

AP-111

AGWMR (5)

2014

WESTERN REFINING - GALLUP REFINERY
Q1-2014

NAPIS-1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	3-10-14	(1)	1212	9.81	12.21	1.518	1.306	1.03	70.1	-22.7
GAUGE TIME	1210	(2)	1214	9.59	11.53	1.432	1.260	0.99	58.0	-58.4
DTB (feet)		(3)	1216	9.43	11.60	1.439	1.265	0.99	54.1	-52.5
Depth to Bottom	13.53									
DEDICATED PUMP	—		1218	9.33	11.77	1.452	1.281	1.00	67.0	-50.9
DTW (feet)		WEATHER CONDITIONS CLEAR, WARM								
Depth to Water	6.78									
DTB - DTW	6.75									
Capacity per foot	0.16									
1 Well Volume	1.08									
3 Well Volumes	3.24	WATER APPEARANCE CLEAR, NO ODOR								
PURGE DATE	3-10-14									
PURGE TIME										
SAMPLE DAY	3-10-14									
SAMPLE TIME	1225									
PUMP DEPTH										
DTW (feet)										
at end of Purging										
SAMPLE LOG NO SURFACE WATER IN CASING										

OAPIS-1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	3-10-14	(1)	1249	9.53	14.50	5.413	4.403	3.74	42.0	-283.0
GAUGE TIME	1245	(2)	1255	9.04	14.14	5.368	4.400	3.73	20.1	-124.1
DTB (feet)		(3)	1301	9.00	14.72	5.500	4.446	3.76	31.0	-127.3
Depth to Bottom	28.30	(4)	1308	8.80	15.09	4.490	4.400	3.73	29.3	-113.1
DEDICATED PUMP	—									
DTW (feet)		WEATHER CONDITIONS CLEAR, WARM, BREEZY								
Depth to Water	11.50									
DTB - DTW	16.80									
Capacity per foot	0.16									
1 Well Volume	2.7									
3 Well Volumes	8.1	WATER APPEARANCE GOLDEN, SLIGHT ODOR								
PURGE DATE	3-10-14									
PURGE TIME										
SAMPLE DAY	3-10-14									
SAMPLE TIME	1315									
PUMP DEPTH										
DTW (feet)										
at end of Purging										
SAMPLE LOG										

INSTRUMENTS USED: BAILER, YSI METER

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

GUM-2		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	3-11-14	(1)							
GAUGE TIME	0814	(2)							
DTB (feet)		(3)							
Depth to Bottom									
DEDICATED PUMP		WEATHER CONDITIONS							
DTW (feet)									
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE									
PURGE TIME		WATER APPEARANCE							
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet)									
at end of Purging									
SAMPLE LOG		WELL DRY							

GUM-1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	3-11-14	(1)	0858	7.33	11.51	4.389	3.837	3.22	51.7	-184.7
GAUGE TIME	0815	(2)	0901	8.91	11.53	4.401	3.864	3.24	42.1	-161.0
DTB (feet)	26.24	(3)	0904	8.66	11.62	4.406	3.875	3.23	47.0	-146.9
Depth to Bottom		(4)								
DEDICATED PUMP		WEATHER CONDITIONS								
DTW (feet)										
Depth to Water	18.92									
DTB - DTW	7.32									
Capacity per foot	0.16									
1 Well Volume	1.17									
3 Well Volumes	3.5	WATER APPEARANCE								
PURGE DATE	3-11-14									
PURGE TIME										
SAMPLE DAY	3-11-14									
SAMPLE TIME	0910									
PUMP DEPTH										
DTW (feet)		YELLOWISH, SLIGHT ODOOR								
at end of Purging										
SAMPLE LOG										

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

Gwm -3		TEST PARAMATERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	3-11-14	(1)								
GAUGE TIME	0818	(2)								
DTB (feet) Depth to Bottom	17.8	(3)								
DEDICATED PUMP	—		WEATHER CONDITIONS							
DTW (feet) Depth to Water	—									
DTB - DTW										
Capacity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										
SAMPLE LOG									WELL DRY	

		TEST PARAMATERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet) Depth to Bottom		(3)								
DEDICATED PUMP		(4)	WEATHER CONDITIONS							
DTW (feet) Depth to Water										
DTB - DTW										
Capacity per foot										
1 Well Volume										
3 Well Volumes										
PURGE DATE										
PURGE TIME			WATER APPEARANCE							
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Signature:

Location Western Refining (California) 3/5/14
Project / Client Qtrly GW + Pond Sampling

CONTENTS

[illegible]

weather: cool (~50), sunny breezy
0700 - Onsite, chkd in w/ Cheryl
+ Janice

0725- Tailgate safety meeting

0745- Calibrate water quality meter

0830 - Pick up ice
shelter, get
API opstra
click in @ best
work point from

0845. At EP-1 ; begin sampling ponds.

ponds

- Use second dipper to obtain samples; decon w/ H_2O / Alconox solution, potable water rinse, then distilled, reuse.
- EB - #1 collected from clean dipper prior to sampling
- Obtain water quality parameters while sampling

Location Western Refining / Gallup 3/5/14
 Project / Client Qtry. GW + Pond Sampling

1330 - Most of pond sampling complete; wrap up for the time being; had all collected samples to ACT (western contractor) who will transport them to Hall Labs

1415 - Resume Sampling

1600 - Pond sampling complete; check in w/ Cheryl Jo.

1615 - Stake out grid locations for tomorrow's land farm sampling.

1700 - Lock up enviro-shed; depart refinery.

1730 - End of Day

Hoyak

Location Western Refining / Gallup 3/6/14
 Project / Client landfarm sampling

0730 - ARRIVE @ PLANT
 - CHECK IN W/ JANICE + CHERYL
 - GET EXCAVATION PERMIT

0800 - SIGN IN @ WWTU
 GET WORK PERMIT

0812 - MEET W/ BACKHOE OPERATOR @ OLD LANDFARM

0820 - COLLECT BLANKS
 BEGIN EXCAVATIONS

COLLECTED BD @
 OCD-04-3-6

COLLECTED MS + MSD @
 OCD-01-3-6

1110 FINAL EXCAVATION
 BACKFILLED

Location WESTERNDate 3-7-14

Project / Client _____

0730

ARRIVE @ PLANT

✓ IN W/ CHERYL

CALIBRATE METER

LOAD SUPPLIES

0845

PROCURE WORK PERMIT

0853

ARRIVE @ WELL 29

COLLECTED FB GROUP #5

COLLECTED EQ BLANK OFF

OF GAUGE PROBE

0900

COMMENCE PURGING

1200

COLLECT FB FOR GROUP #4

@ WELL

1430

COMPLETE DAYS SAMPLING

PACK SAMPLES / UNLOAD

TRUCK

1500

HEAD TO LAB

Location WESTERNDate 3-10-14

Project / Client _____

0730

ARRIVE @ PLANT

LOAD SUPPLIES

✓ IN W/ CHERYL

0800

OBTAIN PERMIT FROM

WWT OPERATOR

SIGN IN @ WWT
PERFORM TAILGATE MTG

0830

COLLECT FB FOR GROUP 1

COMMENCE SAMPLING

GROUP 1

OIL SUMP LOW DRY

0825

COLLECT FB FI GROUP 3

SAMPLE GROUP 3

1330

COMPLETE SAMPLING

GROUP 3

1430

HEAD TO LAB W/ DAYS

SAMPLES

Location

WESTERN

Project / Client

Date

3-11-14

0730

ARRIVE @ PLANT

LOAD SAMPLING SUPPLIES

0745

SIGN IN @ WWTV,

OBTAIN WORK PERMIT

TAILGATE SAFETY MTG

0830 15H

COLLECT FB FI GROUP 2

SAMPLE GWM 1 (2430K)

CLEAN + STRAIGHTEN

UP ENVIRON SHEDS

1200

GAUGE NEW MKTE
WELLS

Location

Date

Project / Client

TRHYDRO CORPORATION
FIELD BORING LOG

Sheet ____ of ____ Sheets

Project & Project Number: 697-039-006		Date:	
Project Location/Address: Gallup Refinery OCD Landfarms		Drilling Company:	
Client: Western Refining		Driller:	
Weather:		Rig Type / Method:	
Logged by:		Sample Method (circle one): Direct Push Split Spoon Shelby Tube Other:	
Logger's Signature:		Surface Elevation: Casing Elevation: GE Elevation:	
		Equipment List:	

BORING ID:

Boring Location: Central OCD Landfarm

Interval (ft bgs)	Texture - Grain Size		Color		Plasticity	Consistency	Moisture	Odor	PID Interval/Reading	Additional Comments (Odor descriptor, sheen, nodules, structure, vegetation, etc.)
	Major	Minor	Major	Modifier						
6'	GVL - F M C	Grvly	Black	Red Brown	High	Very Soft	Dry	Strong		OCD-04-3-6 + BD
	Sand - F M C	Sandy	Gray - L M D	Gray Green	Moderate	Soft	Moist	Moderate		
	Silt	Silty	Bm - L M D	Rust Yellow	Low	Firm	Saturated	Slight		
	Clay	Clayey	Red - L M D	Other	Non	Hard	None Noted			
			Other	%	--	Very Hard	--	--		
6'	GVL - F M C	Grvly	Black	Red Brown	High	Very Soft	Dry	Strong		OCD-02-3-6
	Sand - F M C	Sandy	Gray - L M D	Gray Green	Moderate	Soft	Moist	Moderate		
	Silt	Silty	Bm - L M D	Rust Yellow	Low	Firm	Saturated	Slight		
	Clay	Clayey	Red - L M D	Other	Non	Hard	None Noted			
			Other	%	--	Very Hard	--	--		
5 1/2'	GVL - F M C	Grvly	Black	Red Brown	High	Very Soft	Dry	Strong		OCD-01-3-6 + MS + MSD NATIVE @ ~ 4'
	Sand - F M C	Sandy	Gray - L M D	Gray Green	Moderate	Soft	Moist	Moderate		
	Silt	Silty	Bm - L M D	Rust Yellow	Low	Firm	Saturated	Slight		
	Clay	Clayey	Red - L M D	Other	Non	Hard	None Noted			
			Other	%	--	Very Hard	--	--		
5 1/2'	GVL - F M C	Grvly	Black	Red Brown	High	Very Soft	Dry	Strong		OCD-03-3-6
	Sand - F M C	Sandy	Gray - L M D	Gray Green	Moderate	Soft	Moist	Moderate		
	Silt	Silty	Bm - L M D	Rust Yellow	Low	Firm	Saturated	Slight		
	Clay	Clayey	Red - L M D	Other	Non	Hard	None Noted			
			Other	%	--	Very Hard	--	--		
	GVL - F M C	Grvly	Black	Red Brown	High	Very Soft	Dry	Strong		
	Sand - F M C	Sandy	Gray - L M D	Gray Green	Moderate	Soft	Moist	Moderate		
	Silt	Silty	Bm - L M D	Rust Yellow	Low	Firm	Saturated	Slight		
	Clay	Clayey	Red - L M D	Other	Non	Hard	None Noted			
			Other	%	--	Very Hard	--	--		
	GVL - F M C	Grvly	Black	Red Brown	High	Very Soft	Dry	Strong		
	Sand - F M C	Sandy	Gray - L M D	Gray Green	Moderate	Soft	Moist	Moderate		
	Silt	Silty	Bm - L M D	Rust Yellow	Low	Firm	Saturated	Slight		
	Clay	Clayey	Red - L M D	Other	Non	Hard	None Noted			
			Other	%	--	Very Hard	--	--		
	GVL - F M C	Grvly	Black	Red Brown	High	Very Soft	Dry	Strong		
	Sand - F M C	Sandy	Gray - L M D	Gray Green	Moderate	Soft	Moist	Moderate		
	Silt	Silty	Bm - L M D	Rust Yellow	Low	Firm	Saturated	Slight		
	Clay	Clayey	Red - L M D	Other	Non	Hard	None Noted			
			Other	%	--	Very Hard	--	--		

Sample Collected: Yes

Sample ID: _____

Date: _____

Time: _____

Depth: _____

Number/Size of Containers: _____

Analysis to be Performed: TPH, BTEX, and Chlorides for VZ, Same for TZ + DRO, GRO, and NMAC 3103

Duplicate Collected: _____

Notes: _____

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-2-14	(1)	1441	8.61	13.60	1.404	1.176	.92	83.0	-49.0
GAUGE TIME	1430	(2)	1446	7.35	13.09	1.411	1.186	.93	37.0	-65.9
DTB (feet)	51.03	(3)	1451	7.32	13.21	1.419	1.190	.93	22.0	-68.3
Depth to Bottom		(4)	1518	7.53	13.73	1.450	1.200	.94	25.0	-69.6
DEDICATED PUMP	✓	WEATHER CONDITIONS Clear 86° F winds are 10 mph out SW								
DTW (feet)	18.95									
Depth to Water	32.08	WATER APPEARANCE Clear No odor								
DTB - DTW	.65									
Capacity per foot	20.85									
1 Well Volume	62.55									
3 Well Volumes	6-2-14									
PURGE DATE	1438									
PURGE TIME	6-2-14									
SAMPLE DAY	1522									
SAMPLE TIME	—									
PUMP DEPTH	—									
DTW (feet) at end of Purging	—									

SAMPLE LOG

Pump Freq @ 153 Hz
Purged 55 gals, that is all the purge barrel will hold
Barrel was labeled "Purge water only"

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-3-14	(1)	817	7.38	14.84	1.887	1.530	1.22	51.0	-117.4
GAUGE TIME	802	(2)	822	7.22	13.84	1.833	1.514	1.20	30.0	-127.6
DTB (feet)	46.80	(3)	824	7.20	13.78	1.825	1.509	1.20	31.0	-131.0
Depth to Bottom		(4)	827	7.23	13.88	1.829	1.510	1.20	20.0	-126.0
DEDICATED PUMP	✓	WEATHER CONDITIONS Clear 56° F and no winds								
DTW (feet)	24.15									
Depth to Water	22.65	WATER APPEARANCE Clear, slight odor								
DTB - DTW	.65									
Capacity per foot	14.72									
1 Well Volume	44.16									
3 Well Volumes	6-3-14									
PURGE DATE	813									
PURGE TIME	6-3-14									
SAMPLE DAY	832									
SAMPLE TIME	—									
PUMP DEPTH	—									
DTW (feet) at end of Purging	24.23									

SAMPLE LOG

Pump Freq @ 181 Hz
Purged 45 gallons
Barrel was labeled "Purge water only"

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW 13		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-3-14	(1)	924	8.52	14.48	1.010	0.821	0.63	14.7	-57.5
GAUGE TIME	912	(2)	934	8.39	13.77	0.985	0.815	0.63	25.1	-50.7
DTB (feet)	99.25	(3)	943	8.34	13.40	0.973	0.812	0.63	19.4	-48.4
Depth to Bottom		(4)	950	8.35	13.36	0.971	0.811	0.63	16.5	-51.1
DEDICATED PUMP	✓	WEATHER CONDITIONS Clear, 75°F winds are 13 mph out of the SW								
DTW (feet)	21.45									
Depth to Water										
DTB - DTW	77.3									
Capacity per foot	.65									
1 Well Volume	50.25	WATER APPEARANCE Clear, slight odor								
3 Well Volumes	150.75									
PURGE DATE	6-3-14									
PURGE TIME	919									
SAMPLE DAY	6-3-14									
SAMPLE TIME	953									
PUMP DEPTH										
DTW (feet) at end of Purging	24.65									

SAMPLE LOG

Pump @ 300 Hz
Purged 150 gallons

Total is already labeled "Purged well water only"

OW - 1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-3-14	(1)	1025	9.20	13.85	1.059	0.877	0.68	15.2	-56.6
GAUGE TIME	1016	(2)	1033	9.02	13.23	1.036	0.868	0.67	8.0	-48.8
DTB (feet)	95.70	(3)	1048	9.06	14.79	1.100	0.887	0.69	19.2	-49.5
Depth to Bottom		(4)	1143	9.10	14.71	1.119	0.905	0.70	70.0	-58.0
DEDICATED PUMP	✓	WEATHER CONDITIONS Clear, 79°F winds are 21 mph out of the SW								
DTW (feet)	0.00									
Depth to Water										
DTB - DTW	95.70									
Capacity per foot	.65									
1 Well Volume	62.21	WATER APPEARANCE Clear								
3 Well Volumes	186.63									
PURGE DATE	6-3-14									
PURGE TIME	1022									
SAMPLE DAY	6-3-14									
SAMPLE TIME	1150									
PUMP DEPTH										
DTW (feet) at end of Purging	37.93									

SAMPLE LOG

Pump @ 133 Hz, Pump does not seem to be in the Screened Interval

Purged 25 gallons, well had to be turned off several times to recharge to reach 25 gallons

Barrel is already labeled "Purge well water only", about 30 gallons was in barrel upon

INSTRUMENTS USED: Cassini

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

OW 30		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-3-14	(1)	1252	8.3	14.14	1.535	1.257	0.99	71.3	-50.0
GAUGE TIME	1246	(2)	1255	7.69	13.44	1.485	1.238	0.97	47.0	-42.0
DTB (feet)	49.80	(3)	1258	7.62	13.14	1.476	1.240	0.98	45.0	-40.3
Depth to Bottom		(4)	1301	7.59	13.15	1.473	1.238	0.98	40.0	-39.1
DEDICATED PUMP	✓	WEATHER CONDITIONS 85°F, clear, winds are 10 mph out SSW								
DTW (feet)	23.51									
Depth to Water										
DTB - DTW	26.29									
Capacity per foot	.65									
1 Well Volume	17.08	WATER APPEARANCE Clear, no odor, to cloudy and Red tint								
3 Well Volumes	51.24									
PURGE DATE	6-3-14									
PURGE TIME	1249									
SAMPLE DAY	6-3-14									
SAMPLE TIME	1305									
PUMP DEPTH										
DTW (feet) at end of Purging	24.35									

SAMPLE LOG

motor @ 307 Hz
Purged 55 gallons

Purge barrels already labeled "well purge water only", about 40 gallons was in one barrel upon arrival

OW 10		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-3-14	(1)	1357	8.45	14.33	2.027	1.654	1.32	45.9	-45.8
GAUGE TIME	1349	(2)	1403	7.75	13.76	6.044	5.000	4.28	34.7	-36.8
DTB (feet)	60.30	(3)	1410	7.68	13.60	6.089	5.059	4.33	37.1	-33.8
Depth to Bottom		(4)	1413	7.66	13.48	5.964	4.967	4.25	51.9	-30.9
DEDICATED PUMP	✓	WEATHER CONDITIONS 85°F, clear, winds are 10 mph out SSW								
DTW (feet)	1.45									
Depth to Water										
DTB - DTW	58.85									
Capacity per foot	.65									
1 Well Volume	38.25	WATER APPEARANCE Clear, no odor								
3 Well Volumes	114.75									
PURGE DATE	6-3-14									
PURGE TIME	1353									
SAMPLE DAY	6-3-14									
SAMPLE TIME	1415									
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

motor @ 305 Hz, lock broke when opening

Purged 120 gallons

Tote was already labeled "Purged well water only"

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
Oil Sump LDU									
GAUGE DATE	6-3-14	(1)							
GAUGE TIME	1507	(2)							
DTB (feet)									
Depth to Bottom	6.61	(3)							
DEDICATED PUMP	—								
DTW (feet)		WEATHER CONDITIONS 86° F, Clear with winds 21 mph out of SW							
Depth to Water	6.60								
DTB - DTW									
Capacity per foot	.65								
1 Well Volume									
3 Well Volumes		WATER APPEARANCE							
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG

Grab Sample, well Dry
- No Sample

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
East LDU									
GAUGE DATE	6-3-14	(1)							
GAUGE TIME	1516	(2)							
DTB (feet)									
Depth to Bottom	12.50	(3)							
DEDICATED PUMP	—	(4)							
DTW (feet)		WEATHER CONDITIONS 86° F, Clear with winds 21 mph out of SW							
Depth to Water	7.50								
DTB - DTW									
Capacity per foot	.65								
1 Well Volume									
3 Well Volumes		WATER APPEARANCE Yellow, Gassy							
PURGE DATE									
PURGE TIME									
SAMPLE DAY	6-3-14								
SAMPLE TIME	1540								
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG

Grab Sample, recovered about 1 Liter of product before Sampling. Collected the product and disposed of on bundle pad

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
West LD4		(1)							
GAUGE DATE	6-3-14	(2)							
GAUGE TIME	1548	(3)							
DTB (feet)	12.45								
Depth to Bottom									
DEDICATED PUMP	—								
DTW (feet)	11.85	WEATHER CONDITIONS 86°F, Clear with winds 21 mph out of SW							
Depth to Water									
DTB - DTW									
Capacity per foot	.65								
1 Well Volume									
3 Well Volumes		WATER APPEARANCE Gray with Bits in it							
PURGE DATE									
PURGE TIME									
SAMPLE DAY	6-3-14								
SAMPLE TIME	1556								
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG

Grab Sample

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
NADIS - 3		(1)	802	8.39	19.27	4.030	2.936	2.42	59.9	-58.0
GAUGE DATE	6-4-14	(2)	820	8.16	18.91	3.953	2.914	2.40	56.5	-66.4
GAUGE TIME	818	(3)								
DTB (feet)	30.70	(4)								
Depth to Bottom										
DEDICATED PUMP	—	WEATHER CONDITIONS 60°F, Clear, winds are 9 mph out of NE								
DTW (feet)	8.85									
Depth to Water										
DTB - DTW	21.85									
Capacity per foot	.16									
1 Well Volume	3.49	WATER APPEARANCE clear w/ pink tint								
3 Well Volumes	10.47									
PURGE DATE	6-5-14									
PURGE TIME	800									
SAMPLE DAY	6-5-14									
SAMPLE TIME	0828									
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

Well bailed dry after 5 gallons

*Removal about 4" of water out of vault lid

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTFF 27		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS, mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-4-14	(1)	932	8.17	13.57	6.676	5.557	4.78	487.1	-42.2
GAUGE TIME	925	(2)	934	8.07	12.65	6.569	5.592	4.82	87.2	-36.5
DTB (feet)	14.70	(3)	936	7.47	12.16	6.498	5.594	4.82	42.0	-34.5
Depth to Bottom		(4)								
DEDICATED PUMP	NO	WEATHER CONDITIONS 69°F, clear, winds 4 mph at NNE								
DTW (feet)	7.67									
Depth to Water	7.03									
DTB - DTW	-16									
Capacity per foot	1.12									
1 Well Volume	3.36	WATER APPEARANCE Light brown, murky No odor								
3 Well Volumes	6-4-14									
PURGE DATE	932									
PURGE TIME	6-4-14									
SAMPLE DAY	952									
SAMPLE TIME	NA									
PUMP DEPTH	13.87									
DTW (feet) at end of Purging										

SAMPLE LOG

Sampled but supposed to gauge only

MKTFF 24		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS, mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-4-14	(1)								
GAUGE TIME		(2)								
DTB (feet)	30.50	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	NO	WEATHER CONDITIONS 69°F, clear winds 4 mph at NNE								
DTW (feet)	21.50									
Depth to Water	9									
DTB - DTW	.16									
Capacity per foot	1.44									
1 Well Volume	4.32	WATER APPEARANCE								
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

Gauge only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT 31									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1024	(2)							
DTB (feet)	22.80	(3)							
Depth to Bottom		(4)							
DEDICATED PUMP	No								
DTW (feet)	7.70	WEATHER CONDITIONS							
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes		WATER APPEARANCE							
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG

Gauge only

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT 25									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1029	(2)							
DTB (feet)	19.10	(3)							
Depth to Bottom		(4)							
DEDICATED PUMP	No								
DTW (feet)	10.88	WEATHER CONDITIONS							
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes		WATER APPEARANCE							
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG

Gauge only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT#	28								
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1635	(2)							
DTB (feet)									
Depth to Bottom	16.15	(3)							
DEDICATED PUMP	NO		WEATHER CONDITIONS						
DTW (feet)									
Depth to Water	11.80								
DTB - DTW									
Capacity per foot									
1 Well Volume			WATER APPEARANCE						
3 Well Volumes									
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Gauge only

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT#	29								
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1641	(2)							
DTB (feet)									
Depth to Bottom	22.80	(3)							
DEDICATED PUMP	NO	(4)	WEATHER CONDITIONS						
DTW (feet)									
Depth to Water	2.14								
DTB - DTW									
Capacity per foot									
1 Well Volume			WATER APPEARANCE						
3 Well Volumes									
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Gauge only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MUTF 30		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1045	(2)							
DTB (feet) Depth to Bottom	23.18	(3)							
DEDICATED PUMP	NO		WEATHER CONDITIONS						
DTW (feet) Depth to Water	14.71								
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Guage only

MUTF 26		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1052	(2)							
DTB (feet) Depth to Bottom	17.15	(3)							
DEDICATED PUMP	NO	(4)	WEATHER CONDITIONS						
DTW (feet) Depth to Water	8.63								
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

NO lock on outer casing

Guage only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)							
GAUGE TIME		(2)							
DTB (feet) Depth to Bottom	27.74	(3)							
DEDICATED PUMP	NO		WEATHER CONDITIONS						
DTW (feet) Depth to Water	16.52								
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Gauge only

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1117	(2)							
DTB (feet) Depth to Bottom	27.70	(3)							
DEDICATED PUMP	NO	(4)	WEATHER CONDITIONS						
DTW (feet) Depth to Water	18.59								
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

NO Lock on outer casing

Gauge only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT F 33									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1122	(2)							
DTB (feet)	33.20	(3)							
Depth to Bottom									
DEDICATED PUMP	NO		WEATHER CONDITIONS						
DTW (feet)	23.40								
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE									
PURGE TIME			WATER APPEARANCE						
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG No outer casing or concrete pad + bollards

Guage only

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT F 22									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1125	(2)							
DTB (feet)	35.25	(3)							
Depth to Bottom									
DEDICATED PUMP	NO	(4)	WEATHER CONDITIONS						
DTW (feet)	26.25								
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE									
PURGE TIME			WATER APPEARANCE						
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG NO Lock on outer casing

Guage only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKT F 04		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-4-14	(1)	15:44	7.63	15.74	1.835	1.441	1.14	20.2	-124.6
GAUGE TIME	1457	(2)	1542	7.22	15.79	1.730	1.375	1.09	23.2	-118.1
DTB (feet)	22.22	(3)	1605	7.51	15.40	1.821	1.380	1.11	15.7	-120.8
Depth to Bottom		(4)	1610	7.21	14.72	1.656	1.340	1.06	58.3	-91.2
DEDICATED PUMP	NO	WEATHER CONDITIONS 85°F, clear, winds 23 mph out of SW								
DTW (feet)										
Depth to Water	10.49									
DTB - DTW	11.23									
Capacity per foot	.65									
1 Well Volume	7.30	WATER APPEARANCE Slight turbidity, light brown.								
3 Well Volumes	21.9									
PURGE DATE	6-4-14									
PURGE TIME										
SAMPLE DAY	6-4-14									
SAMPLE TIME	1610									
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

Collected ~~BD-MKT F~~ BD-MKT F - 060414

MKT F 03		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-4-14	(1)								
GAUGE TIME	1542	(2)								
DTB (feet)	18.50	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	NO	WEATHER CONDITIONS 85°F, clear, winds 23 mph out of SW								
DTW (feet)										
Depth to Water	9.32									
DTB - DTW	9.18									
Capacity per foot	.65									
1 Well Volume	5.46	WATER APPEARANCE Red color on the product + mussy grey to chocolate color								
3 Well Volumes	17.88									
PURGE DATE	6-4-14									
PURGE TIME	1550									
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet)	10.60 DTW									
at end of Purging	10.25 DTW	Product at 8.85'								

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT - 14									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1141	(2)							
DTB (feet)	17.47	(3)							
Depth to Bottom		(4)							
DEDICATED PUMP	NO								
DTW (feet)	8.73	WEATHER CONDITIONS 78°F Clear with winds 3 mph out of SSE							
Depth to Water	8.74								
DTB - DTW	.65								
Capacity per foot	5.68								
1 Well Volume	17.04								
3 Well Volumes	6-4-14	WATER APPEARANCE Purple to dark brown color Hydrocarbon odor							
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH		Product @ 7.91 ft							
DTW (feet)	8.75 ORP								
at end of Purging	8.75 DTW								

SAMPLE LOG

Purged 17 gallons of GW
 Purged .5 gallons of product
 Did not collect Sample

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT 13									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1235	(2)							
DTB (feet)	21.50	(3)							
Depth to Bottom		(4)							
DEDICATED PUMP	NO								
DTW (feet)	15.25	WEATHER CONDITIONS 78°F Clear with winds 3 mph out of SSE							
Depth to Water	4.48								
DTB - DTW	.65								
Capacity per foot	4.49								
1 Well Volume	13.47								
3 Well Volumes	6-4-14	WATER APPEARANCE Purple to dark brown with gold speckles in it. Hydrocarbon odor							
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH		Product @ 14.6							
DTW (feet)	11.6								
at end of Purging									

SAMPLE LOG

Purged 14 gallons of GW
 Purged .43 gallons of Product
 Did not collect Sample

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTFF-12		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6/4/14	(1)							
GAUGE TIME	1300	(2)							
DTB (feet)	25.37	(3)							
Depth to Bottom		(4)							
DEDICATED PUMP	NO	WEATHER CONDITIONS 85°F, clear with winds 13 mph out of SW							
DTW (feet)	19.82								
Depth to Water									
DTB - DTW	5.55								
Capacity per foot	0.65								
1 Well Volume	3.61	WATER APPEARANCE dark brown, silty, product appearance.							
3 Well Volumes	10.80								
PURGE DATE	6/4/14								
PURGE TIME									
SAMPLE DAY	NA								
SAMPLE TIME	NA	WATER APPEARANCE dark brown, silty, product appearance.							
PUMP DEPTH	NA								
DTW (feet)	24.50								
at end of Purging		.08' product thickness							
SAMPLE LOG Bailed dry @ 7 gallons									

MKTFF 5		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1439	(2)							
DTB (feet)	17.74	(3)							
Depth to Bottom		(4)							
DEDICATED PUMP	NO	WEATHER CONDITIONS 85°F, clear with winds 13 mph out SW							
DTW (feet)	15.65								
Depth to Water									
DTB - DTW	2.09								
Capacity per foot	1.36								
1 Well Volume	4.08	WATER APPEARANCE yellow colored product to brown GW							
3 Well Volumes									
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME		WATER APPEARANCE yellow colored product to brown GW							
PUMP DEPTH									
DTW (feet)									
at end of Purging		Product @ 15.60							

SAMPLE LOG

Bailed dry after 2 gallons
INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT - 23									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1129	(2)							
DTB (feet)	20.36	(3)							
Depth to Bottom									
DEDICATED PUMP	NO								
DTW (feet)	14.85	WEATHER CONDITIONS							
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG NO lock on outer casing

Gauge only

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT 20									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1719	(2)							
DTB (feet)	9.55	(3)							
Depth to Bottom									
DEDICATED PUMP	NO	(4)							
DTW (feet)	7.41	WEATHER CONDITIONS							
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Gauge only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT 21									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1724	(2)							
DTB (feet)	8.77	(3)							
Depth to Bottom									
DEDICATED PUMP	NO								
DTW (feet)	7.68	WEATHER CONDITIONS							
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Gauge only

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT 19									
GAUGE DATE	6-4-14	(1)							
GAUGE TIME	1741	(2)							
DTB (feet)	16.80	(3)							
Depth to Bottom									
DEDICATED PUMP	NO	(4)							
DTW (feet)	11.91	WEATHER CONDITIONS							
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Gauge only

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTFF 16		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (µS) (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6/5/14	(1)	1610	7.78	21.67	3.409	2.371	1.93	22.7	-177.4
GAUGE TIME	1605	(2)	1618	7.50	20.67	3.339	2.363	1.92	23.5	-155.5
DTB (feet)	14.07	(3)	1622	7.38	20.91	3.404	2.391	1.94	24.0	-151.7
Depth to Bottom		1628	7.33	20.29	3.394	2.423	1.98	20.0	-149.9	
DEDICATED PUMP	NO	WEATHER CONDITIONS Sunny, 85° Wind 10 mph from west								
DTW (feet)	10.52									
Depth to Water	3.55									
DTB - DTW	0.76									
Capacity per foot	0.568									
1 Well Volume	1.70	WATER APPEARANCE Dark Gray to black, low turbidity, hydrocarbon smell.								
3 Well Volumes	6.5/14									
PURGE DATE	1610									
PURGE TIME	6/5/14									
SAMPLE DAY	1635									
SAMPLE TIME										
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

Does not Secharge very fast

MKTFF 09		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (µS) (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-5-14	(1)	1636	7.42	14.26	1.531	1.243	1.98	14.8	-120.1
GAUGE TIME	1610	(2)	1657	7.69	14.17	1.532	1.265	1.00	80.1	-156.6
DTB (feet)	22.85	(3)	1715	7.86	13.25	1.566	1.263	1.00	24.9	-156.4
Depth to Bottom		1721	7.53	12.35	1.477	1.266	1.00	22.0	-131.7	
DEDICATED PUMP	NO	WEATHER CONDITIONS 85° F, Clear winds 15 mph out W								
DTW (feet)	14.9									
Depth to Water	7.95									
DTB - DTW	0.65									
Capacity per foot	5.16									
1 Well Volume	15.48	WATER APPEARANCE Clear to cloudy								
3 Well Volumes	6-5-14									
PURGE DATE	1621									
PURGE TIME	6-5-14									
SAMPLE DAY	1730									
SAMPLE TIME										
PUMP DEPTH										
DTW (feet)										
at end of Purging	16.7									

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

MKTFF 15		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6/5/14	(1)	1430	8.90	16.51	16.21	10.02	10.50	45.1	-175.2
GAUGE TIME	1421	(2)	1435	6.91	16.07	14.77	10.12	10.24	40.7	-150.5
DTB (feet)	19.48	(3)	1445	2.10	15.99	14.79	10.30	10.98	29.2	-169.4
Depth to Bottom	NO		1450	6.70	15.51	14.11	11.20	10.18	19.4	-102.7
DEDICATED PUMP	NO	WEATHER CONDITIONS								
DTW (feet)	13.81									
Depth to Water	5.67	Sunny, 85° Wind 10-15mph from west.								
DTB - DTW	8.16									
Capacity per foot	0.9072	WATER APPEARANCE								
1 Well Volume	2.72									
3 Well Volumes	8.15/14	dark brown, slight turbidity								
PURGE DATE	1430									
PURGE TIME	1500	Purged 3 gallons.								
SAMPLE DAY	1500									
SAMPLE TIME										
PUMP DEPTH										
DTW (feet)	16.81									
at end of Purging										

SAMPLE LOG

Purged 3 gallons

MKTFF 11		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-5-14	(1)	1423	7.31	15.71	2.601	2.052	1.66	20.8	-156.6
GAUGE TIME	1352	(2)	1441	7.61	15.35	2.530	2.017	1.63	22.4	-189.1
DTB (feet)	18.4	(3)	1459	7.68	16.81	2.691	2.075	1.68	52.0	-159.4
Depth to Bottom	NO	(4)	1506	7.53	14.85	2.481	2.001	1.62	23.4	-150.8
DEDICATED PUMP	NO	WEATHER CONDITIONS								
DTW (feet)	9.20									
Depth to Water	9.20	85°F, Clear, winds 15mph at W								
DTB - DTW	8.65									
Capacity per foot	5.98	WATER APPEARANCE								
1 Well Volume	17.94									
3 Well Volumes	6-5-14	Gray to Chocolate color								
PURGE DATE	1407									
PURGE TIME	6-5-14									
SAMPLE DAY	1515									
SAMPLE TIME										
PUMP DEPTH										
DTW (feet)	9.2									
at end of Purging										

SAMPLE LOG

Well recharged quickly

Purged 18 gallons

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

GWM-3		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1)							
GAUGE TIME	932	(2)							
DTB (feet)	18.05	(3)							
Depth to Bottom									
DEDICATED PUMP	NO		WEATHER CONDITIONS						
DTW (feet)									
Depth to Water	Dry								
DTB - DTW									
Capacity per foot									
1 Well Volume									
3 Well Volumes									
PURGE DATE		WATER APPEARANCE							
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging									

SAMPLE LOG

Well is Dry

OAPIS-1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-5-14	(1)	1015	7.65	16.05	5.825	4.537	3.84	17.4	-136.4
GAUGE TIME	1000	(2)	1024	7.14	15.33	5.729	4.567	3.88	12.5	-119.9
DTB (feet)		(3)	1030	7.05	15.82	5.831	4.583	3.89	18.0	-113.0
Depth to Bottom	28.55	(4)								
DEDICATED PUMP	NO		WEATHER CONDITIONS							
DTW (feet)										
Depth to Water	11.75									
DTB - DTW	16.8									
Capacity per foot	.16									
1 Well Volume	2.68									
3 Well Volumes	8.04									
PURGE DATE	6-5-14	WATER APPEARANCE								
PURGE TIME	1005									
SAMPLE DAY	6/5/14									
SAMPLE TIME	1030									
PUMP DEPTH										
DTW (feet) at end of Purging	26.85									

SAMPLE LOG

Well was going dry after 6.5 gallons

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GWM-1										
GAUGE DATE	6-5-14	(1)	1102	8.23	12.70	4.746	4.000	3.36	46.4	-140.3
GAUGE TIME	925	(2)	1106	7.48	12.44	4.565	3.885	3.25	30.1	-124.9
DTB (feet)	26.47	(3)	1110	7.24	12.61	4.537	3.843	3.22	24.4	-120.1
Depth to Bottom										
DEDICATED PUMP	NO	WEATHER CONDITIONS								
DTW (feet)	19.10									
Depth to Water										
DTB - DTW	7.37									
Capacity per foot	.16									
1 Well Volume	1.17	WATER APPEARANCE								
3 Well Volumes	3.51									
PURGE DATE	6-5-14									
PURGE TIME	1100									
SAMPLE DAY	6-5-14									
SAMPLE TIME	1112	WATER APPEARANCE								
PUMP DEPTH										
DTW (feet)										
at end of Purging	23.84									

SAMPLE LOG

Purged ^{3.0}~~2.5~~ gallons and indicated it was going dry

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GWM-2									
GAUGE DATE	6-5-14	(1)							
GAUGE TIME	923	(2)							
DTB (feet)	19.05	(3)							
Depth to Bottom		(4)							
DEDICATED PUMP	NO	WEATHER CONDITIONS							
DTW (feet)	Dry								
Depth to Water									
DTB - DTW									
Capacity per foot									
1 Well Volume		WATER APPEARANCE							
3 Well Volumes									
PURGE DATE									
PURGE TIME									
SAMPLE DAY									
SAMPLE TIME		WATER APPEARANCE							
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG

Well is Dry

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

NAPIS - 2		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-5-14	(1)	1144	8.39	22.06	2.188	1.502	1.19	37.1	-151.7
GAUGE TIME	1138	(2)	1146	7.34	22.03	2.126	1.465	1.16	6.3	-125.5
DTB (feet)	13.80	(3)								
Depth to Bottom										
DEDICATED PUMP	NO									
DTW (feet)	8.20	WEATHER CONDITIONS								
Depth to Water										
DTB - DTW	5.6									
Capacity per foot	.16									
1 Well Volume	110.89									
3 Well Volumes	2.68	WATER APPEARANCE								
PURGE DATE	6-5-14									
PURGE TIME	1135									
SAMPLE DAY	6/5/14									
SAMPLE TIME	1146									
PUMP DEPTH										
DTW (feet)	9.0									
at end of Purging										

SAMPLE LOG

Well not producing after 1.0 gallons.

Removed 4" of water off of well cap in the well vault

MYTF 10		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	6-5-14	(1)	1403	7.14	18.07	3.722	2.748	2.25	35.2	-171.2
GAUGE TIME	1343	(2)								
DTB (feet)	15.70	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	NO									
DTW (feet)	8.40	WEATHER CONDITIONS								
Depth to Water										
DTB - DTW	6.80									
Capacity per foot	.65									
1 Well Volume	4.42									
3 Well Volumes	13.26	WATER APPEARANCE								
PURGE DATE	6/5/14									
PURGE TIME	1400									
SAMPLE DAY	6/5/14									
SAMPLE TIME	1430									
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

Well bailed dry after 5.5 gallons purged.
Did not collect full bottle set due to well going dry

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

LA-3		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1) 815	8.12	20.89	1.864	1.309	1.03	31.1	-65.9
GAUGE TIME	805	(2) 823	8.08	20.78	1.78	1.256	.98	35.7	-62.4
DTB (feet)	82.4	(3) 831	8.04	20.57	1.773	1.259	.99	50.9	-59.2
Depth to Bottom		(4) 835	7.87	20.61	1.777	1.261	.99	36.5	-61.8
DEDICATED PUMP	NO	WEATHER CONDITIONS							
DTW (feet)	7.95								
Depth to Water									
DTB - DTW	14.45								
Capacity per foot	.16	67°F, clear + no wind.							
1 Well Volume	2.31								
3 Well Volumes	6.93								
PURGE DATE	6-5-14								
PURGE TIME	807	WATER APPEARANCE							
SAMPLE DAY	6-5-14								
SAMPLE TIME	840								
PUMP DEPTH									
DTW (feet)		Clear to light brown							
at end of Purging									

SAMPLE LOG * Removed about 4" of water out of 1" & 2"
 Assigned 7.0 gallons
 Collected - BD - NADIS-060514

Did not record DTW after sampling. A welding crew needed to get in where we are at

NADIS-1		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-5-14	(1) 919	8.21	16.97	1.604	1.230	0.97	31.2	-71.6
GAUGE TIME	914	(2) 925	7.72	16.44	1.578	1.225	0.96	17.6	-63.5
DTB (feet)	13.77	(3) 928	7.60	15.74	1.499	1.230	0.99	19.3	-60.2
Depth to Bottom		(4) 932	7.56	17.41	1.645	1.249	.98	28.2	-58.9
DEDICATED PUMP	NO	WEATHER CONDITIONS							
DTW (feet)	6.86								
Depth to Water									
DTB - DTW	6.91								
Capacity per foot	.16	67°F, clear + no wind							
1 Well Volume	1.11								
3 Well Volumes	3.33								
PURGE DATE	6-5-14								
PURGE TIME	919	WATER APPEARANCE							
SAMPLE DAY	6-5-14								
SAMPLE TIME	932								
PUMP DEPTH									
DTW (feet)		Clear, no odor							
at end of Purging									

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
MKTF-02										
GAUGE DATE	6/6/14	(1)	1045	8.34	12.33	2.712	2.325	1.89	32.5	-99.5
GAUGE TIME	1035	(2)	1100	7.91	12.77	3.134	2.657	2.18	27.5	-112.2
DTB (feet)	20.25	(3)	1115	7.75	11.55	2.843	2.512	2.05	25.2	-76.6
Depth to Bottom										
DEDICATED PUMP	NO									
DTW (feet)	7.60	WEATHER CONDITIONS Sunny, 75° Wind from West at 10mph								
Depth to Water										
DTB - DTW	12.65									
Capacity per foot	8.760.65									
1 Well Volume	8.22									
3 Well Volumes	24.67	WATER APPEARANCE Slightly cloudy, clear, no hydrocarbon detected.								
PURGE DATE	6/6/14									
PURGE TIME	1045									
SAMPLE DAY	6/6/14									
SAMPLE TIME	1130									
PUMP DEPTH										
DTW (feet) at end of Purging	16.79									

SAMPLE LOG Well going dry after ~15 gallons - sample * taken

* - Note recovery wells were being pumped within 50' during purge.

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet)		(3)								
Depth to Bottom		(4)								
DEDICATED PUMP										
DTW (feet)		WEATHER CONDITIONS								
Depth to Water										
DTB - DTW										
Capacity per foot										
1 Well Volume										
3 Well Volumes		WATER APPEARANCE								
PURGE DATE										
PURGE TIME										
SAMPLE DAY										
SAMPLE TIME										
PUMP DEPTH										
DTW (feet) at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
MUTF 17		(1)	1007	7.35	13.56	1.225	1.017	0.79	50.1	-138.1
GAUGE DATE	6-6-14	(2)								
GAUGE TIME	954	(3)								
DTB (feet)	23.25									
Depth to Bottom										
DEDICATED PUMP	NO									
DTW (feet)	11.28	WEATHER CONDITIONS Sunny, 75° winds from West at 5 mph								
Depth to Water										
DTB - DTW	11.97									
Capacity per foot	.16									
1 Well Volume	1.42									
3 Well Volumes	5.75	WATER APPEARANCE Reddish Grey, high turbidity								
PURGE DATE	6-6-14									
PURGE TIME	1015									
SAMPLE DAY	6/6/14									
SAMPLE TIME	1015									
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

Well bailed dry @ 2 gallons - sample collected
 Did not collect full bottle set

		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
MUTF - 01		(1)	1058	8.09	12.68	1.908	1.622	1.29	22.9	-148.1
GAUGE DATE	6-6-14	(2)	1110	7.76	12.59	1.415	1.631	1.30	15.7	-130.9
GAUGE TIME	1035	(3)	1117	7.61	12.16	1.899	1.635	1.31	19.2	-138.8
DTB (feet)	16.90	(4)	1126	7.88	12.32	1.904	1.633	1.30	104	-142.7
Depth to Bottom										
DEDICATED PUMP	NO	WEATHER CONDITIONS Sunny, Clear winds 5 mph / W								
DTW (feet)	7.0									
Depth to Water										
DTB - DTW	9.9									
Capacity per foot	.65									
1 Well Volume	1.43	WATER APPEARANCE Strong odor Gold flecks in it Red tint, to chocolate milk								
3 Well Volumes	19.3									
PURGE DATE	6-6-14									
PURGE TIME	1050									
SAMPLE DAY	6-6-14									
SAMPLE TIME	1135									
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

Purged 20 gallons

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT F 06									
GAUGE DATE	6-6-14	(1)							
GAUGE TIME	843	(2)							
DTB (feet)	23.8	(3)							
Depth to Bottom									
DEDICATED PUMP	NO								
DTW (feet)	14.9		WEATHER CONDITIONS Water level meter would give a prominent reading, but gave a slight reading at 14'						
Depth to Water									
DTB - DTW	9.8		54°F, clear and no winds						
Capacity per foot	.65								
1 Well Volume	6.37		WATER APPEARANCE Water level meter did not indicate any product. But there was product with a yellow sheen the whole time waiting until went dry after 6 gallons						
3 Well Volumes	19.11								
PURGE DATE	6-6-14		Strong odor						
PURGE TIME	850								
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet)									
at end of Purging	Dry								

SAMPLE LOG

Bailed dry at 910 after 6 gallons

Did not sample

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT F 18									
GAUGE DATE	6-6-14	(1)	907	6.59	15.94	1.491	1.131	15.3	-157.2
GAUGE TIME	845	(2)	915	7.15	17.43	1.502	1.141	12.7	-175.7
DTB (feet)		(3)							
Depth to Bottom	24.9	(4)							
DEDICATED PUMP	NO								
DTW (feet)	8.45		WEATHER CONDITIONS 54°F, clear and no winds						
Depth to Water									
DTB - DTW	16.45		WATER APPEARANCE Light Brown						
Capacity per foot	.16								
1 Well Volume	2.632								
3 Well Volumes	7.90								
PURGE DATE	6-6-14								
PURGE TIME	905								
SAMPLE DAY	6-6-14								
SAMPLE TIME	920								
PUMP DEPTH									
DTW (feet)									
at end of Purging									

SAMPLE LOG

Bailed 2.5 gallons and well indicated it was going dry and not seeping very fast. So took sample

INSTRUMENTS USED: Did not collect Full bottle set due to well going dry

Signature:

WESTERN REFINING - GALLUP REFINERY
Q1-2014

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT F 08									
GAUGE DATE	6-6-14	(1)							
GAUGE TIME	7:25	(2)							
DTB (feet)	22	(3)							
Depth to Bottom	22	(3)							
DEDICATED PUMP	NO		WEATHER CONDITIONS						
DTW (feet)	15								
Depth to Water	7								
DTB - DTW	7								
Capacity per foot	.65		43°F, clear and no wind						
1 Well Volume	4.55								
3 Well Volumes	13.65								
PURGE DATE	6-6-14								
PURGE TIME	7:34		WATER APPEARANCE						
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging	Dry		Product was black w/ yellow sheen then Gw was chocolate brown Product @ 14.3' Strong odor						

SAMPLE LOG

Bassed for purge water left here
Bailed dry after 10 gallons

		TEST PARAMETERS							
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
MKT F 07									
GAUGE DATE	6-6-14	(1)							
GAUGE TIME	7:56	(2)							
DTB (feet)	17.85	(3)							
Depth to Bottom	17.85	(3)							
DEDICATED PUMP	NO	(4)	WEATHER CONDITIONS						
DTW (feet)	13.1								
Depth to Water	4.75								
DTB - DTW	4.75								
Capacity per foot	.65		52°F, clear and No wind						
1 Well Volume	3.08								
3 Well Volumes	9.26								
PURGE DATE	6-6-14								
PURGE TIME	8:10		WATER APPEARANCE						
SAMPLE DAY									
SAMPLE TIME									
PUMP DEPTH									
DTW (feet) at end of Purging	Dry		Strong odor Jet black w/ yellow sheen						

SAMPLE LOG

Water level meter didn't read any product. After pulling first several bailers there was definite product in the well. Did not sample, Bailed dry after 6.5 gallons

INSTRUMENTS USED:

Signature:

9.0
7.97

WELL INFORMATION

72.9
42.64

WELL	DEDICATED PUMP	TOTAL DEPTH	DTW	WATER LEVEL	CAPACITY PER FOOT	2X	3X	SCREENED INTERVAL
BW-1A	N	42.63	42.64	NA	0.163	NA	NA	30-35
BW-1B	N	72.9	42.64	NA	0.163	NA	NA	54.6-64.6
BW-1C	N	141.89	12.97	128.92	0.163	42	63	
BW-2A	Y	67.57	32.25	35.32	0.163	11.5	17.3	
BW-2B	Y	92.26	28.15	63.85	0.163	20.8	31.2	
BW-2C	N	152.84	20.70	132.14	0.163	42	63	139.5-149.5
BW-3A	N	52.35	52.35	NA	0.163	NA	NA	39.5-49.5
BW-3B	Y	69.4	33.25	36.15	0.163	11.8	17.7	
BW-3C	N	154.55	7.83	146.72	0.163	248	71.7	144.5-154.5
GWM-1	N	26.2	19.56	6.64	0.163	2.2	NA	
GWM-2	N	18.81	19.01	NA	0.163	NA	NA	
GWM-3	N	17.8	18.05	NA	0.163	NA	NA	
OAPIS-1	N	26	11.11	14.89	0.163	4.8	NA	
MW-1	Y	130.83	7.11	123.73	1.02	252.4	378.61	
MW-2	Y	137.48	9.20	128.28	1.02	261.7	392.5	
MW-4	Y	121.72	7.68	114.04	1.02	232.6	348.9	
MW-5	Y	130.83	11.38	119.45	0.74	176.8	265.2	
SMW-2	N	52.8	25.10	27.7	0.163	9.0	13.5	34.31-54.31
SMW-4	Y	69.68	29.10	40.58	0.163	13	19.8	
OW-1	Y	94.55	0.01	94.54	0.74	139.9	209.9	
OW-10	Y	60.33	2.33	58	0.74	85	128	
OW-11	N	65.79	20.11	45.68	0.74	67.6	101.4	43-65
OW-12	N	128.85	47.78	81.07	0.74	120	180	117.8-137.8
OW-13	Y	99.15	22.81	76.54	0.74	113	170	
OW-14	Y	46.52	24.40	22.12	0.74	32.7	49.1	
OW-29	Y	51.08	19.35	31.73	0.74	63.5	95.19	
OW-30	Y	49.90	23.84	26.06	0.74	38	58	
OW-50	N	64.00	16.86	47.14	0.163	15.4	23	48-63
OW-52	N	77.74	15.80	61.94	0.163	20.19	30.3	64-79
NAPIS 1	N	13.53	6.85	6.68	0.163	2.2	3.3	
NAPIS 2	N	13.61	8.10	5.51	0.163	1.8	2.7	
NAPIS 3	N	30.42	7.97	22.45	0.163	8.7	10	
KA-3	N	23.20	9.00	14.2	0.163	4.6	6.9	
RW-1	N	43.04	32.86	NA	0.74	NA	NA	
RW-2	N	39.8	15.85	15.85	0.74	23.5	35	
RW-5	N	39.59	28.81	10.78	0.74	816	24	
RW-6	N	40.9	28.89	12.01	0.74	17.8	26.6	

Notes:

BW-1A, 1B, 1C - All wells had the casing extended - new DTB measurements (8-2014)
 BW-1C - Removed dedicated pump - pipe casing extended - will re-order replacement.

Dry

More Drums

Lost Broken Dry

Need tote 350 gal
Need Tote

More Drums only 2

Need more drums

28.05 DTB
23.95

Need drums

46

Client: Western Refining Company

Mailing Address:

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other _____☐ EDD (Type) Trihydro Format

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

2014 ANNUAL GW

Project #:

MKTF WELLS

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

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4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

1 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

2041 ANNUAL GW

Project #:

RW-1,-2,-5,-6

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 10



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Metals Cations/Anions	Air Bubbles (Y or N)
9/18/14													
9/18/14	1050	H ₂ O	RW-6				X	X	X	X	X		
9/18/14	1140	H ₂ O	RW-5				X	X	X	X	X		
9/18/14	1215	H ₂ O	RW-2				X	X	X	X	X		
9/18/14	1500	H ₂ O	RW-1										
9/18/14	1235	H ₂ O	FB-Group8-9/18/14										
9/17/14	1830	H ₂ O	OW-30				X	X	X	X	X		
9/17/14	1005	H ₂ O	ISW-2A						X				
9/17/14	1000	H ₂ O	ISW-2B						X				
Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:							
9/19/14	1245	[Signature]	[Signature]	09/19/14	1245								
Date:	Time:	Relinquished by:	Received by:	Date	Time								

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

2041 ANNUAL GW

Project #:

MW-1,-2,-4,-5

Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0



HALL ENVIRONMENTAL ANALYSIS LABORATORY

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4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8015B extended	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved - Filtered	Major Cations/Anions	Cyanide	Air Bubbles (Y or N)
9/16/14	1615	H ₂ O	MW-1				X	X	X	X	X	X	X	
9/16/14	1900	H ₂ O	MW-2				X	X	X	X	X	X	X	
9/17/14	1140	H ₂ O	MW-5				X	X	X	X	X	X	X	
9/17/14	1515	H ₂ O	MW-4											
9/19/14	0840	H ₂ O	EIS-#2-9/19/14				X							
9/19/14	0830	H ₂ O	EIS-#3-9/19/14				X							
9/16/14	1700	H ₂ O	FIR-Group 10-9/16/14				X							
Date:	Time:	Relinquished by:	Received by:	Date:	Time:	Remarks:								
9/19/14	1245	Bent	Cheryl Johnson	09/19/14	1245									
Date:	Time:	Relinquished by:	Received by:	Date:	Time:									

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Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

92 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

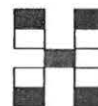
☒ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other _____

☐ EDD (Type) Trihydro Format

Sample Temperature: 10



Tel. 505-345-3975 Fax 505-345-4107

[illegible]

Date: 9/19/14	Time: 1245	Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>	Date 09/19/14	Time 1245
Date:	Time:	Relinquished by:	Received by:	Date	Time

Page 1 of 2

Chain-of-Custody Record

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

2041 ANNUAL GW

Project #:

BW Wells

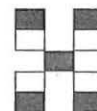
Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	8260 + MTBE	8270 + phenols	WQCC Metals - Total	WQCC Metals - Dissolved, filtered	Major cations/anions	Air Bubbles (Y or N)
9/9/14	1610	H ₂ O	BW-2B ^{13S}									
9/9/14	1610	H ₂ O	BW-213				X	X	X	X	X	
9/9/14	1710	H ₂ O	BW-2A				X	X	X	X	X	
9/10/14	1345	H ₂ O	BW-1C				X	X	X	X	X	
9/10/14	1540	H ₂ O	BW-2C				X	X	X	X	X	
9/10/14	0805	H ₂ O	PW-3				X	X	X	X	X	
9/10/14	1650	H ₂ O	BW-3C				X	X	X	X	X	
9/10/14	1740	H ₂ O	BW-3B				X	X	X	X	X	
9/10/14	1210	H ₂ O	FB-Group 9-9/10/14				X					

Relinquished by: *[Signature]* Date: 9/16/14 Time: 1450

Received by: *[Signature]* Date: 9-16-14 Time: 1450

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record		Turn-Around Time:
Client:	Western Refining Company	☐ Standard ☐ Rush
GALLUP REFINERY		Project Name:
Mailing Address:		2014 ANNUAL GW
	92 Giant Crossing Road, Gallup, NM 87301	Project #:
Phone #:	505-722-3833	OW-13,-14,-29,-30
email or Fax#:	505-863-0930	Project Manager:
QA/QC Package:		C. JOHNSON (cheryl.johnson@wnr.com)
☐ Standard	☐ Level 4 (Full Validation)	Sampler:
Accreditation:		On Ice: ☐ Yes ☐ No
☐ NELAP	☐ Other _____	Sample Temperature:
☐ EDD (Type)		

☐ Standard ☐ Rush

2014 ANNUAL GW

OW-13,-14,-29,-30

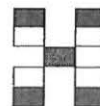
Project Manager:

C. JOHNSON (cheryl.johnson@wnr.com)

Sampler:

On Ice: ☐ Yes ☐ No

Sample Temperature:



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Tel. 505-345-3975 Fax 505-345-4107

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9/16/14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

[illegible]

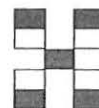
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[illegible]

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Chain-of-Custody Record	Turn-Around Time:
Client: Western Refining Company	☒ Standard ☐ Rush _____
GALLUP REFINERY	Project Name:
Mailing Address:	2014 ANNUAL GW
92 Giant Crossing Road, Gallup, NM 87301	Project #:
Phone #: 505-722-3833	OW-1,-10,-11,-12
email or Fax#: 505-863-0930	Project Manager:
QA/QC Package:	C. JOHNSON (cheryl.johnson@wnr.com)
☐ Standard ☐ Level 4 (Full Validation)	Sampler:
Accreditation:	On Ice: ☐ Yes ☐ No
☐ NELAP ☐ Other _____	Sample Temperature:
☐ EDD (Type) _____	

Sample Temperature:



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[illegible]

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Client:	Western Refining Company
GALLUP REFINERY	
Mailing Address:	
! Giant Crossing Road, Gallup, NM 87301	
Phone #:	505-722-3833
email or Fax#:	505-863-0930
QA/QC Package:	
☐ Standard	☐ Level 4 (Full Validation)
Accreditation:	
☐ NELAP	☐ Other _____
☐ EDD (Type)	_____

Sample Temperature:

Analysis Request

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/16/14	1450			9-16-14	1450
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

Client:	Western Refining Company		
GALLUP REFINERY			
Mailing Address:			
2 Giant Crossing Road, Gallup, NM 87301			
Phone #:	505-722-3833		
email or Fax#:	505-863-0930		
QA/QC Package:			
☐ Standard		☐ Level 4 (Full Validation)	
Accreditation:			
☐ NELAP		☐ Other _____	
☐ EDD (Type)		_____	

☒ Standard ☐ Rush_____

Sample Temperature:

[illegible]

Date	Time	Matrix	Sample Request ID
9/11/14	0945	H ₂ O	West CDU
9/11/14	1200	H ₂ O	FIB-Group6-9/11/14
9/11/14	1210	H ₂ O	FIB-Group5-9/11/14

Date: 9/16/14	Time: 1450	Relinquished by: <i>[Signature]</i>
Date:	Time:	Relinquished by:

Received by: 	Date	Time
	9/16/14	1450
Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.

Client: Western Refining Company

GALLUP REFINERY

Mailing Address:

2 Giant Crossing Road, Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-863-0930

QA/QC Package:

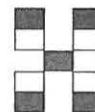
☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Sample Temperature:



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[illegible]

9/11/14	1510	H ₂ O	SMW-2
9/11/14	1690	H ₂ O	SMW-4

9/11/14	1625	H ₂ O	F13-Group 33-9/11/14
---------	------	------------------	----------------------

Received by:	Date	Time
	9-16-14	1450
Received by:	Date	Time

Remarks:

WESTERN REFINING - GALLUP REFINERY
Q3-2014

MKTF-18		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9-18-14	(1)	8:32	7.56	15.34	1.419	1.131	0.89	16.4	-191
GAUGE TIME	8:20	(2)								
DTB (feet)	25.17	(3)								
Depth to Bottom										
DEDICATED PUMP	NO									
DTW (feet)	8.81	WEATHER CONDITIONS Clear, sunny, 60°F, winds from E @ 5mph								
Depth to Water										
DTB - DTW	16.36									
Capacity per foot										
1 Well Volume	5.3									
3 Well Volumes	8.0	WATER APPEARANCE Clear. No odor								
PURGE DATE	9-18-14									
PURGE TIME	8:27									
SAMPLE DAY	9-18-14									
SAMPLE TIME	1440									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										
SAMPLE LOG Well purged dry after 4 gallons										

MKTF-17		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9-18-14	(1)	9:45	7.52	15.34	1.279	1.018	0.79	19.7	-195
GAUGE TIME	9:30	(2)								
DTB (feet)	24.05	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	NO									
DTW (feet)	11.27	WEATHER CONDITIONS Clear, sunny, 65°F, winds from E @ 5mph								
Depth to Water										
DTB - DTW	12.78									
Capacity per foot	4.4									
1 Well Volume	4.241									
3 Well Volumes	6.2	WATER APPEARANCE Clear, no odor.								
PURGE DATE	9-18-14									
PURGE TIME	9:40									
SAMPLE DAY	9-18-14									
SAMPLE TIME	1520									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										
SAMPLE LOG Purge 1.6 gallons And hit bottom of well, wait let recharge and collect sample.										
INSTRUMENTS USED:										
Signature:										

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

MKTFF-22		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/15/14	(1)	10:05	7.22	18.09	2.588	1.938	1.56	11.3	-190
GAUGE TIME	0945	(2)	10:12	7.23	17.55	2.642	2.002	1.62	9.4	-202
DTB (feet)	18.40	(3)	10:19	7.32	17.20	2.714	2.073	1.68	14.8	-202
Depth to Bottom		(4)	10:25	7.52	17.07	2.738	2.091	1.69	16.1	-212
DEDICATED PUMP	N	WEATHER CONDITIONS Sunny, 70°								
DTW (feet)	9.35									
Depth to Water										
DTB - DTW	9.05									
Capacity per foot	0.163	WATER APPEARANCE Grey, Slight turbidity, No odor								
3 Well Volumes	20 gal.									
PURGE DATE	9/15/14									
PURGE TIME	0955									
SAMPLE DAY	9/15/14	WATER APPEARANCE Grey, Slight turbidity, No odor								
SAMPLE TIME										
PUMP DEPTH										
DTW (feet)										
at end of Purging										

SAMPLE LOG

MKTFF-20		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE		(1)								
GAUGE TIME		(2)								
DTB (feet)		(3)								
Depth to Bottom		(4)								
DEDICATED PUMP		WEATHER CONDITIONS 								
DTW (feet)										
Depth to Water										
DTB - DTW										
Capacity per foot		WATER APPEARANCE 								
3 Well Volumes										
PURGE DATE										
PURGE TIME										
SAMPLE DAY		WATER APPEARANCE 								
SAMPLE TIME										
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
Q3-2014

MKT F-16		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-17-14	(1)	10:45	7.34	23.08	3.184	2.125	1.71	15.5	-212
GAUGE TIME	1030	(2)	10:50	7.32	23.34	3.284	2.205	1.78	13.8	-205
DTB (feet)		(3)	10:55	7.36	23.14	3.334	2.247	1.82	15.0	-203
Depth to Bottom	14.08		10:57	7.34	23.04	3.399	2.298	1.86	14.0	-204
DEDICATED PUMP	NO	WEATHER CONDITIONS								
DTW (feet)										
Depth to Water	10.6									
DTB - DTW	3.48									
Capacity per foot										
2 Well Volume	1.1	WATER APPEARANCE								
3 Well Volumes	1.7									
PURGE DATE	9-17-14									
PURGE TIME	1040									
SAMPLE DAY	9-17-14									
SAMPLE TIME	1100	Clear, no odor								
PUMP DEPTH	N/A									
DTW (feet) at end of Purging										

SAMPLE LOG

MKT F-09		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-17-14	(1)	1334	7.38	14.67	1.526	1.235	0.97	23.5	-198
GAUGE TIME	1115	(2)	1345	7.33	14.55	1.540	1.252	0.99	33.3	-196
DTB (feet)	22.73	(3)	1355	7.33	14.51	1.578	1.282	1.01	29.0	-197
Depth to Bottom	14.84	(4)	1405	7.36	14.55	1.595	1.296	1.02	18.2	-199
DEDICATED PUMP	N	WEATHER CONDITIONS								
DTW (feet)										
Depth to Water	14.89									
DTB - DTW	7.84									
Capacity per foot	0.74									
2 Well Volume	1.1	WATER APPEARANCE								
3 Well Volumes	1.7									
PURGE DATE	9-17-14									
PURGE TIME	1320									
SAMPLE DAY	9/18/14									
SAMPLE TIME	0900	Initially Clear & No odor; Hit bottom causing sediment disruption and became cloudy after 10 gallons of purging.								
PUMP DEPTH	N/A									
DTW (feet) at end of Purging	N/A									

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q3-2014

MKTF-15		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/12/14	(1)	9:15	6.74	16.85	15.55	11.97	10.96	16.0	-179
GAUGE TIME	0905	(2)	9:28	6.80	16.72	15.35	11.85	10.85	17.3	-185
DTB (feet)	19.5	(3)	9:31	6.80	16.75	15.60	12.04	11.03	14.2	-175
Depth to Bottom			9:35	6.83	16.49	15.44	11.99	10.97	20.7	-175
DEDICATED PUMP	N	WEATHER CONDITIONS Cloudy, 60°F, Wind 5mph from E.								
DTW (feet)										
Depth to Water	13.71									
DTB - DTW	5.79									
Capacity per foot	0.163									
2 Well Volume	1.9	WATER APPEARANCE Cloudy brown / reddish light color, product odor								
3 Well Volumes	2.8									
PURGE DATE	9-17-14									
PURGE TIME	9:10									
SAMPLE DAY	9-17-14									
SAMPLE TIME	9:40									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

SAMPLE LOG

MKTF-20		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/17/14	(1)	0919	6.99	16.20	4.138	3.198	2.65	21.1	-178
GAUGE TIME	0900	(2)								
DTB (feet)	15.88	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Cloudy, 65°, Wind 5mph from E.								
DTW (feet)										
Depth to Water	8.99									
DTB - DTW	6.89									
Capacity per foot	0.74									
2 Well Volume	1.0	WATER APPEARANCE dark brown, high turbidity								
3 Well Volumes	1.5									
PURGE DATE	9/17/14									
PURGE TIME	0910									
SAMPLE DAY	9/18/14									
SAMPLE TIME	0815									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									

SAMPLE LOG

well bailed dry, will sample tomorrow (9/18)

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

MW-4		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/9/14	(1)	1310	8.80	13.83	0.930	0.769	0.59	13.0	-199
GAUGE TIME	945	(2)	1400	8.81	13.78	0.933	0.769	0.59	9.5	-192
DTB (feet)	121.72	(3)	1430	8.82	13.90	0.933	0.721	0.59	12.3	-199
Depth to Bottom		(4)	1505	8.92	13.42	0.930	0.769	0.59	10.1	-204
DEDICATED PUMP	N	WEATHER CONDITIONS Cloudy, 65°, Wind 15 mph from S.								
DTW (feet)	2.68									
Depth to Water	114.04									
DTB - DTW	0.163									
Capacity per foot	349	WATER APPEARANCE Clear, no odor								
3 Well Volumes										
PURGE DATE	9/17/14									
PURGE TIME	1200									
SAMPLE DAY	9/17/14									
SAMPLE TIME	1515									
PUMP DEPTH	NA									
DTW (feet)	NA									
at end of Purging	NA									

SAMPLE LOG

OW-30		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/9/14	(1)	1722	7.54	13.50	1.520	1.265	1.00	10.1	-189
GAUGE TIME	1130	(2)	1746	7.42	13.49	1.512	1.259	0.99	7.7	-182
DTB (feet)	49.90	(3)	1805	7.66	12.92	1.494	1.259	0.99	15.4	-193
Depth to Bottom		(4)	1825	7.60	12.95	1.497	1.258	0.99	10.5	-189
DEDICATED PUMP	V	WEATHER CONDITIONS Cloudy, 70°,								
DTW (feet)	23.84									
Depth to Water	26.06									
DTB - DTW	0.74									
Capacity per foot	58	WATER APPEARANCE Clear, No odor								
3 Well Volumes										
PURGE DATE	9/17/14									
PURGE TIME	1645									
SAMPLE DAY	9/17/14									
SAMPLE TIME	1830									
PUMP DEPTH	NA									
DTW (feet)	NA									
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
Q3-2014

MW-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9-8-14	(1)	1405	9.12	15.30	0.917	0.731	0.56	28.0	-197
GAUGE TIME	1330	(2)	1500	9.20	14.40	0.900	0.733	0.56	25.5	-206
DTB (feet)	130.83	(3)	1545	9.20	15.27	0.916	0.731	0.56	18.2	-208
Depth to Bottom			1610	9.26	14.25	0.894	0.734	0.56	15.5	-210
DEDICATED PUMP	Yes	WEATHER CONDITIONS Cloudy, 70°F, E winds @ 0-5 mph								
DTW (feet)	7.11									
Depth to Water										
DTB - DTW	123.73									
Capacity per foot	1.04	WATER APPEARANCE Clear No odor.								
1 Well Volume										
3 Well Volumes	378.6									
PURGE DATE	13:30									
PURGE TIME	9-16-14									
SAMPLE DAY	9-16-14									
SAMPLE TIME	1615									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

MW-5		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/8/14	(1)	0838	9.24	13.32	0.897	0.751	0.58	12.9	-191
GAUGE TIME	1415	(2)	0950	9.46	13.44	0.915	0.763	0.59	8.5	-188
DTB (feet)	130.83	(3)	1030	9.44	13.40	0.907	0.760	0.59	8.0	-189
Depth to Bottom		(4)	1130	9.37	13.84	0.916	0.757	0.58	8.9	-214
DEDICATED PUMP	Y	WEATHER CONDITIONS Cloudy, 65°, Wind 5 mph from E.								
DTW (feet)	11.38									
Depth to Water										
DTB - DTW	119.45									
Capacity per foot	0.74	WATER APPEARANCE Clear, no odor								
1 Well Volume										
3 Well Volumes	26.5									
PURGE DATE	9/12/14									
PURGE TIME	0745									
SAMPLE DAY	9/12/14									
SAMPLE TIME	1140									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

OW-13		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	1730	8.37	13.50	0.988	0.822	0.63	13.6	-205
GAUGE TIME	1650	(2)	1752	8.27	13.37	0.970	0.810	0.63	10.0	-199
DTB (feet)	99.15	(3)	1805	8.41	13.52	0.973	0.810	0.63	11.5	-206
Depth to Bottom		(4)	1833	8.56	13.20	0.973	0.806	0.63		-
DEDICATED PUMP	✓	WEATHER CONDITIONS Partly cloudy, 75°, wind 10mph from NE								
DTW (feet)	22.61									
Depth to Water	76.54									
DTB - DTW	76.54									
Capacity per foot	0.74	WATER APPEARANCE Clear, No odor								
3 Well Volumes	170									
PURGE DATE	9/15/14									
PURGE TIME	1700									
SAMPLE DAY	9/15/14	WATER APPEARANCE Clear, No odor								
SAMPLE TIME	1838									
PUMP DEPTH	NA									
DTW (feet) at end of Purging										
SAMPLE LOG		170 gallons								

MW-2		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	1910	9.07	13.80	0.895	0.739	0.57	7.0	-192
GAUGE TIME	1355	(2)	1830	9.09	13.50	0.886	0.738	0.57	7.5	-192
DTB (feet)	137.48	(3)	1845	9.08	13.50	0.885	0.737	0.57	7.3	-192
Depth to Bottom		(4)	1900	9.08	13.49	0.886	0.737	0.58	7.0	-192
DEDICATED PUMP	✓	WEATHER CONDITIONS Cloudy, 70°, wind 5-10 from S.								
DTW (feet)	9.20									
Depth to Water	128.28									
DTB - DTW	128.28									
Capacity per foot	1.02	WATER APPEARANCE Clear, No odor.								
3 Well Volumes	392.5									
PURGE DATE	9/16/14									
PURGE TIME	1530									
SAMPLE DAY	9/16/14	WATER APPEARANCE Clear, No odor.								
SAMPLE TIME	1900									
PUMP DEPTH	NA									
DTW (feet) at end of Purging	NA									
SAMPLE LOG										

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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OW-29		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/18/14	(1)	1430	7.81	14.20	1.469	1.202	0.94	12.1	-215
GAUGE TIME	1645	(2)	1455	7.49	13.45	1.446	1.208	0.95	7.2	-202
DTB (feet)	5108	(3)	1528	7.79	13.56	1.481	1.214	0.96	10.2	-210
Depth to Bottom		(4)	1540	7.70	13.52	1.464	1.217	0.96	9.4	-197
DEDICATED PUMP	NY	WEATHER CONDITIONS Sunny, 85°, wind 10mph from S.								
DTW (feet)	19.35									
Depth to Water	31.33	WATER APPEARANCE Clear, no odor								
DTB - DTW	6.103									
Capacity per foot	95.19									
3 Well Volumes										
PURGE DATE	9/15/14									
PURGE TIME	1405									
SAMPLE DAY	9/15/14									
SAMPLE TIME	1545									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

OW-14		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/18/14	(1)	1615	7.47	15.28	1.847	1.48	1.12	20.1	-201
GAUGE TIME	1655	(2)	1628	7.39	15.20	1.852	1.48	1.17	19.2	-218
DTB (feet)	46.52	(3)	1635	7.39	14.71	1.850	1.51	1.17	14.2	-209
Depth to Bottom		(4)	1643	7.36	14.39	1.843	1.499	1.19	12.4	-203
DEDICATED PUMP	Y	WEATHER CONDITIONS Partly Cloudy - 78°F, winds 10mph from S.								
DTW (feet)	24.40									
Depth to Water	22.12	WATER APPEARANCE Clear, no odor								
DTB - DTW	0.74									
Capacity per foot	49.1									
3 Well Volumes										
PURGE DATE	9/15/14									
PURGE TIME	10:05									
SAMPLE DAY	9/15/14									
SAMPLE TIME	1645									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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OW-52		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	1206	8.26	14.64	0.855	0.67	0.51	22.0	-188
GAUGE TIME	1545	(2)	1225	8.31	14.66	0.812	0.65	0.50	11.7	-174
DTB (feet)	77.74	(3)	1240	8.49	14.63	0.816	0.60	0.51	12.4	-183
Depth to Bottom		(4)	1245	8.45	14.64	0.813	0.65	0.51	13.2	-180
DEDICATED PUMP	N	WEATHER CONDITIONS Sunny, 75°, wind 5mph from NE								
DTW (feet)	15.80									
Depth to Water	61.94	WATER APPEARANCE Clear, No odor.								
DTB - DTW	0.163									
Capacity per foot	30.3									
3 Well Volumes										
PURGE DATE	9/15/14									
PURGE TIME	1150									
SAMPLE DAY	9/15/14									
SAMPLE TIME	1345									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

OW-50		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/18/14	(1)	1320	8.24	14.97	0.911	0.73	0.56	15.1	-208
GAUGE TIME	1630	(2)	1329	8.45	14.68	0.902	0.730	0.56	15.0	-211
DTB (feet)	64	(3)	1335	8.45	14.52	0.903	0.734	0.56	15.3	-206
Depth to Bottom		(4)	1340	8.42	14.92	0.903	0.727	0.56	8.3	-203
DEDICATED PUMP	N	WEATHER CONDITIONS Sunny, 80°, 10 mph wind from S.								
DTW (feet)	16.86									
Depth to Water	47.14	WATER APPEARANCE Slightly red, some sediment, no odor								
DTB - DTW	0.163									
Capacity per foot	23									
3 Well Volumes										
PURGE DATE	9/15/14									
PURGE TIME	1315									
SAMPLE DAY	9/15/14									
SAMPLE TIME	1335									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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3rd QTR - ANNUAL

RW-5		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/9/14	(1)	1120	7.72	16.47	0.674	0.523	0.40	24.7	-197
GAUGE TIME	1200	(2)	1125	7.72	16.25	0.654	0.511	0.39	25	-195
DTB (feet)	39.59	(3)	1130	7.65	16.28	0.649	0.506	0.38	19.5	-193
Depth to Bottom		(4)	1135	7.61	16.57	0.654	0.507	0.38	18.9	-195
DEDICATED PUMP	N	WEATHER CONDITIONS Sunny, 70°, Wind 10 mph from East								
DTW (feet)	28.81									
Depth to Water	12.01	WATER APPEARANCE Clear, Slight hydrocarbon odor								
DTB - DTW	8.74									
Capacity per foot	24									
3 Well Volumes										
PURGE DATE	9-18-14									
PURGE TIME	11:10									
SAMPLE DAY	9/18/14									
SAMPLE TIME	1140									
PUMP DEPTH	35									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

RW-2		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/9/14	(1)	1100	7.18	16.21	1.323	0.934	0.72	14.2	-194
GAUGE TIME	1230	(2)	1115	7.16	15.90	1.325	0.937	0.72	10.2	-193
DTB (feet)	39.8	(3)	1130	7.17	15.95	1.325	0.939	0.72	13.1	-195
Depth to Bottom		(4)	1150	7.17	15.65	1.323	0.939	0.73	10.5	-192
DEDICATED PUMP	N	WEATHER CONDITIONS Sunny, 70°, Wind 10 mph from East								
DTW (feet)	23.95									
Depth to Water	15.85	WATER APPEARANCE Clear, Slight hydrocarbon odor								
DTB - DTW	0.74									
Capacity per foot	35									
3 Well Volumes										
PURGE DATE	9/18/14									
PURGE TIME	1055									
SAMPLE DAY	9/18/14									
SAMPLE TIME	1215									
PUMP DEPTH	NA									
DTW (feet)	NA									
at end of Purging										

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

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Q3-2014

SMW-4		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	1620	8.56	14.02	1.060	0.872	0.68	36.0	-187
GAUGE TIME	15:15	(2)	1630	8.51	13.85	1.061	0.876	0.68	10.3	-179
DTB (feet)	69.68	(3)								
Depth to Bottom										
DEDICATED PUMP	Y.									
DTW (feet)	29.10	WEATHER CONDITIONS Clear skies, 0-5 mph NW, Sunny								
Depth to Water										
DTB - DTW	40.58									
Capacity per foot	0.163									
1 Well Volume										
3 Well Volumes	19.8	WATER APPEARANCE Clear, No Odor								
PURGE DATE	9-11-14									
PURGE TIME	1600									
SAMPLE DAY	9/11/14									
SAMPLE TIME	1640									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										
SAMPLE LOG		Pump lost suction @ 10 gallons, let well recharge then sample.								

OW-1		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/8/14	(1)	1730	8.71	13.00	1.042	0.872	0.68	20.1	-185
GAUGE TIME	11:30	(2)	1747	8.87	14.90	1.088	0.874	0.68	9.2	-181
DTB (feet)	94.55	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	Yes									
DTW (feet)	94.54	WEATHER CONDITIONS Clear Sunny Skies, Winds NW 0-5 mph								
Depth to Water	0.01									
DTB - DTW	94.54									
Capacity per foot	0.74									
1 Well Volume										
3 Well Volumes	209	WATER APPEARANCE Clear, No odor, turned high turbidity.								
PURGE DATE	9-11-14									
PURGE TIME	1720									
SAMPLE DAY	9-11-14									
SAMPLE TIME	1800									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										
SAMPLE LOG										

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
Q3-2014

OW-10		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	8:55	7.68	13.09	4.902	4.125	3.48	12.0	-165
GAUGE TIME	0745	(2)	9:00	7.65	13.02	5.100	4.296	3.63	11.3	-145
DTB (feet)	60.33	(3)	7:15	7.55	13.00	4.801	4.046	3.41	10.9	-162
Depth to Bottom			9:30	7.60	13.16	4.824	4.052	3.42	14.5	-172
DEDICATED PUMP	Y	WEATHER CONDITIONS Clear skies, calm winds, 65°F								
DTW (feet)	2.33									
Depth to Water	5.8									
DTB - DTW	8.74									
Capacity per foot	60									
1 Well Volume	145.128									
3 Well Volumes	9-12-14	WATER APPEARANCE 9:35 Clear, No odor.								
PURGE DATE	8:40									
PURGE TIME	9-12-14									
SAMPLE DAY	9/12/14									
SAMPLE TIME	NA									
PUMP DEPTH	DTW (feet) at end of Purging									

SAMPLE LOG

[Handwritten signature]

OW-12		TEST PARAMETERS								
			Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	9/9/14	(1)	1035	9.37	15.33	0.953	0.744	0.57	57	-186
GAUGE TIME	0815	(2)	1050	9.50	15.80	0.913	0.711	0.55	51.9	-182
DTB (feet)	128.85	(3)								
Depth to Bottom										
DEDICATED PUMP	N	(4)								
DTW (feet)	47.78	WEATHER CONDITIONS Sunny, 70°, wind strong from west.								
Depth to Water	86.07									
DTB - DTW	0.74									
Capacity per foot	60									
1 Well Volume	180									
3 Well Volumes	9/12/14									
PURGE DATE	1015	WATER APPEARANCE Clear, no odor,								
PURGE TIME	9/12/14									
SAMPLE DAY	1100									
SAMPLE TIME	123'									
PUMP DEPTH	DTW (feet) at end of Purging									
DTW (feet)										

SAMPLE LOG

INSTRUMENTS USED:

Signature:

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Q3-2014

OW-11		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/9/14	(1)	1140	8.64	15.40	2.393	1.896	1.53	29.8	-184
GAUGE TIME	1450	(2)	1155	8.47	14.73	2.304	1.864	1.50	21.0	-181
DTB (feet)		(3)	1208	8.69	15.00	2.332	1.874	1.51	14.9	-177
Depth to Bottom	65.79		1215	8.88	15.00	2.303	1.898	1.53	18.0	-187
DEDICATED PUMP	N	WEATHER CONDITIONS Clear, Calm winds, 70°F								
DTW (feet)										
Depth to Water	20.11									
DTB - DTW	45.68									
Capacity per foot	0.74									
1 Well Volume		WATER APPEARANCE Clear, No odor								
3 Well Volumes	101									
PURGE DATE	9-12-14									
PURGE TIME	11:30									
SAMPLE DAY	9/12/14									
SAMPLE TIME	1220	WATER APPEARANCE Clear, No odor								
PUMP DEPTH	60									
DTW (feet)										
at end of Purging										
SAMPLE LOG										

MKT-F-04		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/15/14	(1)	0905	7.09	16.28	1.918	1.496	1.19	25.1	-182
GAUGE TIME	0850	(2)	0920	7.12	15.16	1.843	1.474	1.17	39.8	-178
DTB (feet)		(3)	0927	7.13	14.94	1.783	1.434	1.14	33.5	-177
Depth to Bottom	22.15	(4)	0935	7.13	14.90	1.781	1.439	1.13	30.2	-177
DEDICATED PUMP	N	WEATHER CONDITIONS Sunny, 70°, Wind from NE @ 5 mph.								
DTW (feet)										
Depth to Water	11.09									
DTB - DTW	11.06									
Capacity per foot	0.74									
1 Well Volume		WATER APPEARANCE brown, high turbidity, No odor.								
3 Well Volumes	24.5									
PURGE DATE	9/15/14									
PURGE TIME	0855									
SAMPLE DAY	9/15/14									
SAMPLE TIME	0945	WATER APPEARANCE brown, high turbidity, No odor.								
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										
SAMPLE LOG										

INSTRUMENTS USED:

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

NAPIS-3		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	910	7.37	23.30	1.829	1.229	0.96	38.5	-162
GAUGE TIME	1445	(2)	922	7.40	24.39	1.465	0.964	0.74	46.4	-163
DTB (feet)	30.42	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Clear, Calm Winds, Sunny, 65°F								
DTW (feet)	7.97									
Depth to Water	22.45									
DTB - DTW	0.163									
Capacity per foot	7	WATER APPEARANCE Clear, No odor								
Well Volumes										
PURGE DATE	9/11/14									
PURGE TIME	0850									
SAMPLE DAY	9/11/14									
SAMPLE TIME	1126									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

NAPIS-2		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	940	7.30	25.55	2.475	1.592	1.26	12.1	-189
GAUGE TIME	1455	(2)								
DTB (feet)	13.61	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Clear, Calm winds, Sunny, 65°F								
DTW (feet)	8.10									
Depth to Water	5.51									
DTB - DTW	1.8									
Capacity per foot		WATER APPEARANCE Clear, No odor.								
Well Volumes										
PURGE DATE	9/11/14									
PURGE TIME	9:35									
SAMPLE DAY	9/11/14									
SAMPLE TIME	1135									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

* Water found in annulus around well casing, water was bailed and the cap to the casing seemed to be tight and did not allow surface contamination.

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

NAPPS-1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9-8-14	(1)	9:15	7.33	20.39	1.726	1.229	0.96	19.5	-161
GAUGE TIME	1500	(2)	9:18	7.31	20.31	1.712	1.223	0.96	25.1	-153
DTB (feet)	13.53	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Clear, Calm Winds, Sunny, 65°F								
DTW (feet)	6.85									
Depth to Water	6.68									
DTB - DTW	0.163									
Capacity per foot	2.2	WATER APPEARANCE Clear, No odor								
3 Well Volumes										
PURGE DATE	9/11/14									
PURGE TIME	9:13									
SAMPLE DAY	9/11/14									
SAMPLE TIME	10:15									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

SMW-2		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	14:49	7.35	16.59	9.227	7.139	6.26	29.9	-178
GAUGE TIME	1510	(2)	14:55	7.23	17.12	9.111	6.977	6.12	33.5	-168
DTB (feet)	52.8	(3)	15:00	7.24	17.70	9.234	6.938	6.12	45.7	-165
Depth to Bottom		(4)	15:05	7.25	17.94	9.211	6.923	6.06	43.3	-165
DEDICATED PUMP	N	WEATHER CONDITIONS Sunny, 80°, Wind 10mph from West								
DTW (feet)	25.10									
Depth to Water	27.7									
DTB - DTW	0.163									
Capacity per foot	13.5	WATER APPEARANCE Clear, no odor								
3 Well Volumes										
PURGE DATE	9-11-14									
PURGE TIME	14:40									
SAMPLE DAY	9/11/14									
SAMPLE TIME	1510									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature:

WESTERN REFINING - GALLUP REFINERY
3rd QTR - ANNUAL

OWM-1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	0739	7.26	17.21	4.686	3.93	3.31	26.5	-180
GAUGE TIME	1530	(2)								
DTB (feet)	94.55	(3)								
Depth to Bottom		(4)								
DEDICATED PUMP	N	WEATHER CONDITIONS Clear, 50°, No wind								
DTW (feet)	19.56									
Depth to Water										
DTB - DTW	6.64									
Capacity per foot	0.163	WATER APPEARANCE Yellow, slight turbidity								
Well Volumes	2.2									
PURGE DATE	9/12/14									
PURGE TIME	0730									
SAMPLE DAY	9/12/14	WATER APPEARANCE Yellow, slight turbidity								
SAMPLE TIME	0750									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging										

SAMPLE LOG

OAPIS-1		TEST PARAMETERS								
		Time (hrs)	pH	Temperature Deg C	Conductivity (uS), (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)	
GAUGE DATE	9/8/14	(1)	0741	7.28	17.64	6.157	4.65	3.96	18.2	-175
GAUGE TIME	1550	(2)	0750	7.22	16.82	5.993	4.61	3.93	13.2	-176
DTB (feet)	26.0	(3)	0754	7.21	16.14	5.867	4.59	3.91	12.5	-173
Depth to Bottom		(4)	0759	7.21	15.96	5.845	4.59	3.91	14.0	-170
DEDICATED PUMP	N	WEATHER CONDITIONS Clear, 50°, no wind								
DTW (feet)	11.11									
Depth to Water										
DTB - DTW	14.89									
Capacity per foot	0.163	WATER APPEARANCE Yellow, slight turbidity								
Well Volumes	4.8									
PURGE DATE	9/12/14									
PURGE TIME	0735									
SAMPLE DAY	9/12/14	WATER APPEARANCE Yellow, slight turbidity								
SAMPLE TIME	0805									
PUMP DEPTH	NA									
DTW (feet)										
at end of Purging	NA									

SAMPLE LOG

INSTRUMENTS USED:

Water Level - Heron Instrument 100 feet DipperT electric water depth tape.
Bailer

Signature: