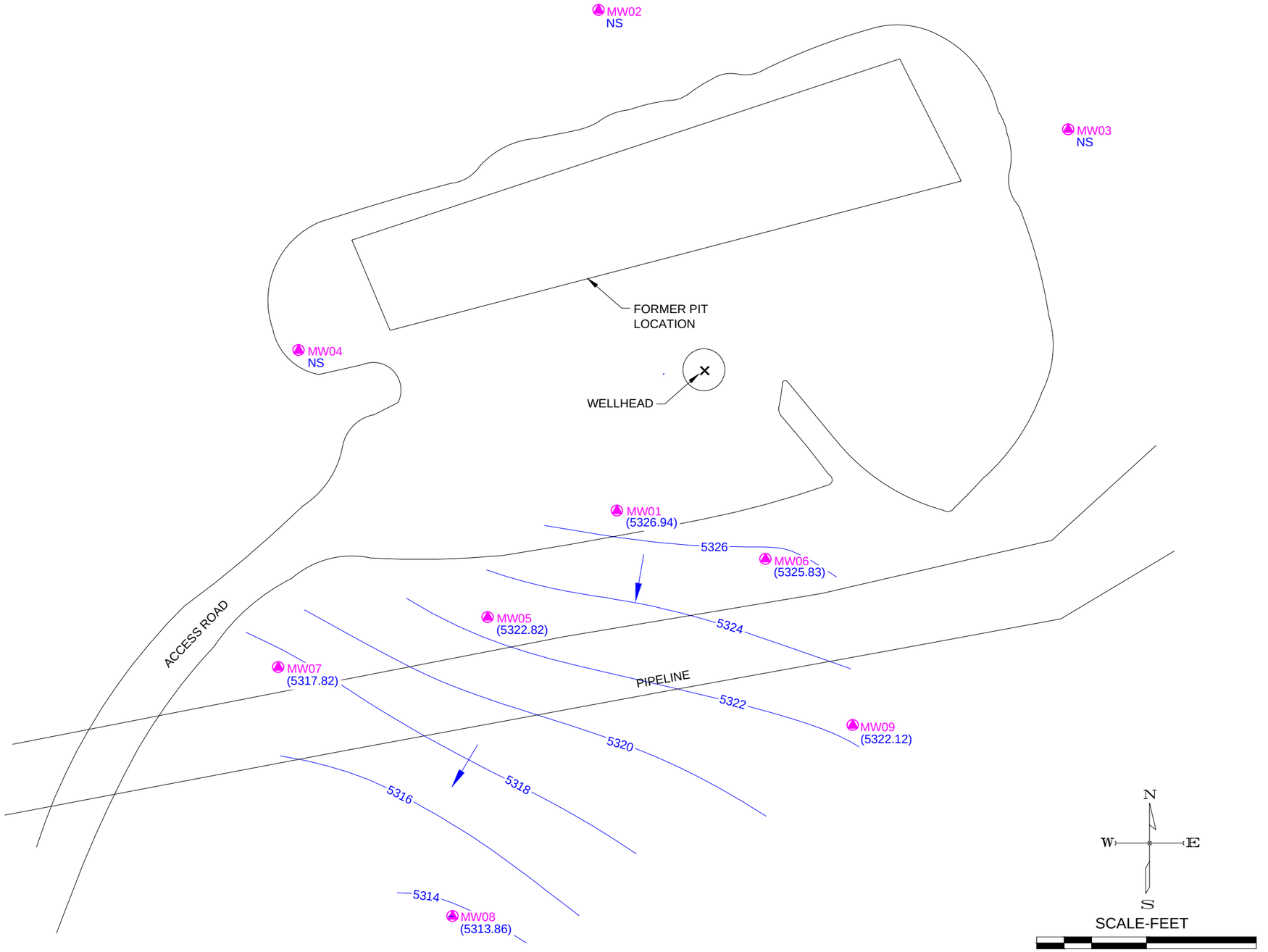


LEGEND:

MW01	MONITORING WELL/BOREHOLE
5325.0	GROUNDWATER ELEVATION CONTOUR (FT-MSL)
(5325.55)	GROUNDWATER ELEVATION (FT-MSL)
	GROUNDWATER FLOW DIRECTION
NS	NOT SAMPLED

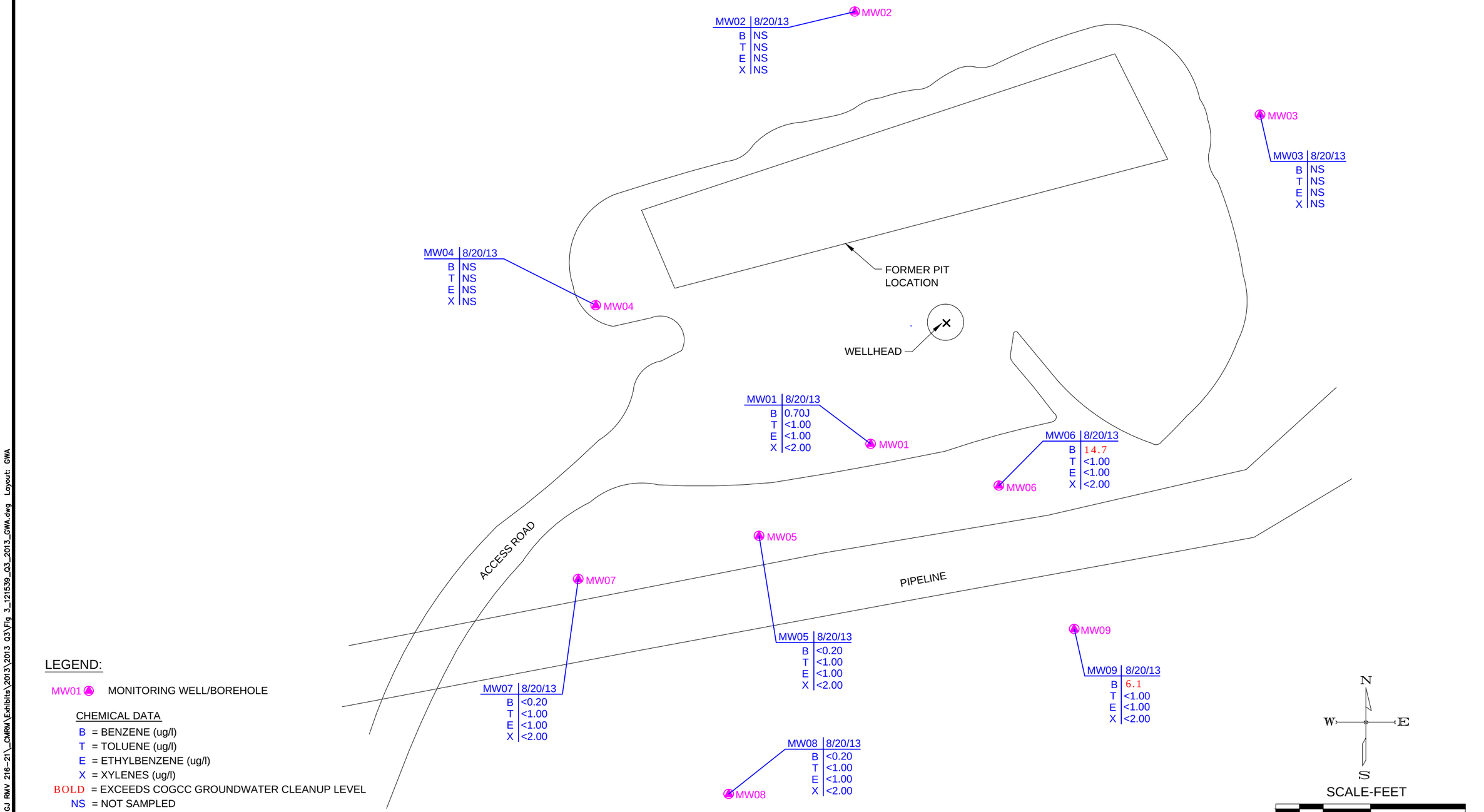
PROJECT NO:	012-1539
DRAWN BY:	sds
DATE:	10.03.2013

POTENTIOMETRIC SURFACE MAP - AUGUST 2013
WPX RMV 216-21
WPX ENERGY ROCKY MOUNTAIN, LLC
GARFIELD COUNTY, COLORADO

OLSSON ASSOCIATES
760 Horizon Drive, Ste. 102
Grand Junction, CO 81506
TEL 970.263.7800
FAX 970.263.7456

FIGURE
2

F:\Projects\012-1539 GJ RMV 216-21_CMRR\Exhibits\2013\2013 Q3\Fig 2_121539_Q3_2013_PS.dwg Layout: P SURF



F:\Projects\012-1539 GJ RMV 216-21_CMRM\Exhibits\2013\2013 Q3\Fig 3_121539_Q3_2013_GWA.dwg Layout: GWA

PROJECT NO:	012-1539
DRAWN BY:	sds
DATE:	10.03.2013

GROUNDWATER ANALYTICAL RESULTS - AUGUST 2013
WPX RMV 216-21
WPX ENERGY ROCKY MOUNTAIN, LLC
GARFIELD COUNTY, COLORADO

OLSSON ASSOCIATES
760 Horizon Drive, Ste. 102
Grand Junction, CO 81506
TEL 970.263.7800
FAX 970.263.7456

FIGURE
3

Table 1
RMV 216-21 Groundwater Monitoring
2013 Water Quality Data Summary

SAMPLE SUMMARY	
Location Description	RMV 216-21 GW Monitoring
Sample Type	Groundwater

LABORATORY DATA SUMMARY **Sample ID**	**CDPHE Regulation 41 Standards**	**COGCC Table 910-1 Standards**	**UNITS**	RMV 216-21 MW1	RMV 216-21 MW1	RMV 216-21 MW1	RMV 216-21 MW2	RMV 216-21 MW2	RMV 216-21 MW2
Depth to Water (feet)				84.45	84.54	84.56	79.2	NS	NT
Sample Date				3/7/2013	6/25/2013	8/20/2013	3/7/2013	6/25/2013	8/20/2013
Analytical Parameters									
BTEX									
Benzene	5	5	ug/l	<0.20	<0.20	0.70J	<0.20	NS	NT
Toluene	560 to 1000	560 to 1000	ug/l	<1.0	<1.0	<1.0	<1.0	NS	NT
Ethylbenzene	700	700	ug/l	<1.0	<1.0	<1.0	<1.0	NS	NT
Xylene (total)	1400 to 10000	1400 to 10000	ug/l	<2.0	<2.0	<2.0	<2.0	NS	NT
Metals									
Calcium	NA	NA	mg/l	212	214	226	209	NS	NT
Iron	0.3	NA	mg/l	<0.07	<0.07	<0.07	<0.07	NS	NT
Magnesium	NA	NA	mg/l	213	201	201	171	NS	NT
Manganese	0.05	NA	mg/l	0.369	0.378	0.429	0.0488	NS	NT
Potassium	23	NA	mg/l	6.34	5.24	5.65	6.43	NS	NT
Selenium	0.05	NA	mg/l	<0.05	<0.05	<0.05	<0.05	NS	NT
Sodium	390	NA	mg/l	446	391	3.93	343	NS	NT
General Chemistry									
Alkalinity, Bicarbonate as CaCO3	NA	NA	mg/l	726	577	559	638	NS	NT
Alkalinity, Carbonate	NA	NA	mg/l	<5.0	<5.0	<5.0	<5.0	NS	NT
Alkalinity, Total as CaCO3	NA	NA	mg/l	729	577	559	638	NS	NT
Chloride	250	1.25 x bkgd	mg/l	225	213	199	17	NS	NT
Nitrogen, Nitrate	10	NA	mg/l	31.1	32	28.5	25.9	NS	NT
Nitrogen Nitrite	1.0	NA	mg/l	0.15	0.16	0.12	<0.020[b]	NS	NT
Solids, Total Dissolved	10,000	NA	mg/l	3210	3230	3160	2780	NS	NT
Sulfate	250	1.25 x bkgd	mg/l	1390	1460	1310	1350	NS	NT
pH	NA	NA	su	7.04	7.2	7.29	7.13	NS	NT
Field Readings									
Temperature	NA	NA	deg. C	14.34	14.20	14.20	14.20	NS	NT
Specific Conductivity	NA	NA	mS/cm	3.91	3.852	3.787	2.94	NS	NT
Dissolved Oxygen	NA	NA	mg/l	1.05	1.26	0.75	0.81	NS	NT
pH	NA	NA	su	7.60	7.29	7.51	7.04	NS	NT
Solids, Total Dissolved	NA	NA	mg/l	2.5	2.5	2.4	1.9	NS	NT
Turbidity	NA	NA	NTU	5999	NT	NT	5999	NS	NT

ug/l -micrograms per liter
mg/l -milligrams per liter
J - indicates an estimated value
umhos/cm - micromhos per centimeter
mS/cm - millisiemens per centimenter
su - standard units
NA - not applicable
NTU - nephelometric turbidity units
NT - not tested

a - Dilution required due to matrix interference
b - Elevated detection limit due to matrix interference
c - Elevated detection limit due to dilution required for possible matrix interference

SAMPLE SUMMARY	
Location Description	
Sample Type	

LABORATORY DATA SUMMARY								
Sample ID	RMV 216-21 MW3	RMV 216-21 MW3	RMV 216-21 MW3	RMV 216-21 MW4	RMV 216-21 MW4	RMV 216-21 MW4	RMV 216-21 MW5	RMV 216-21 MWX
Depth to Water (feet)	68.14	NS	NT	85.69	NS	NT	85.81	MW5 Duplicate
Sample Date	3/7/2013	6/25/2013	8/20/2013	3/7/2013	6/25/2013	8/20/2013	3/7/2013	3/7/2013
Analytical Parameters								
BTEX								
Benzene	<0.20	NS	NT	<0.20	NS	NT	<0.20	<0.20
Toluene	<1.0	NS	NT	<1.0	NS	NT	<1.0	<1.0
Ethylbenzene	<1.0	NS	NT	<1.0	NS	NT	<1.0	<1.0
Xylene (total)	<2.0	NS	NT	<2.0	NS	NT	<2.0	<2.0
Metals								
Calcium	222	NS	NT	225	NS	NT	221	221
Iron	<0.07	NS	NT	<0.07	NS	NT	<0.07	<0.07
Magnesium	184	NS	NT	183	NS	NT	234	234
Manganese	0.137	NS	NT	<0.005	NS	NT	0.123	0.124
Potassium	6.62	NS	NT	6.59	NS	NT	6.51	6.29
Selenium	<0.05	NS	NT	<0.05	NS	NT	<0.05	<0.05
Sodium	358	NS	NT	345	NS	NT	500	490
General Chemistry								
Alkalinity, Bicarbonate as CaCO3	567	NS	NT	577	NS	NT	565	548
Alkalinity, Carbonate	<5.0	NS	NT	<5.0	NS	NT	<5.0	<5.0
Alkalinity, Total as CaCO3	567	NS	NT	577	NS	NT	565	548
Chloride	29.2	NS	NT	15.6	NS	NT	325	331
Nitrogen, Nitrate	44.9	NS	NT	19.7	NS	NT	33.1	33.4
Nitrogen Nitrite	0.04	NS	NT	<0.020[b]	NS	NT	0.031	0.043
Solids, Total Dissolved	2890	NS	NT	2980	NS	NT	3470	3470
Sulfate	1400	NS	NT	1480	NS	NT	1480	1480
pH	7.16	NS	NT	7.14	NS	NT	7.07	7.12
Field Readings								
Temperature	14.53	NS	NT	14.37	NS	NT	26.37	26.37
Specific Conductivity	3.36	NS	NT	3.24	NS	NT	4.24	4.24
Dissolved Oxygen	1.48	NS	NT	2.21	NS	NT	1.65	1.65
pH	7.67	NS	NT	7.00	NS	NT	6.97	6.97
Solids, Total Dissolved	2.2	NS	NT	2.1	NS	NT	2.8	2.8
Turbidity	1509	NS	NT	2000	NS	NT	11.3	11.3

ug/l -micrograms per liter
mg/l -milligrams per liter
J - indicates an estimated value
umhos/cm - micromhos per centimeter
mS/cm - millisiemens per centimenter
su - standard units
NA - not applicable
NTU - nephelometric turbidity units
NT - not tested

Table 1
RMV 216-21 Groundwater Monitoring
2013 Water Quality Data Summary

SAMPLE SUMMARY								
Location Description								
Sample Type								

LABORATORY DATA SUMMARY								
Sample ID	RMV 216-21 MW5	RMV 216-21 MW5	RMV 216-21 MW6	RMV 216-21 MW6	RMV 216-21 MW6	RMV 216-21 MW7	RMV 216-21 MW7	RMV 216-21 MW7
Depth to Water (feet)	85.95	86.01	81.79	82.89	82.91	90.79	90.95	91.0
Sample Date	6/25/2013	8/20/2013	3/7/2013	6/25/2013	8/20/2013	3/7/2013	6/25/2013	8/20/2013
Analytical Parameters								
BTEX								
Benzene	<0.20	<0.20	17.3	16.7	14.7	<0.20	<0.20	<0.20
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylene (total)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Metals								
Calcium	222	238	217	212	231	224	220	233
Iron	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Magnesium	227	225	252	234	250	219	206	209
Manganese	0.113	0.117	0.182	0.171	0.207	0.0076	0.0069	<0.005
Potassium	5.17	5.66	7.07	5.45	6.14	6.46	5.39	5.58
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium	446	4.52	593	513	5.48	464	403	4.1
General Chemistry								
Alkalinity, Bicarbonate as CaCO3	525	536	1050	827	599	727	615	563
Alkalinity, Carbonate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total as CaCO3	525	536	1050	827	599	727	615	563
Chloride	325	284	493	466	430	215	192	201
Nitrogen, Nitrate	33.7	31.8	35	35.3	33.2	24.6	25.9	23.8
Nitrogen Nitrite	<0.040	<0.020	4.5	4.1	4	0.024	<0.040	<0.020
Solids, Total Dissolved	3530	3480	3830	3570	3610	3330	3270	3270
Sulfate	1490	1390	1460	1440	1360	1490	1530	1400
pH	7.47	7.26	7.04	7.23	7.27	7.15	7.29	7.3
Field Readings								
Temperature	14.10	14.40	18.93	15.10	14.80	13.77	14.40	14.50
Specific Conductivity	4.166	4.19	4.93	4.687	4.766	3.94	3.802	3.787
Dissolved Oxygen	0.58	0.32	1.3	0.2	1.02	2.17	2.01	1.7
pH	7.22	7.31	6.95	7.13	7.29	7.60	7.26	7.40
Solids, Total Dissolved	2.7	2.7	3.2	3.0	3.1	2.5	2.5	2.5
Turbidity	NT	NT	859	NT	NT	1834	NT	NT

ug/l -micrograms per liter
mg/l -milligrams per liter
J - indicates an estimated value
umhos/cm - micromhos per centimeter
mS/cm - millisiemens per centimenter
su - standard units
NA - not applicable
NTU - nephelometric turbidity units
NT - not tested

SAMPLE SUMMARY						
Location Description						
Sample Type						

LABORATORY DATA SUMMARY						
Sample ID	RMV 216-21 MW8	RMV 216-21 MW8	RMV 216-21 MW8	RMV 216-21 MW9	RMV 216-21 MW9	RMV 216-21 MW9
Depth to Water (feet)	88.23	88.34	88.36	81.54	81.66	81.72
Sample Date	3/7/2013	6/25/2013	8/20/2013	3/7/2013	6/25/2013	8/20/2013
Analytical Parameters						
BTEX						
Benzene	<0.20	<0.20	<0.20	2.9	4.9	6.1
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylene (total)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Metals						
Calcium	202	199	203	256	236	259
Iron	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
Magnesium	248	236	222	266	245	248
Manganese	0.0133	0.0168	0.0177	0.0933	0.1340	0.1160
Potassium	6.67	5.5	5.63	7.73	6.2	6.56
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sodium	494	4.41	4.27	502	457	4.43
General Chemistry						
Alkalinity, Bicarbonate as CaCO3	822	541	569	975	576	610
Alkalinity, Carbonate	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Alkalinity, Total as CaCO3	822	541	569	975	576	610
Chloride	319	296	282	427	383	337
Nitrogen, Nitrate	33.9	33.4	31.9	46.8	45.8	43.1
Nitrogen Nitrite	<0.020[b]	<0.040	<0.020	3.3	2.7	2.7
Solids, Total Dissolved	3490	3490	3420	3830	3710	3570
Sulfate	1500	1440	1370	1560	1540	1430
pH	7.17	7.25	7.34	7.03	7.28	7.27
Field Readings						
Temperature	17.48	14.30	14.40	14.31	15.30	14.50
Specific Conductivity	4.13	4.146	4.123	4.79	4.47	4.491
Dissolved Oxygen	1.6	0.78	0.61	0.92	0.52	0.41
pH	7.01	7.25	7.40	7.62	7.17	7.40
Solids, Total Dissolved	2.7	2.7	2.7	3.1	2.9	2.9
Turbidity	568	NT	NT	2000	NT	NT

ug/l -micrograms per liter
mg/l -milligrams per liter
J - indicates an estimated value
umhos/cm - micromhos per centimeter
mS/cm - millisiemens per centimenter
su - standard units
NA - not applicable
NTU - nephelometric turbidity units
NT - not tested

Mountain States ACCUTEST LABORATORIES

08/28/13

Technical Report for

WPX Energy Rocky Mountain, LLC

CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Accutest Job Number: D49655

Sampling Date: 08/20/13

Report to:

Olsson Associates
760 Horizon Drive Suite 102
Grand Junction, CO 81505
tdobransky@oaconsulting.com; karolina.blaney@wpxenergy.com

ATTN: Tim Dobransky

Total number of pages in report: **56**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Scott Heideman
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

Sections: 1 2 3 4 5 6 7 8

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Sample Summary

WPX Energy Rocky Mountain, LLC

Job No: D49655

CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D49655-1	08/20/13	09:30	JSKB	08/21/13	AQ	Ground Water	RMV 216-21 MW1
D49655-1F	08/20/13	09:30	JSKB	08/21/13	AQ	Groundwater Filtered	RMV 216-21 MW1
D49655-2	08/20/13	10:45	JSKB	08/21/13	AQ	Ground Water	RMV 216-21 MW5
D49655-2F	08/20/13	10:45	JSKB	08/21/13	AQ	Groundwater Filtered	RMV 216-21 MW5
D49655-3	08/20/13	10:30	JSKB	08/21/13	AQ	Ground Water	RMV 216-21 MW6
D49655-3F	08/20/13	10:30	JSKB	08/21/13	AQ	Groundwater Filtered	RMV 216-21 MW6
D49655-4	08/20/13	11:45	JSKB	08/21/13	AQ	Ground Water	RMV 216-21 MW7
D49655-4F	08/20/13	11:45	JSKB	08/21/13	AQ	Groundwater Filtered	RMV 216-21 MW7
D49655-5	08/20/13	12:10	JSKB	08/21/13	AQ	Ground Water	RMV 216-21 MW8
D49655-5F	08/20/13	12:10	JSKB	08/21/13	AQ	Groundwater Filtered	RMV 216-21 MW8
D49655-6	08/20/13	11:20	JSKB	08/21/13	AQ	Ground Water	RMV 216-21 MW9
D49655-6F	08/20/13	11:20	JSKB	08/21/13	AQ	Groundwater Filtered	RMV 216-21 MW9

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	WPX Energy Rocky Mountain, LLC	**Job No**	D49655
Site:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)	**Report Date**	8/28/2013 2:45:19 PM

On 08/21/2013, 6 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D49655 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GTB1198

- All samples were analyzed within the recommended method holding time.
- Sample(s) D49655-1MS, D49655-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010C

Matrix AQ **Batch ID:** MP10876

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49649-1FMS, D49649-1FMSD, D49649-1FSDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Manganese, Potassium are outside control limits for sample MP10876-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Matrix AQ **Batch ID:** MP10916

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49798-1SDL, D49798-1MS, D49798-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method EPA 300.0/SW846 9056

Matrix AQ **Batch ID:** GP10740

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49655-3MS, D49655-3MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D49655-4 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D49655-5 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D49655-2 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.

Matrix AQ **Batch ID:** R18449

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D49655-5 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

Matrix AQ **Batch ID:** R18450

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D49655-6 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

Matrix AQ **Batch ID:** R18452

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D49655-1 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

Matrix AQ **Batch ID:** R18453

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D49655-2 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

Matrix AQ **Batch ID:** R18454

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D49655-4 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

Matrix AQ **Batch ID:** R18455

- The data for EPA 300.0/SW846 9056 meets quality control requirements.
- D49655-3 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

Wet Chemistry By Method SM 2320B-2011

Matrix AQ **Batch ID:** GN21657

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49649-1DUP, D49649-1MS, D49649-1MSD were used as the QC samples for the Alkalinity, Total as CaCO3 analysis.

Matrix AQ **Batch ID:** GN21660

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ **Batch ID:** GN21661

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM 2540C-2011

Matrix AQ **Batch ID:** GN21611

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49655-3DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM 5310B-2011

Matrix AQ **Batch ID:** GP10779

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D49655-5DUP, D49655-5MS, D49655-5MSD were used as the QC samples for the Total Organic Carbon analysis.

Wet Chemistry By Method SM4500HB+-2011/9040C

Matrix AQ **Batch ID:** GN21631

- The following samples were run outside of holding time for method SM4500HB+-2011/9040C: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Summary of Hits

Job Number: D49655
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)
Collected: 08/20/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
D49655-1	**RMV 216-21 MW1**					
Benzene		0.70 J	1.0	0.20	ug/l	SW846 8021B
Alkalinity, Bicarbonate as CaCO3		559	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		559	5.0		mg/l	SM 2320B-2011
Chloride		199	50		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate		28.5	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]		28.6	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrite		0.12	0.020		mg/l	EPA 300.0/SW846 9056
Solids, Total Dissolved		3160	10		mg/l	SM 2540C-2011
Sulfate		1310	50		mg/l	EPA 300.0/SW846 9056
Total Organic Carbon		5.6	1.0		mg/l	SM 5310B-2011
pH		7.29			su	SM4500HB+ -2011/9040C
D49655-1F	**RMV 216-21 MW1**					
Calcium		226000	400		ug/l	SW846 6010C
Magnesium		201000	200		ug/l	SW846 6010C
Manganese		429	5.0		ug/l	SW846 6010C
Potassium		5650	1000		ug/l	SW846 6010C
Sodium		393000	400		ug/l	SW846 6010C
D49655-2	**RMV 216-21 MW5**					
Alkalinity, Bicarbonate as CaCO3		536	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		536	5.0		mg/l	SM 2320B-2011
Chloride		284	50		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate		31.8	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]		31.8	1.0		mg/l	EPA 300.0/SW846 9056
Solids, Total Dissolved		3480	10		mg/l	SM 2540C-2011
Sulfate		1390	50		mg/l	EPA 300.0/SW846 9056
Total Organic Carbon		5.8	1.0		mg/l	SM 5310B-2011
pH		7.26			su	SM4500HB+ -2011/9040C
D49655-2F	**RMV 216-21 MW5**					
Calcium		238000	400		ug/l	SW846 6010C
Magnesium		225000	200		ug/l	SW846 6010C
Manganese		117	5.0		ug/l	SW846 6010C
Potassium		5660	1000		ug/l	SW846 6010C
Sodium		452000	400		ug/l	SW846 6010C
D49655-3	**RMV 216-21 MW6**					
Benzene		14.7	1.0	0.20	ug/l	SW846 8021B

Summary of Hits

Job Number: D49655
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)
Collected: 08/20/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Alkalinity, Bicarbonate as CaCO3		599	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		599	5.0		mg/l	SM 2320B-2011
Chloride		430	50		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate		33.2	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]		37.2	1.4		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrite		4.0	0.40		mg/l	EPA 300.0/SW846 9056
Solids, Total Dissolved		3610	10		mg/l	SM 2540C-2011
Sulfate		1360	50		mg/l	EPA 300.0/SW846 9056
Total Organic Carbon		7.2	1.0		mg/l	SM 5310B-2011
pH		7.27			su	SM4500HB+ -2011/9040C
D49655-3F	**RMV 216-21 MW6**					
Calcium		231000	400		ug/l	SW846 6010C
Magnesium		250000	200		ug/l	SW846 6010C
Manganese		207	5.0		ug/l	SW846 6010C
Potassium		6140	1000		ug/l	SW846 6010C
Sodium		548000	400		ug/l	SW846 6010C
D49655-4	**RMV 216-21 MW7**					
Alkalinity, Bicarbonate as CaCO3		563	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		563	5.0		mg/l	SM 2320B-2011
Chloride		201	50		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate		23.8	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]		23.8	1.0		mg/l	EPA 300.0/SW846 9056
Solids, Total Dissolved		3270	10		mg/l	SM 2540C-2011
Sulfate		1400	50		mg/l	EPA 300.0/SW846 9056
Total Organic Carbon		6.5	1.0		mg/l	SM 5310B-2011
pH		7.30			su	SM4500HB+ -2011/9040C
D49655-4F	**RMV 216-21 MW7**					
Calcium		233000	400		ug/l	SW846 6010C
Magnesium		209000	200		ug/l	SW846 6010C
Potassium		5580	1000		ug/l	SW846 6010C
Sodium		410000	400		ug/l	SW846 6010C
D49655-5	**RMV 216-21 MW8**					
Alkalinity, Bicarbonate as CaCO3		569	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		569	5.0		mg/l	SM 2320B-2011
Chloride		282	50		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate		31.9	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]		31.9	1.0		mg/l	EPA 300.0/SW846 9056

Summary of Hits

Job Number: D49655
Account: WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)
Collected: 08/20/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Solids, Total Dissolved		3420	10		mg/l	SM 2540C-2011
Sulfate		1370	50		mg/l	EPA 300.0/SW846 9056
Total Organic Carbon		6.0	1.0		mg/l	SM 5310B-2011
pH		7.34			su	SM4500HB+ -2011/9040C
D49655-5F	**RMV 216-21 MW8**					
Calcium		203000	400		ug/l	SW846 6010C
Magnesium		222000	200		ug/l	SW846 6010C
Manganese		17.7	5.0		ug/l	SW846 6010C
Potassium		5630	1000		ug/l	SW846 6010C
Sodium		427000	400		ug/l	SW846 6010C
D49655-6	**RMV 216-21 MW9**					
Benzene		6.1	1.0	0.20	ug/l	SW846 8021B
Alkalinity, Bicarbonate as CaCO3		610	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		610	5.0		mg/l	SM 2320B-2011
Chloride		337	50		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate		43.1	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]		45.8	1.0		mg/l	EPA 300.0/SW846 9056
Nitrogen, Nitrite		2.7	0.020		mg/l	EPA 300.0/SW846 9056
Solids, Total Dissolved		3570	10		mg/l	SM 2540C-2011
Sulfate		1430	50		mg/l	EPA 300.0/SW846 9056
Total Organic Carbon		7.4	1.0		mg/l	SM 5310B-2011
pH		7.27			su	SM4500HB+ -2011/9040C
D49655-6F	**RMV 216-21 MW9**					
Calcium		259000	400		ug/l	SW846 6010C
Magnesium		248000	200		ug/l	SW846 6010C
Manganese		116	5.0		ug/l	SW846 6010C
Potassium		6560	1000		ug/l	SW846 6010C
Sodium		443000	400		ug/l	SW846 6010C

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	RMV 216-21 MW1		
Lab Sample ID:	D49655-1	**Date Sampled:**	08/20/13
Matrix:	AQ - Ground Water	**Date Received:**	08/21/13
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB21783.D	1	08/22/13	EV	n/a	n/a	GTB1198
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.70	1.0	0.20	ug/l	J
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	92%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: RMV 216-21 MW1
Lab Sample ID: D49655-1
Matrix: AQ - Ground Water
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Date Sampled: 08/20/13
Date Received: 08/21/13
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	559	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Total as CaCO3	559	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Chloride	199	50	mg/l	100	08/21/13 17:31	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate	28.5	1.0	mg/l	100	08/21/13 17:31	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	28.6	1.0	mg/l	1	08/21/13 17:31	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrite	0.12	0.020	mg/l	5	08/21/13 13:37	SK	EPA 300.0/SW846 9056
Solids, Total Dissolved	3160	10	mg/l	1	08/22/13	JD	SM 2540C-2011
Sulfate	1310	50	mg/l	100	08/21/13 17:31	SK	EPA 300.0/SW846 9056
Total Organic Carbon	5.6	1.0	mg/l	1	08/26/13 16:28	GH	SM 5310B-2011
pH	7.29		su	1	08/23/13 13:15	AK	SM4500HB+ -2011/9040C

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW1		
Lab Sample ID:	D49655-1F	**Date Sampled:**	08/20/13
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/21/13
		Percent Solids:	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	226000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Iron	< 70	70	ug/l	1	08/27/13	08/27/13	JB	SW846 6010C [2]	SW846 3010A [4]
Magnesium	201000	200	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Manganese	429	5.0	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Potassium	5650	1000	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 50	50	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Sodium	393000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3900
(2) Instrument QC Batch: MA3913
(3) Prep QC Batch: MP10876
(4) Prep QC Batch: MP10916

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW5		
Lab Sample ID:	D49655-2	**Date Sampled:**	08/20/13
Matrix:	AQ - Ground Water	**Date Received:**	08/21/13
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB21786.D	1	08/22/13	EV	n/a	n/a	GTB1198
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	93%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: RMV 216-21 MW5
Lab Sample ID: D49655-2
Matrix: AQ - Ground Water
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Date Sampled: 08/20/13
Date Received: 08/21/13
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	536	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Total as CaCO3	536	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Chloride	284	50	mg/l	100	08/21/13 17:42	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate	31.8	1.0	mg/l	100	08/21/13 17:42	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	31.8	1.0	mg/l	1	08/21/13 17:42	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrite [b]	< 0.020	0.020	mg/l	5	08/21/13 13:49	SK	EPA 300.0/SW846 9056
Solids, Total Dissolved	3480	10	mg/l	1	08/22/13	JD	SM 2540C-2011
Sulfate	1390	50	mg/l	100	08/21/13 17:42	SK	EPA 300.0/SW846 9056
Total Organic Carbon	5.8	1.0	mg/l	1	08/26/13 16:39	GH	SM 5310B-2011
pH	7.26		su	1	08/23/13 13:15	AK	SM4500HB+ -2011/9040C

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)
(b) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW5		
Lab Sample ID:	D49655-2F	**Date Sampled:**	08/20/13
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/21/13
		Percent Solids:	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	238000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Iron	< 70	70	ug/l	1	08/27/13	08/27/13	JB	SW846 6010C [2]	SW846 3010A [4]
Magnesium	225000	200	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Manganese	117	5.0	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Potassium	5660	1000	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 50	50	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Sodium	452000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3900
(2) Instrument QC Batch: MA3913
(3) Prep QC Batch: MP10876
(4) Prep QC Batch: MP10916

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW6		
Lab Sample ID:	D49655-3	**Date Sampled:**	08/20/13
Matrix:	AQ - Ground Water	**Date Received:**	08/21/13
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB21787.D	1	08/22/13	EV	n/a	n/a	GTB1198
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	14.7	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	95%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: RMV 216-21 MW6
Lab Sample ID: D49655-3
Matrix: AQ - Ground Water
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Date Sampled: 08/20/13
Date Received: 08/21/13
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	599	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Total as CaCO3	599	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Chloride	430	50	mg/l	100	08/21/13 17:53	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate	33.2	1.0	mg/l	100	08/21/13 17:53	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	37.2	1.4	mg/l	1	08/21/13 17:53	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrite	4.0	0.40	mg/l	100	08/21/13 17:53	SK	EPA 300.0/SW846 9056
Solids, Total Dissolved	3610	10	mg/l	1	08/22/13	JD	SM 2540C-2011
Sulfate	1360	50	mg/l	100	08/21/13 17:53	SK	EPA 300.0/SW846 9056
Total Organic Carbon	7.2	1.0	mg/l	1	08/26/13 16:50	GH	SM 5310B-2011
pH	7.27		su	1	08/23/13 13:15	AK	SM4500HB+ -2011/9040C

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID: RMV 216-21 MW6
Lab Sample ID: D49655-3F
Matrix: AQ - Groundwater Filtered
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Date Sampled: 08/20/13
Date Received: 08/21/13
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	231000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Iron	< 70	70	ug/l	1	08/27/13	08/27/13	JB	SW846 6010C [2]	SW846 3010A [4]
Magnesium	250000	200	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Manganese	207	5.0	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Potassium	6140	1000	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 50	50	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Sodium	548000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3900
(2) Instrument QC Batch: MA3913
(3) Prep QC Batch: MP10876
(4) Prep QC Batch: MP10916

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW7		
Lab Sample ID:	D49655-4	**Date Sampled:**	08/20/13
Matrix:	AQ - Ground Water	**Date Received:**	08/21/13
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB21788.D	1	08/22/13	EV	n/a	n/a	GTB1198
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: RMV 216-21 MW7
Lab Sample ID: D49655-4
Matrix: AQ - Ground Water
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Date Sampled: 08/20/13
Date Received: 08/21/13
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	563	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Total as CaCO3	563	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Chloride	201	50	mg/l	100	08/21/13 18:27	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate	23.8	1.0	mg/l	100	08/21/13 18:27	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	23.8	1.0	mg/l	1	08/21/13 18:27	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrite [b]	< 0.020	0.020	mg/l	5	08/21/13 14:11	SK	EPA 300.0/SW846 9056
Solids, Total Dissolved	3270	10	mg/l	1	08/22/13	JD	SM 2540C-2011
Sulfate	1400	50	mg/l	100	08/21/13 18:27	SK	EPA 300.0/SW846 9056
Total Organic Carbon	6.5	1.0	mg/l	1	08/26/13 17:01	GH	SM 5310B-2011
pH	7.30		su	1	08/23/13 13:15	AK	SM4500HB+ -2011/9040C

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)
(b) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW7		
Lab Sample ID:	D49655-4F	**Date Sampled:**	08/20/13
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/21/13
		Percent Solids:	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	233000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Iron	< 70	70	ug/l	1	08/27/13	08/27/13	JB	SW846 6010C [2]	SW846 3010A [4]
Magnesium	209000	200	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Manganese	< 5.0	5.0	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Potassium	5580	1000	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 50	50	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Sodium	410000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3900
(2) Instrument QC Batch: MA3913
(3) Prep QC Batch: MP10876
(4) Prep QC Batch: MP10916

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW8		
Lab Sample ID:	D49655-5	**Date Sampled:**	08/20/13
Matrix:	AQ - Ground Water	**Date Received:**	08/21/13
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB21789.D	1	08/22/13	EV	n/a	n/a	GTB1198
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	94%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: RMV 216-21 MW8
Lab Sample ID: D49655-5
Matrix: AQ - Ground Water
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Date Sampled: 08/20/13
Date Received: 08/21/13
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	569	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Total as CaCO3	569	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Chloride	282	50	mg/l	100	08/21/13 18:38	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate	31.9	1.0	mg/l	100	08/21/13 18:38	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	31.9	1.0	mg/l	1	08/21/13 18:38	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrite [b]	< 0.020	0.020	mg/l	5	08/21/13 14:22	SK	EPA 300.0/SW846 9056
Solids, Total Dissolved	3420	10	mg/l	1	08/22/13	JD	SM 2540C-2011
Sulfate	1370	50	mg/l	100	08/21/13 18:38	SK	EPA 300.0/SW846 9056
Total Organic Carbon	6.0	1.0	mg/l	1	08/26/13 17:12	GH	SM 5310B-2011
pH	7.34		su	1	08/23/13 13:15	AK	SM4500HB+ -2011/9040C

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)
(b) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW8		
Lab Sample ID:	D49655-5F	**Date Sampled:**	08/20/13
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/21/13
		Percent Solids:	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	203000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Iron	< 70	70	ug/l	1	08/27/13	08/27/13	JB	SW846 6010C [2]	SW846 3010A [4]
Magnesium	222000	200	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Manganese	17.7	5.0	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Potassium	5630	1000	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 50	50	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Sodium	427000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3900
(2) Instrument QC Batch: MA3913
(3) Prep QC Batch: MP10876
(4) Prep QC Batch: MP10916

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW9		
Lab Sample ID:	D49655-6	**Date Sampled:**	08/20/13
Matrix:	AQ - Ground Water	**Date Received:**	08/21/13
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB21790.D	1	08/22/13	EV	n/a	n/a	GTB1198
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	6.1	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	92%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RMV 216-21 MW9		
Lab Sample ID:	D49655-6	**Date Sampled:**	08/20/13
Matrix:	AQ - Ground Water	**Date Received:**	08/21/13
		Percent Solids:	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	610	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Alkalinity, Total as CaCO3	610	5.0	mg/l	1	08/27/13	JD	SM 2320B-2011
Chloride	337	50	mg/l	100	08/21/13 18:49	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate	43.1	1.0	mg/l	100	08/21/13 18:49	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrate + Nitrite [a]	45.8	1.0	mg/l	1	08/21/13 18:49	SK	EPA 300.0/SW846 9056
Nitrogen, Nitrite	2.7	0.020	mg/l	5	08/21/13 15:00	SK	EPA 300.0/SW846 9056
Solids, Total Dissolved	3570	10	mg/l	1	08/22/13	JD	SM 2540C-2011
Sulfate	1430	50	mg/l	100	08/21/13 18:49	SK	EPA 300.0/SW846 9056
Total Organic Carbon	7.4	1.0	mg/l	1	08/26/13 18:16	GH	SM 5310B-2011
pH	7.27		su	1	08/23/13 13:15	AK	SM4500HB+ -2011/9040C

(a) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RMV 216-21 MW9		
Lab Sample ID:	D49655-6F	**Date Sampled:**	08/20/13
Matrix:	AQ - Groundwater Filtered	**Date Received:**	08/21/13
		Percent Solids:	n/a
Project:	CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	259000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Iron	< 70	70	ug/l	1	08/27/13	08/27/13	JB	SW846 6010C [2]	SW846 3010A [4]
Magnesium	248000	200	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Manganese	116	5.0	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Potassium	6560	1000	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Selenium	< 50	50	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]
Sodium	443000	400	ug/l	1	08/22/13	08/22/13	JB	SW846 6010C [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3900
(2) Instrument QC Batch: MA3913
(3) Prep QC Batch: MP10876
(4) Prep QC Batch: MP10916

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

WPX CHAIN OF CUSTODY

ACCUTEST LABORATORIES

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL. 303-425-6021 FAX: 303-425-6854
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D49655

Client / Reporting Information

Company Name: Olsson Associates
Street Address: 760 Horizon Drive Suite 102
City: Grand Junction, CO 81506
Project Contact: Tim Dobransky | Email: tdobransky@olssonassociates.c
Phone #: 970-263-7800
Sampler(s) Name(s): J.Silva K.Berz

Project Information

Project Name: CORCCOGJ: RMV 216-21 GW Monitoring (012.1539)
Street:
City: State:
Project #:
Client Purchase Order #: NXEEPPARACH
Project Manager:

Billing Information (if different from Report to)

Company Name: WPX Energy Rocky Mountain, LLC (WILLCOP)
Street Address: 1058 County Road 215
City: Parachute, CO 81635
Attention: Leo Braun
Email Invoices: Leo.Braun@wpxenergy.com

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	BTEX - (8021B)	Dissolved Metals LF (6010)**	TOC - (SM20 5310B)	TDS/pH - (2540C/SM4500)	Alkalinity Series - (SM2320)	Anions - (E300.0)*	LAB USE ONLY
	RMV 216-21 MW1		8/20/13	0930	KB	GW	3				1					X	X	X	X	X	X	01
	~~RMV 216-21 MW2~~					GW	3				1											
	~~RMV 216-21 MW3~~					GW	3				1											
	~~RMV 216-21 MW4~~					GW	3				1											
	RMV 216-21 MW5		8/20/13	1045	KB	GW	3				1				X	X	X	X	X	X	X	02
	RMV 216-21 MW6		8/20/13	1030	JS	GW	3				1					X	X	X	X	X	X	03
	~~RMV 216-21 MWX~~					GW	3				1					X	X	X	X	X	X	
	RMV 216-21 MW7	8/20/13 → 08		1145	KB	GW	3				1					X	X	X	X	X	X	04
	RMV 216-21 MW8	8/20/13 → 08		1210	JS	GW	3				1					X	X	X	X	X	X	05
	RMV 216-21 MW9		8/20/13	1120	JS	GW	3				1					X	X	X	X	X	X	06
																						07

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

Approved By (Accutest PM): / Date: JGM 12/6/12

- [X] 6 Business Day Std. (per contract)
- [ ] 3 Day Emergency
- [ ] 2 Day Emergency
- [ ] 1 Day Emergency
- [ ] Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] COMMBN
- [ ] COMMBN+
- [ ] State Forms Required
- [ ] Send Forms to State
- [ ] Report by Fax
- [X] Report by PDF
- [ ] EDD Format

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial BN = Results/QC/Narrative (+ = chromatograms)

Comments / Special Instructions

Also email final report to: Karolina.Blaney@wpxenergy.com

*Anions - NO2, NO3, SO4, Cl, nitrate-nitrite

**Metals - Ca, Fe, K, Mg, Mn, Na, Se

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:
1		8/20/13 1230	
6		8/20/13 1330	
5	Relinquished by:	Date Time:	Received By: 5

	Relinquished By:	Date Time:	Received By:
2			8-21-13 1230
4	Relinquished By:	Date Time:	Received By:

Custody Seal # | [ ] Intact [ ] Not Intact | Preserved where applicable | On Ice | Cooler Temp. 2.5

D49655: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D49655 **Client:** OLSSON **Immediate Client Services Action Required:** No

Date / Time Received: 8/21/2013 12:30:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: RMV **Airbill #'s:** CO

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	
2. Trip Blank listed on COC:	☑		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

D49655: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D49655
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB1198-MB	TB21780.D	1	08/22/13	EV	n/a	n/a	GTB1198

The QC reported here applies to the following samples: **Method:** SW846 8021B

D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	92%	60-140%

Blank Spike Summary

Job Number: D49655
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB1198-BS	TB21781.D	1	08/22/13	EV	n/a	n/a	GTB1198

The QC reported here applies to the following samples: **Method:** SW846 8021B

D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	24.4	90	70-130
100-41-4	Ethylbenzene	45.6	41.0	90	70-130
108-88-3	Toluene	212	180	85	70-130
1330-20-7	Xylenes (total)	216	200	93	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	93%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D49655
Account: WILLCOP WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D49655-1MS	TB21784.D	1	08/22/13	EV	n/a	n/a	GTB1198
D49655-1MSD	TB21785.D	1	08/22/13	EV	n/a	n/a	GTB1198
D49655-1	TB21783.D	1	08/22/13	EV	n/a	n/a	GTB1198

The QC reported here applies to the following samples: **Method:** SW846 8021B

D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6

CAS No.	Compound	D49655-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.70	J	27.2	24.4	87	24.2	86	1	55-133/30
100-41-4	Ethylbenzene	ND		45.6	40.1	88	40.2	88	0	63-130/30
108-88-3	Toluene	ND		212	176	83	176	83	0	70-130/30
1330-20-7	Xylenes (total)	ND		216	196	91	196	91	0	64-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D49655-1	Limits
120-82-1	1,2,4-Trichlorobenzene	98%	98%	92%	60-140%

* = Outside of Control Limits.

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10876
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/22/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	11	41		
Antimony	30	2.1	19		
Arsenic	25	3.8	5.6		
Barium	10	.2	1.4		
Beryllium	10	.9	1.2		
Boron	50	.8	6.6		
Cadmium	10	.2	.36		
Calcium	400	2.4	41	6.2	<400
Chromium	10	.3	.4		
Cobalt	5.0	.5	.57		
Copper	10	.8	1.9		
Lead	50	2.1	21		
Lithium	5.0	.4	2.7		
Magnesium	200	6.8	19	5.0	<200
Manganese	5.0	.5	.46	0.40	<5.0
Molybdenum	10	.4	.84		
Nickel	30	.5	.87		
Phosphorus	100	15	20		
Potassium	1000	99	270	46.1	<1000
Selenium	50	7.1	11	1.8	<50
Silicon	50	4.7	5.2		
Silver	30	.3	.6		
Sodium	400	7.3	170	23.9	<400
Strontium	5.0	.01	.12		
Thallium	10	1.8	4		
Tin	50	12	16		
Titanium	10	.1	2.1		
Uranium	50	2.9	5.5		
Vanadium	10	.4	.4		
Zinc	30	.4	3.2		

Associated samples MP10876: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10876
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/22/13

Metal	D49649-1F Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron	anr				
Cadmium					
Calcium	57700	87600	25000	108.4	75-125
Chromium					
Cobalt					
Copper					
Lead					
Lithium					
Magnesium	20500	46600	25000	104.0	75-125
Manganese	0.60	501	500	100.1	75-125
Molybdenum					
Nickel					
Phosphorus					
Potassium	304	27800	25000	109.5	75-125
Selenium	0.0	1060	1000	106.0	75-125
Silicon					
Silver					
Sodium	31200	57500	25000	106.8	75-125
Strontium	anr				
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP10876: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10876
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/22/13

Metal	D49649-1F Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron	anr					
Cadmium						
Calcium	57700	87400	25000	107.6	0.2	20
Chromium						
Cobalt						
Copper						
Lead						
Lithium						
Magnesium	20500	46700	25000	104.4	0.2	20
Manganese	0.60	500	500	99.9	0.2	20
Molybdenum						
Nickel						
Phosphorus						
Potassium	304	27700	25000	109.1	0.4	20
Selenium	0.0	1070	1000	107.0	0.9	20
Silicon						
Silver						
Sodium	31200	57600	25000	107.2	0.2	20
Strontium	anr					
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP10876: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10876
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/22/13

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	anr			
Cadmium				
Calcium	27500	25000	110.0	80-120
Chromium				
Cobalt				
Copper				
Lead				
Lithium				
Magnesium	26200	25000	104.8	80-120
Manganese	510	500	102.0	80-120
Molybdenum				
Nickel				
Phosphorus				
Potassium	27200	25000	108.8	80-120
Selenium	1070	1000	107.0	80-120
Silicon				
Silver				
Sodium	26400	25000	105.6	80-120
Strontium	anr			
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP10876: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10876
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/22/13

Metal	D49649-1F Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron	anr			
Cadmium				
Calcium	57700	62700	3.7	0-10
Chromium				
Cobalt				
Copper				
Lead				
Lithium				
Magnesium	20500	21800	6.0	0-10
Manganese	0.600	0.00	100.0(a)	0-10
Molybdenum				
Nickel				
Phosphorus				
Potassium	304	0.00	100.0(a)	0-10
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver				
Sodium	31200	32500	5.4	0-10
Strontium	anr			
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP10876: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/27/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	8.6	41		
Antimony	30	3.2	19		
Arsenic	25	5.2	5.6		
Barium	10	1.4	1.4		
Beryllium	10	.8	1.2		
Boron	50	6.7	6.6		
Cadmium	10	.4	.36		
Calcium	400	2.2	41		
Chromium	10	.4	.4		
Cobalt	5.0	.4	.57		
Copper	10	1.2	1.9		
Iron	70	2.2	9.5	1.8	<70
Lead	50	3.6	21		
Lithium	5.0	1.9	2.7		
Magnesium	200	14	19		
Manganese	5.0	.01	.46		
Molybdenum	10	.8	.84		
Nickel	30	.9	.87		
Phosphorus	100	15	20		
Potassium	1000	130	270		
Selenium	50	8.8	11		
Silicon	50	5.2	5.2		
Silver	30	.4	.6		
Sodium	400	4.9	170		
Strontium	5.0	.01	.12		
Thallium	10	2.9	4		
Tin	50	13	16		
Titanium	10	.15	2.1		
Uranium	50	3.7	5.5		
Vanadium	10	.4	.4		
Zinc	30	.6	3.2		

Associated samples MP10916: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 08/27/13

Metal	D49798-1 Original	MS	Spikelot ICPALL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium					
Chromium	anr				
Cobalt					
Copper					
Iron	6190	11200	5000	100.2	75-125
Lead	anr				
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium	anr				
Silicon					
Silver	anr				
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP10916: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/27/13

Metal	D49798-1 Original	MSD	Spikelot ICPALL2	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper						
Iron	6190	11000	5000	96.2	1.8	20
Lead	anr					
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP10916: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/27/13

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	4980	5000	99.6	80-120
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP10916: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916 Methods: SW846 6010C
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/27/13

Metal	D49798-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper				
Iron	6190	6150	0.7	0-10
Lead	anr			
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP10916: D49655-1F, D49655-2F, D49655-3F, D49655-4F, D49655-5F, D49655-6F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

QC Batch ID: MP10916
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN21660	5.0	0.0	mg/l	100	98.1	98.1	90-110%
Alkalinity, Carbonate	GN21661	5.0	0.0	mg/l	100	98.1	98.1	80-120%
Alkalinity, Total as CaCO3	GN21657	5.0	0.0	mg/l	100	98.1	98.1	90-110%
Bromide	GP10740/GN21585	0.050	0.0	mg/l	20	19.9	99.5	90-110%
Chloride	GP10740/GN21585	0.50	0.0	mg/l	20	19.7	98.5	90-110%
Fluoride	GP10740/GN21585	0.10	0.0	mg/l	10	9.32	93.2	90-110%
Nitrogen, Nitrate	GP10740/GN21585	0.010	0.0	mg/l	4.52	4.42	97.8	90-110%
Nitrogen, Nitrite	GP10740/GN21585	0.0040	0.0	mg/l	6.09	5.91	97.0	90-110%
Solids, Total Dissolved	GN21611	10	0.0	mg/l	400	400	100.0	90-110%
Sulfate	GP10740/GN21585	0.50	0.0	mg/l	30	29.6	98.7	90-110%
Total Organic Carbon	GP10779/GN21646	1.0	0.0	mg/l	8.82	8.78	99.5	90-110%
pH	GN21631			su	8.00	8.00	100.0	99.3-100.7%

Associated Samples:
Batch GN21611: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GN21631: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GN21657: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GN21660: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GN21661: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GP10740: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GP10779: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN21657	D49649-1	mg/l	258	295	1.6	0-20%
Solids, Total Dissolved	GN21611	D49655-3	mg/l	3610	3640	0.8	0-20%
Total Organic Carbon	GP10779/GN21646	D49655-5	mg/l	6.0	5.8	3.4	0-20%

Associated Samples:
Batch GN21611: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GN21657: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GP10779: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN21657	D49649-1	mg/l	258	100	381	90.7	80-120%
Bromide	GP10740/GN21585	D49655-3	mg/l	0.0	250	255	102.0	80-120%
Chloride	GP10740/GN21585	D49655-3	mg/l	430	1000	1420	99.0	80-120%
Fluoride	GP10740/GN21585	D49655-3	mg/l	10.3	250	247	94.7	80-120%
Nitrogen, Nitrate	GP10740/GN21585	D49655-3	mg/l	33.2	56.5	91.3	102.8	80-120%
Nitrogen, Nitrite	GP10740/GN21585	D49655-3	mg/l	4.0	30.5	35.3	102.8	80-120%
Sulfate	GP10740/GN21585	D49655-3	mg/l	1360	1000	2350	99.0	80-120%
Total Organic Carbon	GP10779/GN21646	D49655-5	mg/l	6.0	10	16.2	102.0	80-120%

Associated Samples:
Batch GN21657: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GP10740: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GP10779: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D49655
Account: WILLCOP - WPX Energy Rocky Mountain, LLC
Project: CORCCOGJ: RMV 216-21 GW Monitoring(012.1539)

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN21657	D49649-1	mg/l	258	100	380	0.1	20%
Bromide	GP10740/GN21585	D49655-3	mg/l	0.0	250	254	0.4	20%
Chloride	GP10740/GN21585	D49655-3	mg/l	430	1000	1410	0.7	20%
Fluoride	GP10740/GN21585	D49655-3	mg/l	10.3	250	249	0.8	20%
Nitrogen, Nitrate	GP10740/GN21585	D49655-3	mg/l	33.2	56.5	90.9	0.4	20%
Nitrogen, Nitrite	GP10740/GN21585	D49655-3	mg/l	4.0	30.5	35.8	1.4	20%
Sulfate	GP10740/GN21585	D49655-3	mg/l	1360	1000	2340	0.4	20%
Total Organic Carbon	GP10779/GN21646	D49655-5	mg/l	6.0	10	16.1	0.6	20%

Associated Samples:
Batch GN21657: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GP10740: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
Batch GP10779: D49655-1, D49655-2, D49655-3, D49655-4, D49655-5, D49655-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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