56		
12:42:07	281			75374.2	Pump off.										
Total Volume pumped today = 10,829.1 gallons															
13:35	334	34.2	0.2	W.L. after pulling pump.											

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Turb: +/- 10%

Cond: +/- 3%

DO: +/- 10%

ORP: +/- 10 mV

Desired Flow Rate: 100 to 500 mL/min F9

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 2

W.L.s

Client: RBF/MPWSP - Exploratory Borehole Drilling

W.L.'s taken w/ an electronic W.L. indicator

Logged By: N. Reynolds (GSSI) & Cascade DrillingBorehole Name/Number: CX-B1WQTest Date: 2-19-14 / WedSonic Casing Dia: 8 inSonic Casing Depth: 224 ft bgsScreened Interval: 237-247 ft bgs

Static WL: _____ ft brp

Note: SWL was 4 ft ags prior to pumping.

Reference Point Elevation: _____ ft amsl

RP: 6.0 ft ags (Top of 8" casing)

Recovered W.L. was not recorded by driller on 2-20-14.

est. 6 ft bgs by driller

Pump Depth: 199 ft bgs to Pump intake

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total gallons
10:35:13	0			75374.1	Pump on @ 27 gpm. ↓ Q @ 10:36:30 to 22 gpm									gpm
10:40	5	147.63			13.0 ↓ Q @ 10:41 to 10.3 gpm.									
10:45	10	122.3		75520.7	~10.3									turbid
10:55	20	108.6		75622.2	10.2									"overrange"
11:10	35	108.82		75778.8	10.4									530
11:25	50	108.37		75936.1	10.5									196
11:35	60	110.0		76042.4	10.6	18.9	1.1	21571	19051	14681.2	6.71	-13.9	150	
11:45	70	110.6		76150.7	10.8	18.9	1.1	21776	19254	14817.2	6.77	-54.6	81.4	
11:55	80	110.4		76259.0	10.8	18.9	1.1	22069	19503	15014.4	6.77	-58.8	53.6	
12:05	90	110.3		76367.2	10.8	18.8	1.2	22241	19623	15130.0	6.78	-59.8	52.9	
12:16	101	109.82		76486.4	10.8	18.9	1.2	22432	19803	15252.4	6.77	-58.4	45.8	
12:25	110	109.47		76583.8	10.8	18.8	1.2	22544	19879	15327.2	6.77	-56.8	31.2	
12:35	120	109.6		76692.2	10.8	18.8	1.2	22658	19973	15415.6	6.77	-54.8	37.2	
12:45	130	108.83		76800.6	10.8	18.8	1.2	22769	20069	15483.6	6.77	-52.0	20.9	
12:55	140	108.4		76908.3	10.8	18.7	1.2	22840	20121	15531.2	6.77	-49.6	17.9	
13:05	150	107.95		77016.0	10.8	18.7	1.2	22922	20184	15585.6	6.77	-46.3	14.4	
13:15	160	106.95		77122.6	10.7	18.7	1.2	23007	20261	15640.0	6.77	-43.1	14.9	
13:25	170	106.83		77228.9	10.6	18.7	1.2	23068	20308	15687.3	6.77	-40.9	14.9	
13:35	180	106.8		77334.7	10.6	18.7	1.2	23143	20374	15742.0	6.76	-38.2	12.9	
13:45	190	107.0		77440.8	10.6	18.7	1.2	23210	20429	15789.6	6.76	-36.5	12.8	

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

Flow thru cell = 1471 mL/min

F-10

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 2

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-BIWQSonic Casing Dia: 8 in Sonic Casing Depth: 224 ft bgs

Static WL: _____ ft brp

RP: 6.0 ft agsLogged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 2-19-14 / WedScreened Interval: 237-247 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 199 ft bgs pump intake
0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
13:55	200	107.0		77546.8	10.6	18.7	1.2	23243	20447	15810.0	6.76	-33.8	14.7
14:05	210	106.8		77652.8	10.6	18.7	1.2	23296	20485	15837.2	6.76	-31.6	14.5
14:15	220	106.6		77759.2	10.6	18.7	1.2	23326	20516	15864.4	6.76	-29.1	13.6
14:25	230	105.98		77865.7	10.7	18.7	1.2	23382	20555	15898.4	6.76	-26.3	11.6
14:35	240	106.5		77971.8	10.6	18.7	1.2	23406	20578	15912.0	6.76	-24.6	11.4
14:45	250	106.6		78078.2	10.6	18.7	1.2	23444	20606	15939.2	6.76	-22.5	10.7
14:55	260	105.7		78184.5	10.6	18.7	1.2	23466	20631	15952.8	6.76	-20.7	8.56
15:05	270	106.3		78290.7	10.6	18.7	1.2	23480	20644	15966.4	6.76	-18.8	9.23
15:15	280	106.1		78397.2	10.7	18.7	1.2	23516	20669	15986.8	6.76	-17.0	13.2
15:25	290	106.25		78503.6	10.6	18.7	1.2	23547	20700	16007.2	6.76	-15.7	13.1
15:38	303	106.2		78641.7	10.6	18.7	1.2	23592	20737	16041.2	6.76	-13.4	11.2
15:41:42	~307	↓ Q to 6.3 gpm		78641.7	10.6	18.7	1.2	23592	20737	16041.2	6.76	-13.4	11.2
15:52	317	50.3		78727.2	~3.3	18.6	1.1	23639	20744	16075.2	6.77	-21.8	1.32
16:00	325	39.8		78745.6	2.3	18.6	1.1	23660	20779	16088.8	6.79	-29.1	1.21
16:05	330	39.88		78756.7	2.2	18.7	1.0	23705	20869	16122.8	6.79	-32.4	1.20
16:10	Collect	WQ samples for lab analysis. Samples placed on ice.											
16:41	366	38.5		78831.8	2.1	19.0	1.0	23926	21194	16272.4	6.80	-40.1	0.91
16:46:13	371			78841.2		Pump off.							
		Total Volume pumped =		3,467.1 gallons									

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

F-11

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL**DRAFT****Subject to Revision****ISOLATED AQUIFER**
ZONE SAMPLING DATA SHEETZone No. 3

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-B1 WQSonic Casing Dia: 8 in Sonic Casing Depth: 161 ft bgsStatic WL: 28.2 ft brpRP: 8.67 ft ags (top of 8" casing)Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 2-21-14 / FriScreened Interval: 182 - 192 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 168 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
09:47:32	0	28.2	0	78841.1	Pump on ~ 3.1 gpm.								
09:49	1	119.0	90.8	-	↓ Q to 6.4 gpm	9.52 ↑ Q to 8.2							
10:00	12	88.6	60.4	78988.1	10.1	aerated discharge							
10:15	27	91.5	63.3	79140.1	10.1	18.5	0.1	45654	40030	31082.8	6.75	-183.7	20.8
10:30	42	90.6	62.4	79292.7	10.2	18.5	0.1	46385	40680	31545.2	6.78	-264.8	10.7
10:45	57	90.0	61.8	79444.0	10.1	18.5	0.1	46650	40865	31728.8	6.77	-284.2	17.6
11:00	72	89.9	61.7	79594.9	10.1	18.5	0.1	46900	41060	31892.0	6.77	-283.4	8.57
11:15	87	89.9	61.7	79745.8	10.1	18.3	0.1	46964	40963	31932.8	6.77	-280.7	6.70
11:30	102	89.9	61.7	79896.6	10.1	18.2	0.1	46992	40928	31953.2	6.77	-277.8	10.0
11:45	117	89.85	61.65	80047.3	10.0	18.3	0.1	47016	41014	31973.6	6.77	-274.3	6.13
12:00	132	89.75	61.55	80198.2	10.1	18.3	0.1	47036	40977	31987.2	6.77	-270.3	15.3
12:15	147	89.80	61.60	80348.8	10.0	18.2	0.1	47051	40969	31994.0	6.77	-266.8	3.82
12:30	162	89.65	61.45	80499.6	10.1	18.2	0.1	47059	40962	32000.8	6.77	-262.2	7.50
12:34:38	167				↓ Q to 4.6 gpm	12:37:15 ↓ Q to 3.2 gpm							
12:45	177	47.45	19.25	80583.7	3.1	18.4	0.1	47074	41134	32044.4	6.79	-249.7	1.03
12:55	187	46.5	18.3	80615.4	3.2	18.7	0.1	47103	41447	32028.0	6.79	-251.5	0.32
13:05	197	46.1	17.9	80646.5	3.1	18.8	0.1	47112	41546	32034.8	6.79	-253.3	0.25
13:10	Begin collecting			WQ samples for lab analysis. Samples placed on ice.									
13:33	225	44.75	16.55	80730.6	3.0	18.9	0.1	47122	41627	32041.6	6.80	-255.7	0.14
13:41:20	233			80753.5	Pump off. Total Volume pumped =			1,912.4 gallons					

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1221.5 mL/min

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

14:24 276 31.95 3.75

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 4

W.L.s

Client: RBF/MPWSP - Exploratory Borehole DrillingW.L.s taken using
an electronic water
indicator.Borehole Name/Number: CX-B1 WQSonic Casing Dia: 8 in Sonic Casing Depth: 122 ft bgsStatic WL: 22.9 ft brp 2/23 07:33 recovered W.L. = 21.5 ft bgsRP: 8.0 ft ags (Top of 8" casing)Logged By: N. Reynold (GSSI) & Cascade DrillingTest Date: 2-22-14 / SatScreened Interval: 134-144 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 124 ft bgs 0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
10:49:49	0	22.9	0	80753.5	Pump on @ 19.0 gpm,								
10:52	2	120.0	97.1		120 ↓Q to 3.9 gpm								Silky
10:56	6	95.8	72.9		3.9								turbid
11:00	10	82.0	59.1	80839.1	4.0								highly aerated discharge
11:20	30	73.65	50.75	80923.2	4.2								" 157
11:35	45	74.4	51.5	80987.1	4.3	18.2	2.8	38044	33127	25846.8	6.80	-149.9	3.42
11:50	60	74.9	52.0	81052.4	4.4	18.3	3.0	38686	33712	26295.6	6.82	-127.5	1.55
12:05	75	74.8	51.9	81117.8	4.4	18.2	3.3	38950	33868	26479.2	6.82	-113.0	1.65
12:20	90	74.8	51.9	81183.2	4.4	18.2	3.4	39056	33956	26560.8	6.82	-103.3	3.62
12:40	115	74.5	51.6	81271.6	4.4	18.1	3.6	39201	34053	26656.0	6.82	-94.7	10.7
12:55	125	74.6	51.7	81337.2	4.4	18.1	3.7	39394	34192	26751.2	6.81	-84.4	6.83
13:10	140	74.35	51.45	81402.6	4.4	18.2	3.8	39394	34270	26785.2	6.81	-77.5	7.13
13:25	155	74.3	51.4	81468.2	4.4	18.2	3.8	39413	34300	26798.8	6.81	-72.1	10.5
13:40	170	74.3	51.4	81533.8	4.4	18.2	3.7	39432	34276	26798.8	6.81	-66.7	11.6
13:55	185	74.35	51.45	81599.6	4.4	18.1	3.7	39481	34312	26846.2	6.81	-62.0	10.5
13:59:13	189				↓Q to 2.1 gpm								
14:05	195	55.55	32.65	81630.2	2.1	18.1	3.6	39527	34305	26880.4	6.81	-61.5	5.41
14:20	210	49.3	26.4	81662.3	2.1	18.6	3.6	39542	34731	26887.1	6.82	-58.4	0.18
14:30	220	48.8	25.9	81683.8	2.2	18.7	3.6	39563	34822	26900.8	6.82	-58.0	0.20
14:40	230	48.7	25.8	81705.1	2.1	18.8	3.6	39592	34907	26921.2	6.82	-56.6	0.24

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Flow thru cell = 1062.3 mL/min

13:59 (↓Q) = 1012.1 mL/min

Desired Flow Rate: 100 to 500 mL/min

F-13

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>4</u>					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>CX-B1WQ</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>122</u> ft bgs Static WL: <u>22.9</u> ft brp RP: <u>8.0 ft ags (top of 8" casing)</u>													
Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>2-22-14 / Sat</u> Screened Interval: <u>134-144</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>124</u> ft bgs <i>-0.68 constant</i>													
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
2/22	14:45	235	Begin collecting	WQ samples for lab analysis.									
	15:13	263	49.7	26.8	81782.0	2.3	18.9	3.6	39597	34967	26928.0	6.82	-55.3
	15:19:23	269				↑ Q to 6.8 gpm	15:21	↑ Q to 7.8 gpm	15:22	↑ Q to 10.3 gpm			
	15:25	275	102.9	80.0	81842.7	10.3	18.4	2.4	35369	30732	23936	6.94	-148.0
	15:29:17	279				↓ Q to 5.6 gpm	(WL was approaching pump)						overrange
	15:33	283	98.6	75.7	81904.3	5.6	17.9	3.6	39539	34214	26894.0	6.81	-68.3
	15:47	297	84.8	61.9	81982.7	5.6	17.8	3.8	39627	34163	26941.6	6.80	-41.4
	15:57	307	84.35	61.45	82039.2	5.7	17.8	3.9	39649	34194	26962.0	6.79	-37.1
	16:07	317	84.2	61.3	82095.7	5.7	17.9	3.9	39641	34252	26955.2	6.79	-33.6
	16:09:16	319	Pump off		82108.7								
			Total Volume pumped	=	1355.2 gallons								
2/23	07:33	29.5	(21.5 ft bgs)	Recovered water level.									

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

F-14

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 5

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-B1WQSonic Casing Dia: 8 in Sonic Casing Depth: 73 ft bgsStatic WL: 26.0 ft brpRP: 7.0 ft ags (top of 8" casing)

W.L.'s taken using
an electronic water
indicator.

Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 2-23-14 / SunScreened Interval: 84-94 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 74 ft bgs 0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
11:58:38	0	26.0	0	82108.7	Pump on @ ~19gpm.	11.1		11.1 gpm					
12:01	2	33.8	7.8	82187.8	11.1						aerated discharge		
12:05	6	33.8	7.8	82355.5	11.2						"	137	
12:20	21	33.8	7.8	82523.2	11.2							6.09	
12:35	36	33.8	7.8	82748.2	11.2							4.24	
12:55	56	34.0	8.0	82920.2	11.3	17.3	3.5	40675	34656	27655.6	7.00	-21.5	3.45
13:10	71	34.05	8.05	83092.2	11.5	17.3	3.6	40881	34862	27805.2	7.04	-57.6	4.56
13:25	86	34.0	8.0	83264.5	11.5	17.3	3.6	41062	35002	27920.8	7.05	-54.5	4.94
13:40	101	34.02	8.02	83436.8	11.5	17.3	3.6	41158	35069	27988.8	7.05	-44.8	4.67
13:55	116	34.1	8.1	83609.5	11.5	17.3	3.6	41219	35124	28029.6	7.05	-34.7	3.76
14:10	131	34.1	8.1	83782.1	11.5	17.3	3.6	41258	35155	28056.8	7.05	-25.0	4.00
14:25	146	34.2	8.2	83954.9	11.5	17.3	3.7	41289	35178	28077.2	7.05	-16.2	4.17
14:40	161	34.1	8.1	84131.1	11.5	17.3	3.6	41305	35193	28090.8	7.05	-9.0	4.39
14:52	173	34.1	8.1	84241.6	11.5	17.2	3.7	41315	35193	28097.6	7.05	-4.4	4.38
14:55	176				↓ Q	to 5.8gpm ; 14:58 ↓ Q to 2.8 gpm							
15:02	183	28.27	2.27	84158.2	2.8	17.7	3.5	41317	35647	28097.6	7.06	-7.8	0.16
15:12	193	28.25	2.25	84186.4	2.8	18.3	3.4	41304	36002	28084.0	7.06	-12.3	3.65
15:22	203	28.2	2.2	84214.0	2.8	19.4	3.4	41288	36046	28077.2	7.07	-14.3	9.61
15:32	213	28.2	2.2	84241.6	2.8	18.4	3.4	41270	36070	28063.6	7.07	-15.7	13.5
15:42	223	28.15	2.15	84269.0	2.7	18.4	3.3	41262	36051	28056.8	7.07	-14.4	17.0

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1219.5 mL/min
= 1180.2 mL/min ($\downarrow Q @ 14:55$)

Turb: +/- 10%

DO: +/- 10%

F-15

Desired Flow Rate: 100 to 500 mL/min

GEOSCIENCE

**CONFIDENTIAL
DRAFT**

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Subject to Revision

**ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET**

Zone No. 5

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: CX-B1WQ

Sonic Casing Dia: 8 in Sonic Casing Depth: 73 ft bgs

Static WL: 26.0 ft brp

RP: 7.0 flags

Logged By: N. Reynolds (GSSI) & Cascade Drilling

Test Date: 2-23-14 / Sun

Screened Interval: 84-94 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 74 ft bgs

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 ml/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
 P.O. Box 220, Claremont, CA 91711
 Tel: (909) 451-6650 Fax: (909) 451-6638
 www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 6

W.L.s

Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-B1WQSonic Casing Dia: 9 in Sonic Casing Depth: 34 ft bgsStatic WL: 25.25 ft brpRP: 6.0 ft ags (top of 9" casing)

W.L.'s taken using an electronic W.L. Indicator

Logged By: N. Reynolds(GSSI) & Cascade Drilling
Test Date: 2-24-14 / MonScreened Interval: 51 - 61 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 47 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
14:01:32	0	25.25	0	85016.7	Pump on @	10.4 gpm							
14:04	2		-		Pump off. PWL reaches pump.								
14:08:20	0			85048.4	Resume pumping @ 5.2 gpm.								
14:10	2	37.6	12.35		5.2								
14:15	7	38.55	13.30	85087.1	5.2								
14:30	22	38.9	13.65	85166.0	5.3								
14:45	37	40.15	14.90	85246.5	5.4	17.7	3.0	32656	28069	22208.8	7.12	-174.7	62.0
15:00	52	40.1	14.85	85330.5	5.6	17.6	3.1	33784	29013	22990.8	7.17	-159.3	13.4
15:15	67	40.25	15.00	85412.2	5.4	17.6	3.2	34309	29483	233308	7.18	-142.4	6.29
15:30	82	40.35	15.10	85494.2	5.5	17.6	3.3	34701	29777	23589.2	7.18	-130.1	4.27
15:45	97	40.40	15.15	85576.5	5.5	17.6	3.5	35076	30098	23847.6	7.18	-120.1	3.87
16:00	112	40.4	15.15	85658.6	5.5	17.5	3.6	35234	30194	23963.2	7.18	-113.5	4.26
16:15	127	40.4	15.15	85740.6	5.5	17.5	3.7	35355	30316	24051.6	7.18	-108.0	4.42
16:30	142	40.7	15.45	85823.1	5.5	17.5	3.7	35451	30377	24099.2	7.18	-102.9	5.41
16:45	157	40.8	15.55	85906.7	5.6	17.4	3.8	35658	30507	24242.0	7.17	-98.2	4.47
16:52	164				↓Q to 4.1 gpm								16:55 → 0.60
17:00	172	36.26	11.0	85978.3	4.1	17.8	3.8	35644	30716	24242.0	7.17	-95.3	0.57
17:10	182	36.35	11.1	86020.7	4.2	17.7	3.8	35703	30750	24282.8	7.17	-93.5	1.34
17:20	192	36.33	11.08	86063.1	4.2	17.7	3.7	35736	30790	24303.2	7.17	-91.3	2.48
17:24:32	197			86081.8	Pump off. Total Volume pumped =	1065.1 gallons							

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

17:30 26.0 ft brp

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

F-17

Desired Flow Rate: 100 to 500 mL/min

Flow thru cell = 1,145.9 mL/min

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET																																																																																																																																																																																																							
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>6</u> W.L.'s																																																																																																																																																																																																							
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>						Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u>																																																																																																																																																																																																									
Borehole Name/Number: <u>CX-B1WQ</u>						Test Date: <u>2-25-14/Tue</u>																																																																																																																																																																																																									
Sonic Casing Dia: <u>9</u> in		Sonic Casing Depth: <u>34</u> ft bgs				Screened Interval: <u>51-61</u> ft bgs																																																																																																																																																																																																									
Static WL: <u>25.9</u> ft brp						Reference Point Elevation: _____ ft amsl																																																																																																																																																																																																									
RP: <u>6.0 flags (top of 9" casing)</u>						Pump Depth: <u>47</u> ft bgs																																																																																																																																																																																																									
<table border="1"> <thead> <tr> <th>Time</th> <th>Time Step (min)</th> <th>Water Level (ft brp)</th> <th>Drawdown (ft)</th> <th>Totalizer (gal)</th> <th>Pumping Rate (gpm)</th> <th>Temp (°C)</th> <th>DO (mg/L)</th> <th>Specific Cond. (µS/cm)</th> <th>Cond. (µS/cm)</th> <th>TDS (mg/L)</th> <th>pH</th> <th>ORP (mV)</th> <th>Turbidity (NTU)</th> <th>Vol Pumped (gal)</th> </tr> </thead> <tbody> <tr><td>07:49:48</td><td>0</td><td>25.9</td><td>0</td><td>86081.8</td><td>Pump on 9.2 gpm</td><td></td><td></td><td>0752</td><td>Q to 4.1 gpm.</td><td>0755</td><td>1Q to 5.7 gpm</td><td></td><td></td><td></td></tr> <tr><td>08:00</td><td>10</td><td>37.4</td><td>11.5</td><td>86141.1</td><td>5.8</td><td></td><td></td><td>30568</td><td>discharge is aerated</td><td>24303.2</td><td>7.17</td><td>-59.3</td><td>5.09</td><td>22.6</td></tr> <tr><td>08:15</td><td>25</td><td>38.5</td><td>12.6</td><td>86231.7</td><td>6.0</td><td>17.4</td><td>3.3</td><td>35755</td><td>30693</td><td>24378.0</td><td>7.18</td><td>-68.6</td><td>1.56</td><td></td></tr> <tr><td>08:30</td><td>40</td><td>38.5</td><td>12.6</td><td>86322.3</td><td>6.0</td><td>17.5</td><td>3.4</td><td>35851</td><td>30751</td><td>24425.6</td><td>7.18</td><td>-69.1</td><td>0.62</td><td></td></tr> <tr><td>08:45</td><td>55</td><td>38.6</td><td>12.7</td><td>86413.0</td><td>6.0</td><td>17.5</td><td>3.4</td><td>35906</td><td>30762</td><td>24439.2</td><td>7.18</td><td>-68.5</td><td>0.34</td><td></td></tr> <tr><td>08:55</td><td>65</td><td>38.65</td><td>12.75</td><td>86473.5</td><td>6.1</td><td>17.5</td><td>3.4</td><td>35926</td><td>30803</td><td>24452.8</td><td>7.18</td><td>-67.3</td><td>0.33</td><td></td></tr> <tr><td>09:05</td><td>75</td><td>38.7</td><td>12.8</td><td>86534.0</td><td>6.1</td><td>17.5</td><td>3.5</td><td>35952</td><td>30861</td><td>24493.6</td><td>7.18</td><td>-63.4</td><td>0.25</td><td></td></tr> <tr><td>09:10</td><td>80</td><td>Begin collecting WQ samples for lab analysis.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>09:31</td><td>101</td><td>38.8</td><td>12.9</td><td>86697.4</td><td>6.3</td><td>17.5</td><td>3.6</td><td>35999</td><td>30861</td><td>24493.6</td><td>7.18</td><td></td><td></td><td></td></tr> <tr><td>09:36:56</td><td>107</td><td></td><td></td><td>86733.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="14">Total volume pumped today = <u>651.7</u> gallons</td></tr> <tr><td>10:15</td><td>145</td><td>25.8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>														Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Vol Pumped (gal)	07:49:48	0	25.9	0	86081.8	Pump on 9.2 gpm			0752	Q to 4.1 gpm.	0755	1Q to 5.7 gpm				08:00	10	37.4	11.5	86141.1	5.8			30568	discharge is aerated	24303.2	7.17	-59.3	5.09	22.6	08:15	25	38.5	12.6	86231.7	6.0	17.4	3.3	35755	30693	24378.0	7.18	-68.6	1.56		08:30	40	38.5	12.6	86322.3	6.0	17.5	3.4	35851	30751	24425.6	7.18	-69.1	0.62		08:45	55	38.6	12.7	86413.0	6.0	17.5	3.4	35906	30762	24439.2	7.18	-68.5	0.34		08:55	65	38.65	12.75	86473.5	6.1	17.5	3.4	35926	30803	24452.8	7.18	-67.3	0.33		09:05	75	38.7	12.8	86534.0	6.1	17.5	3.5	35952	30861	24493.6	7.18	-63.4	0.25		09:10	80	Begin collecting WQ samples for lab analysis.													09:31	101	38.8	12.9	86697.4	6.3	17.5	3.6	35999	30861	24493.6	7.18				09:36:56	107			86733.5											Total volume pumped today = <u>651.7</u> gallons														10:15	145	25.8												
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Vol Pumped (gal)																																																																																																																																																																																																	
07:49:48	0	25.9	0	86081.8	Pump on 9.2 gpm			0752	Q to 4.1 gpm.	0755	1Q to 5.7 gpm																																																																																																																																																																																																				
08:00	10	37.4	11.5	86141.1	5.8			30568	discharge is aerated	24303.2	7.17	-59.3	5.09	22.6																																																																																																																																																																																																	
08:15	25	38.5	12.6	86231.7	6.0	17.4	3.3	35755	30693	24378.0	7.18	-68.6	1.56																																																																																																																																																																																																		
08:30	40	38.5	12.6	86322.3	6.0	17.5	3.4	35851	30751	24425.6	7.18	-69.1	0.62																																																																																																																																																																																																		
08:45	55	38.6	12.7	86413.0	6.0	17.5	3.4	35906	30762	24439.2	7.18	-68.5	0.34																																																																																																																																																																																																		
08:55	65	38.65	12.75	86473.5	6.1	17.5	3.4	35926	30803	24452.8	7.18	-67.3	0.33																																																																																																																																																																																																		
09:05	75	38.7	12.8	86534.0	6.1	17.5	3.5	35952	30861	24493.6	7.18	-63.4	0.25																																																																																																																																																																																																		
09:10	80	Begin collecting WQ samples for lab analysis.																																																																																																																																																																																																													
09:31	101	38.8	12.9	86697.4	6.3	17.5	3.6	35999	30861	24493.6	7.18																																																																																																																																																																																																				
09:36:56	107			86733.5																																																																																																																																																																																																											
Total volume pumped today = <u>651.7</u> gallons																																																																																																																																																																																																															
10:15	145	25.8																																																																																																																																																																																																													

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

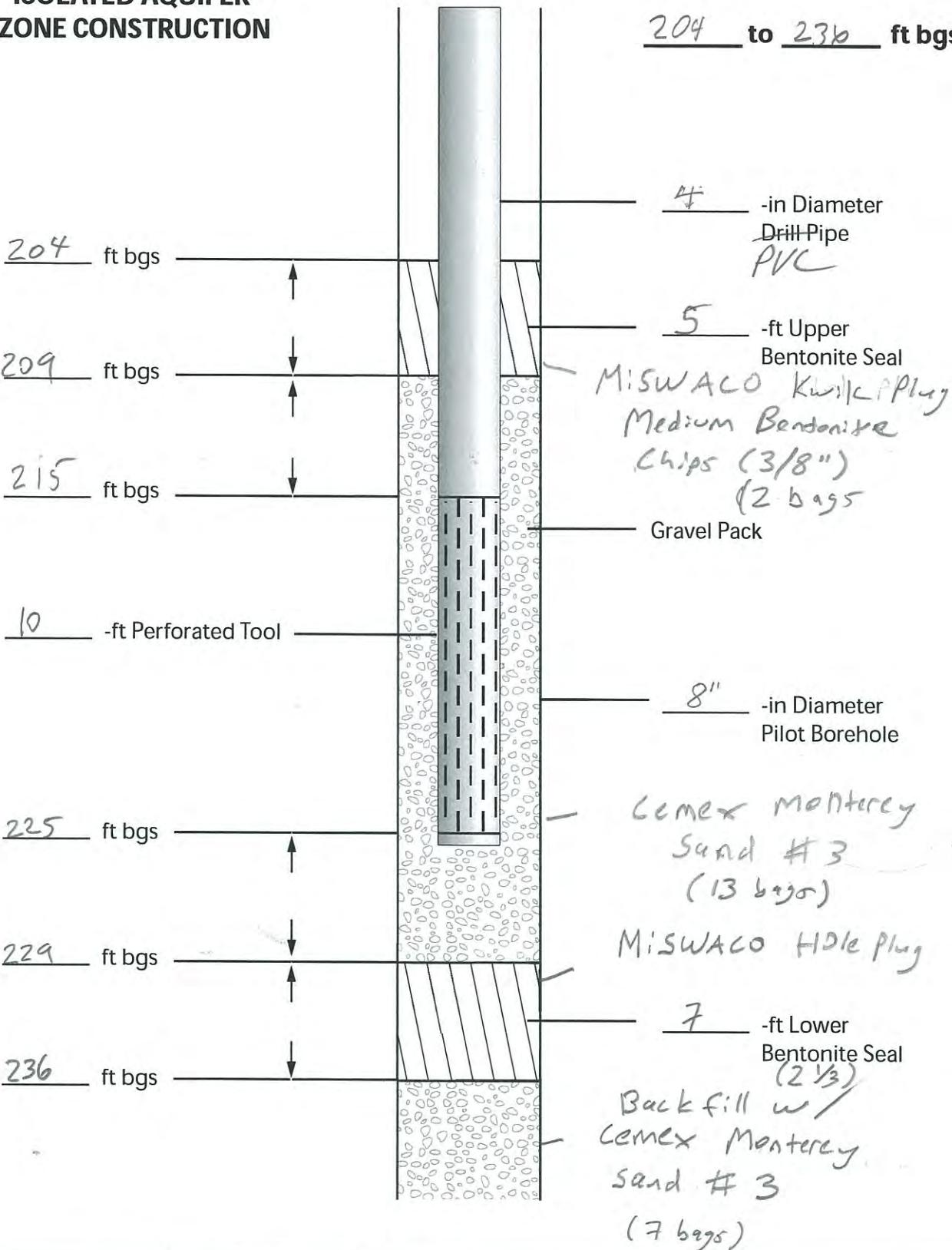
Flow thru cell = 1133.8 mL/min

Turb: +/- 10%

DO: +/- 10%

F-18

Desired Flow Rate: 100 to 500 mL/min

**ISOLATED AQUIFER
ZONE CONSTRUCTION**
Zone No. 1204 to 236 ft bgs**GEOSCIENCE**

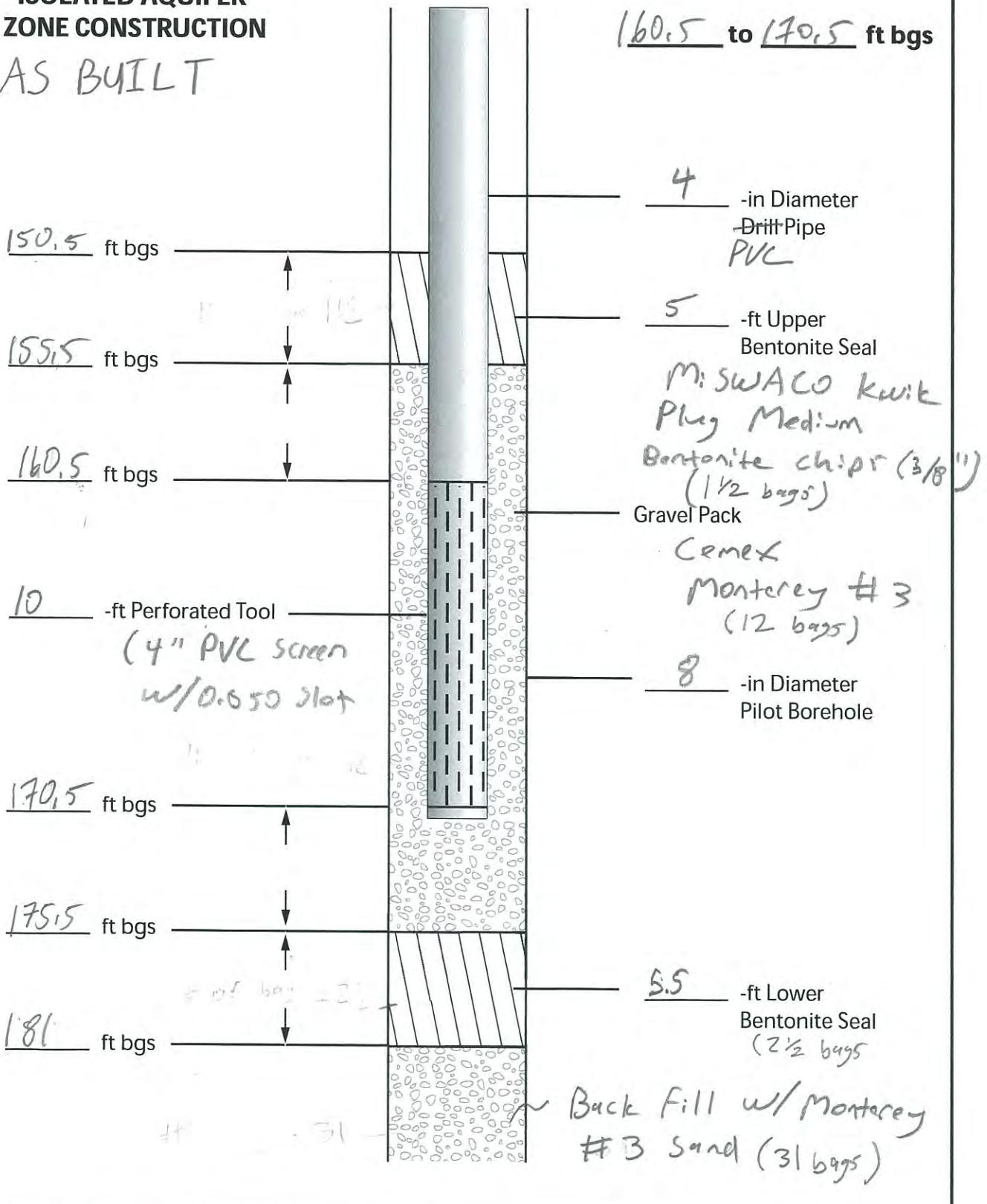
GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssivwater.com

Client: RBF Consulting Inc.Well Name/Number: CX-B2WQDate: 3/7/14

**ISOLATED AQUIFER
ZONE CONSTRUCTION**
AS BUILT

Zone No. 2

160.5 to 170.5 ft bgs



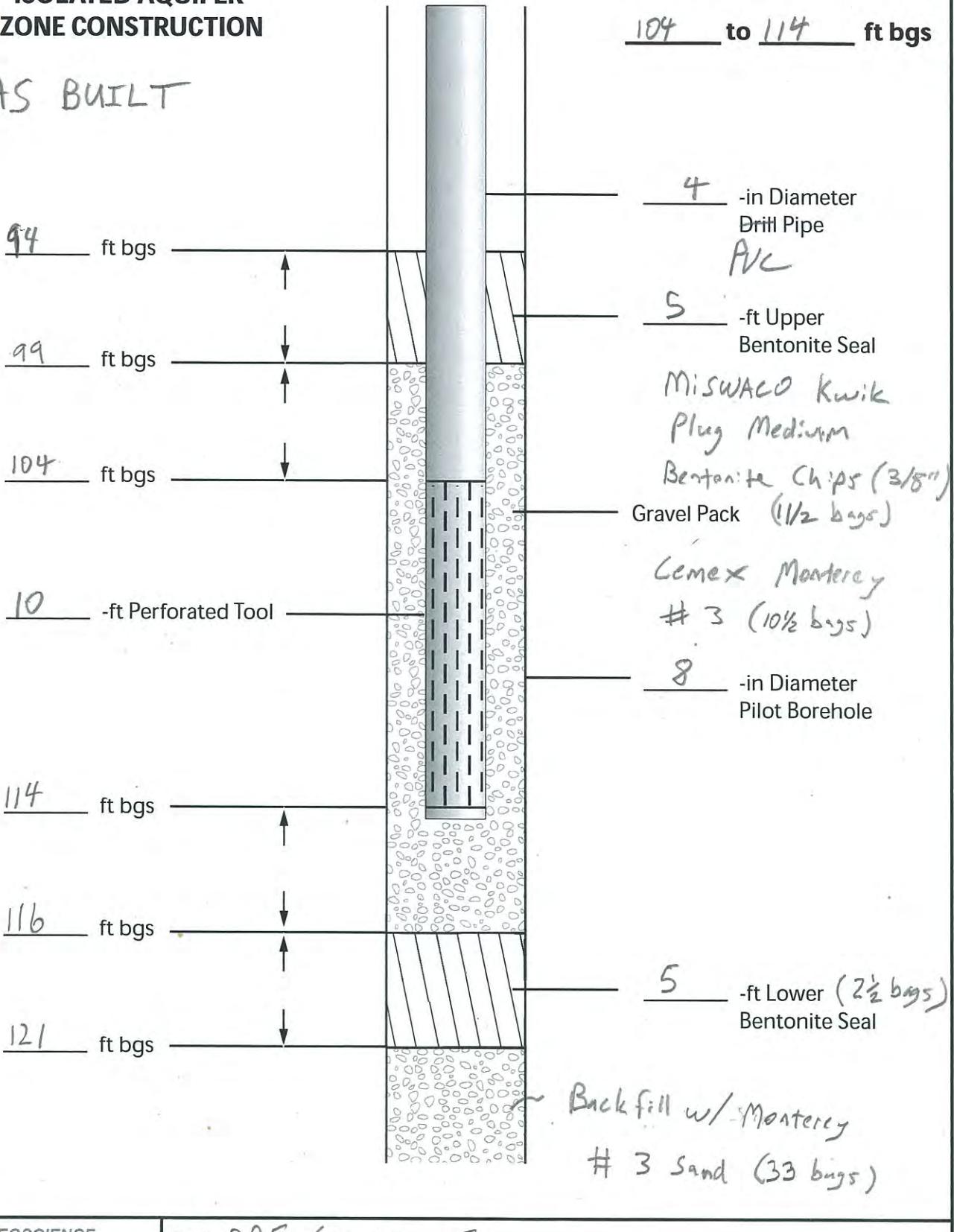
GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwafer.com

Client: RBF Consulting

Well Name/Number: MRWSP Exploratory Borehole CX-B2WQ

Date: 3/9/14 Sunday

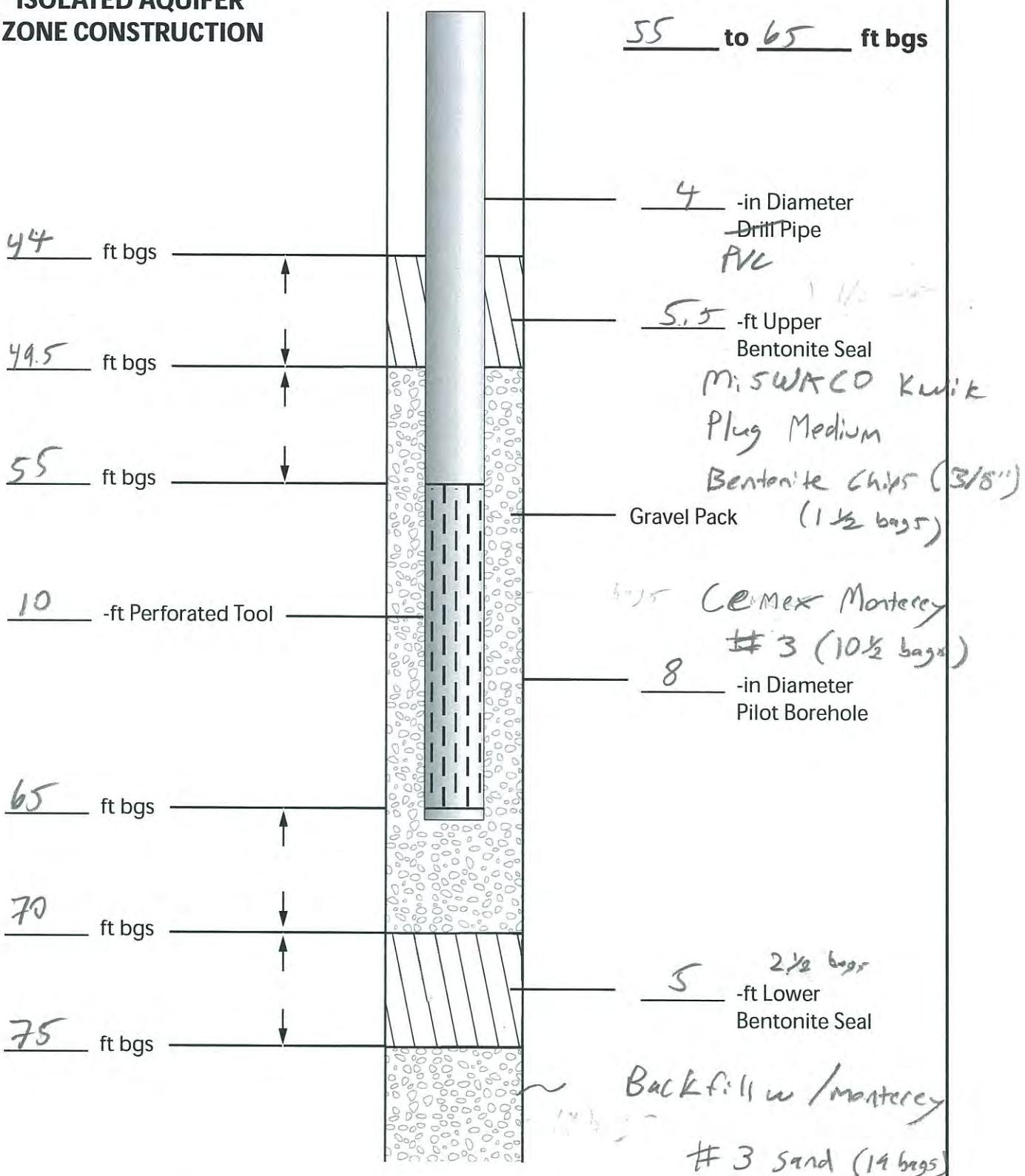
**ISOLATED AQUIFER
ZONE CONSTRUCTION**
AS BUILT
Zone No. 3
104 to 114 ft bgs

GEOSCIENCE

 GEOSCIENCE Support Services, Incorporated
 P.O. Box 220, Claremont, CA 91711
 Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF-Consulting Inc

Well Name/Number: MPWSP Exploratory Borehole CX-B2WQ

Date: 3/10/14 Monday

**ISOLATED AQUIFER
ZONE CONSTRUCTION**
Zone No. 4
55 to 65 ft bgs

GEOSCIENCE

 GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

 Client: RBF- Consulting Inc

 Well Name/Number: MPWSP Exploratory Borehole CX-B2wQ

 Date: 3/12/14

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>1</u> WL 5					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>						Logged By: <u>J. Sodden (GSST) & CG code</u>							
Borehole Name/Number: <u>CX-B2wQ</u>						Test Date: <u>3/8/14 / Saturday</u>							
Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>210</u> ft bgs						Screened Interval: <u>215 - 225</u> ft bgs							
Static WL: <u>36.4</u> ft brp						Reference Point Elevation: _____ ft amsl							
RP: <u>8 ft</u>						Pump Depth: <u>197</u> ft bgs							
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal/s)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	O ₂ Sat Constant TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
0755	0	36.4	0	8678	Pump on @ 0755								
0757	2	36.2	9.8	8679.5	7.5								
0801	6	48.9	12.5	8683	8.75								
0805	10	51.5	15.1	8691.5	21.25								
0825	30	51.7	15.3	8730.5	19.5								
0840	45	51.85	15.45	8760.5	20								
0855	60	51.5	15.1	8790	19.66								24.0
0910	75	52	15.6	8820	20	19°C	2.9	35364	31322	24058	6.68	103.9	3.98
0925	90	52.2	15.8	8849.5	19.67	18.8	1.2	35369	31223	24051.6	6.70	79.2	2.85
0940	105	52.3	15.9	8879.5	20	18.9	0.9	35254	31127	23970	6.71	71.1	2.47
0955	120	52.35	15.95	8909	19.67	18.9	0.9	35159	31057	23908.5	6.71	62.7	1.90
1010	135	43.6	7.2	8922.5	12.33	19.1	0.9	35318	31339	24010	6.72	57.5	1.47
1025	150	43.55	7.15	8941.5	9.33	19.2	0.9	35319	31408	24017	6.72	52.1	1.45
1040	165	43.50	7.10	8956.	9.67	19.3	0.9	35311	31455	24010.8	6.72	48.7	1.91
1050	175	43.55	7.15	8966	10	19.2	0.9	35319	31410	24010.8	6.73	45.1	0.78
1100	185	43.50	7.10	8976.5	10.5	19.2	0.9	35342	31380	24030.2	6.74	43.4	1.45
1115	200	43.55	7.15	8990.5	9.33	19.3	0.9	35349	31471	24038.0	6.74	41.6	1.62
1130	215	43.55	7.15	9005.5	10	19.4	0.9	35337	31552	24024.1	6.77	36.0	2.09
1145	230	43.60	7.20	9020.5	10	19.3	0.9	35297	31454	24004	6.83	30.3	3.09
1200	245	43.60	7.20	9034.5	9.33	19.2	0.7	35291	31398	23917.2	6.72	37.6	3.15

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 970 mL/min

Turb: +/- 10%

DO: +/- 10%



GEOSCIENCE
Support Services, Inc.
PO Box 220, Claremont, CA 91111
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gsswater.com

CONFIDENTIAL

DRAFT

Subject to Revision

ISOLATED AQUIFER

ZONE SAMPLING DATA SHEET

Zone No. 1

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: CX-B2WQ

Sonic Casing Dia: 8 in

Sonic Casing Depth: 210 ft bgs

Static WI: 316.4 ft brp

RP: 844

Logged By: J. Scholer (GSSST) & Cascade Water

Test Date: 3/8/14 Saturday

Screened Interval: 215-225 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 197 ft bgs

0.68 constant

Time Step (min)

Water Level (ft brp)

Drawdown (ft)

Totalizer (gpm)

Pumping Rate (gpm)

Temp (°C)

DO (mg/L)

Cond. (µS/cm)

Specific Cond. (µS/cm)

TDS (mg/L)

pH

ORP (mV)

Turbidity (NTU)

1215 260 43.55 7.15 10 19.2 0.9 35272 31374 23983 6.72 40.1 3.90

1230 245 43.55 7.15 10 19.1 0.9 35261 31309 23976.8 6.71 39.3 2.44

1245 240 43.50 7.10 9.33 19.2 0.9 35308 31417 24010.0 6.71 41.5 1.89

1300 305 43.50 7.10 9.13.5 19.2 0.9 35305 31312 24004.0 6.71 43.4 3.6

1315 320 41.30 4.90 9.06.5 19.1 0.8 35309 31382 24004 6.71 40.8 2.53

1330 350 43.80 7.40 9.16.5 19.3 0.8 35413 31544 24072 6.71 35.4 4.29

1345 365 40.80 4.40 9.12.9.0 19.1 0.8 35284 31347 23992 6.72 38.2 3.65

1400 380 40.70 4.30 9.13.8.5 19.3 0.8 35335 31483 24031.2 6.72 32.1 5.43

1415 395 40.65 4.25 9.14.7.5 19.3 0.8 35313 31470 24017.6 6.72 30.5 7.45

1430 410 40.85 4.95 9.15.6.5 19.3 0.8 35310 311973 24010.8 6.72 28.3 11.0

1445 425 44.75 8.35 9.170.9 19.6 0.8 35250 31202 23970.0 6.71 36.9 5.28

1500 440 44.85 8.44 9.188.1 11.47 18.9 0.9 35238 31195 23963.2 6.71 42.5 5.86

1515 455 44.90 8.50 9.206.4 12.2 18.8 0.9 35221 31059 23996.6 6.71 49.8 2.39

1530 470 44.90 8.50 9.224.6 12.13 18.9 0.9 35212 31087 23972.8 6.71 46.2 1.29

1545 485 44.90 8.50 9.242.8 12.13 18.8 0.9 35226 31097 23949.6 6.71 47.8 0.96

1555 495 44.95 8.55 9.255.0 12.20 18.8 0.9 35210 31027 23942.8 6.71 48.5 0.69

1605 505 44.95 8.55 9.267.1 12.10 18.8 0.9 35199 3029 23936.0 6.71 49.0 0.91

W/O. Sample 160 F. nishu 1 Sun 11/15 @ 1635

1638 538 44.90 8.50 9.307.5 12.92 18.8 0.7 35152 30943 23902 6.71 49.4 0.90

1645 545 44.90 8.50 9.316.0 12.02 18.8 0.9 35143 30951 23895.5 6.71 49.4 0.70

Stabilization Criteria:
3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit
Cond: +/- 3%
ORP: +/- 10 mV

final totalizer = 9319.20 gals

Turb: +/- 10%
DO: +/- 10%

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET

Zone No. 2

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: CX-B2 WQ

Sonic Casing Dia: 8 in

Static WL: 34.25 ft brp

RP: 8 ft + 95 (Top of Casing)

Sonic Casing Depth: 14.7 ft bgs

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gpm)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
1454	0	34.25	Ø	9319	~10gpm	~10.9pm							
1456	2	65.2	30.95	9321	~10gpm	~10.9pm							
1500	6	68.7	34.45	9325.7									
1504	10	69.0	34.75	9321.8									
1524	30	69.3	35.05	9325.0									
1539	45	69.35	35.10	9365.3									
1554	60	70.00	35.75	9380.7									
1609	75	69.80	35.95	9396.1									
1624	90	70.0	35.75	9491.8									
1639	105	69.20	34.95	9926.7									
1654	120	69.75	35.50	9442.3	10.40	18.4°C	2.2						
1659	125	70.1	35.85	9447.5	10.40	18.4	1.6						
1704	130	70.00	35.75	9452.6	10.20	18.4	1.6						
				9454.85	final	10.01201							
3/10 0803	0	34.31	Ø	9454.85									
0805	2	51.6	17.23	9455.3									
0809	6	52.3	17.93	9458.8									
0813	10	55.1	20.41	9462.1									
0833	30	67.25	232.04	9483.5	10.7	18.2	1.5	2655.8	2223.8	1733.20	6.67	45.2	3.76
0848	45	67.1	32.74	9449.1									
				18.2									
				19597	19597	6.79							
				15293	15293	6.79							
				32.0	32.0								

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%
DO: +/- 10%

Appendix F

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.qssiwatertech.com

CONFIDENTIAL
DRAFT
Subject to Revision

Client: RBF/MPWSP - Exploratory Borehole Drilling
Borehole Name/Number: CX-B2 wQ
Sonic Casing Dia: 8 in
Static WL: 34.3 ft bsp
RP: 6ft wgs (Top of 6in)

Stabilization Criteria: 3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit
Cond: +/- 3%
ORP: +/- 10 mV

Flow through cell = 1,100 mL/min

Turb: +/- 10%
DO: +/- 10%

GEOSCIENCE

GEO SCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL

DRAFT

Subject to Revision

ISOLATED AQUIFER ZONE SAMPLING DATA SHEET

Zone No. 3

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: CX-B2WQ

Sonic Casing Dia: 8 in

Static WL: 31.70 ft brp

RP: 8 ft 1/2 (Top of Casing)

Sonic Casing Depth: 92 ft bgs

Test Date: 10/10-11/14

Screened Interval: 104-114 ft bgs

Reference Point Elevation: 91 ft amsl

Pump Depth: 91 ft bgs

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal x 10)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	VOL (mL/min)
1627	0	31.70	0	9656.4										
1629	2	47.00	15.30	9658.8	12.0	19.2	8.632.05							0.47 off scale
1633	6	47.00	15.30	9664.9	15.25	18.2								
1637	10	45.30	13.60	9668.2	8.25	17.9								2.91
1642	15	45.70	14.0	9673.6	10.80	18.1								
1643	Pump off			9674.2										94.3
0754	0	32.30	0	9674.2										
0756	2	45.70	13.40	9676.7	12.50									
0800	6	45.65	13.35	9681.3	11.50									
0804	10	45.85	13.55	9685.9	11.50	17.8	5.7	3936.3	3339.1	26751.2	6.69	127.3	11,90	
0824	30	45.90	13.60	9709.0	11.55	17.8	4.6	38170	32298.0	259746.0	7.01	8.1	5.26	
0834	45	45.85	13.55	9726.7	11.53	17.8	4.6	38848	33352.6	26424.6	7.00	-3.3	5.05	
0854	60	45.90	13.60	9743.6	11.53	17.9	4.7	3926.3	33391.2	26696.0	6.98	2.9	2.39	
0909	75	45.95	13.65	9761.2	11.60	17.9	5.0	39662	34262	26975.6	6.98	12.6	2.45	
0924	90	45.95	13.65	9778.4	11.47	17.9	5.1	39796	34408	27057.2	6.97	21.2	2.89	
0939	105	45.95	13.65	9796.1	11.80	18.0	5.1	39821	34467	27077.6	6.97	27.9	2.65	
0954	120	46.0	13.70	9813.1	11.33	18.0	5.3	39909	34539	27132.0	6.97	33.6	1.53	
1009	135	46.0	13.70	9830.6	11.66	18.0	5.3	39946	34607	27166.2	6.96	38.8	1.97	
1024	150	46.0	13.70	9848.0	11.60	18.0	5.4	39974	34662	27179.6	6.96	42.2	2.52	
1039	165	46.05	13.75	9865.4	11.60	18.0	5.4	339978	34666	27193.2	6.97	49.6	2.30	

F-27

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow through cell = 1,100 mL/min

Appendix F

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
PO Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssinwater.com

CONFIDENTIAL
DRAFT
Subject to Revision

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: CX-132w/Q

Sonic Casing Dia: 8 in

Sonic Casing Depth: 12 ft bgs

Static WL: 31.7, 32.3 ft brp

RP: 8 ft + 19.5 (Top of casing)

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET

Zone No. 3

Logged By: J. Selsor/aw & Cascade P. Hng/aw

Test Date: 3/10-11/14

Screened Interval: 104-114 ft bgs

Reference Point Elevation: 91 ft amsl

Pump Depth: 91 ft bgs

VOL
(ml/min)

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gpm)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
1054	180	46.00	13.70	9882.9	11.67	18.1	5.4	40044	34733	27234.2	6.94	46.5	1.25
1109	195	46.05	13.75	9900.3	11.60	18.1	5.3	40057	34741	27234.0	6.96	47.3	0.49
1119	210	46.00	13.70	9912.0	11.70	18.1	5.3	40077	34769	27220.4	6.97	48.0	1.07
1129	220	46.00	13.70	9923.6	11.60	18.1	5.4	40025	34769	27213.0	6.97	47.9	1.89
1144	235	46.05	13.75	9941.1	11.66	18.1	5.3	40029	34781	27213.6	6.96	48.5	1.80
1159	250	46.00	13.70	9958.4	11.53	18.1	5.3	40022	34794	27213.6	6.96	49.1	0.94
1209	260	46.00	13.70	9970.1	11.70	18.2	5.3	40061	34807	27217.6	6.92	47.5	1.87
1224	275	46.00	13.70	9987.5	11.60	18.1	5.3	40069	34912	27217.6	6.96	47.2	2.38
1239	290	46.10	13.80	10004.9	11.60	18.2	5.3	40037	34710	27227.2	6.97	46.0	3.04
1254	305	37.70	5.40	10016.0	7.4	18.7	5.2	40125	35342	272281.6	6.98	36.6	5.66
1309	320	37.70	5.40	10023.5	5.0	18.8	5.2	40133	35319	27289.4	6.97	31.7	3.42
1324	335	37.70	5.40	10031.0	5.0	18.9	5.2	40133	35433	27288.4	6.98	30.9	3.06
1339	350	37.70	5.40	10038.4	4.93	18.8	5.2	40126	35380	27281.6	6.97	29.7	
1354	365	37.70	5.40	10045.86	4.97	18.7	5.2	40150	35342	27308.8	6.97	29.1	1.90
1409	380	37.70	5.40	10053.32	4.17	18.7	5.3	40155	35332	27302.0	6.97	28.2	1.70
1424	395	37.70	5.40	10060.78	4.17	18.6	5.2	40156	35274	27328.8	6.97	27.0	4.23
1439	410	37.70	5.40	10068.23	4.97	18.6	5.3	40159	35288	27308.8	6.97	26.4	3.17
1454	425	37.60	5.30	10075.57	4.89	18.6	5.3	40166	35265	27308.8	6.97	25.5	4.58
1509	440	51.35	15.05	10094.08	14.34	17.7	5.6	40159	34555	27328	6.96	39.9	0.86
1524	455	51.4	19.1	10921.99	16.60	17.7	5.6	40160	34536	27315.6	6.95	44.2	0.69

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

DO: +/- 10 mV

Flow through cell = 1,050 ml/min

Turb: +/- 10%
DO: +/- 10%

Appendix F

CONFIDENTIAL
DRAFT
Subject to Revision

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.assiwalter.com

ISOLATED AQUIFER ZONE SAMPLING DATA SHEET

Subject to Revision

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: CX-132 w/8 ft bgs
Sonic Casing Dia: 8 in Sonic Casing Depth: 82

Sonic Casing Dia: 8 in Sonic Casing Depth: 42 ft bgs
 Static WL: 31°, 32°, 33° ft brp
 RP: 8 ft 95 (Top of 100 ft)

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit
Cond: +/- 3%
ORP: +/- 10 mV

Turb: +/- 10%
DO: +/- 10%

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssivater.com

CONFIDENTIAL
DRAFT
Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEETZone No. 4Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-B2WQSonic Casing Dia: 48 inSonic Casing Depth: 44 ft bgsStatic WL: 21.75 ft brpRP: 6.5 ft ags (top of casing)Logged By: J. Soobaker & Cascede - WLSTest Date: 3/12/14 wednesdayScreened Interval: 55-65 ft bgsReference Point Elevation: 54 ft amslPump Depth: 0.68 ft bgs

0.68 Constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gals)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
1/205	0	32.80	0	102374.2									
1/207	2	34.80	4.00	102395.1	10.45								
1/211	6	35.00	4.20	102424.4	7.33								
1/213	10	35.60	4.20	102453.6	7.33								
1/225	30	36.50	5.70	102463.7	9.06								
1/250	45	36.65	5.85	102781.7	9.80	18.3	4.4	39400	34377	26771.6	7.11	-34.7	1.51
1/305	60	36.65	5.85	102930.0	9.89	18.3	4.5	31553	34531	26914.4	7.11	-23.3	7.64
1/320	75	36.65	5.85	103078.4	9.89	18.3	4.6	39691	34643	26916.0	7.11	-20.1	6.52
1/335	10	37.10	7.10	103247.9	11.30	18.2	4.5	39722	34565	27016.4	7.12	-13.7	7.57
1/350	105	37.85	7.05	103427.8	11.99	18.2	4.6	39745	34646	27030.8	7.11	-9.1	5.30
1/405	120	37.85	7.05	103607.8	12.00	18.2	4.6	31771	34581	27043.6	7.12	-6.6	5.64
1/420	135	37.85	7.05	103798.0	12.01	18.2	4.6	31762	34578	27043.6	7.12	-3.3	4.15
1/435	150	37.85	7.05	103916.8.2	12.01	18.1	4.7	31752	34555	27023.3	7.12	-0.5	3.04
1/450	165	37.85	7.05	104148.4	12.01	18.1	4.7	31725	34520	27016.4	7.12	2.1	2.63
1/505	180	37.85	7.05	104328.7	12.02	17.9	4.8	31721	34358	27016.4	7.12	4.3	2.53
1/520	195	37.85	7.05	104508.1	12.01	17.8	4.8	39412	34309	27030.0	7.12	7.0	1.21
1/535	210	37.85	7.05	104689.3	12.03	17.8	4.7	31729	34273	27016.4	7.12	8.7	0.98
1/545	220	37.85	7.05	104809.5	12.02	17.8	4.7	31703	34233	27002.8	7.10	10.1	0.87
1/555	230	37.85	7.05	104939.8	12.07	17.8	4.8	31704	34210	27002.8	7.12	11.1	1.79
1/610	245	37.85	7.05	105110.0	11.35	17.9	4.7	31610	34246	26189.2	7.12	12.8	1.75

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

DO: +/- 10 mV

Flow Through Cell = 1/100 mL/min

Turb: +/- 10%

DO: +/- 10%

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #1 As Built

Zone No. 1306 to 316 ft bgs

8" Sonic Casing to 285 ft bgs.
Open annulus above upper
bentonite seal.

289.5 ft bgs

10.0 ft

299.5 ft bgs

6.5 ft

306 ft bgs10

-ft Perforated Tool

(4" PVC Screen
w/ 0.050" slot)4-in Diameter
Drill Pipe
PVC10.0-ft Upper
Bentonite Seal
Mi SWACO Kwik-Plug
Medium ($\frac{3}{8}$ ") Bentonite
Chips (2 bags)Gravel Pack CEMEX
Monterey #3
(15 bags)8-in Diameter
Pilot Borehole316 ft bgs

5.5 ft

321.5 ft bgs

7.5 ft

329 ft bgs7.5-ft Lower
Bentonite Seal
(3 bags)

native material

GEOSCIENCE
 GEOSCIENCE Support Services, Incorporated
 P.O. Box 220, Claremont, CA 91711
 Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssivwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole CX-B4

Date: 4-3-14 / Thu & 4-4-14 / Fr:

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #2 As-Built

Zone No. 2

248 to 258 ft bgs

8" Sonic Casing to 236 ft bgs.
Open annulus above upper bentonite seal.

236 ft bgs

6.5 ft

242.5 ft bgs

5.5 ft

248 ft bgs

10 -ft Perforated Tool

(4" PVC Screen
(w/ 0.050" slots)

258 ft bgs

5 ft

263 ft bgs

6 ft

269 ft bgs

300 ft bgs

4 -in Diameter
Drill Pipe
PVC

6.5 -ft Upper
Bentonite Seal

Mi SWALO Kwik-Plug
Medium (3/8") Bentonite
chips (2 bags)

Gravel Pack CEMEX
Monterey #3
(13.5 bags)

8 -in Diameter
Pilot Borehole

6 -ft Lower
Bentonite Seal
(2.5 bags)

33 bags of CEMEX
Monterey #3
800 gal H₂O

GEOSCIENCE	
GEOSCIENCE Support Services, Incorporated P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com	

Client: <u>RBF Consulting Inc.</u>
Well Name/Number: <u>MPWSP Exploratory Borehole CX-B4</u>
Date: <u>4-5-14 / Sat</u>

Zone #3 As Built

Zone No. 3

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

8" Sonic casing to 144 ft bgs.
Open annulus above upper bentonite seal.

143.5 ft bgs

6.5 ft

150 ft bgs

5 ft

155 ft bgs

10

-ft Perforated Tool

(4" PVC Screen
(0.050" slots)

165 ft bgs

5 ft

170 ft bgs

5 ft

175 ft bgs

900 gallons of H₂O
added

258 ft bgs

4 -in Diameter
Drill Pipe

6.5 -ft Upper
Bentonite Seal
Mi SWACO Kwik-Plug
Medium (3/8") Bentonite
Chips (1 1/2 bags)

Gravel Pack CEMEX
Monterey #3
(13 bags)

8 -in Diameter
Pilot Borehole

5 -ft Lower
Bentonite Seal
(3 bags)

84 bags of CEMEX
Monterey #3

GEOSCIENCE
GEOSCIENCE Support Services, Incorporated P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com

Client: RBF Consulting Inc.
Well Name/Number: MPWSP Exploratory Borehole CX-B4
Date: 4-7-14 / Mon

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #4 As Built

Zone No.

4

110 to 120 ft bgs

8" sonic casing to 95.8 ft bgs
Open annulus above upper
bentonite seal.

99 ft bgs

6.0 ft

105 ft bgs

5.0 ft

110 ft bgs

10

-ft Perforated Tool

(4" PVC Screen
(w/0.050" slots)

120

ft bgs

4.0 ft

124

ft bgs

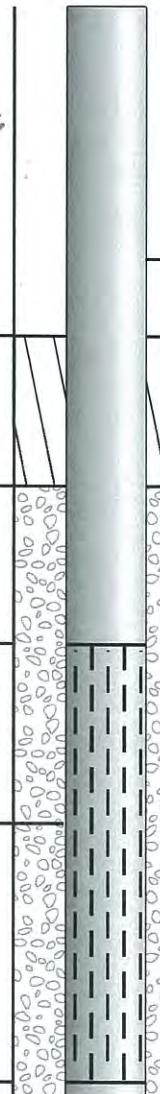
7.0 ft

131

ft bgs

600 gallons
H₂O added

166
ft bgs



4 -in Diameter
Drill Pipe
PVC

6 -ft Upper
Bentonite Seal

MiSWACO Kwik-Plug
Medium (3/8") Bentonite
chips (2 1/2 bags)

Gravel Pack CEMEX
Monterey #3
(12 bags)

8 -in Diameter
Pilot Borehole

7 -ft Lower
Bentonite Seal
(3 bags)

24 bags of Monterey #3

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole CX-B4

Date: 4-8-14 / Tue

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #5 As-Built

Zone No. 558 to 68 ft bgs

8" sonic casing to 45.7ft bgs.
Open annulus above upper bentonite seal.

45 ft bgs

8.0 ft

53 ft bgs

5.0 ft

58 ft bgs10 -ft Perforated Tool(4" PVC Screen
w/ 0.050" slots)68 ft bgs

5.5 ft

73.5 ft bgs

4.5 ft

78 ft bgsAdded 700 gal
of fresh water

95 ft bgs

4 -in Diameter
~~Drill Pipe~~
PVC8.0 -ft Upper
Bentonite SealMi SWACO Kwik-Plug
Medium (3/8") Bentonite
chips. (2 bags)Gravel Pack
CEMEX
Monterey #3
(12 bags)8 -in Diameter
Pilot Borehole4.5 -ft Lower
Bentonite Seal
(2 bags)21 bags of CEMEX
Monterey #3

GEOSCIENCE	Client: RBF Consulting Inc.
GEOSCIENCE Support Services, Incorporated P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com	Well Name/Number: MPWSP Exploratory Borehole CX-B4
	Date: 4-9-14 /Wed

Sheet 1 2**GEOSCIENCE**

GEOSCIENCE Support Services, Inc.
 P.O. Box 220, Claremont, CA 91711
 Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

**CONFIDENTIAL
DRAFT****Subject to Revision****ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET**Zone No. 1

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingW.L.'s taken using an
electronic W.L. indicator.Borehole Name/Number: CX-B4Sonic Casing Dia: 8 in Sonic Casing Depth: 285 ft bgsStatic WL: 45.9 ft brpRP: 7.5 ft ags (Top of 8" casing) stableLogged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 4-4-14 / FriScreened Interval: 306-316 ft bgs

Reference Point Elevation: _____ ft amsl intake

Pump Depth: 193.3 ft bgs 0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
12:44:15	0	45.9	0	106218.9	Pump on @~12 gpm.	21.4	9.2	1246	↓ Q to 9.8 gpm.	9,210			
12:50	6	136.0	92.1	—	9.2	↑ Q to	9.8 gpm.	Water aerated & turbid.	Rate decreasing on its own.				
13:05	21	175.8	129.9	—	9.3								overrange
13:15	31	175.95	130.05	106513.0	9.5			Water milky/aerated.	"				257
13:30	46	175.45	129.55	106653.3	9.4			"	"				47.6
13:45	61	177.25	131.35	106794.6	9.4	21.0	0.6	34260	31679	23334.0	6.73	-32.0	35.7
14:00	76	178.1	132.2	106937.6	9.5	21.1	0.6	35603	32931	24214.8	6.69	-69.4	37.5
14:15	91	176.7	130.8	107080.5	9.5	21.0	0.7	36247	33452	24650.0	6.72	-79.1	29.7
14:30	106	177.5	131.6	107223.4	9.5	21.0	0.7	36662	33834	24935.6	6.66	-82.7	17.4
14:45	121	176.3	130.4	107366.3	7.5	20.9	0.7	37024	34156	25173.6	6.64	-83.2	14.6
15:00	136	177.6	131.7	107508.9	9.5	21.0	0.7	37222	34370	25309.6	6.67	-82.2	8.63
15:15	151	178.2	132.3	107651.2	9.5	21.0	0.7	37434	34581	25459.2	6.69	-80.6	7.05
15:30	166	179.0	133.1	107793.6	9.5	21.0	0.8	37445	34601	25466.0	6.69	-80.5	21.6
15:45	181	179.3	133.4	107936.0	9.5	20.9	0.8	37708	34804	25642.8	6.67	-79.3	5.09
16:00	196	179.1	133.2	108078.4	9.5	20.9	0.8	37807	34902	25704.0	6.65	-77.6	3.80
16:15	211	179.0	133.1	108220.6	9.5	20.9	0.7	37890	34963	25772	6.64	-75.6	3.61
16:30	226	177.7	131.8	108362.1	7.4	20.9	0.7	37977	36004	25826.4	6.63	-73.7	2.31
16:37:57	234			108437.2	Pump off.	F-37	Total Volume pumped today =	2,218.3 gallons					

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. 1 W.L.S					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>													
Borehole Name/Number: <u>CX-14</u>													
Sonic Casing Dia: <u>8</u> in		Sonic Casing Depth: <u>285</u> ft bgs		Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u>									
Static WL: <u>50.25</u> ft brp		Test Date: <u>4-5-14/Sat</u>											
RP: <u>7.5 Stags (top of 8" casing)</u>		Screened Interval: <u>306-316</u> ft bgs											
Reference Point Elevation: _____ ft amsl													
Pump Depth: <u>193.3</u> ft bgs intake													
0.68 constant													
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
7:48:43	0	50.25	0	108437.2	Pump on @ 1.8 gpm	7.7	7.54	37568	34576	25547.6	6.58	77.3	2.0
8:04	15	129.6	79.35	108566.6	7.7			37587	34620	25561.2	6.63	-9.1	31.2
8:19	30	133.35	83.10	108681.7	7.7			37654	34619	25602.0	6.62	-28.9	3.78
8:34	45	134.3	84.05	108796.2	7.6			37641	34702	25595.2	6.61	-36.4	1.10
8:49	60	134.4	84.15	108910.5	7.6			37688	34754	25629.2	6.61	-38.4	0.94
9:04	75	135.9	85.65	109026.0	7.7	20.9	1.0	37568	34576	25547.6	6.58	77.3	1.19
9:19	90	138.4	88.15	109145.5	8.0	20.9	0.6	37587	34620	25561.2	6.63	-9.1	0.91
9:34	105	138.85	88.60	109264.9	8.0	20.8	0.6	37654	34619	25602.0	6.62	-28.9	0.63
9:49	120	139.80	89.55	109384.4	8.0	20.9	0.6	37641	34702	25595.2	6.61	-36.4	0.50
9:59	130	139.50	89.25	109464.1	8.0	20.9	0.6	37688	34754	25629.2	6.61	-38.4	0.54
10:00	131	Begin collecting	Water samples for laboratory analysis. Samples placed on ice.										
10:28	159	140.60	90.35	109699.1	8.1	21.0	0.6	37646	34755	25602.0	6.61	-38.5	0.43
10:35	166	-	-	109754.5	Pump off.								
11:25	216	48.35	-1.90	recovered	W.L. after pumping pump.								
Total Volume pumped today = 1317.3 gallons													

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1480.8 mL/min

Turb: +/- 10%

DO: +/- 10%

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 2

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingWL's taken using an
electronic WL indicator.Borehole Name/Number: CX-B4Sonic Casing Dia: 8 in Sonic Casing Depth: 236 ft bgsStatic WL: 45.25 ft brpRP: 6.7 ft stage (Top of 8" casing)Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 4-6-14 / SunScreened Interval: 248 - 258 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 193.5 ft bgs (intake) 0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Tot Vol (gal)
09:27	0	45.25	0	109754.5	Pump on @ 8.7 gpm.	9.29	↑Q to 14.4 gpm.	093218 to Z1.	3 gpm	1182.0	7.5	117.0	3.61	
09:35	8	74.25	29.00	109866.5	21.0			aerated.	turbid	1293.0				
09:45	18	76.05	30.80	110076.5	21.0	Good zone.	Higher producing.	Aerated.	35.1	1404.0				
09:50	23				↓Q to 11.8 gpm.	0951	↓Q to 10.6 gpm							
09:55	28	60.5	15.25	110233.2	10.7									10.8
10:10	43	60.7	15.45	110395.1	10.8									1.12
10:25	58	60.8	15.55	110557.3	10.8									0.41
10:40	73	60.95	15.70											
10:45	78	61.00	15.75	110773.7	10.8									0.67
11:00	93	61.45	16.20	110936.5	10.9	19.8	3.0	35439	31916	24099.2	6.58	117.0	3.61	
11:10	103	61.50	16.25	111047.5	11.1	19.7	2.2	35705	32106	24282.8	6.68	47.1	2.35	
11:20	113	61.60	16.35	111158.5	11.1	19.7	2.2	35944	32340	24446.0	6.68	20.4	2.83	
11:30	123	61.60	16.35	111269.4	11.1	19.8	2.2	36168	32575	24595.6	6.68	9.7	2.36	
11:45	138	61.60	16.35	111435.6	11.1	19.8	2.2	36450	32845	24792.8	6.68	2.7	2.55	
12:00	153	61.70	16.45	111601.8	11.1	19.8	2.2	36688	33053	24956.0	6.69	-0.9	1.89	
12:15	168	61.70	16.45	111767.8	11.1	19.8	2.3	36915	33269	25105.6	6.68	-0.7	2.48	
12:30	183	61.75	16.50	111933.7	11.1	19.8	2.3	37081	33434	25214.4	6.68	-0.4	1.80	
12:45	198	61.75	16.50	112099.6	11.1	19.8	2.3	37210	33528	25309.6	6.70	-1.8	2.34	
13:00	213	61.80	16.55	112265.5	11.1	19.8	2.3	37564	33851	25540.8	6.69	5.0	1.72	
13:15	228	61.80	16.55	112431.5	11.1	19.8	2.3	37658	33967	25608.8	6.74	3.9	2.25	

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Flow thru cell = 1294.2 mL/min

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision					ISOLATED AQUIFER ZONE SAMPLING DATA SHEET							
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com							Zone No. <u>2</u>							
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>							Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u>							
Borehole Name/Number: <u>CX-B4</u>							Test Date: <u>4-6-14 / Sun</u>							
Sonic Casing Dia: <u>B</u> in		Sonic Casing Depth: <u>236</u> ft bgs					Screened Interval: <u>Z4B-Z5B</u> ft bgs							
Static WL: <u>45.25</u> ft brp							Reference Point Elevation: _____ ft amsl							
RP: <u>6.7 ft ags</u>							Pump Depth: <u>193.5</u> ft bgs							
<i>0.68 constant</i>														
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Tot Vol (gal)
13:23	236	$\downarrow Q$ to 5.4 gpm												
13:30	243	53.60	8.35	112559.8	5.3	20.1	2.3	37738	34242	25663	6.71	3.6	1.89	
13:45	258	53.55	8.30	112641.5	5.4	20.2	2.2	37844	34410	25731.2	6.72	4.9	1.00	
14:00	273	53.55	8.30	112723.0	5.4	20.2	2.2	37882	34414	25758.4	6.74	0.3	2.16	
14:15	288	53.55	8.30	112804.6	5.4	20.2	2.2	37937	34493	25799.2	6.74	0.0	2.98	
14:25	298	$\uparrow Q$ to 21.6 gpm												
14:30	303	77.60	32.35	112962.9	21.2	19.6	2.3	37703	33824	25663.2	6.74	2.3	4.17	
14:45	318	77.70	32.45	113282.4	21.3	19.4	2.3	37947	33924	25806.0	6.70	10.1	2.71	
15:00	333	77.90	32.65	113602.2	21.3	19.5	2.4	38122	34087	25928.4	6.67	21.7	2.26	
15:15	348	78.00	32.75	113922.2	21.3	19.4	2.4	38213	34164	25982.8	6.66	28.1	1.88	
15:30	363	78.20	32.95	114242.6	21.4	19.4	2.4	38278	34205	26030.4	6.66	30.6	1.96	
15:45	378	78.30	33.05	114563.5	21.4	19.4	2.4	38324	34231	26057.6	6.66	34.0	1.70	
16:00	393	78.30	33.05	114884.3	21.4	19.4	2.5	38354	34291	26084.8	6.66	36.8	1.46	
16:05	398	Begin collecting		119Q samples for laboratory analysis. Samples placed on ice.										
16:33	426	78.50	33.25	115594.2	21.5	19.4	2.5	38426	34384	26132.4	6.66	41.7	1.18	
16:39:48	433			115749.5	Pump off.									
					Total Volume pumped = 599.5.0 gallons									
4/7	7:30	47.15												

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

GEOSCIENCE		CONFIDENTIAL DRAFT					ISOLATED AQUIFER ZONE SAMPLING DATA SHEET							
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com		Subject to Revision					Zone No. <u>3</u> (Day 1) <u>WL's</u>							
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>CX-B4</u>		WL's taken using an electronic WL indicator					Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>4-7-14 / Mon</u>							
Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>144</u> ft bgs							Screened Interval: <u>155 - 165</u> ft bgs							
Static WL: <u>42.05</u> ft brp RP: <u>6.0 ft ags (top of 8" casing)</u>							Reference Point Elevation: _____ ft amsl Pump Depth: <u>142.0</u> ft bgs (intake) <u>0.68 constant</u>							
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total Vol (gal)
13:48:23	0	42.05	0	115749.5	Pump on @ ~ 10 gpm.									
13:55	7	85.80	43.75	115815.2	9.9									overrange
14:00	12	87.85	45.80	115864.7	9.9									466
14:15	27	89.70	47.65	116011.9	9.8									148
14:30	42	89.90	47.85	116159.5	9.8									143
14:45	57	90.10	48.05	116307.0	9.8									18.1
15:00	72	90.00	47.95	116454.7	9.8									3.97
15:15	87	91.5	49.45	116603.6	9.9	19.1	4.7	27888	24761	18978.8	6.72	95.0	19.2	
15:30	102	91.6	49.55	116755.7	10.1	19.1	4.5	28361	25158	19284.8	6.77	46.6	2.90	1006.2
15:45	117	92.1	50.05	116908.1	10.2	19.1	4.6	28421	25214	19339.2	6.77	31.8	2.60	1158.6
16:00	132	92.05	50.00	117060.2	10.1	19.1	4.6	28527	25296	19400.4	6.78	25.1	3.36	1310.7
16:15	147	92.15	50.10	117212.3	10.1	19.1	4.6	28580	25347	19434.4	6.78	21.1	3.82	
16:30	162	92.10	50.05	117364.1	10.1	19.1	4.6	28609	25371	19454.8	6.78	17.9	2.71	
16:45:28	166			117419.2	Pump off.									
Total Volume pumped today = <u>1669.7 gallons</u>														

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

28.03 mS/cm
542

Turb: +/- 10%

DO: +/- 10%

F-41

Flow thru cell = 1419.1 mL/min

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision							ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com									Zone No. <u>3</u> (Day 2) WL's					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>		W.L.'s taken using an electronic WL indicator							Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>4-8-14 (Tue)</u> Screened Interval: <u>155-165</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>142.0</u> ft bgs (intake) <u>0.68 constant</u>					
Borehole Name/Number: <u>CX-B4</u>														
Sonic Casing Dia: <u>8</u> in		Sonic Casing Depth: <u>144</u> ft bgs												
Static WL: <u>43.3</u> ft brp														
RP: <u>6.0 fangs (top of 8" casing)</u>														
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Tot Vol. (gal)
07:29:33	0	43.3	0	117419.2	Pump on @ 8.1 gpm, 7:32	↑Q to 10.8 gpm								
07:45	15	92.2	48.9	117577.9	10.5									16.4
08:00	30	93.4	50.1	117735.1	10.5									15.9
08:15	45	93.4	50.1	117891.7	10.5									11.2
08:30	60	92.9	49.6	118050.6	10.5									24.5
08:45	75	94.3	51.0	118210.2	10.6	18.8	4.9	28822	25407	19618.0	6.67	123.0	19.3	
09:00	90	94.4	51.1	118373.0	10.9	18.8	4.7	28984	25548	19713.2	6.72	85.3	3.89	
09:15	105	94.55	51.25	118536.0	10.9	18.8	4.7	28927	25515	19672.4	6.73	69.4	3.84	
09:30	120	94.55	51.25	118698.4	10.8	18.8	4.6	28849	25424	19618.0	6.74	56.6	2.53	
09:45	136	94.65	51.35	118871.9	10.8	18.8	4.5	28766	25375	19556.0	6.74	44.4	4.77	
10:00	150	94.55	51.25	119023.8	10.9	18.9	4.5	28717	25354	19529.6	6.74	36.6	5.78	
10:15	165	94.65	51.35	119186.8	10.9	18.9	4.5	28657	25321	19488.8	6.74	31.3	3.89	
10:30	181	94.65	51.35	119360.6	10.9	19.0	4.5	28643	25335	19475.2	6.74	28.7	6.05	
10:45	195	94.70	51.40	119512.8	10.9	19.0	4.5	28609	25326	19454.8	6.74	27.6	3.51	
11:00	210	94.85	51.55	119675.9	10.9	19.0	4.5	28599	25310	19448.0	6.74	27.3	5.02	
11:15	225	94.90	51.60	119839.0	10.9	19.0	4.5	28585	25335	19434.4	6.75	28.0	5.24	
11:30	240	95.00	51.70	120002.0	10.9	19.0	4.6	28574	25304	19427.6	6.75	28.5	4.04	
11:44:32	254	↓Q to 5.5 gpm			5.5									
11:45	265	84.40	41.10	120163.5	5.5	19.0	4.6	28577	25329	19434.4	6.75	28.7	2.58	
12:00	270	68.00	24.70	120248.2	5.6	19.4	4.5	28690	25629	19509.2	6.75	28.9	0.25	

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1329.8 mL/min

Turb: +/- 10%

DO: +/- 10%

F-42

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>3 (Day 2)</u>					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>CX-B4</u>						Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>4-8-14/Tue</u>							
Sonic Casing Dia: <u>8</u> in			Sonic Casing Depth: <u>144</u> ft bgs			Screened Interval: <u>155-165</u> ft bgs							
Static WL: <u>43.3</u> ft brp			Reference Point Elevation: _____ ft amsl										
RP: <u>6.0 ft ags</u>			Pump Depth: <u>142.0</u> ft bgs										
<u>0.68 constant</u>													
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μ S/cm)	Cond. (μ S/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
12:15	285	68.00	24.70	120330.6	5.5	19.4	4.5	28716	25672	19522.6	6.75	32.6	0.14
12:25	295	68.05	24.75	120385.5	5.5	19.4	4.5	28707	25663	19522.8	6.75	34.0	0.18
12:30	300	Begin collecting WQ samples for laboratory analysis. Samples placed on ice.											
12:50	320	68.20	24.90	120527.8	5.7	19.5	4.5	28695	25655	19509.2	6.74	36.1	0.15
12:53:04	323			120544.5	Pump off. Total volume pumped today = 3125.3 gallons								
13:27	357	43.85	0.55	← Recovered W.L. after pulling pump.									

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 4

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-B4Sonic Casing Dia: 8 in Sonic Casing Depth: 95.8 ft bgsStatic WL: 41.20 ft brpRP: 6.7 ft ags (top of 8" casing)W.L.'s taken using
an electronic w.l.
indicator.Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 4-9-14 / WedScreened Interval: 110-120 ft bgsReference Point Elevation: ft amslPump Depth: 196 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total Vol (gal)
7:59:56	0	41.20	0	120544.6	Pump on @	10.4 gpm.	Brown/turbid. Good yield.							
08:03	3	45.40	4.20		Turbid but improving.									
08:15	15	45.45	4.25	120706.1	10.0	Milky/aerated.							39.0	
08:30	30	45.50	4.30	120856.6	10.0	" "							16.0	
08:37:50 ~38				~120919.0	Pump off. Pump died.									
08:43	43	41.10	-0.10		Recovering w.l. 08:50 Begin pulling pump to check. Wires pinched.									
10:07:40	0	41.55	0.35	120913.1	Resume pumping @ 10.7 gpm. Q dropping slowly.									
10:15	7	44.50	3.30	120979.1	8.8								7.6	
10:30	22	44.60	3.40	121110.7	8.8	19.0	4.8	29701	26333	20202.8	6.65	85.1	5.07	434.5
10:45	37	44.65	3.45	121243.2	8.8	19.0	4.9	29805	26405	20277.6	6.65	72.0	7.50	566.1
11:00	52	44.65	3.45	121375.8	8.8	19.0	5.0	29865	26428	20311.6	6.64	70.6	1.13	698.6
11:15	67	44.65	3.45	121508.7	8.9	19.0	5.0	29908	26473	20332.0	6.64	72.1	0.69	831.2
11:25	77	44.65	3.45	121597.6	8.9	18.9	5.1	29926	26423	20352.4	6.64	72.8	0.58	
11:35	87	44.65	3.45	121686.3	8.9	18.9	5.1	29933	26466	20352.4	6.63	74.9	0.85	
11:40	92	Begin collecting w.Q samples for lab analysis.						Samples placed on ice.						
12:01	113	44.65	3.45	121922.3	9.1	18.9	5.1	29954	26471	20366.0	6.63	76.9	1.70	
12:07:04 119				121976.0	Pump off.									
12:45	157	41.5	0.30	Recovered water level.				Total Volume pumped = 1431.4 gallons						

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1306.6 mL/min

Turb: +/- 10%

DO: +/- 10%

GEOSCIENCE

CONFIDENTIAL
DBAFT

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Subject to Revision

ISOLATED AQUIFER ZONE SAMPLING DATA SHEET

Zone No. 5 (Day 1)

-W.L.S

Client: RBF/MPWSP - Exploratory Borehole Drilling

W.L.'s taken using
an electronic W.L.
indicator.

Logged By: N. Reynolds (ass) & Cascade Drilling

Test Date: 4-9-19 / wed

Screened Interval: 58-68 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 57.5 ft bgs (intake)

OrbB constant

Borehole Name/Number: CX-B4

Sonic Casing Dia: **6** in. Spec.

Sonic Casing Dia: 8 in Sonic Casing Depth: 45.7 ft bgs

Static WL: 42.20 ft brp

RP: 7.4 flags (top of 8" casing)

Stabilization Criteria: Note: 700 gal Fresh water added during construction.

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

16:39 564

Turb: +/- 10%

DO: +/- 10%

F-45

Flow thru cell = 1173.7 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 5 (Day 2)

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: CX-B4Sonic Casing Dia: 8 in Sonic Casing Depth: 45.7 ft bgsStatic WL: 42.20 ft brpRP: 7.4 ft ags (top of 8" casing)WL's taken using
an electronic WL
indicator.Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 4-10-14 / ThuScreened Interval: 58-68 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 57.5 ft bgs (intake)
0.68 Constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total Vol. (gal)
07:14:11	0	42.20	0	122355.9	Pump on @ ~5 gpm	~7:20	~5 gpm	07:20 ↑Q to ~7 gpm	. Clear/aerated.	30.1				
07:19	5	46.05	3.85	122399.7	~5									
07:24	10	48.20	6.00	122432.7	7.4									
07:29	15	48.20	6.00	122469.0	7.3									
07:46	32	48.25	6.05	122592.1	7.2									
08:00	46	48.30	6.10	122693.6	7.3									
08:15	61	48.30	6.10	122802.6	7.3									
08:30	76	48.30	6.10	122911.8	7.3			discharge is aerated						
08:45	91	48.65	6.45	123024.8	7.5	18.6	6.1	6789	5959	4617.2	6.91	25.1	1.84	555.9
09:00	106	48.65	6.45	123140.0	7.7	18.7	6.2	6848	6022	4664.8	6.92	9.2	1.61	
09:15	121	48.70	6.50	123254.2	7.6	18.6	6.3	6856	6023	4664.8	6.93	9.7	1.75	898.3
09:30	136	48.70	6.50	123368.6	7.6	18.6	6.4	6884	6045	4685.2	6.93	13.8	1.62	
09:45	142				↓Q to 4.8 gpm									
09:40	146	46.0	3.80	123433.4	4.8	19.0	6.4	6911	6116	4705.6	6.93	16.0	1.16	1077.5
09:50	156	46.0	3.80	123480.5	4.7	19.0	6.3	6914	6127	4705.6	6.94	17.6	1.31	
10:00	166	46.0	3.80	123527.4	4.7	19.1	6.3	6922	6139	4712.4	6.95	18.6	1.32	
10:10	176	46.0	3.80	123574.3	4.7	19.1	6.3	6932	6154	4719.2	6.94	20.2	1.21	1218.4
10:20	186	46.0	3.80	123621.1	4.7	19.1	6.3	6951	6168	4726.0	6.93	21.6	1.21	
10:30	196	46.0	3.80	123668.1	4.7	19.1	6.4	6946	6159	4726.0	6.92	23.7	1.23	
10:40	206	46.0	3.80	123714.9	4.7	19.1	6.4	6944	6170	4726.0	6.92	24.8	1.23	

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

6709
8:50

Turb: +/- 10%

DO: +/- 10%

F-46

Flow thru cell = 1,400.6 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET

Zone No. 5 (Day 2) WL's

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: CX-B4

Sonic Casing Dia: 8 in Sonic Casing Depth: 45.7 ft bgs

Static WL: 42.20 ft brp

RP: 7.4 ft ags

Logged By: N. Reynolds (GSSI) & Cascade Drilling

Test Date: 4-10-14 / Thu

Screened Interval: 58-68 ft bgs

Reference Point Elevation: ft amsl

Pump Depth: 57.5 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
10:50	216	46.0	3.80	123761.7	4.7	19.1	6.4	6978	6193	4732.8	6.92	25.7	1.17
11:00	226	46.0	3.80	123808.5	4.7	19.1	6.4	6970	6186	4732.8	6.92	26.5	1.24
11:07	233	Recalibrate Hach 2100Q. (3pt: 20, 100, & 800 NTU).											
11:15	241	46.0	3.80	123873.3	4.7	19.1	6.4	6967	6182	4739.6	6.92	27.7	1.21
11:25	251	46.0	3.80	123924.9	4.7	19.1	6.5	6988	6208	4760.0	6.92	28.3	1.12
11:30	256	Begin	WQ Sampling for lab analysis. Samples placed on ice.										
11:49	275	46.0	3.80	124042.5	4.9	19.1	6.6	7044	6258	4794.0	6.92	30.1	1.01
11:55:35	282			124073.2	Pump off. Total Volume pumped today = 1717.3 gallons								
12:26	312	42.25	0.05	Recovered water level.									

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min F47

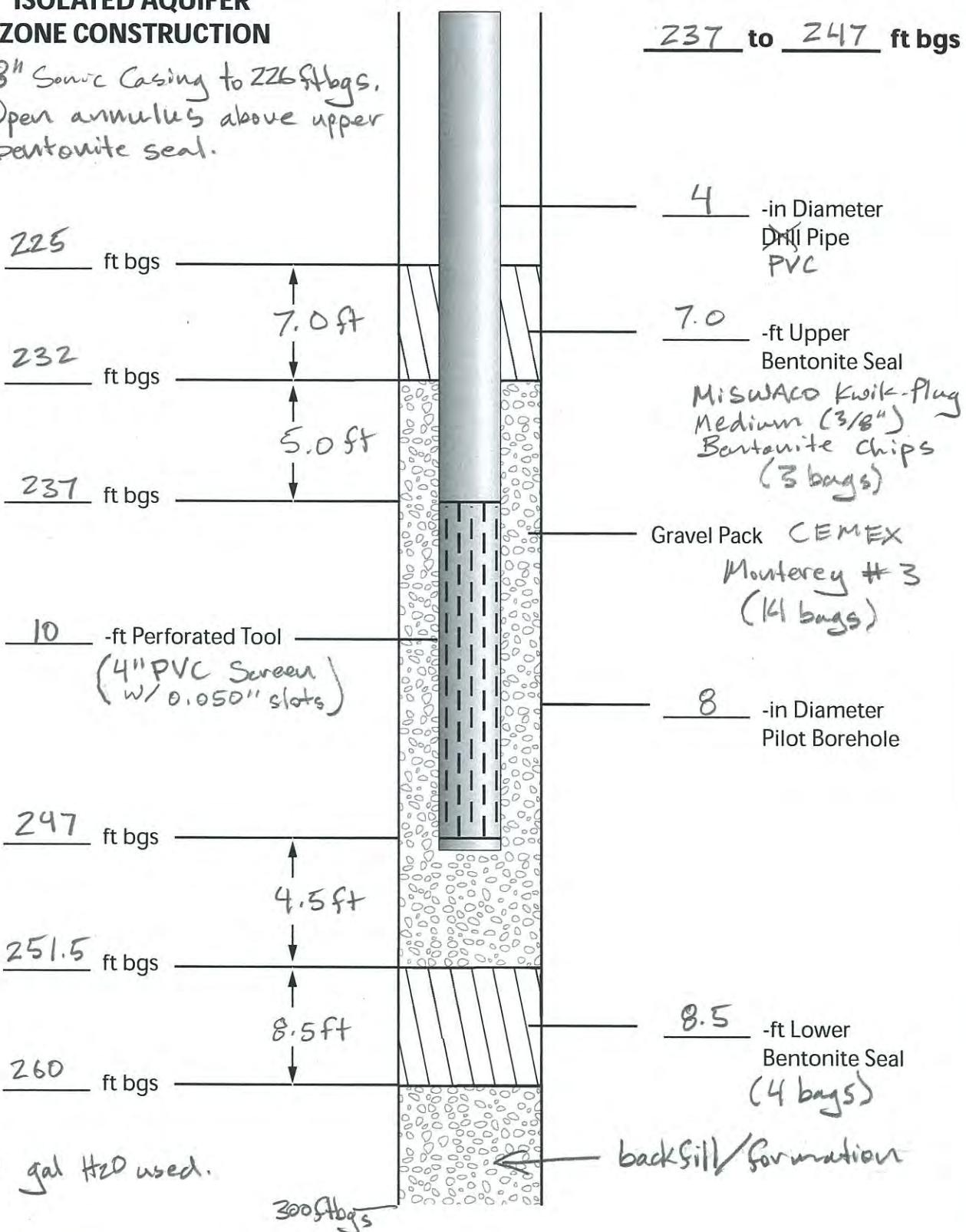
**ISOLATED AQUIFER
ZONE CONSTRUCTION**

8" Sonic Casing to 226 ft bgs.
Open annulus above upper bentonite seal.

Zone #1 As Built

Zone No. 1

237 to 247 ft bgs



GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gsswater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole MDW-1

Date: 4-30-14 / Wed

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone H2 AS-Built

Zone No. 2

187 to 197 ft bgs

8" Sonic Casing to 173 ft bgs.
Open annulus above upper
bentonite seal.

175 ft bgs

6.0

181 ft bgs

6.0

187 ft bgs

10

-ft Perforated Tool

(4" Dia PVC w/
0.050" Slots)

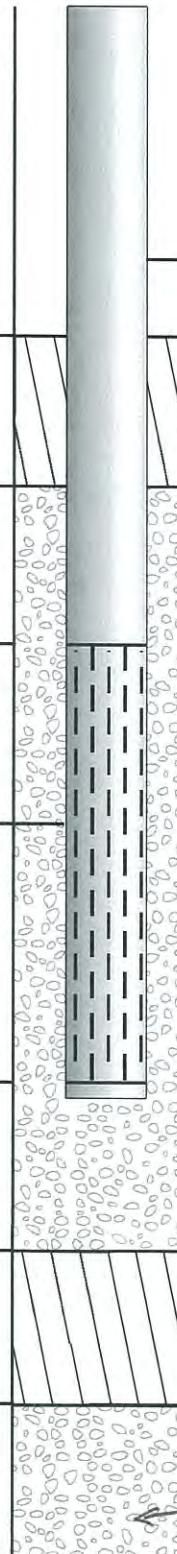
197 ft bgs

5.0

202 ft bgs

5.5

207.5 ft bgs



4 -in Diameter
Drill Pipe
PVC

6 -ft Upper
Bentonite Seal
~~CETCO Pure gold~~
~~M-SWALO Kwik Plug~~

Medium (3/8")
Bentonite Chgs

Gravel Pack (2 bags)

8 -in Diameter
Pilot Borehole

Cemex
Monterey #3
(13 bags)

5.5 -ft Lower
Bentonite Seal
(2½ bags)

backfill

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc

Well Name/Number: MPWISP Exploratory borehole MDL-1

Date: 9/6/17 Tuesday

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #3 As Built

Zone No. 3

152 to 162 ft bgs

B" sonic casing to 142 ft bgs.
Open annulus above upper
Bentonite Seal.

139.5 ft bgs

5.5

145 ft bgs

7.0

152 ft bgs

10

-ft Perforated Tool

(4" PVC Screen
(W/0.050" slots)

162 ft bgs

5.0

167 ft bgs

5.0

172 ft bgs

5.0

500 gallons of H₂O used177
ft bgs

4 -in Diameter
DRILL Pipe
PVC

5.5 -ft Upper
Bentonite Seal

CETCO Pure gold,
Medium (~~50~~) Bentonite
chips (2 bags)

Gravel Pack CEMEX
Monterey #3
(14 bags)

8 -in Diameter
Pilot Borehole

5.0 -ft Lower
Bentonite Seal
(2 bags)

4 bags of Monterey #3

GEOSCIENCE	Client: RBF Consulting Inc.
GEOSCIENCE Support Services, Incorporated P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com	Well Name/Number: MPWSP Exploratory Borehole MDW-1 Date: 5-8-14 Thu

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone # 4 As Built

Zone No. 4

60 to 70 ft bgs

9" sonic casing to 44 ft bgs.
Open annulus above upper
bentonite seal.

47.5 ft bgs

6.5 ft

54 ft bgs

6.0 ft

60 ft bgs

10 -ft Perforated Tool

(4" PVC Screen
w/ 0.050" slots)

70 ft bgs

5.0 ft

75 ft bgs

5.0 ft

80 ft bgs

350 gallons of H₂O used

143
st bgs

4 -in Diameter
Drill Pipe
PVC

6.5 -ft Upper
Bentonite Seal

Mi SWACO Kwik Plug
Medium (3/8") Bentonite
chips (3 bags)

Gravel Pack CEMEX
Monterey #3
(13 bags)

8 -in Diameter
Pilot Borehole

5.0 -ft Lower
Bentonite Seal
(2.5 bags)

38 bags of Monterey #3

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole MPW-1

Date: 5-9-14 / Fri

GEOSCIENCE		CONFIDENTIAL DRAFT		Day 1	ISOLATED AQUIFER ZONE SAMPLING DATA SHEET								
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com		Subject to Revision		Zone No.	1 willis								
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>				WL's taken w/ electronic WL. Indicator.	Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u>								
Borehole Name/Number: <u>MDW-1</u>					Test Date: <u>4-30-14 / Wed (Day 1)</u>								
Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>226</u> ft bgs					Screened Interval: <u>237-247</u> ft bgs								
Static WL: <u>26.05</u> ft brp (falling slowly)					Reference Point Elevation: _____ ft amsl								
RP: <u>7.2 ft ags (Top 8" casing)</u>					Pump Depth: <u>226</u> ft bgs (intake) Myron L readings (Not YSI)								
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
15:21:01	0	26.05	0	124073.1	Pump on @ 7 gpm.	15:22	Pump off. Totalizer reversed.						
15:26:51	0	-	-	124054.6	Pump on @ 10.8 gpm								
15:29	2	34.9	8.85	-	10.8	15:30:13 ↑ Q to							
15:33	6	45.0	18.95	124143.0	18.7	turbid / brown							
15:38	11	46.3	20.25	124249.8	21.4	Water clearing, aerated 15:39:05 ↑ Q. Valve wide open.							
15:41	14	56.8	30.75	-	31.5	turbid							
15:44	17	57.6	31.55	124427.4	31.5	Some brown fine sand.						229	
16:00	33	58.55	32.50	124931.0	31.5		41.20					33.3	
16:15	48	58.80	32.75	125403.2	31.5		41.57					21.0	
16:30	63	58.90	32.85	125875.6	31.5		42.09					18.1	
16:45	78	59.00	32.95	126347.9	31.5		42.30					14.0	
17:00	93	59.05	33.00	126820.2	31.5		42.48					14.0	
17:06	99			127011.2	Pump off. Total volume pumped today = 29,751 gallons								

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gsswater.com

CONFIDENTIAL
DRAFT
Subject to Revision

Day 2

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET

Zone No. 1

W.L's

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: MDW-1

Sonic Casing Dia: 8 in Sonic Casing Depth: 226 ft bgs

Static WL: 28.00 ft brp

RP: 7.2 ft ams (top of 58" casing)

Logged By: N. Reynolds (GSSST) & Cascade Drilling

Test Date: 5-1-14/Thu

Screened Interval: 237-247 ft bgs

Reference Point Elevation: ft amsl

Pump Depth: 226 ft bgs (intake)
0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
07:30:53	0	28.00	0	127010.6	Pump on @ 9.9 gpm								
07:34	3	35.40	7.40		9.9								
07:45	14	35.25	7.25	127149.2	9.8								39.9
08:00	29	35.20	7.20	127295.4	9.7								17.6
08:15	44	35.15	7.15	127441.9	9.8								9.43
08:30	59	35.15	7.15	127588.3	9.8								5.76
08:45	74	35.15	7.15	127735.0	9.8								7.71
09:00	89	35.10	7.10	127882.1	9.8								5.83
09:15	104	35.10	7.10	128029.3	9.8								6.74
09:30	119	35.30	7.30	128180.1	10.1	17.4	0.2	42697	36454	29036.0	7.11	-13.9	6.84
09:45	134	35.25	7.25	128333.7	10.2	17.4	0.2	42742	36529	29063.2	7.14	-42.1	6.82
10:00	149	35.20	7.20	128486.7	10.2	17.3	0.2	42773	36481	29083.6	7.13	-57.2	6.33
10:15	164	35.10	7.10	128639.7	10.2	17.3	0.2	42789	36510	29097.2	7.13	-67.8	3.22
10:30	179	35.00	7.00	128792.9	10.2	17.3	0.2	42807	36496	29110.8	7.13	-75.5	5.65
10:45	194	34.95	6.95	128946.8	10.3	17.3	0.2	42817	36505	29117.6	7.12	-81.2	5.89
11:00	209	34.90	6.90	129100.1	10.2	17.3	0.2	42831	36556	29124.4	7.13	-85.6	4.42
11:15	224	34.85	6.85	129253.5	10.2	17.3	0.2	42840	36577	29131.2	7.13	-89.1	4.71
11:22:18	231	↑ Q to 15.7 gpm.											
11:30	239	39.75	11.75	129438.6	15.7	17.1	0.2	42879	36414	29158.4	7.13	-91.7	12.1
11:45	254	39.90	11.90	129674.5	15.7	17.1	0.2	42868	36416	29151.6	7.13	-92.2	5.05

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1498.5 mL/min

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

F-53

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision					ISOLATED AQUIFER ZONE SAMPLING DATA SHEET							
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com							Day 2							
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>MDW-1</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>226</u> ft bgs Static WL: <u>28.00</u> ft brp RP: <u>7.2 Stags (Top of 8" casing)</u>										Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>5-1-14 / Thu</u> Screened Interval: <u>237-247</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>226</u> ft bgs			W.L.'s	
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	
12:00	269	39.75	11.75	1299 D9.8	15.7	17.1	0.2	42864	36394	29144.8	7.13	-94.1	3.66	
12:15	284	39.65	11.65	130144.7	15.7	17.1	0.2	42862	36389	29144.8	7.12	-96.1	4.98	
12:30	299	39.65	11.65	130380.6	15.7	17.1	0.2	42853	36383	29138.0	7.12	-98.0	3.26	
12:45	314	39.60	11.60	130617.5	15.8	17.0	0.2	42856	36342	29144.8	7.11	-100.2	2.79	
13:00	329	39.40	11.40	130853.5	15.7	17.1	0.2	42845	36382	29138.0	7.12	-101.4	2.35	
13:15	344	39.35	11.35	131087.8	15.6	17.1	0.2	42841	36363	29131.2	7.12	-102.7	1.80	
13:30	359	39.30	11.30	131322.5	15.6	17.1	0.2	42836	36397	29124.4	7.12	-103.9	1.50	
13:45	374	39.45	11.45	131557.2	15.6	17.1	0.2	42826	36400	29124.4	7.12	-105.1	1.79	
14:00	389	39.25	11.25	131793.1	15.7	17.1	0.2	42819	36386	29117.6	7.12	-106.2	1.53	
14:15	404	39.40	11.40	132027.9	15.7	17.1	0.2	42813	36351	29110.8	7.12	-107.3	2.49	
14:30	419	39.45	11.45	132264.8	15.8	17.1	0.2	42811	36322	29110.8	7.12	-108.0	2.28	
14:45	434	39.45	11.45	132501.8	15.8	17.1	0.2	42802	36328	29104.0	7.12	-107.6	1.96	
15:00	449	39.45	11.45	132738.8	15.8	17.0	0.2	42797	36307	29104.0	7.12	-107.6	2.22	
15:15	464	39.45	11.45	132976.0	15.8	17.0	0.2	42787	36295	29097.2	7.12	-107.6	1.95	
15:30	479	39.45	11.45	133212.5	15.8	17.1	0.2	42788	36308	29097.2	7.12	-107.5	2.33	
15:45	494	39.50	11.50	133449.2	15.8	17.0	0.2	42787	36237	29097.2	7.12	-107.6	2.33	
15:56	499	Begin collecting water samples for lab analysis.												
16:15	524	39.45	11.45	133927.1	15.9	17.0	0.2	42777	36216	29090.4	7.11	-108.0	1.95	
16:22:18	531			134041.7	Pump off.									
Total volume pumped today = 7031.1 gallons														

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

F-54

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

**CONFIDENTIAL
DRAFT**
Subject to Revision

ISOLATED AQUIFER ZONE SAMPLING DATA SHEET

Zone No. 2 (187-197 ft 673)

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: MDW-1

Sonic Casing Dia: 8 in Sonic Casing Depth: 173 ft bgs

Static WL: 26.24 ft brp

RP: 7 ft a₃₅

Logged By: J. Sobolow (GSSI) & Cascade falling trees

Test Date: 5/6/14 / Tuesday

Screened Interval: 187-197 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 173 ft bgs

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

F-55

Flow through cell:

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL**DRAFT****Subject to Revision****ISOLATED AQUIFER**
ZONE SAMPLING DATA SHEETZone No. 2

WLS Day 2

Client: RBF/MPWSP - Exploratory Borehole DrillingW.L.'s taken using
an electronic W.L.
indicator.Borehole Name/Number: MDW-1Logged By: N. Reynolds (GSSI) & Cascade DrillingSonic Casing Dia: 8 in Sonic Casing Depth: 173 ft bgsTest Date: 5-7-14 / WedStatic WL: 26.20 ft brpScreened Interval: 187 - 197 ft bgsRP: 7.0 ft ags (top of 8" casing)

Reference Point Elevation: _____ ft amsl

Pump Depth: 173 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
7:50:35	0	26.20	0	136216.5	Pump on @ 10.2 gpm								turbid
7:55	5	-	-	136280.9	10.56 ↓ Q Slightly Fo			9.5 gpm					125
8:05	15	27.30	1.10	136374.5	9.1 Aerated								3.96
8:20	30	27.40	1.20	136511.1	9.1 "								3.11
8:35	45	27.45	1.25	136648.2	9.1								3.80
8:50	60	27.50	1.30	136785.5	9.2								3.04
9:05	75	27.55	1.35	136922.6	9.1	16.3	1.7	45594	38005	31008.0	6.62	-14.7	1.95
9:20	90	27.65	1.45	137062.4	9.3	16.3	0.1	45626	38019	31028.4	6.78	-62.3	1.92
9:35	105	27.70	1.50	137202.8	9.4	16.3	0.1	45633	38044	31028.4	6.80	-79.7	1.98
9:50	120	27.75	1.55	137343.5	9.4	16.3	0.1	45684	38094	31062.4	6.80	-86.9	1.84
10:05	135	27.80	1.60	137483.6	9.3	16.3	0.1	45724	38136	31089.6	6.80	-91.0	1.50
10:20	150	27.85	1.65	137623.6	9.3	16.3	0.1	45736	38180	31096.4	6.80	-93.9	2.57
10:35	165	27.90	1.70	137763.8	9.3	16.3	0.1	45750	38166	31110.0	6.80	-96.0	1.72
10:50	180	27.95	1.75	137903.9	9.3	16.3	0.1	45765	38171	31116.8	6.80	-97.7	1.68
11:05	195	28.00	1.80	138044.1	9.3	16.3	0.1	45776	38221	31130.4	6.80	-99.0	1.87
11:20	210	28.00	1.80	138184.4	9.4	16.3	0.1	45790	38227	31137.2	6.80	-100.1	1.80
11:35	225	28.05	1.85	138324.7	9.4	16.3	0.1	45802	38239	31144.0	6.80	-101.1	1.58
11:50	240	28.05	1.85	138465.0	9.4	16.4	0.1	45806	38281	31144.0	6.80	-102.1	1.68
12:05	255	28.05	1.85	138605.2	9.3	16.4	0.1	45812	38278	31150.8	6.80	-103.1	1.61
12:10:36	260				↓ Q to 5.4 gpm								

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

Flow thru cell = 1099.7 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 3

W.L's

Client:	RBF/MPWSP - Exploratory Borehole Drilling		W.L.'s taken w/ an electronic W.L. indicator:		Logged By: N. Reynolds (GSSI) & Cascade Drilling								
Borehole Name/Number:	MPW-1		Test Date: 5-8-74 / Thu										
Sonic Casing Dia:	8 in		Sonic Casing Depth:	142 ft bgs	Screened Interval: 152 - 162 ft bgs								
Static WL:	28.25 ft brp		Reference Point Elevation:		ft amsl								
RP:	7.9 flags (top of 8" casing)		Pump Depth:	142 ft bgs	D168 constant								
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
11:40:28	0	28.25	0	139565.4	Pump on @ grey + turbid	12.1	12.1 gpm						
11:43	3	53.0	24.75	-	12.1			11:45:30 ↑Q		to 21.6 gpm			
11:48	8	77.00	48.75	-	21.6								
11:55	15	84.85	56.60	139827.7	21.5								107
12:12	32	86.05	57.80	140192.8	21.5			(W.L. @ 12:10)					13.0
12:25	45	86.95	58.70	140472.1	21.5								9.02
12:40	60	87.30	59.05	140794.5	21.5								5.07
12:55	75	87.60	59.35	141116.7	21.5								3.91
13:10	90	88.00	59.75	1411438.7	21.5								3.30
13:25	105	88.20	59.95	1411760.3	21.4								2.40
13:40	120	88.90	60.65	142082.6	21.5	16.1	0.2	36220	30067	24629.6	6.84	-73.4	2.33
13:55	135	89.00	60.75	142406.6	21.6	16.1	0.2	36462	30250	24779.2	6.91	-102.4	1.77
14:05	145	-	-	142622.4	21.6	16.1	0.1	36521	30316	24857.6	6.91	-110.6	1.39
14:10	150	89.10	60.85	142730.3	21.6	16.1	0.1	36583	30336	24881.2	6.91	-113.2	1.35
14:25	165	89.10	60.85	143053.7	21.6	16.1	0.1	36728	30472	24969.6	6.91	-118.6	1.00
14:40	180	89.25	61.00	143378.0	21.6	16.1	0.1	36826	30554	25078.4	6.91	-122.1	1.05
14:55	195	89.20	60.95	143701.8	21.6	16.1	0.1	36953	30670	25119.2	6.91	-124.6	1.22
15:10	210	89.25	61.00	144025.6	21.6	16.0	0.1	37063	30733	25214.4	6.91	-126.4	0.95
15:20	220	89.30	61.05	144241.6	21.6	16.0	0.1	37132	30745	25228.0	6.91	-127.2	0.93
15:30	230	89.20	60.95	144457.6	21.6	16.0	0.1	37196	30803	25309.6	6.91	-128.1	1.14

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1290.9 mL/min

Turb: +/- 10%

DO: +/- 10%

36.36

Desired Flow Rate: 100 to 500 mL/min

F-58

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220; Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>3</u>					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>						Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u>							
Borehole Name/Number: <u>MDW-1</u>						Test Date: <u>5-8-14 / Thu</u>							
Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>142</u> ft bgs						Screened Interval: <u>152 - 162</u> ft bgs							
Static WL: <u>28.25</u> ft brp						Reference Point Elevation: _____ ft amsl							
RP: <u>7.9 ft ags</u>						Pump Depth: <u>142</u> ft bgs							
<u>0.68 constant</u>													
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
15:40	240	89.25	61.00	144673.3	21.6	16.0	0.1	37247	30853	25323.2	6.91	-128.8	2.40
15:50	250	89.30	61.05	144889.2	21.6	16.0	0.1	37260	30885	25330.0	6.91	-129.3	1.70
16:00	260	89.35	61.10	145105.0	21.6	16.0	0.1	37344	30916	25377.6	6.91	-129.3	1.95
16:10	270	89.50	61.25	145320.7	21.6	16.0	0.1	37363	30928	25404.8	6.91	-129.2	0.98
16:20	280	89.25	61.00	145536.6	21.6	15.9	0.1	37414	30941	25432.0	6.91	-129.7	2.82
16:30	290	89.20	60.95	145752.3	21.6	15.9	0.1	37451	30928	25459.2	6.91	-130.4	1.30
16:40	300	89.30	61.05	145968.2	21.6	15.9	0.1	37515	30985	25479.6	6.90	-131.2	0.78
16:50	310	89.25	61.00	146184.0	21.6	15.9	0.1	37546	31014	25513.6	6.90	-131.8	0.84
16:55	315	Begin collecting WQ samples for lab analysis. Samples placed on ice.											
17:10	330	89.25	61.00	146618.1	21.7	15.9	0.1	37642	31053	25595.2	6.90	-132.4	1.37
17:15:45	336			146740.4	Pump off. Total volume pumped = 7,175 gallons								
5/9~07:30		28.80	0.55										

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 300 mL/min F-59

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision							ISOLATED AQUIFER ZONE SAMPLING DATA SHEET																																																																																																																																																																								
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com									Day 1																																																																																																																																																																								
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>		W.L.'s taken w/ an electronic W.L. indicator.							Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u>																																																																																																																																																																								
Borehole Name/Number: <u>MDW-1</u>									Test Date: <u>5-9-14 / Fri</u>																																																																																																																																																																								
Sonic Casing Dia: <u>9</u> in		Sonic Casing Depth: <u>44</u> ft bgs							Screened Interval: <u>60 - 70</u> ft bgs																																																																																																																																																																								
Static WL: <u>20.70</u> ft brp									Reference Point Elevation: _____ ft amsl																																																																																																																																																																								
RP: <u>6.0 ft ags (top of 9" casing)</u>									Pump Depth: <u>59.0</u> ft bgs																																																																																																																																																																								
<table border="1"> <thead> <tr> <th>Time</th> <th>Time Step (min)</th> <th>Water Level (ft brp)</th> <th>Drawdown (ft)</th> <th>Totalizer (gal)</th> <th>Pumping Rate (gpm)</th> <th>Temp (°C)</th> <th>DO (mg/L)</th> <th>Specific Cond. (µS/cm)</th> <th>Cond. (µS/cm) MS</th> <th>TDS (mg/L)</th> <th>pH</th> <th>ORP (mV)</th> <th>Turbidity (NTU)</th> <th>Total Vol. (gal)</th> </tr> </thead> <tbody> <tr> <td>15:30:15</td> <td>0</td> <td>20.70</td> <td>0</td> <td>146740.3</td> <td>Pump on @ 7.9 gpm.</td> <td></td> <td></td> <td>Very turbid/gray.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>15:35</td> <td>5</td> <td>24.00</td> <td>3.30</td> <td>146785.8</td> <td>7.9</td> <td>Turbid but improving.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>15:40</td> <td>10</td> <td>24.10</td> <td>3.40</td> <td>146825.2</td> <td>7.9</td> <td>15:43:38 ↑ Q to 16.7 gpm (PWL = 28.4 ft brp).</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>15:50</td> <td>20</td> <td>35.40</td> <td>14.70</td> <td>146986.3</td> <td>30.5 ← max pump Q</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>16:00</td> <td>30</td> <td>35.65</td> <td>14.95</td> <td>147291.1</td> <td>30.5</td> <td></td> <td></td> <td>30.32</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>16:15</td> <td>45</td> <td>35.85</td> <td>15.15</td> <td>147748.5</td> <td>30.5</td> <td></td> <td></td> <td>30.70</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>16:30</td> <td>60</td> <td>35.90</td> <td>15.20</td> <td>148207.2</td> <td>30.6</td> <td></td> <td></td> <td>31.00</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>16:45</td> <td>75</td> <td>35.95</td> <td>15.25</td> <td>148666.0</td> <td>30.6</td> <td></td> <td></td> <td>31.26</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>16:49:45</td> <td>~80</td> <td></td> <td></td> <td>148810.9</td> <td>Pump off.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="14">Total Volume pumped today = 2070.6 gallons</td> </tr> </tbody> </table>														Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm) MS	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total Vol. (gal)	15:30:15	0	20.70	0	146740.3	Pump on @ 7.9 gpm.			Very turbid/gray.							15:35	5	24.00	3.30	146785.8	7.9	Turbid but improving.									15:40	10	24.10	3.40	146825.2	7.9	15:43:38 ↑ Q to 16.7 gpm (PWL = 28.4 ft brp).									15:50	20	35.40	14.70	146986.3	30.5 ← max pump Q										16:00	30	35.65	14.95	147291.1	30.5			30.32							16:15	45	35.85	15.15	147748.5	30.5			30.70							16:30	60	35.90	15.20	148207.2	30.6			31.00							16:45	75	35.95	15.25	148666.0	30.6			31.26							16:49:45	~80			148810.9	Pump off.										Total Volume pumped today = 2070.6 gallons													
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm) MS	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total Vol. (gal)																																																																																																																																																																			
15:30:15	0	20.70	0	146740.3	Pump on @ 7.9 gpm.			Very turbid/gray.																																																																																																																																																																									
15:35	5	24.00	3.30	146785.8	7.9	Turbid but improving.																																																																																																																																																																											
15:40	10	24.10	3.40	146825.2	7.9	15:43:38 ↑ Q to 16.7 gpm (PWL = 28.4 ft brp).																																																																																																																																																																											
15:50	20	35.40	14.70	146986.3	30.5 ← max pump Q																																																																																																																																																																												
16:00	30	35.65	14.95	147291.1	30.5			30.32																																																																																																																																																																									
16:15	45	35.85	15.15	147748.5	30.5			30.70																																																																																																																																																																									
16:30	60	35.90	15.20	148207.2	30.6			31.00																																																																																																																																																																									
16:45	75	35.95	15.25	148666.0	30.6			31.26																																																																																																																																																																									
16:49:45	~80			148810.9	Pump off.																																																																																																																																																																												
Total Volume pumped today = 2070.6 gallons																																																																																																																																																																																	

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET

Day 2

Zone No. 4

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingW.L.'s taken using
an electronic W.L.
indicator.Borehole Name/Number: MD10-1Sonic Casing Dia: 9 in Sonic Casing Depth: 44 ft bgsStatic WL: 20.65 ft brpRP: 6.0 ft ags (top of 9" casing)Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 5-10-14 / SatScreened Interval: 60 - 70 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 59.0 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
8:58:16	0	20.65	0	148810.9	Pump on @ ~15.5 gpm.			Water clear.					
09:03	5	26.80	6.15	-	15.5								
09:08	10	26.80	6.15	148951.8	15.2	Slightly aerated							14.0
09:23	25	26.80	6.15	149179.2	15.2	aerated sample							6.50
09:38	40	26.80	6.15	149407.1	15.2	" "	"						4.34
09:53	55	26.80	6.15	149634.5	15.2	" "	"						2.96
10:08	70	26.90	6.25	149863.0	15.2	16.0	2.4	31624	26190	21515.2	7.25	80.2	1.88
10:23	85	26.90	6.25	150094.3	15.4	16.0	2.4	31699	26270	21562.8	7.33	20.9	1.39
10:38	100	26.95	6.30	150325.7	15.4	16.0	2.4	31805	26336	21624.0	7.33	0.6	1.30
10:53	115	26.95	6.30	150557.1	15.4	16.0	2.4	31858	26393	21658.0	7.33	-5.5	1.23
11:08	130	26.95	6.30	150788.7	15.4	16.0	2.4	31930	26462	21719.2	7.33	-9.1	1.50
11:23	145	27.00	6.35	151020.2	15.4	16.0	2.4	32007	26526	21766.8	7.33	-10.5	1.20
11:38	160	27.00	6.35	151251.7	15.4	16.0	2.4	32065	26591	21841.4	7.33	-10.8	0.92
11:48	170	27.00	6.35	151406.4	15.5	16.0	2.4	32107	26619	21841.6	7.32	-10.6	0.85
11:58	180	27.00	6.35	151560.7	15.4	16.0	2.5	32173	26662	21875.1	7.32	-10.1	0.83
12:05	187	Begin collecting		WQ samples for lab analysis. Samples placed on ice.									
12:25	207	27.05	6.40	151982.8	15.6	16.0	2.6	32301	26769	21970.8	7.32	-8.9	0.89
12:32:54	215			152104.7	Pump off.								
13:53	295	20.90	0.25		Total Volume pumped today =			3293.8 gallons					

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Flow thru cell = 1239.7 mL/min

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

F-61

**ISOLATED AQUIFER
ZONE CONSTRUCTION**
Zone #1 As-built

120
8" sonic Casing
to 106 ft bgs. Open
annulus above upper
bentonite seal

104.75 ft bgs

5.25 ft

110 ft bgs

3.5 ft

113.5 ft bgs

5

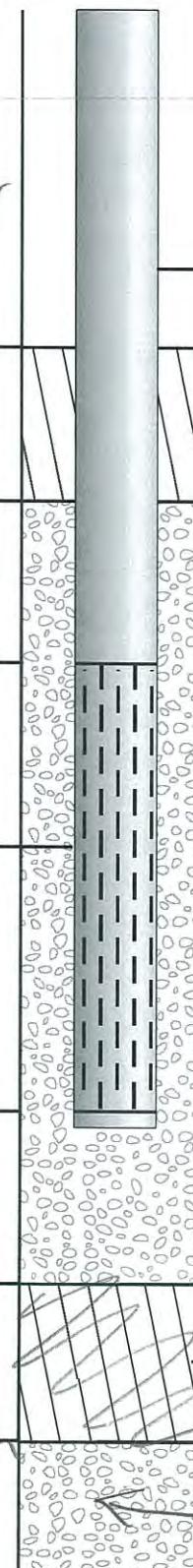
-ft Perforated Tool
(0.050 in. slot)
4" PVC

118.5 ft bgs

7.5 ft

126 ft bgs

ft bgs



113.5 to 118.5 ft bgs

(targetting the sand w/ gravel
layer from 114.2 - 118.3 ft bgs)

4" -in Diameter

~~████████~~ Pipe
PVC

5.25

-ft Upper
Bentonite Seal

3/8" SWACO Quick
Seal bentonite
chips.

Gravel Pack

(CEMEX
Monterey #3)

10 bags

8"

-in Diameter
Pilot Borehole

-ft Lower
Bentonite Seal
(none)

CEMEX 8 mesh sand
to 126 ft bgs

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MP WSP Exploratory Borehole ML-1

Date: 10-5-13 / Sat

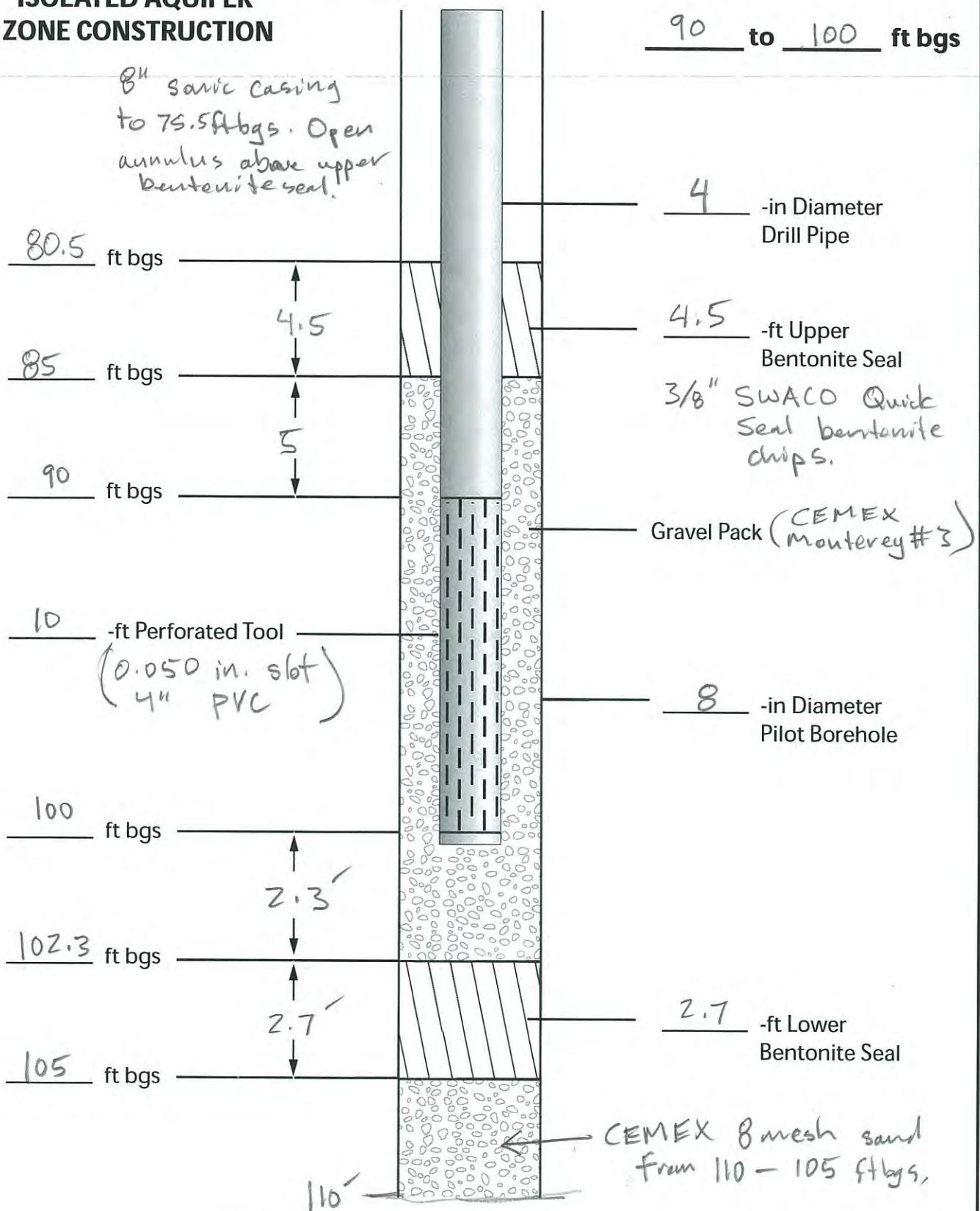
Zone #2 As Built

Appendix F

Zone No. 2

90 to 100 ft bgs

ISOLATED AQUIFER ZONE CONSTRUCTION



GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MP WSP Exploratory Borehole ML-1

Date: 10-7-15/Mon

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision					ISOLATED AQUIFER ZONE SAMPLING DATA SHEET							
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gsswater.com							Zone No. <u>1</u>							
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>ML-1</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>106</u> ft bgs Static WL: <u>9.6</u> ft brp RP: <u>7.1 ft aags</u>										Logged By: <u>N. Reynolds (GSSI); Cascade Drilling</u> Test Date: <u>10-5-13 / Sat</u> Screened Interval: <u>113.5 - 118.5</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>97</u> ft bgs				
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal/s)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	
10:10	0	9.6	0	7597.6	0									
10:15	5	58.6	49.0	7685.4	17									
10:20	10	59.0	49.4	7769.5	16.8									
10:22	12													
10:25	15			7920.1										
10:31	21													
10:32	22	103.0	93.4	8101.2	22									
10:38	26	102.1	92.5		20									
10:50	40													
11:12	63													
11:15	65			8978.5										
11:20:40				8978.5										
11:23	73	25.5	16.9		10.3									
11:26	76				15.3									
11:27	77				17.8									
11:35	85	68.7	59.1											
12:38:18				9210.0	6									
13:09		11.25	1.65		6									

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min **F-64**

See Page 2

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET							
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								YSI Pro Series							
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>ML-1</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>106</u> ft bgs Static WL: <u>11.7</u> ft brp ← 2nd static RP: <u>7.1 ft bgs</u>								Logged By: <u>N. Reynolds (EISST) Cascade Drilling</u> Test Date: <u>10-5-13 / Sat</u> Screened Interval: <u>113.5 - 118.5</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>105</u> ft bgs ← 2nd Pump (scrubbed)							
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal x 1)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Salinity (ppt)	
14:00:50	0	11.7	6	9215.5			Pump on.								
14:01							↓Q								
14:04	3	34.5	22.8		12.7									70.0	
14:07	6				11.7		↑Q								
14:16	14	36.6	24.9		13.8										
14:23	22	38.7	27.0	9500.0	~14	17.0	-	35842	30358	23302.5	6.83	-	5.75		
14:31	30	39.3	27.6	9611.8	14.0	16.9	-	35793	30280	23270.0	6.87	-	3.26	22.63	
14:40	39	40.15	28.45	9731.4	14.0	17.0	-	35729	30299	23231.0	6.87	-	2.80	22.60	
14:50	49	40.05	28.35	9876.5	13.9	16.9	-	35750	30195	23231.5	6.88	-	1.74	22.60	
15:00	59	40.33	28.63	10,015.8	13.9	16.9	-	35691	30156	23198.5	6.89	-	1.26	22.55	
15:10	69	40.7	29.0	10,155.5	14.0	17.0	-	35615	30180	23140.0	6.89	-	1.14	22.51	
15:20	79	40.84	29.14	10,294.2	13.9	17.0	-	35557	30114	23107.5	6.91	-	1.06	22.47	
15:30	89	41.0	29.3	10,433.4	13.9	17.0	-	35497	30048	23075.0	6.91	-	1.16	22.41	
15:40	99	41.2	29.5	10,572.5	13.9	17.0	-	35429	30002	23029.5	6.91	-	1.04	22.38	
15:50	109	41.65	29.95	10,711.4	13.9	16.9	-	35362	29915	22984.0	6.91	-	1.21	22.33	
16:00	119	41.6	29.9	10,850.3	13.9	17.0	-	35300	29875	22964.5	6.91	-	0.88	22.30	
16:10	129	41.75	30.05	10,989.2	13.9	17.0	-	35270	29827	22919.0	6.91	-	0.75	22.26	
16:27	146	41.95	30.25	11,225.1	13.9	16.9	-	35169	29716	22847.5	6.92	-	0.70	22.21	
16:45	Water samples collected for laboratory analysis. Placed on ice.														
17:47	226	42.62	30.92	12,356.2	14.1	16.7	-	34707	29195	22561.5	6.91	-	0.42	21.87	

Stabilization Criteria: 17:54:43 12,462.0 Turn pump off. 4864.4 gallons pumped total.

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 300 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 2 (90-100 ft bgs)Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: ML-1Sonic Casing Dia: 8 in Sonic Casing Depth: 75.5 ft bgsStatic WL: 9.50 ft brpRP: 7.1 ft agsLogged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 10-7-T3 / MonScreened Interval: 90-100 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 80 ft bgs ← smaller pump

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal/s)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
14:09:43	0	9.50	0	12,460.0	0			pump on.	Turbid, but not sandy.	15.8 gpm			
14:13:	3	~63	53.5		15.8			↓ Q	W.L. dropping quickly				
14:15	5	61.5	52.0		11.0								
14:17	7				1			↑ Q	14:18 ↑ Q to 14.8 gpm				
14:27	17							↓ Q	w.l. approaching pump	13 gpm			
14:55	45												
15:26	136	77.8	70.7	13,409.3	11.1	17.0	—	628	532	409.50	7.21	—	12.5
		Water is very aerated/milky. Sulfur smell.											0.31
15:41	151	78.9	69.4	13,573.3	10.9	17.0	—	630	534	409.50	7.22	—	10.0
15:50	160	79.3	69.8	13,671.3	10.9	16.9		643	544	416.00	7.23		0.31
16:08	178	79.9	70.4	13,867.3	10.9	16.9		646	546	422.50	7.23		0.32
16:20	190	80.3	70.8	13,997.7	10.9	16.9		645	545	422.50	7.23		0.32
16:33	203	74.4	64.9	14,127.7	9.9	17.0		644	545	422.50	7.23		0.32
16:56	226	74.4	64.9	14,352.6	9.8	16.9		646	545	422.50	7.23		0.32
17:11	241	74.65	65.15	14,499.1	9.8	16.8		646	545	422.50	7.23		0.32
17:23	↓ Q slightly												
17:40	270	64.15	54.65	14,755.0	7.9	16.8		645	545	422.50	7.23		0.32
18:04	294	64.00	54.50	14,946.8	8.0	16.8		645	544	422.50	7.24		0.32
18:20	310	64.20	54.70	15,074.5	8.0	16.8		647	545	422.50	7.24		0.32
19:01	351	64.8	55.30	15,410.1	8.2	16.9		646	546	422.50	7.24		0.32

Stabilization Criteria: 19:4 Pump off. 15,551.0

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 300 mL/min F66

18:25 Take WQ samples for lab analysis.

Zone No. 1**ISOLATED AQUIFER
ZONE CONSTRUCTION**

8" Sonic casing to 155 ft bgs.
Open annulus above upper
bentonite seal.

156 ft bgs

6 ft

162 ft bgs

5 ft

167 ft bgs

10 -ft Perforated Tool

(0.050 in slot
Sch. 40 4" PVC)

177 ft bgs

5.5 ft

182.5 ft bgs

7.5 ft

190.0 ft bgs

4 -in Diameter
Drill Pipe
PVC

6 -ft Upper
Bentonite Seal
2 bags

3/8" SWACO Quick
Seal bentonite

Gravel Pack (CEMEX
Monterey #3)
13 bags

8 -in Diameter
Pilot Borehole

7.5 -ft Lower
Bentonite Seal
3 bags

backfill/cuttings from 200
ft bgs

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP ML-2 (Del Mar Fisheries)

Date: 12-16-13 / Mon

Zone No. 290 to 100 ft bgs

ISOLATED AQUIFER ZONE CONSTRUCTION

8" Sonic Casing to 75 ft bgs
Open annulus above upper bentonite seal.

80.3 ft bgs

4.4 ft

84.7 ft bgs

5.3 ft

90 ft bgs

10 -ft Perforated Tool
(0.050 in. slot)
4" PVC

100 ft bgs

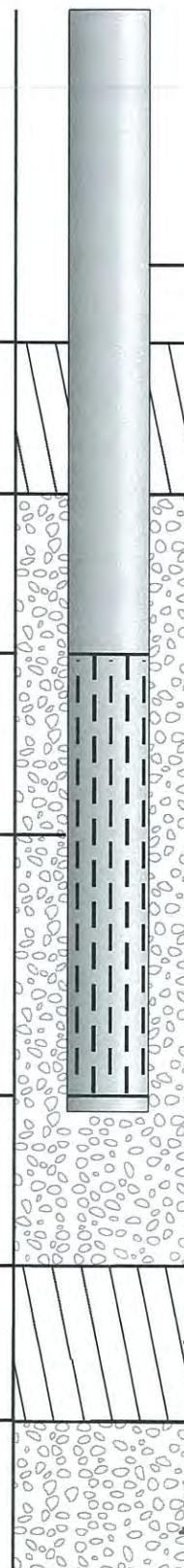
4.5 ft

104.5 ft bgs

5.5 ft

110 ft bgs

1' 4" fill



4 -in Diameter
Drill Pipe
PVC

4.4 -ft Upper
Bentonite Seal

3/8" SWACO Quick
Seal bentonite

Gravel Pack (CEMEX
Monterey #3)

8 -in Diameter
Pilot Borehole

5.5 -ft Lower
Bentonite Seal

2/12 sand from 140 ft bgs

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP ML-2 (Del Mar Fisheries)

Date: 12-18-13 / Wed

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 1 WL.Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: ML-2 (Pel Mar Fisheries)Sonic Casing Dia: 8 in Sonic Casing Depth: 155 ft bgsStatic WL: 6.12 ft brp 2nd Static = 9.80 ft brpRP: 6.0 ft ags (TOC)Logged By: N. Reynolds (GSSI) & CascadeTest Date: 12-17-13 TueScreened Interval: 167 - 177 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 165 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
10:10:23	0	6.12	0	51134.6	Pump on to test polarity &					DD determination.			
10:13	3	90.0	84.0		21.8								
10:17	7	138.0	132.0		~22	↓Q to 13 gpm							
10:23	13	123.5	117.5	Rolled back	14.3								
10:33	23			51489.0	Pump off. Switch to smaller pump.	354.4	gallons pumped.						
13:08:10	0	9.80	new static	51461.9	Pump on @ 14.8 gpm								
13:11	3	59.3	49.5		14.8	some variation to water.							
13:17	9	88.0	78.2		14.8								
13:20	12	91.2	81.4	51619.1	~14.8	17.8	0.2	34190	29464	23249.2	6.93	-28.3	12.4
13:24		Pump off to fix hose break.		51666.5	~14.8								
13:32		Pump on. Adjust Q.		~13.3 gpm.									
13:38	6	94.8	85.0		15.6	↑Q to 17.1	gpm	13:43	17.1	18.1 gpm			
13:50	18	130.4	120.6	51982.6	17.8	17.6	1.2	34195	29420	23276.4	6.98	-76.7	21.2
14:00	28	133.3	123.5	52160.4	17.8	17.6	0.4	34484	29612	23453.2	6.92	-94.9	9.79
14:10	38	134.0	124.2	52337.8	17.7	17.6	0.2	34566	29656	23500.8	6.91	-99.0	8.12
14:20	48	134.6	124.8	52515.0	17.7	17.5	0.1	34591	29665	23521.2	6.91	-100.3	5.80
14:30	58	135.0	125.2	52692.1	17.7	17.5	0.1	34614	29682	23534.8	6.90	-100.5	5.80
14:40	68	135.4	125.6	52869.3	17.7	17.5	0.0	34638	29662	23562.0	6.89	-100.6	3.46
14:50	78	135.5	125.7	53046.2	17.7	17.4	0.0	34651	29655	23562.0	6.87	-100.7	2.81
15:00	88	135.7	125.9	53223.1	17.7	17.4	0.0	34672	29638	23575.6	6.87	-100.1	2.44

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Turb: +/- 10%

Cond: +/- 3%

DO: +/- 10%

ORP: +/- 10 mV

Desired Flow Rate: 100 to 500 mL/min F-69

Flow thru cell = 1081.5 mL/min

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>1</u> W.L.					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>													
Borehole Name/Number: <u>ML-2</u>													
Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>155</u> ft bgs													
Static WL: <u>9.80</u> ft brp													
RP: <u>6.0 ft ags</u>													
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	<u>53223.1</u> Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
15:10	98	problem w/ sounder	"	53400.1	17.7	17.4	0.0	34688	29647	23589.2	6.86	-99.8	1.33
15:20	108	"	"	53577.1	17.7	17.4	0.0	34697	29650	23589.2	6.86	-99.8	3.50
15:30	118	136.7	126.9	53753.9	17.7	17.4	0.0	34716	29649	23602.8	6.86	-99.5	2.75
15:40	128	136.8	127.0	53930.8	17.7	17.4	0.0	34710	29643	23602.8	6.86	-98.9	1.94
15:50	138	136.9	127.1	54107.7	17.7	17.4	0.0	34717	29650	23609.6	6.86	-99.5	2.03
16:00	148	137.0	127.2	54284.5	17.7	17.4	0.0	34716	29646	23602.8	6.86	-99.2	1.70
16:10	158	137.2	127.4	54461.2	17.7	17.3	0.0	34729	29654	23616.4	6.86	-99.5	2.36
16:20	168	137.25	127.45	54638.1	17.7	17.4	0.0	34728	29657	23616.4	6.86	-99.2	2.78
16:30	178	137.24	127.44	54814.8	17.7	17.3	0.0	34734	29658	23616.4	6.86	-99.8	1.72
16:40	188	137.45	127.65	54991.6	17.7	17.3	0.0	34730	29650	23616.4	6.86	-99.2	1.68
16:45	193	Collect WQ samples for lab analysis.					Samples placed on ice.						
17:15	223	138.5	128.7	55615.9	17.8	17.3	0.0	34760	29660	23636.8	6.86	-95.7	3.40
17:26	234			55818.4	Pump off.								
Total volume pumped = 4683.8 gallons.													

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min E-70

GEOSCIENCE

CONFIDENTIAL
DRAFT

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Subject to Revision

ISOLATED AQUIFER ZONE SAMPLING DATA SHEET

Zone No. 2

Logged By: N. Reynolds (GSSI) & Cascade

Test Date: 12-18-13 / Wed

Screened Interval: 90 - 100 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 80 ft bgs (intake)

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: MPWSP ML-Z (Del Mar Fisheries)

Sonic Casing Dia: 8 in Sonic Casing Depth: 75 ft bgs

Static WL: 9.6 ft brp (3.6 ft basl)

RP: 6.0 ags (top of 8" cushion)

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
15:45:19	0	9.6	0	55818.2	~28.2	Pump on.							
15:47	2	35.0	25.4		~28.2								
15:50	5	35.9	26.3	55964.6	~28.2								471
16:00	15	36.1	26.5	56246.2	28.2								25.2
16:10	25	36.2	26.6	56527.8	28.2								12.5
16:23	38	36.3	26.7	56893.9	28.2								5.12
16:25	16:26	↑Q											
16:27	42	47.0	37.4		42.4	↑Q	to ~48 gpm	50.6 ft brp w.l.			16:31 ↑ Q		
16:32	47	55.3	45.7	57258.7	50.4								
16:35	50	55.7	46.1	57408.1	49.8								81.5
16:40	55	56.6	47.0	57656.5	49.7								27.6
16:45	60	57.1	47.5	57904.4	49.6								20.7
16:50	65	57.6	48.0	58151.9	49.5								16.6
16:52	67			58242.0	Pump off.	Volume pumped = 2,423.8 gallons							

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

F-71

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 2

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: ML-2 (Del Mar Fisheries)Sonic Casing Dia: 8 in Sonic Casing Depth: 75 ft bgsStatic WL: 7.6 ft brp (1.6 ft bgs)RP: 6.0' aigs (top of 8" casing)

high tide = 10:35 5.12'

Logged By: N. Reynolds (GSSI) & CascadeTest Date: 12-19-13 / ThuScreened Interval: 90 - 100 ft bgsReference Point Elevation: ft amslPump Depth: 80 ft bgs 0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
8:22:10	0	7.6	0	58241.0	Pump on 19.6 gpm	08.24	↑ Q to 25.1 gpm						
8:26	4	27.7	20.1	58324.8	25.1		water slightly aerated.						22.6
8:30	8	28.5	20.9	58426.0	25.3								5.03
9:15	53	29.5	21.9	59565.0	25.3	16.3	0.1	10573	8813	7208.0	6.68	73.3	1.95
9:25	63	29.62	22.02	59819.5	25.5	16.3	0.0	10705	8946	7289.6	6.68	63.5	1.43
9:35	73	29.57	21.97	60074.1	25.5	16.4	0.0	10834	9049	7364.4	6.67	55.4	1.35
9:45	83	29.54	21.94	60328.4	25.4	16.4	0.0	10937	9145	7439.2	6.67	49.9	1.22
9:55	93	29.53	21.93	60582.4	25.4	16.4	0.0	11079	9253	7534.4	6.67	44.6	1.03
10:05	103	29.62	22.02	60836.4	25.4	16.4	0.0	11151	9335	7582.0	6.67	40.7	0.77
10:15	113	29.60	22.00	61090.5	25.4	16.4	0.0	11240	9414	7643.2	6.67	37.4	0.63
10:25	123	29.62	22.02	61344.9	25.4	16.4	0.0	11317	9480	7711.2	6.67	34.7	0.52
10:35	133	29.64	22.04	61599.0	25.4	16.4	0.0	11413	9549	7772.4	6.67	32.3	0.50
10:45	143	29.72	22.12	61853.1	25.4	16.4	0.0	11508	9635	7826.8	6.67	30.1	0.72
10:45	Begin collecting wQ samples for laboratory analysis. Samples placed on ice.												
11:01	159												0.51
11:22	180	29.97	22.37	62802.6	25.7	16.5	0.0	11825	9896	8037.6	6.68	22.1	0.58
11:30:28	188			63017.3	25.4	Pump off.		Total Volume pumped		= 4776.3 gallons			
12:25	243	8.00	0.40	-	0								

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 300 mL/min

Flow thru cell = 148.5 mL/min

**ISOLATED AQUIFER
ZONE CONSTRUCTION**

Zone #1 - As Built

Zone No. 1180 to 190 ft bgs

8" sonic casing to 164 ft bgs
Open annulus above upper bentonite seal.

169 ft bgs

5'

174 ft bgs

6'

180 ft bgs

-ft Perforated Tool
(0.050" slot)
4" PVC

190 ft bgs

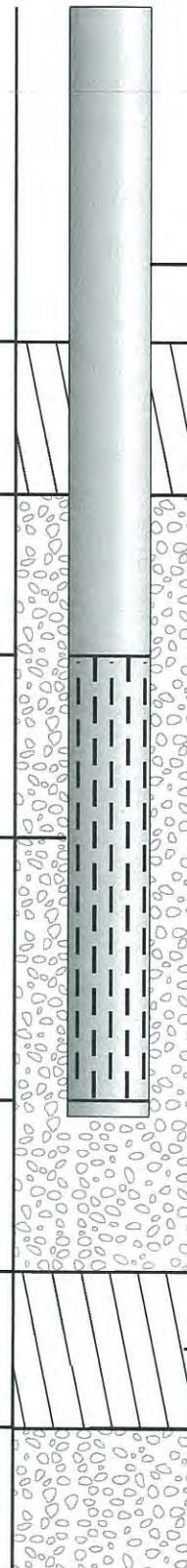
5'

195 ft bgs

5'

200 ft bgs

5'



4 -in Diameter
Drill Pipe
PVC

5 -ft Upper
Bentonite Seal
3/8" SWACO Quick
Seal bentonite chips

Gravel Pack (CEMEX
Monterey #3)

8 -in Diameter
Pilot Borehole

5 -ft Lower
Bentonite Seal

Hole T.D. 200 ft bgs

GEOSCIENCE

Client: RBF Consulting Inc.

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

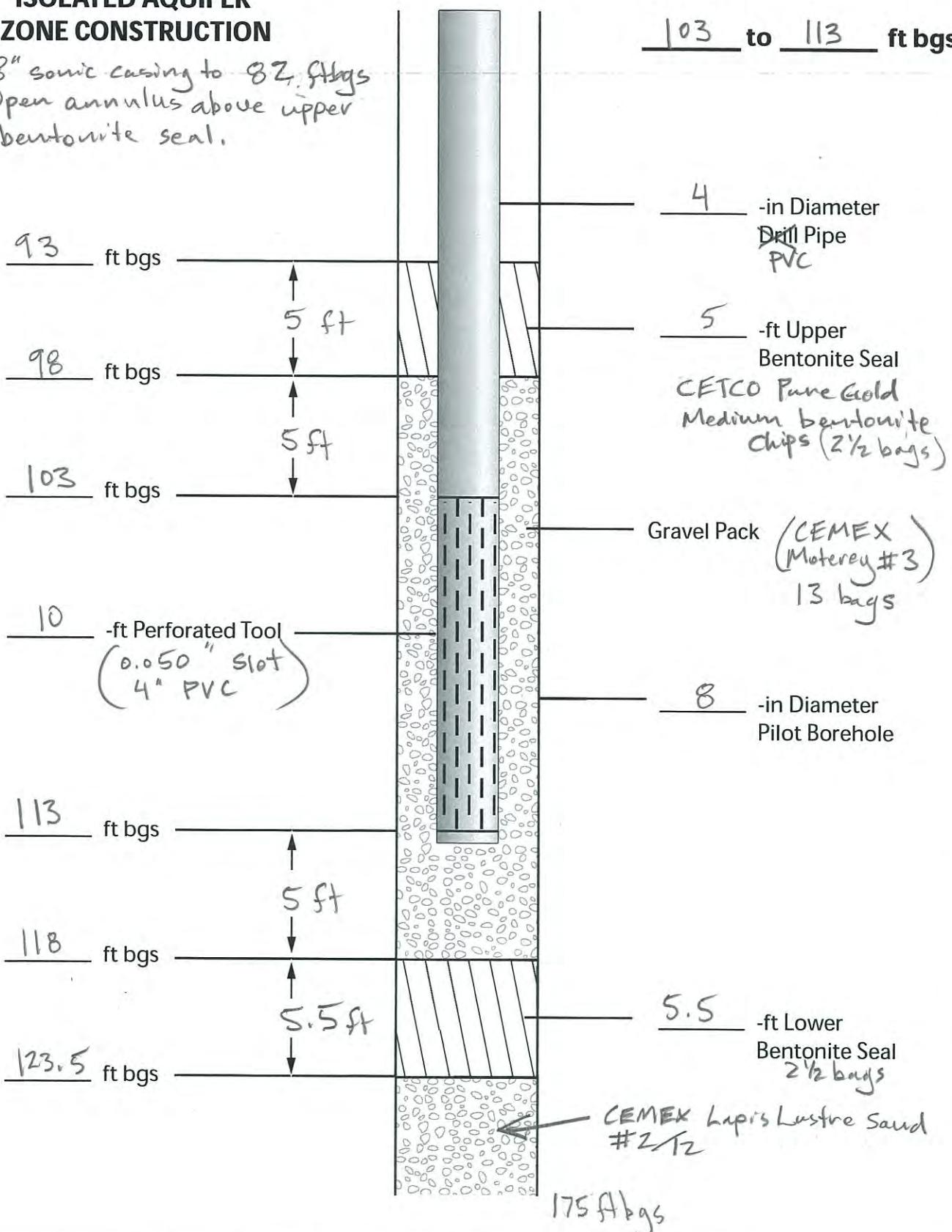
Well Name/Number: MPWSP Exploratory Borehole ML-3

Date: 1-10-14 /Fri

Zone #2 - As Built

Zone No. 2103 to 113 ft bgs
**ISOLATED AQUIFER
ZONE CONSTRUCTION**

8" sonic casing to 82 ft bgs
Open annulus above upper
bentonite seal.

**GEOSCIENCE**

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole ML-3

Date: 1-12-14/Sun

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER ZONE SAMPLING DATA SHEET

Zone No. 1

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: ML-3 (Hwy 1 South)

Sonic Casing Dia: 8 in Sonic Casing Depth: 164 ft bgs

Static WL: 14.0 ft brp (8 ft bags)

RP: 6.0 ftags (top of 8" casing)

Logged By: N. Reynolds (GSSI) & Cascade Drilling

Test Date: 1-10-14 / Fri

Screened Interval: 180-190 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 164.0 ft bgs - 0.68 constant

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

F-75

5/(33.84/60)

365 gallons = 3 well Vol.

She Appendix F4

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
 P.O. Box 220, Claremont, CA 91711
 Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 1 *W.L.S*Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: ML-3 (Hwy 1 South)Sonic Casing Dia: 8 in Sonic Casing Depth: 164 ft bgsStatic WL: 18.57 ft brp *(12.57 ft bgs)*RP: 6.0 ft ags (top of 8" casing)Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 1-11-14 / SatScreened Interval: 180-190 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 184 ± 174 ft bgs

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
8:21:05	0	18.57	-	63083.3	Pump on @ ~3.8 gpm	Turbid.							
8:26	5	66.0	47.43										
8:31	10	99.0	80.43		3.2								
8:36	15	126.8	108.23		3.2								
8:40	19	139.5	120.93	63147.3	Silty. Aerated.								
8:45	24	175.0	156.43		19.8	0.6	7744	6955	5222.4	7.43	-332.1	Turbid.	
8:46	25	Pump off.		63166.5	w.l. approaching pump intake.								
8:54:30	33	139.9	121.33	Recovering	W.L. (slowly recovering)								
10:54	153	65.7	47.13	Recovering	w.l. after swabbing								
12:20:20	0	41.2	22.63	63166.5	Pump on. 8.2 gpm.	12:21 ↓ Q to 4.5 gpm	12:24 ↓ Q to 2.8 gpm	12:21 ↓ Q to 4.5 gpm	12:24 ↓ Q to 2.8 gpm	12:21 ↓ Q to 4.5 gpm	7.31	-97.9	Turbid.
12:24	4	95.6	77.03		4.5								
12:30	10	Sounder stuck		63204.6	~2.8								
12:36	16			63215.0	Stop Pumping. PWL @ pump.								
12:57:30		Resume pumping.											
12:39	19	139.7	121.13										
12:41	21	154.0	135.43	63222.2	2.2	19.7	5.4	9665	8678	6534	7.31	-97.9	Turbid.
12:45	25	169.0	150.43	63231.4	2.3	20.0	5.2	8976	8102	6038	7.31	-100.2	" "
12:46	26	Stop Pumping. PWL @ pump.											
13:04:15	44	Resume pumping.	~2.0 gpm	63233.0	2.0								
13:06	46												

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min *F-76*15:47:57
11/12/13

Total gallons

64.9

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision
ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 1Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: ML-3 (Hwy 1 South)Sonic Casing Dia: 8 in Sonic Casing Depth: 164 ft bgsStatic WL: 18.57 ft brpRP: 6.0 fadsLogged By: N. Reynolds (GSS) & Cascade DrillingTest Date: 1-11-14/SatScreened Interval: 180-190 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 174 ft bgs

Time	12:20 Time Step (min)	18.57 Water Level (ft brp)	Drawdown (ft)	63166.5 Totalizer ()	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total gallons
13:07	47	151.6	133.03		2.0									
13:10	50	159.5	140.93	63240.7	1.9									
13:13:53	53	168.0	149.43	63247.7		Stop pumping. PWL approaching pump								
14:00:30	100	95.7	77.13	63247.7		Resume pumping @ 3.1 gpm.	14:04	↓ Q to						
14:05	105	141.5	122.93	63261.9	2.8	19.3	4.8	11,463	10193	7799.6	7.29	-90.1	23.3	
14:10	110	149.0	130.43	63269.3	1.5	19.0	2.9	11,513	10189	7820.0	7.31	-103.9	58.1	
14:15	115	156.2	137.63	63276.2	1.4	19.4	2.5	11,346	10141	7684.0	7.31	-113.6	470	
14:20	120	162.4	143.83	63282.7	1.3	20.0	2.1	10,647	9640	7235.2	7.33	-123.4	432	
14:25	125	167.1	148.53	63288.8	1.2	20.8	1.7	10,578	9726	7194.4	7.32	-128.1	426	
14:28:16	128			63292.1		Stop Pumping. PWL approaching pump								
14:53	153	116.0	97.43											125.6
14:55:47	156			63292.1		Resume pumping @ 3.6 gpm.	14:58	↓ Q						
15:00	160	145.1	126.53	63298.2	~2.1	20.6	3.1	1079	10282	7738.4	7.32	-118.6	23.0	
15:05	165	160.8	142.23	63308.8	2.1	19.9	1.9	11564	10439	7860.8	7.30	-120.9	31.9	
15:09	169	169.0	150.43	63316.2	2.1	Stop Pumping. PWL approaching pump								
15:59:44	220			63316.2		Resume pumping.	Recovering W.L.	96.8 ft brp						149.7
16:00	220	Began collecting		Water Samples for laboratory analysis										
16:02	222													
16:05	225	148.5												
16:09:05	229			63348.0		Stop Pumping. PWL approaching pump!								1815

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 300 mL/min

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET						
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gsswater.com								Zone No. <u>1</u>						
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>ML-3 (Hwy 1 South)</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>164</u> ft bgs Static WL: <u>18.57</u> ft brp RP: <u>6.0 ft ags</u>						Logged By: <u>H. Reynolds (GSS) & Cascade Drilling</u> Test Date: <u>1-11-14/Sat</u> Screened Interval: <u>180-190</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>174</u> ft bgs								
Time	12:20 Time Step (min)	18.57 Water Level (ft brp)	Drawdown (ft)	63166.5 Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μ S/cm)	Cond. (μ S/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Total gallons
16:22		126.2		63343.4	Recovering W.L. (Totalizer wound back)									
16:22:52	Pump on @	~1.9 gpm		63357.5	20.2	5.6	11163	10253	7752	7.33	-104.5	24.5		191.0
16:28:45					Step Pumping		PWL approaching pump							
16:48:11	Pump on @	~2.0 gpm			~2.0	19.6	2.9	11438	10196	7697	7.33	-126		213.5
16:54														
16:57:10	Stop pumping.	PWL by pump		63380.0										
17:15:06	Pump on @	~2 gpm												
17:17						20.2	4.7	10952	9992	7656	7.35	-121.3	92.3	
17:20						1.5	20.3	4.1	11751	10694	7990	7.27	-99.7	
17:23		173.4				19.7	3.7	11704	10507	7942.4	7.28	-105.8	65.2	
17:25:42	Pump off.	Complete Sampling		63397.7										231.2

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 300 mL/min F-78

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT

Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 2

W.L.'s

Client: RBF/MPWSP - Exploratory Borehole DrillingLogged By: N. Reynolds (GSSI) & Cascade DrillingBorehole Name/Number: ML-3 (Hwy 1 South)Test Date: 1-13-14/MonSonic Casing Dia: 8 in Sonic Casing Depth: 82 ft bgsScreened Interval: 103-113 ft bgsStatic WL: 18.86 ft brp (10.86 ft bgs)

Reference Point Elevation: _____ ft amsl

RP: 8.0 ft bgs (Top of 8" casing)Pump Depth: 95 ft bgs

0.68 constant

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
9:03:55	0	18.86	0	63473.0	Pump on @ 3.5 gpm. Water clear. 0906:50 bQ slightly.								
9:11	7	49.9	31.04		2.2	9:11:34 ↑Q slightly to 2.4 gpm.							
9:15	11	57.1	38.24		2.4	↑Q slightly. Water aerated. No odor.							11.6
9:21	17	67.2	48.34		2.8								8.90
9:55	51	76.3	57.44	63618.0	3.1	19.8	1.3	7420	6687	5045.6	6.90	-116.4	2.91
10:05	61	78.3	59.44	63649.1	3.1	19.7	0.1	7385	6637	5018.4	6.96	-136.3	24.0
10:15	71	79.9	61.04	63680.4	3.1	19.7	0.1	7402	6653	5032.0	6.96	-142.1	4.56
10:25	81	79.8	60.94	63711.8	3.1	19.7	0.1	7394	6650	5025.2	6.95	-145.3	4.17
10:35	91	79.7	60.84	63743.0	3.1	19.8	0.1	7387	6648	5025.2	6.95	-148.0	1.88
10:45	101	79.9	61.04	63774.2	3.1	19.8	0.1	7363	6632	5011.6	6.95	-150.0	2.10
10:55	111	80.3	61.44	63805.5	3.1	19.8	0.1	7368	6629	5011.6	6.95	-151.0	2.03
11:05	121	80.3	61.44	63836.7	3.1	19.8	0.1	7458	6714	5072.8	6.94	-151.6	1.51
11:15	131	80.3	61.44	63867.9	3.1	19.8	0.1	7434	6696	5052.4	6.94	-151.5	1.02
11:25	141	80.3	61.44	63899.0	3.1	19.8	0.1	7447	6709	5066.0	6.94	-151.7	0.96
11:35	151	80.2	61.34	63930.1	3.1	19.8	0.1	7439	6701	5059.2	6.94	-151.4	0.99
11:45	Begin collecting	wQ	Samples for lab analysis.										
12:05	181	78.9	60.04	64029.3	3.3	19.8	0.0	7473	6721	5079.6	6.93	-149.4	7.24
12:13	189												2.58
12:18:05	194			64079.7	Pump off.	Total Volume pump = 606.7 gallons							
13:41	277	20.7	1.84										

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

Flow thru cell = 1218.5 mL/min

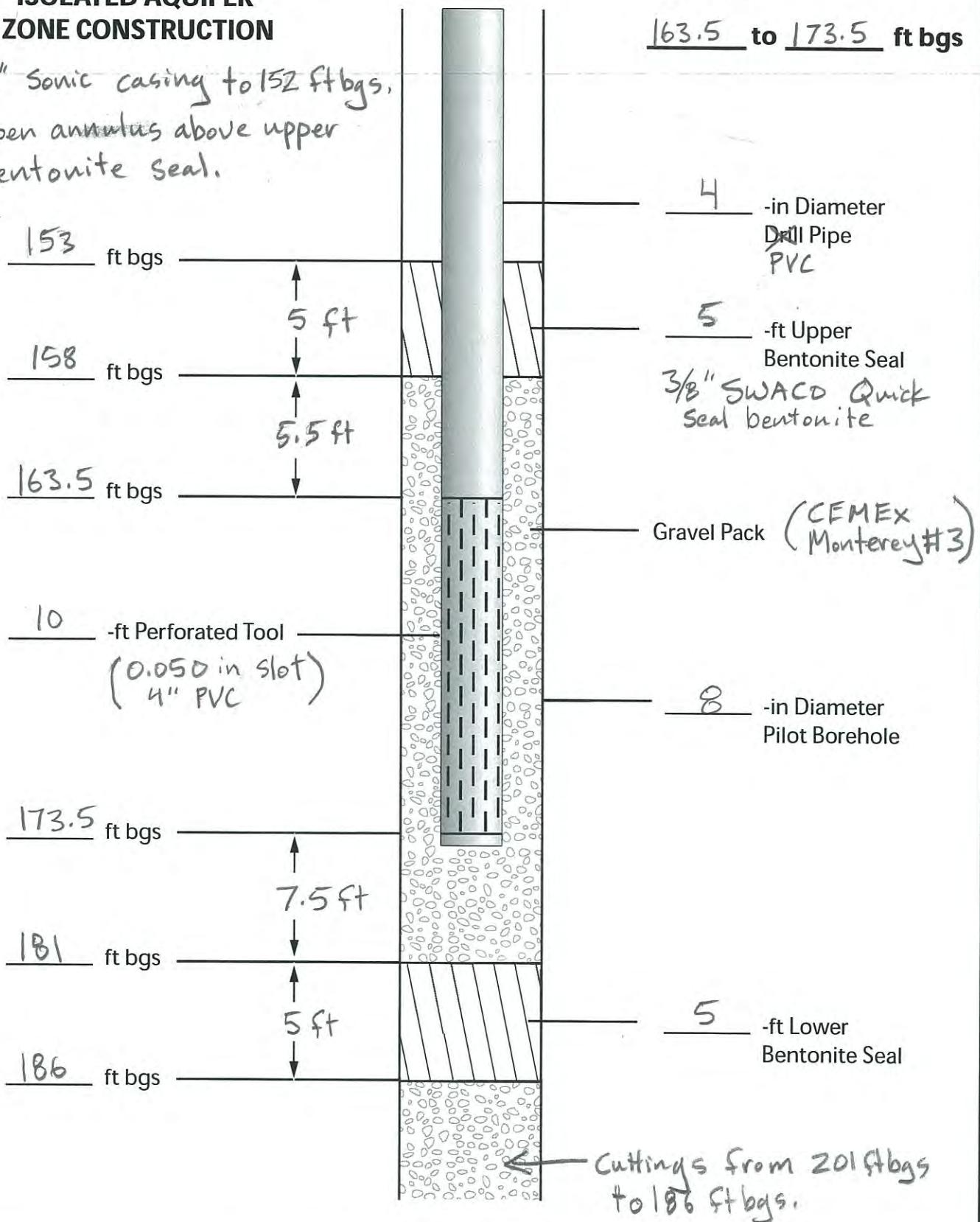
Zone #1 As Built

Appendix F

Zone No. _____

ISOLATED AQUIFER ZONE CONSTRUCTION

*8" Sonic casing to 152 ft bgs.
Open annulus above upper
bentonite seal.*



GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP ML-4 (Hwy 1 Middle)

Date: 12-4-13 / Wed

Zone No. 274.5 to 84.5 ft bgs
**ISOLATED AQUIFER
ZONE CONSTRUCTION**

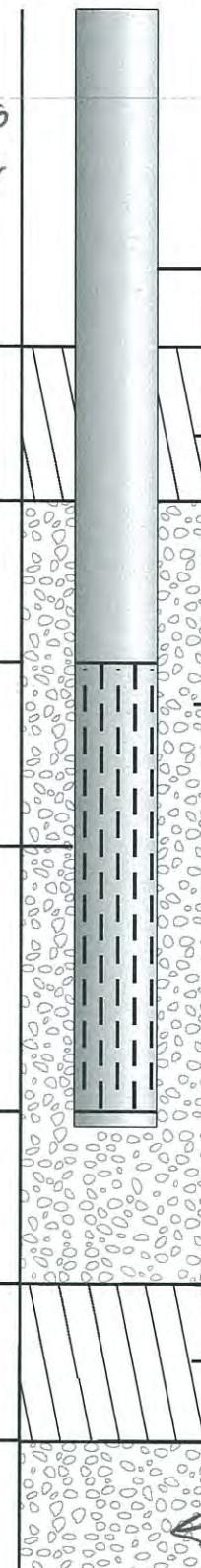
8" Sonic casing to 52 ft bgs
Open annulus above upper bentonite seal

62' ft bgs69.5 ft bgs74.5 ft bgs10

-ft Perforated Tool

(0.050 in slot)
4" PVC84.5 ft bgs90 ft bgs95.5 ft bgs

Zone #2 As Built



4 -in Diameter
Drill Pipe
PVC

7.5 -ft Upper
Bentonite Seal

3/8" SWACO Quick
Seal Bentonite

Gravel Pack (CEMEX
Monterey #3)

8 -in Diameter
Pilot Borehole

~69 ft
Dipper

5.5 -ft Lower
Bentonite Seal

#212 Sand 130 - 95.5
ft bgs

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP ML-4 (Hwy 1 Middle)

Date: 12-6-13 / Fri

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL
DRAFT
Subject to Revision

ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET
Zone No. 1Logged By: N. Reynolds (GSSI) & Cascade DrillingTest Date: 12-4-13 / WedScreened Interval: 163.5 - 173.5 ft bgs

Reference Point Elevation: _____ ft amsl

Pump Depth: 153.5 ft bgs Note: TDS Constant Set to 0.68Client: RBF/MPWSP - Exploratory Borehole DrillingBorehole Name/Number: ML-4 (Hwy 1 Middle)Sonic Casing Dia: 8 in Sonic Casing Depth: 152 ft bgsStatic WL: 35.0 ft brp (27.33 ft bgs)RP: 7.67 ft ags (top of casing)

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
14:21:33	0	35.0	0	36581.3	42.5	Pump on.	↓	2014:23	(drawing down to pump)				
14:26		113.8	78.8	-	17.6								
14:29				↑Q to	18.4								
14:30		105.3	70.3	↑Q to	18.5								
14:35		108.6	73.6	↑Q to	20.2								
14:38		118.0 ^{& dropping}	83.0	↑Q to	22.7								
14:45		123.25	88.25		21.9								
14:58		123.4	88.40		22.0								
15:00		126.0	91.0	↑Q to	22.8								
15:17				↑Q to	~24								
15:35	73	135.2	100.2	38251.1	24.7	17.6	1.3	30316	26034	20617.60	6.74	49.6	5.13
15:45	83	133.8	98.8	38497.1	24.6	17.6	0.6	30410	26103	20678.8	6.75	17.2	5.63
15:55	93	136.9	101.9	38742.5	24.5	17.6	0.4	30298	26003	20746.8	6.76	-1.7	8.66
16:05	103	136.5	101.5	38993.7	25.1	17.6	0.1	30780	26410	20930.4	6.77	-10.8	5.11
16:15	113	136.2	101.2	39244.8	25.1	17.5	0.1	30802	26416	20944.6	6.77	-17.3	6.84
16:25	123	136.3	101.3	39495.8	25.1	17.5	0.0	30824	26422	20957.6	6.77	-24.3	4.67
16:35	133	135.6	100.6	39746.4	25.1	17.5	0.0	30832	26443	20964.4	6.77	-31.2	3.23
16:45	143	134.4	99.4	39996.0	25.0	17.5	0.0	30845	26438	20978.2	6.77	-37.4	5.16
16:55	153	135.5	100.5	40246.5	25.1	17.5	0.0	30853	26436	20978.0	6.78	-43.4	5.51
17:17	175	135.8	100.8	40799.8	25.2	17.5	0.1	30860	26445	20984.8	6.78	-53.8	3.89

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Turb: +/- 10%

Cond: +/- 3%

DO: +/- 10%

ORP: +/- 10 mV

Desired Flow Rate: 100 to 500 mL/min

Flow through cell 1190.5 mL/min Form Created: 29-Sep-13

762.5 mm Hg

GEOSCIENCE

CONFIDENTIAL
DRAFT

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Subject to Revision

**ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET**

Zone No. 1

Client: RBF/MPWSP - Exploratory Borehole Drilling

Logged By: N. Reynolds (GSSI) & Cascade Drilling

Borehole Name/Number: ML-4

Test Date: 12-4-13 / Wed

Sonic Casing Dia: 8 in Sonic Casing Depth: 152 ft bgs

Screened Interval: 163.5-173.5 ft bgs

Static WL: 35.0 ft brp

Reference Point Elevation:

RP: 7.67 ftags (Top of casing)

Pump Depth: 153.5 ft bgs

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

GEOSCIENCE

CONFIDENTIAL
DRAFT

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

**ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET**

Subject to Revision

Zone No. 1

Client: RBF/MPWSP - Exploratory Borehole Drilling

Logged By: N. Reynolds (GSSD) & Cascade Drilling

Borehole Name/Number: ML-4

Test Date: 12-5-13 / thu

Sonic Casing Dia: 8 in Sonic Casing Depth: 152 ft bgs

Screened Interval: 163.5 - 173.5 ft bgs

Static WL: 36.35 ft brp (28.68 ft bgs)

Reference Point Elevation:

RP: 7.67 ft ags (top of casing)

Pump Depth: 153.5 ft bgs — 0.68 constant

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb. +/- 10%

DO: +/- 10%

F-84

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>2</u>					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>ML-4 (Hwy 1 Middle)</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>52</u> ft bgs Static WL: <u>35.8</u> ft brp (<u>27.8 ft bgs</u>) RP: <u>8.0 ft ags (Top of 8")</u>						Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>12-6-13 / Fri</u> Screened Interval: <u>74.5 - 84.5</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>69</u> ft bgs <i>0.68 Constant</i>							
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
10:00	0	35.8	0	48465.4	9.5	Pump on.							
10:04	4	48.8	13.0	-	9.5								
10:07	7	49.6	13.8	-	9.1								
10:09	9	51.7	15.9	-	10.5	(↑Q @ 10:09)							
10:33	33	59.0	23.2	48855.7	14.4	17.4	0.7	11,694	9995	7962.8	6.65	-12.9	22.5
10:40	40	59.5	23.7	48956.3	14.4	17.4	0.5	12,042	10,295	8187.2	6.64	-34.4	15.5
11:15	75	61.1	25.3	49458.0	14.3	17.6	0.3	12,717	10,914	8649.6	6.59	-61.3	3.38
11:25	85	61.6	25.8	49601.5	14.4	17.6	0.2	12,780	10,965	8697.2	6.59	-64.6	2.75
11:35	95	62.0	26.2	49745.1	14.4	17.5	0.2	12,845	11,025	8731.2	6.58	-69.4	1.74
11:45	105	62.3	26.5	49888.5	14.3	17.6	0.1	12,866	11,058	8765.2	6.57	-73.5	1.36
11:55	115	62.5	26.7	50031.9	14.3	17.7	0.1	12,899	11,100	8765.2	6.57	-79.7	1.15
12:05	125	62.8	27.0	50175.2	14.3	17.7	0.1	12,914	11,131	8792.4	6.57	-86.1	0.92
12:15	135	63.1	27.3	50318.7	14.4	17.7	0.1	12,933	11,141	8799.2	6.57	-92.8	0.94
12:25	Collect	WQ samples for laboratory analysis.											Samples placed on ice. Note: water has sulfur odor.
13:01	181	64.2	28.4	50986.1	14.5	17.7	0.1	12,987	11,168	8840.0	6.56	-124.6	0.78
13:10	190	64.4	28.6										
13:11:56~192	Pump off.			51141.8									Total Volume pumped = 2,676.4 gallons
13:51		40.75	4.95										
14:20		40.10	4.30										

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min

F-85

Flow Rate (GSI) = 1371 mL/min

Zone #1 As Built

Zone No. 1**ISOLATED AQUIFER
ZONE CONSTRUCTION**

8" Sonrc Casting to
136 ft bgs. Open annulus
above upper bentonite
seal.

142 ft bgs

5'

147 ft bgs

5'

152 ft bgs

10

-ft Perforated Tool
(0.050 in Slot)
4" PVC

162 ft bgs

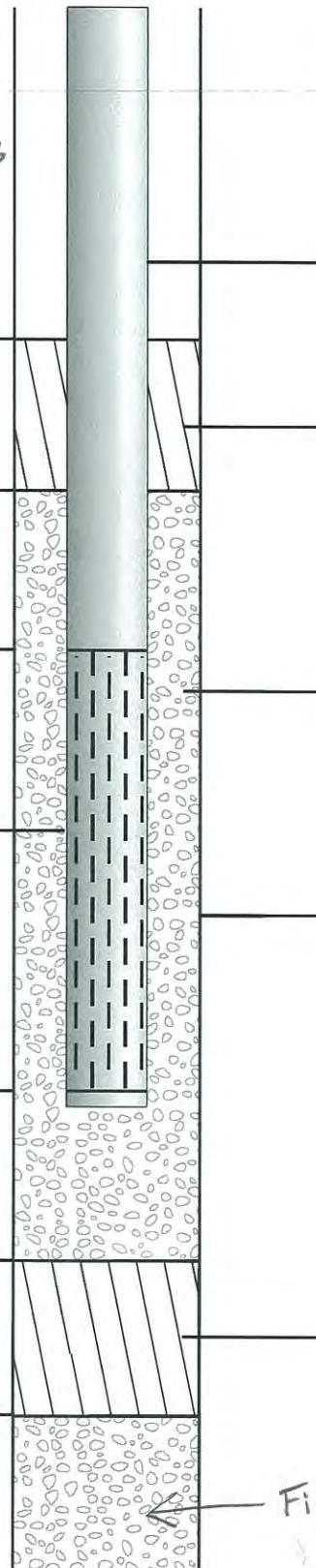
5'

167 ft bgs

5'

172 ft bgs

TD 200 ft bgs



152 to 162 ft bgs

4 -in Diameter
Drill Pipe
PVC

5 -ft Upper
Bentonite Seal

3/8" SWACO Quick
Seal bentonite
chips. (1.5 bags)

Gravel Pack (CEMEX
Monterey #3)
13 bags

8 -in Diameter
Pilot Borehole

5 -ft Lower
Bentonite Seal
(2 bags)

Fill from drilling to 172 ft bgs

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwatert.com

Client: RBF Consulting Inc.

Well Name/Number: MPWSP Exploratory Borehole ML-6

Date: 11-21-13 / Thu

Zone #2 - As-Built

Appendix F

Zone No. 2

ISOLATED AQUIFER ZONE CONSTRUCTION

8" sonic Casing to 85 ft bgs.

Open annulus above upper bentonite seal.

90 ft bgs

5'

95 ft bgs

5'

100 ft bgs

10

-ft Perforated Tool

(0.050 in. slot)
4" PUC

110 ft bgs

5'

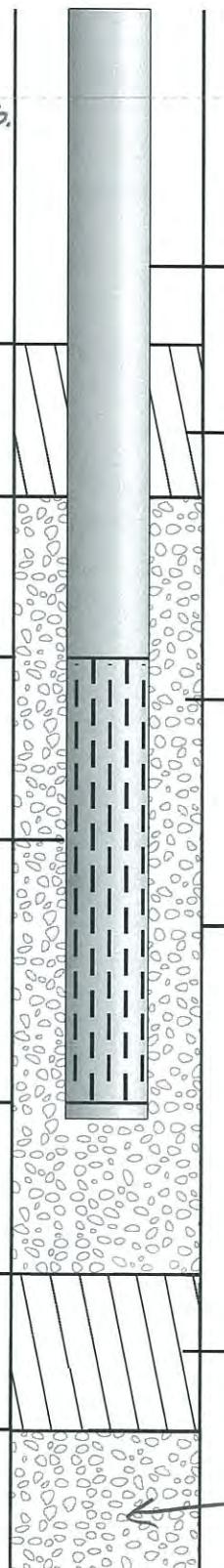
115 ft bgs

5'

120 ft bgs

5'

142 ft bgs



100 to 110 ft bgs

4 -in Diameter
Drill Pipe
PVC

-ft Upper
Bentonite Seal
3/8" SWACO Quick
Seal bentonite
chips. 3 bags

Gravel Pack (CEMEX
Monterey #3
14 bags)

8 -in Diameter
Pilot Borehole

5 -ft Lower
Bentonite Seal
4 bags

CEMEX 8 mesh sand
from 142 - 120 ft bgs

GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF Consulting Inc

Well Name/Number: MPWSP ML-6 (MBARI)

Date: 11-22-13 / Fri # 11-23-13 / Sat

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision							ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com									Zone No. 1					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u>										Logged By: <u>N. Reynolds (GSSI)</u>				
Borehole Name/Number: <u>ML-6 (MBARI)</u>										Test Date: <u>11-22-13 / Fri.</u>				
Sonic Casing Dia: <u>8</u> in		Sonic Casing Depth: <u>136</u> ft bgs								Screened Interval: <u>152-162</u> ft bgs				
Static WL: <u>15.74</u> ft brp										Reference Point Elevation: _____ ft amsl Note: TDS RP: <u>7.65</u> Pump Depth: <u>143</u> ft bgs Constant is 0.65				
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (µS/cm)	Cond. (µS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)	
12:26	193	120.2	104.46	22381.0	42.9	16.6	0.1	48043	40368	31226	6.63	-73.9	3.23	
12:36	203	120.05	104.31	22810.0	42.9	16.5	0.1	48065	40302	31245.5	6.63	-77.4	1.71	
12:46	213	120.2	104.46	23238.5	42.9	16.6	0.1	48074	40404	31245.5	6.63	-79.5	2.45	
12:56	223	120.4	104.56	23666.4	42.8	16.6	0.1	48074	40377	31245.5	6.63	-81.6	1.48	
13:06	233	120.4	104.66	24094.0	42.8	16.6	0.1	48095	40386	31258.5	6.64	-85.1	2.81	
13:16	243	120.5	104.76	24521.5	42.8	16.5	0.1	48144	40356	31284.5	6.63	-88.0	2.24	
13:26	253	120.4	104.66	24949.0	42.8	16.5	0.1	48132	40389	31284.5	6.63	-90.5	1.26	
13:35	Sample	for laboratory	WQ analysis	5.5										
14:16		120.70	104.96	27087.3	42.8	16.4	0.1	48218	40336	31343	6.62	-104.6	1.17	
14:22:23				27358.0	Pump off.									
Total gallons pumped = 11,838.5														

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

F-88

Desired Flow Rate: 100 to 500 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

CONFIDENTIAL**DRAFT****Subject to Revision****ISOLATED AQUIFER
ZONE SAMPLING DATA SHEET**

Zone No. 1

Client: RBF/MPWSP - Exploratory Borehole Drilling

Borehole Name/Number: ML-6 (MBARI)

Sonic Casing Dia: 8 in Sonic Casing Depth: 136 ft bgs

Static WL: 15.74 ft brp 8.09 ft bgs

RP: 7.65 ft ays

Logged By: N. Reynolds (GSSI) & Cascade

Test Date: 11-22-13 / Fri

Screened Interval: 152-162 ft bgs

Reference Point Elevation: ft amsl Note: TPS

Pump Depth: 143 ft bgs

VSI Professional plus.

Constant is 0.65

Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gal)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
09:13	0	15.74	0	15519.5		09:13	Pump on						
09:39		54.4	38.66		19.5								
09:54:35		63.1	47.36		~25.0	↑Q							
10:05		68.0	52.26		23.9								
10:06						↑Q							
10:10		76.0	60.26		~29	↑Q							
10:13						↑Q							
10:23	70	116.1	100.36		43.2								
10:26	73			17226.5	~43.2								
10:36	83	118.1	102.36	17658.0	43.2	16.7	0.1	47904	40276	31141.5	6.61	-8.6	11.6
10:46	93	118.8	103.06	18088.5	43.1	16.6	0.4	47463	39864	30849	6.62	-19.6	6.51
10:56	103	119.2	103.46	18518.5	43.0	16.6	0.3	47565	39992	30927	6.62	-34.1	5.73
11:06	113	119.6	103.86	18948.0	43.0	16.6	0.2	47726	40094	31031	6.62	-42.5	5.62
11:16	123	119.9	104.16	19377.3	42.9	16.6	0.2	47791	40169	31063.5	6.63	-49.1	7.49
11:26	133	120.0	104.26	19806.8	43.0	16.5	0.1	47894	40120	31135	6.63	-55.1	8.40
11:36	143	120.0	104.26	20236.4	43.0	16.5	0.1	47920	40161	31148	6.62	-59.2	3.53
11:46	153	120.2	104.46	20665.5	42.9	16.5	0.1	47975	40185	31180.5	6.62	-64.5	8.44
11:56	163	120.0	104.26	21094.5	42.9	16.5	0.1	47990	40231	31193.5	6.63	-64.6	4.55
12:06	173	120.0	104.26	21523.0	42.9	16.5	0.1	48024	40265	31219.5	6.63	-67.1	8.31
12:16	183	120.3	104.56	21952.0	42.9	16.6	0.1	48026	40279	31213.0	6.63	-70.1	2.35

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 500 mL/min F-89

1230 mL/min through Flowthru cell.

GEOSCIENCE		CONFIDENTIAL DRAFT Subject to Revision						ISOLATED AQUIFER ZONE SAMPLING DATA SHEET					
GEOSCIENCE Support Services, Inc. P.O. Box 220, Claremont, CA 91711 Tel: (909) 451-6650 Fax: (909) 451-6638 www.gssiwater.com								Zone No. <u>2</u>					
Client: <u>RBF/MPWSP - Exploratory Borehole Drilling</u> Borehole Name/Number: <u>ML-6 (MBARI)</u> Sonic Casing Dia: <u>8</u> in Sonic Casing Depth: <u>85</u> ft bgs Static WL: <u>15.00</u> ft brp <u>9.58 ft bgs</u> RP: <u>5.42 ft bgs (TOC)</u>						Logged By: <u>N. Reynolds (GSSI) & Cascade Drilling</u> Test Date: <u>11-23-13 / SAT</u> Screened Interval: <u>100 - 110</u> ft bgs Reference Point Elevation: _____ ft amsl Pump Depth: <u>90</u> ft bgs							
Time	Time Step (min)	Water Level (ft brp)	Drawdown (ft)	Totalizer (gallons)	Pumping Rate (gpm)	Temp (°C)	DO (mg/L)	Specific Cond. (μS/cm)	Cond. (μS/cm)	TDS (mg/L)	pH	ORP (mV)	Turbidity (NTU)
10:19:54	0	15.00	-	27347.0	Pump on @ 36.4 gpm.	10:21	to 22.0 gpm						
10:49:43	↑Q	to 31.8	ft brp	35.6 ft brp									
10:52	↑Q	to 40.3	ft brp	40.1 ft brp									
10:54:50	↑Q (valve all the way open)	to 49.6	ft brp	49.6 gpm. PWL = 47.4 ft brp.									
11:00	40	48.6	33.6	28472.3	49.3								
11:10	50	49.2	34.2	28979.0	50.7								13.0
11:20	60	49.6	34.6	29464.5	48.6								7.75
11:30	70	49.8	34.8	29960.0	49.6	16.0	0.3	42484	35193	28893.2	6.56	75.3	5.03
11:40	80	49.9	34.9	30455.2	49.5	16.0	0.1	42490	35191	28920.4	6.57	67.8	3.24
11:50	90	50.1	35.1	30950.5	49.5	15.9	0.1	42523	35185	28927.2	6.58	69.0	2.98
12:00	100	50.2	35.2	31445.3	49.5	15.9	0.1	42557	35194	28947.6	6.58	69.1	3.58
12:10	110	50.3	35.3	31940.2	49.5	15.9	0.1	42601	35210	28961.2	6.58	68.8	3.59
12:20	120	50.4	35.4	32435.3	49.5	15.9	0.1	42616	35223	28981.6	6.58	67.4	2.48
12:30	130	50.5	35.5	32930.3	49.5	15.9	0.1	42626	35209	28988.4	6.58	65.6	1.80
12:40	140	50.6	35.6	33425.5	49.5	15.9	0.1	42651	35243	28988.4	6.57	63.5	1.86
12:51	151	50.5	35.5	33969.5	49.5	15.9	0.1	42650	35246	29002.0	6.58	60.6	1.73
13:00	Collect	W.Q. samples for laboratory analysis, including MBARI's samples.											
13:36	196	50.8	35.8	36194.4	49.4	15.9	0.1	42650	35274	29042.8	6.57	42.2	1.16
13:44	204			36588.5	Pump off.								
14:45													

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Cond: +/- 3%

ORP: +/- 10 mV

Turb: +/- 10%

DO: +/- 10%

Desired Flow Rate: 100 to 300 mL/min

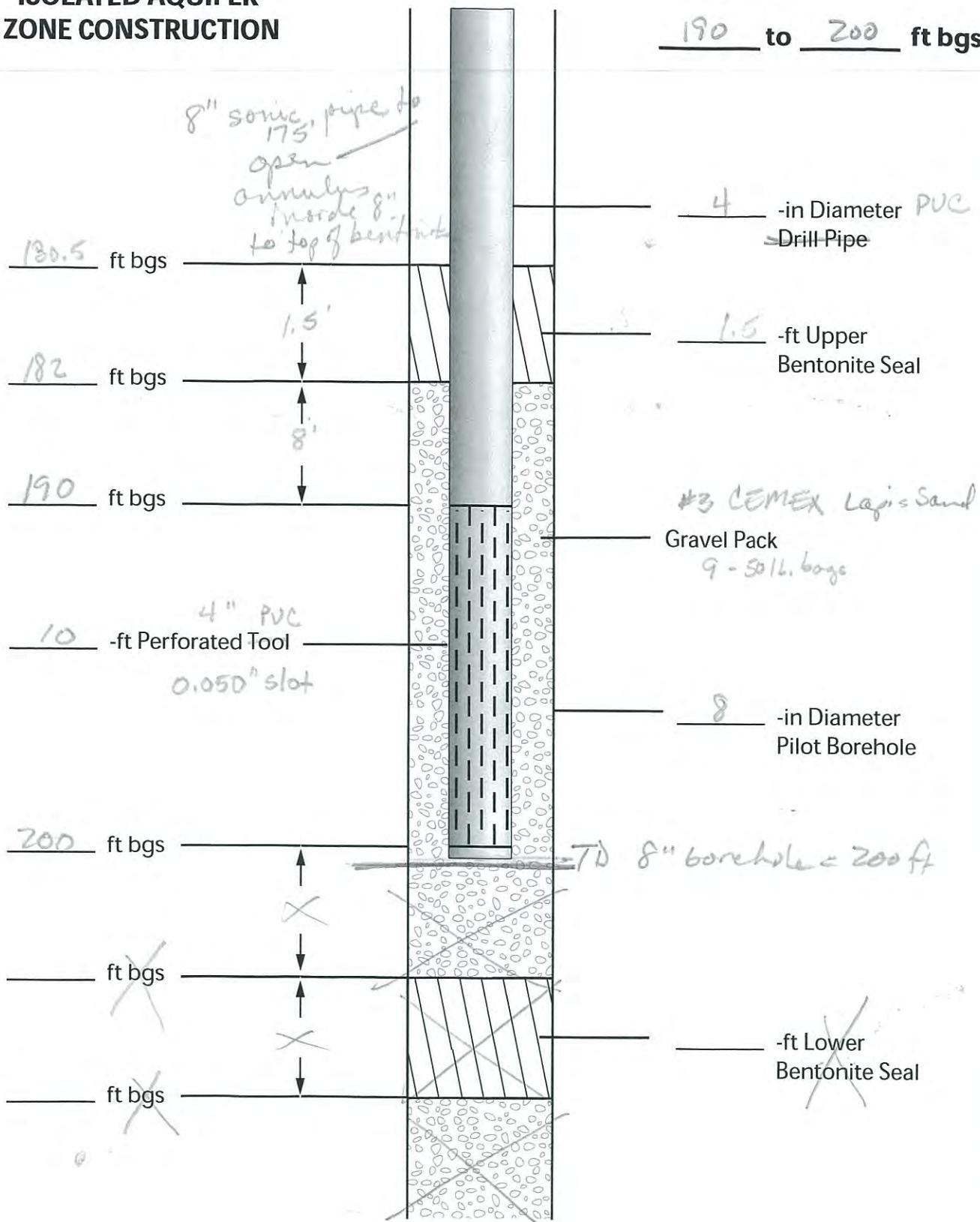
Flow through cell 1223.5 mL/min

Form Created: 29-Sep-13

Zone No. PR-1 Zone 1

190 to 200 ft bgs

ISOLATED AQUIFER ZONE CONSTRUCTION


GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gsswater.com

Client: RBF/MPWSP Expl Boreholes

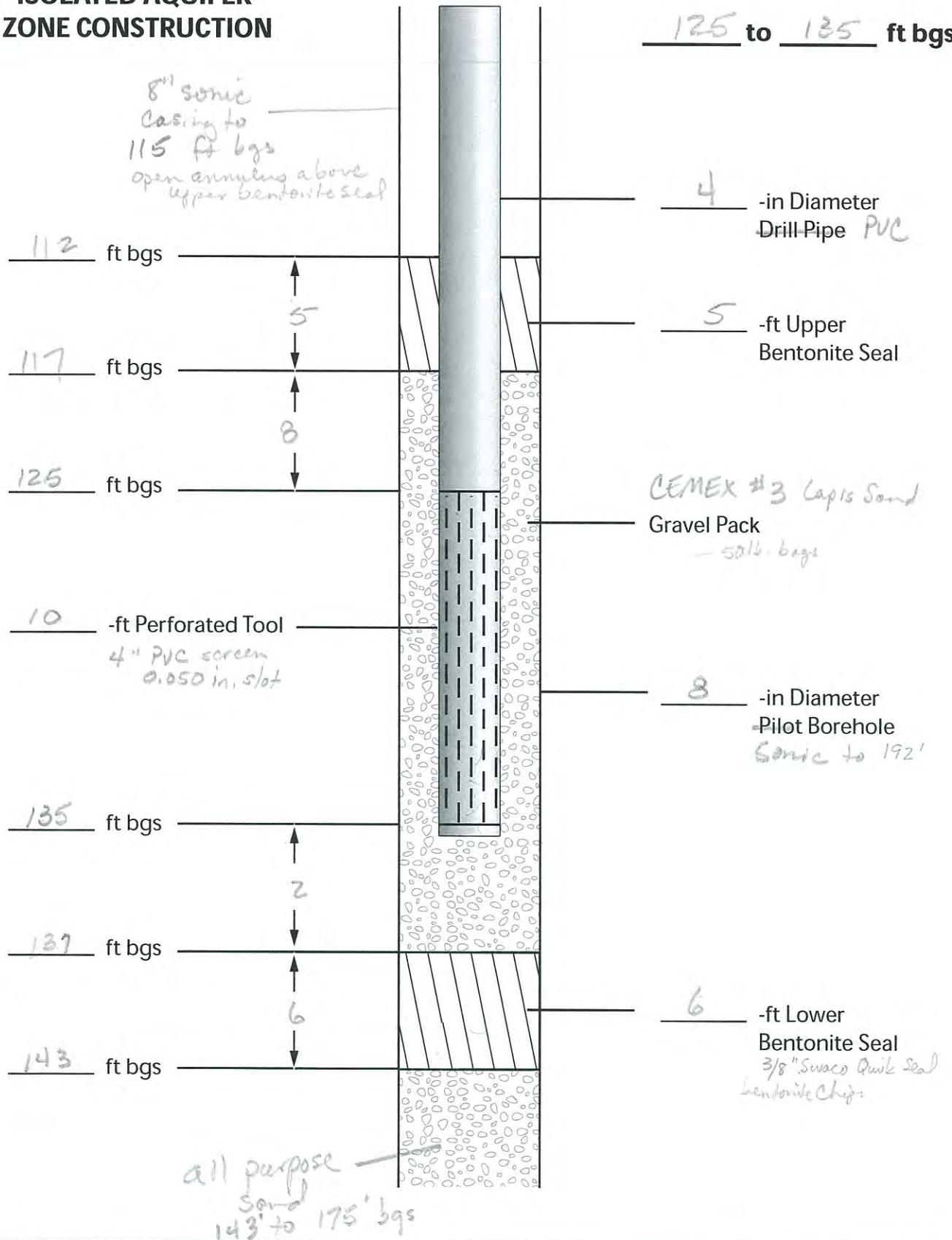
Well Name/Number: PR-1 Zone 1 (190'-200' Lgs)

Date: 24-Sep-13

Zone No. PR-1 Zone 2

125 to 135 ft bgs

ISOLATED AQUIFER ZONE CONSTRUCTION



GEOSCIENCE

GEOSCIENCE Support Services, Incorporated
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF / 41PWSP Expl. Boreholes

Well Name/Number: PR-1 Zone 2 (125'-135' bgs)

Date: 25-Sep-13

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

WELL SAMPLING DATA SHEET

Client: RBF / MAWSP
Well Name/Number: PR-1 Zone 1 (190'-200' bgs)
Well Dia: 4 in Well Depth: 200 ft bgs
Static WL: 12 ft brp
RP: +6

Logged By: Diane Smith
Test Date: 24-Sep-13
Screened Interval: 190-200 ft bgs
Reference Point Elevation: 15 ft amsl
Pump Depth: 120' ft bgs

8" Sonic casin to 175' Lg. 2.

Sampling Method:

Casing Volume:

Tubing Volume:

Volume Pumped Before Sampling:

Flow Rate:

Stabilization Criteria:

3 to 5 minute recordings with 3 consecutive readings within:

pH: +/- 0.1 unit

Turb: +/- 10%

pH: +/- 0.1

DO: +/- 10%

QRR: +/- 10 mV

Desired Flow Rate: 100 to 500 ml/min

GEOSCIENCE

WELL SAMPLING DATA SHEET

GEOSCIENCE Support Services, Inc.
P.O. Box 220, Claremont, CA 91711
Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwater.com

Client: RBF / MPWSP
Well Name/Number: PR-1 Zone 2 (125'-135' bgs)
Well Dia: 4 in Well Depth: 135 ft bgs
Static WL: 4.7 ft brp
RP: +7.2

8" sonic casing to 115' bgs

Logged By: Diane Smith
Test Date: 25-Sep-13

Screened Interval: 125-135 ft bgs

Reference Point Elevation: 16.2 ft amsl

Pump Depth: 105 ft bgs

Sampling Method:

Stabilization Criteria:

Casing Volume:

3 to 5 minute recordings with 3 consecutive readings within:

Tubing Volume:

Turb: +10%

Volume Ramped Before Sampling:

pH: +/- 0.1

urb: +/- 10%

Volume Flow Rate:

Desired Flow Rate = 100 to 500 mL/min

GEOSCIENCE

GEOSCIENCE Support Services, Inc.
 P.O. Box 220, Claremont, CA 91711
 Tel: (909) 451-6650 Fax: (909) 451-6638
www.gssiwatert.com

PUMPING TEST DATA SHEET

8" sonoc casing to 115' bgs

Client: RBR
 Well Name: PR-1 Zone 2

Logged By: Diane Smith
 Test Date: 25 Sep - 13

Circle Well Type: Pumping Observation ($r =$) ft
 Circle Test Type: Step Drawdown Constant Rate Recovery Development
 Reference Point Elevation: +7.2 ft Pump Depth: 105 ft bgs
 Static Water Level Depth: 4.7 ft bgs Totalizer Units: gal

Time of Day	Time min Step	Time min Total	Depth to Water (ft brp)	Draw-down (ft)	Pumping Rate (gpm)	Sand Content		Totalizer (gal)	Remarks and other data
						Time Interval	ppm		
4:00	-		11.9	-	-			03790	
4:07	0		-	-	-			-	Pump On
4:10	3		-	-	-			-	Cloudy, no odor
4:18	8		30.8	18.9	30	4:19	04150 + 1 min	4260	clear, foam in cup
4:23	16		31.0	19.1	30			4610	initials
4:34	27		31.3	19.4	30			4800	
4:40	33		31.4	19.5	-			4952	
4:45	38		31.6	19.7	30			5220	
4:55	48		31.7	19.8	-			5380	
5:00	53		31.8	19.9	30				Incr Q to 50 gpm
5:03	56								Cloudy
5:08	61		51.1	39.2	50			6700	
5:15	68		56.5	44.6	50			-	
5:20	73		-	-	50			6320	sl. cloudy
5:25	78		53.3	41.4	-			6560	sl. cloudy
5:30	83		58.8	46.9	-			6780	
5:35	88		59.1	47.2	50			7080	
5:40	93		59.3	47.4	50			7310	
5:45	98		59.7	47.8	50			7560	v. sl. cloudy, Pump off
5:53	8		12.8	1.2	-			-	Recovery
6:00	15		12.8	1.2	-			-	..