

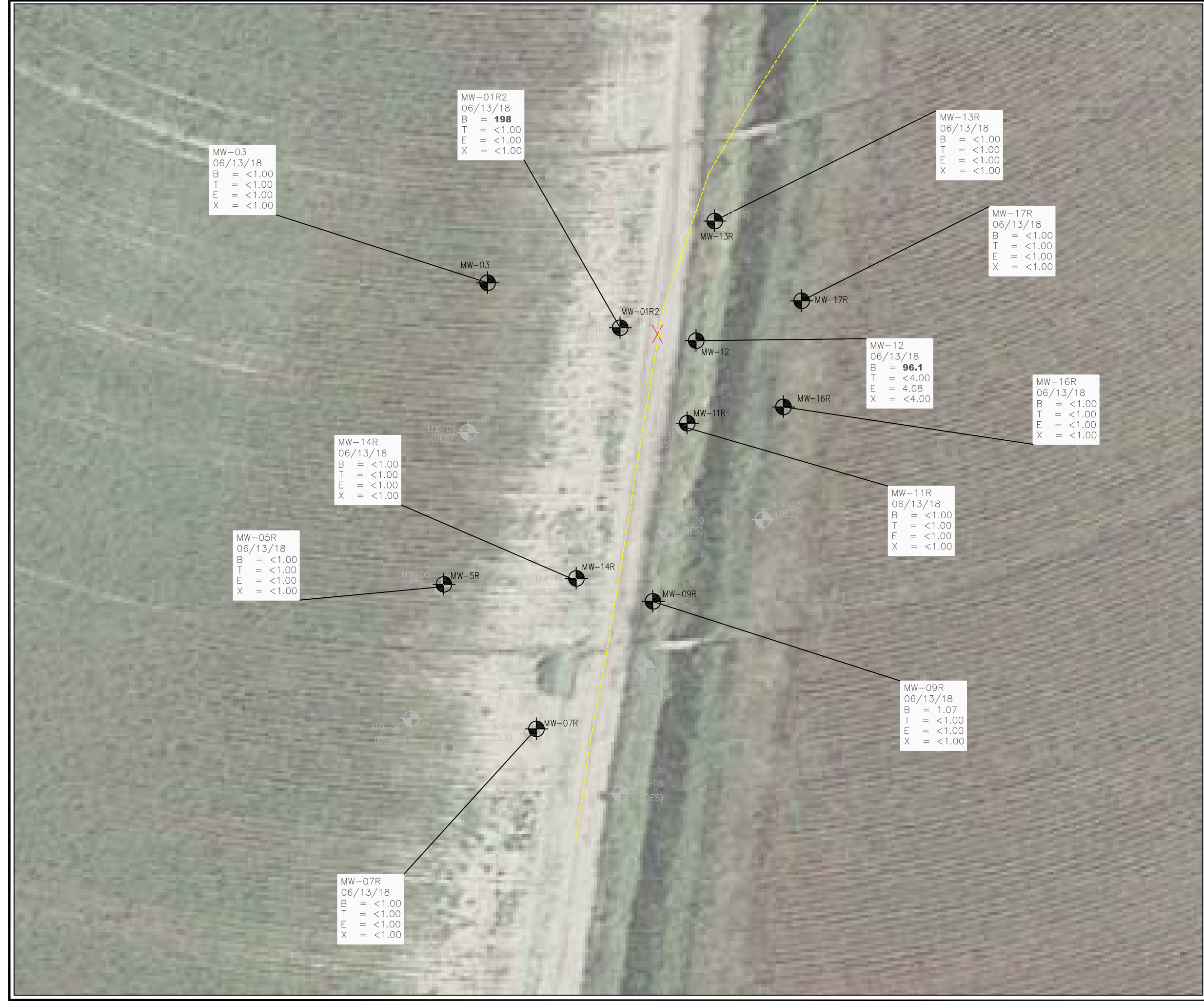


FIGURES

Figure 1: Groundwater Analytical Map (06/13/18)

Figure 2: Groundwater Elevation Map (06/13/18)

Figure 3: Grab Surface Water Sample Location Map (06/13/18)



APPROXIMATE LOCATION OF UNINTENTIONAL RELEASE

APPROXIMATE FLOW LINE LOCATION

APPROXIMATE MONITORING WELL LOCATIONS

DESTROYED MONITORING WELL LOCATIONS

PARAMETERS

SAMPLE LOCATION

DATE

B = BENZENE (µg/L)

T = TOLUENE (µg/L)

E = ETHYLBENZENE (µg/L)

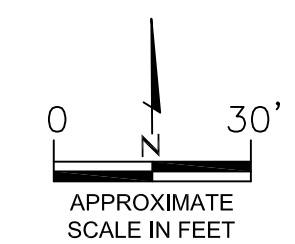
X = TOTAL XYLENES (µg/L)

µg/L = MICROGRAMS PER LITER

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY DETECTION LIMITS

VALUES PRESENTED IN **BOLD** TYPEFACE EXCEED COGCC TABLE 910-1 REGULATORY LIMITS

COGCC – COLORADO OIL AND GAS CONSERVATION COMMISSION



GROUNDWATER ANALYTICAL MAP

(06/13/18)

WARDLAW #20-28

FLOW LINE RELEASE

40.452377 / -104.550395

SE1/4 SE1/4 SEC.28 T6N R64W 6PM

WELD COUNTY, COLORADO

REMEDATION # 10185

DATE

06/25/18

FIG. NO.

1

DRAWN BY

AMN

EAGLE

ENVIRONMENTAL CONSULTING, INC.

4101 INCA STREET, DENVER, CO 80211

Ph: 303-433-0479 • F: 303-325-5449



LEGEND

APPROXIMATE LOCATION OF UNINTENTIONAL RELEASE

APPROXIMATE FLOW LINE LOCATION

APPROXIMATE MONITORING WELL LOCATIONS

DESTROYED MONITORING WELL LOCATIONS

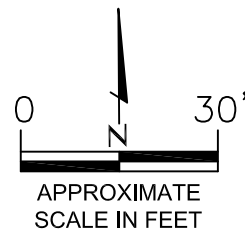
(4748.25) GROUNDWATER ELEVATION (FT.)

INFERRED GROUNDWATER ELEVATION CONTOUR (FT.)

APPROXIMATE GROUNDWATER FLOW DIRECTION

FT. = FEET

NOTE:
GROUNDWATER ELEVATION DATA WAS COLLECTED ON 06/13/18.
GROUNDWATER ELEVATION DATA COLLECTED FROM MONITORING WELLS
MW-11R AND MW-13R WAS NOT USED IN THE CONSTRUCTION OF INFERRED
GROUNDWATER ELEVATION CONTOURS.



GROUNDWATER ELEVATION MAP
(06/13/18)
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

DATE	06/25/18
FIG. NO.	2

DRAWN BY
AMN

EAGLE
ENVIRONMENTAL
CONSULTING, INC.
4101 INCA STREET, DENVER, CO 80211
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TABLES

Table 1: Water Analytical Results Summary

Table 2: Groundwater Elevation Summary

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
SW-01 (40.452432487 / -104.550326268)	02/09/17	<1.00	2.54	<1.00	2.58
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	<1.00	<1.00	<1.00	<1.00
SW-02 (40.451283697 / -104.550667387)	02/09/17	100	514	54.9	659
	02/13/17	11.3	83.8	9.64	240
	02/20/17	<1.00	<1.00	<1.00	3.18
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	<1.00	<1.00	<1.00	<1.00
SW-03 (40.451208284 / -104.550759293)	02/09/17	90.7	459	48.8	605
	02/10/17	6.24	40.2	4.92	109
	02/13/17	8.52	42.8	4.36	152
	02/20/17	<1.00	<1.00	<1.00	2.45
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	NOP			
SW-04 (40.450779462 / -104.551161230)	02/10/17	4.92	28.4	<4.00	90.9
	02/13/17	6.80	32.0	<4.00	147
	02/20/17	<1.00	<1.00	<1.00	1.49
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	<1.00	<1.00	<1.00	<1.00

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
SW-05 (40.449982352 / -104.551611892)	02/10/17	<4.00	8.20	<4.00	73.8
	02/13/17	<1.00	1.06	<1.00	22.8
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	NOP			
SW-06 (40.449897202 / -104.551692223)	02/10/17	<4.00	<4.00	<4.00	16.5
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	NOP			
SW-07 (40.449690628 / -104.551677355)	02/10/17	<4.00	<4.00	<4.00	<4.00
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	NOP			
SW-08 (40.448928873 / -104.551685603)	02/10/17	<4.00	<4.00	<4.00	<4.00
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	NOP			

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
SW-09 (40.448299817 / -104.551680172)	02/10/17	<4.00	<4.00	<4.00	<4.00
	02/13/17	<1.00	<1.00	<1.00	<1.00
	02/20/17	<1.00	<1.00	<1.00	<1.00
	03/17/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	NOP			
GW-01	02/11/17	434	1560	138	1530
MW-01 (40.452393003 / -104.550433142)	03/27/17	188	<4.00	12.6	327
	06/15/17	614	<1.00	<1.00	2.26
	09/14/17	DES			
	12/12/17	DES			
MW-01R (40.452393003 / -104.550433142)	03/13/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-01R2 (40.452393003 / -104.550433142)	06/13/18	198	<1.00	<1.00	<1.00
MW-02 (40.452504816 / -104.550455313)	03/30/17	<1.00	<1.00	6.58	43.4
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/13/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-03 (40.452454447 / -104.550546129)	03/30/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/13/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	<1.00	<1.00	<1.00	<1.00

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
MW-04 (40.452342502 / -104.550577837)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/13/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-05 (40.452208431 / -104.550603406)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/13/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	DES			
MW-05R (40.452208431 / -104.550603406)	06/13/18	<1.00	<1.00	<1.00	<1.00
MW-06 (40.452070696 / -104.550630887)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/13/18	1.39	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-07 (40.452002981 / -104.55055025)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/15/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-07R (40.452002981 / -104.55055025)	06/13/18	<1.00	<1.00	<1.00	<1.00
MW-08 (40.451924937 / -104.550467803)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
MW-09 (40.452077465/-104.550441169)	03/27/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	3.15	<1.00	<1.00	<1.00
	12/12/17	1.47	<1.00	<1.00	<1.00
	03/16/18	1.09	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-09R (40.452077465/-104.550441169)	06/13/18	1.07	<1.00	<1.00	<1.00
MW-10 (40.452207178/-104.55040854)	03/28/17	<4.00	<4.00	<4.00	<4.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-11 (40.452321549/-104.550383609)	03/30/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-11R (40.452321549/-104.550383609)	06/13/18	<1.00	<1.00	<1.00	<1.00
MW-12 (40.45239442/-104.550368154)	03/30/17	210	480	19.8	424
	06/13/17	2120	5560	251	3510
	09/14/17	1310	<1.00	52.3	344
	12/12/17	220	<1.00	31.6	24.7
	03/16/18	95.7	<4.00	5.60	<4.00
	06/13/18	96.1	<4.00	4.08	<4.00
MW-13 (40.452664489 / -104.550339323)	03/30/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	<1.00	<1.00	<1.00	<1.00
	12/12/17	<1.00	<1.00	<1.00	<1.00
	03/16/18	<1.00	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-13R (40.452664489 / -104.550339323)	06/13/18	<1.00	<1.00	<1.00	<1.00

TABLE 1
WATER ANALYTICAL RESULTS SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDIATION # 10185

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
MW-14 (40.452664489/-104.550339323)	03/28/17	<4.00	<4.00	<4.00	<4.00
	06/15/17	96.0	<1.00	<1.00	23.6
	09/14/17	73.6	<1.00	<1.00	<1.00
	12/12/17	16.3	<1.00	<1.00	<1.00
	03/16/18	6.02	<1.00	<1.00	<1.00
	05/15/18	DES			
MW-14R (40.452664489/-104.550339323)	06/13/18	<1.00	<1.00	<1.00	<1.00
MW-15 (40.452232004/-104.550269649)	03/30/17	<1.00	<1.00	<1.00	<1.00
	06/15/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	DES			
MW-16 (40.452334255/-104.550243785)	03/30/17	<1.00	<1.00	<1.00	<1.00
	06/15/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	DES			
MW-16R (40.452334255/-104.550243785)	03/16/18	<1.00	<1.00	<1.00	1.38
	06/13/18	<1.00	<1.00	<1.00	<1.00
MW-17 (40.452418346/-104.55022411)	03/30/17	<1.00	<1.00	<1.00	<1.00
	06/13/17	<1.00	<1.00	<1.00	<1.00
	09/14/17	DES			
MW-17R (40.452418346/-104.55022411)	03/16/18	<1.00	<1.00	<1.00	<1.00
	06/13/18	<1.00	<1.00	<1.00	<1.00

COGCC = Colorado Oil and Gas Conservation Commission
NS = Not Sampled
DES - Destroyed
µg/L - micrograms per liter
Note: Values presented with a less than symbol (<) indicate concentrations were not observed at or above the laboratory reporting limit.

Values presented in **bold** typeface exceed their respective COGCC - Regulatory Limits (Table 910-1).



TABLE 2
GROUNDWATER ELEVATION SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	TOC Elevation (feet)	Depth to Groundwater from TOC (feet)	Relative Groundwater Elevation (feet)	Depth to Groundwater (bgs) (feet)	Stickup Height (feet)
MW-01 (40.452393003 / -104.550433142)	03/28/17	98.78	7.74	91.04	4.88	2.86
	06/15/17		7.20	91.58	4.34	
	09/14/17	DES				
MW-01R (40.452393003 / -104.550433142)	03/13/18	99.15	7.29	91.86	4.23	3.06
	05/15/18	DES				
MW-01R2 (40.452393003 / -104.550433142)	06/13/18	98.45	5.79	92.66	2.76	3.03
MW-02 (40.452504816 / -104.550455313)	03/28/17	99.22	NM	NA	NA	2.92
	03/30/17		9.83	89.39	6.91	
	06/13/17		5.54	93.68	2.62	
	09/14/17		5.41	93.81	2.49	
	12/12/17		6.04	93.18	3.12	
	03/13/18		5.99	93.23	3.07	
	05/15/18	DES				
MW-03 (40.452454447 / -104.550546129)	03/28/17	99.62	NM	NA	NA	3.10
	03/30/17		12.97	86.65	9.87	
	06/13/17		6.00	93.62	2.90	
	09/14/17		5.89	93.73	2.79	
	12/12/17		6.53	93.09	3.43	
	03/13/18		6.48	93.14	3.38	
	06/13/18	98.22	4.25	95.37	1.15	
MW-04 (40.452342502 / -104.550577837)	03/28/17	99.20	6.78	92.42	3.80	2.98
	06/13/17		6.00	93.20	3.02	
	09/14/17		5.86	93.34	2.88	
	12/12/17		6.50	92.70	3.52	
	03/13/18		6.51	92.69	3.53	
	05/15/18	DES				
MW-05 (40.452208431 / -104.550603406)	03/28/17	98.64	6.63	92.01	3.63	3.00
	06/13/17		6.05	92.59	3.05	
	09/14/17		5.93	92.71	2.93	
	12/12/17		6.49	92.15	3.49	
	03/13/18		6.56	92.08	3.56	
	05/15/18	DES				
MW-05R (40.452208431 / -104.550603406)	06/13/18	98.42	5.86	92.56	3.14	2.72
MW-06 (40.452070696 / -104.550630887)	03/28/17	98.38	6.44	91.94	3.49	2.95
	06/13/17		6.04	92.34	3.09	
	09/14/17		5.93	92.45	2.98	
	12/12/17		6.42	91.96	3.47	
	03/13/18		6.52	91.86	3.57	
	05/15/18	DES				

TABLE 2
GROUNDWATER ELEVATION SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	TOC Elevation (feet)	Depth to Groundwater from TOC (feet)	Relative Groundwater Elevation (feet)	Depth to Groundwater (bgs) (feet)	Stickup Height (feet)
MW-07 (40.452002981 / -104.55055025)	03/28/17	98.37	6.57	91.80	3.65	2.92
	06/15/17		6.66	91.71	3.74	
	09/14/17		6.56	91.81	3.64	
	12/12/17		6.91	91.46	3.99	
	03/13/18		7.04	91.33	4.12	
	05/15/18	DES				
MW-07R (40.452002981 / -104.55055025)	06/13/18	98.12	6.12	92.00	3.16	2.96
MW-08 (40.451924937 / -104.550467803)	03/28/17	98.32	6.60	91.72	3.89	2.71
	06/13/17		6.53	91.79	3.82	
	09/14/17		6.41	91.91	3.70	
	12/12/17		6.67	91.65	3.96	
	03/13/18		6.77	91.55	4.06	
	05/15/18	DES				
MW-09 (40.452077465 / -104.550441169)	03/28/17	98.78	7.14	91.64	4.48	2.66
	06/13/17		6.85	91.93	4.19	
	09/14/17		6.76	92.02	4.10	
	12/12/17		7.03	91.75	4.37	
	03/13/18		7.11	91.67	4.45	
	05/15/18	DES				
MW-09R (40.452077465 / -104.550441169)	06/13/18	98.96	7.40	91.56	4.32	3.08
MW-10 (40.452207178 / -104.55040854)	03/28/17	98.91	NM	NA	NA	2.83
	06/13/17		6.60	92.31	3.77	
	09/14/17		6.48	92.43	3.65	
	12/12/17		6.92	91.99	4.09	
	03/13/18		6.76	92.15	3.93	
	05/15/18	DES				
MW-11 (40.452321549 / -104.550383609)	03/28/17	99.27	NM	NA	NA	2.74
	06/13/17		6.64	92.63	3.90	
	09/14/17		6.38	92.89	3.64	
	12/12/17		7.11	92.16	4.37	
	03/13/18		6.96	92.31	4.22	
	05/15/18	DES				
MW-11R (40.452321549 / -104.550383609)	06/13/18	99.24	12.34	86.90	9.44	2.90

TABLE 2
GROUNDWATER ELEVATION SUMMARY
WARDLAW #20-28
FLOW LINE RELEASE
40.452377 / -104.550395
SE1/4 SE1/4 SEC.28 T6N R64W 6PM
WELD COUNTY, COLORADO
REMEDATION # 10185

Sample Location (Latitude/Longitude)	Date	TOC Elevation (feet)	Depth to Groundwater from TOC (feet)	Relative Groundwater Elevation (feet)	Depth to Groundwater (bgs) (feet)	Stickup Height (feet)
MW-12 (40.45239442 / -104.550368154)	03/28/17	99.34	NM	NA	NA	2.71
	03/30/17		13.64	85.70	10.93	
	06/13/17		6.48	92.86	3.77	
	09/14/17		6.26	93.08	3.55	
	12/12/17		6.97	92.37	4.26	
	03/13/18		6.88	92.46	4.17	
	06/13/18		6.39	92.95	3.68	
MW-13 (40.452664489 / -104.550339323)	03/28/17	100.00	NM	NA	NA	2.64
	06/13/17		6.55	93.45	3.91	
	09/14/17		6.31	93.69	3.67	
	12/12/17		6.89	93.11	4.25	
	03/13/18		6.83	93.17	4.19	
	05/15/18	DES				
MW-13R (40.452664489 / -104.550339323)	06/13/18	100.45	10.61	89.84	7.79	2.82
MW-14 (40.452664489 / -104.550339323)	03/28/17	98.41	7.32	91.09	4.60	2.72
	06/15/17		6.60	91.81	3.88	
	09/14/17		6.48	91.93	3.76	
	12/12/17		7.08	91.33	4.36	
	03/13/18		7.11	91.30	4.39	
	05/15/18	DES				
MW-14R (40.452664489 / -104.550339323)	06/13/18	98.48	5.95	92.53	3.03	2.92
MW-15 (40.452232004 / -104.550269649)	03/28/17	99.54	NM	NA	NA	2.82
	06/15/17		7.33	92.21	4.51	
	09/14/17	DES				
MW-16 (40.452334255 / -104.550243785)	03/28/17	99.73	NM	NA	NA	2.86
	06/15/17		7.11	92.62	4.25	
	09/14/17	DES				
MW-16R (40.452334255 / -104.550243785)	03/13/18	100.29	7.90	92.39	4.68	3.22
	06/13/18		7.40	92.89	4.18	
MW-17 (40.452418346 / -104.55022411)	03/28/17	99.72	NM	NA	NA	2.75
	06/15/17		8.42	91.30	5.67	
	09/14/17	DES				
MW-17R (40.452418346 / -104.55022411)	03/13/18	100.08	7.61	92.47	4.63	2.98
	06/13/18		6.77	93.31	3.79	
NOTES: All wells completed as PVC stick ups. TOC = top of casing PVC = polyvinyl chloride NM = not measured bgs= below ground surface NA = not applicable DES = Destroyed						



ATTACHMENT A

Laboratory Analytical Report



June 20, 2018

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Wardlaw #20-28

Project Number - [none]

Attached are your analytical results for Noble - Wardlaw #20-28 received by Origins Laboratory, Inc. June 13, 2018. This project is associated with Origins project number Y806168-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01R2	Y806168-01	Water	June 13, 2018 13:06	06/13/2018 15:00
MW-03	Y806168-02	Water	June 13, 2018 11:41	06/13/2018 15:00
MW-05R	Y806168-03	Water	June 13, 2018 11:51	06/13/2018 15:00
MW-07R	Y806168-04	Water	June 13, 2018 12:03	06/13/2018 15:00
MW-09R	Y806168-05	Water	June 13, 2018 12:13	06/13/2018 15:00
MW-11R	Y806168-06	Water	June 13, 2018 12:19	06/13/2018 15:00
MW-12	Y806168-07	Water	June 13, 2018 13:40	06/13/2018 15:00
MW-13R	Y806168-08	Water	June 13, 2018 11:21	06/13/2018 15:00
MW-14R	Y806168-09	Water	June 13, 2018 13:23	06/13/2018 15:00
MW-16R	Y806168-10	Water	June 13, 2018 12:25	06/13/2018 15:00
MW-17R	Y806168-11	Water	June 13, 2018 12:38	06/13/2018 15:00
SW-01	Y806168-12	Water	June 13, 2018 13:10	06/13/2018 15:00
SW-02	Y806168-13	Water	June 13, 2018 13:15	06/13/2018 15:00
SW-04	Y806168-14	Water	June 13, 2018 13:20	06/13/2018 15:00

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

ORIGINS
LABORATORY, INC

1725 Elk Place
Denver, CO 80211
Phone: 303.433.1322
Fax: 303.265.9645

www.originslaboratory.com

page 1 of 2

4806668

Client: Eagle Environmental Consulting, Inc.
Address: 4101 Inca St
Denver, CO 80211
Telephone Number: 303 433 0479
Email Address: MCE3@eagle-environmental.com

Project Manager: Martin Eckert III
Project Name: Wardlaw #20-28
Project Number: JS/5Q
Samples Collected By: JS/5Q

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other	ISTEX	
MW-01R2	6/13/19	1306	3		X			X					
MW-03		1141											
MW-05R		1151											
MW-07R		1203											
MW-09R		1213											
MW-11R		1219											
MW-13R		1340											
MW-14R		1121											
MW-16R		1323											
MW-16R		1225											
Relinquished By: [Signature]	Date: 6/13/19	Time: 1500											
Relinquished By: [Signature]	Date: 6/13/19	Time: 1500											

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard

Temp Received: 5.4 Date Results Needed: Noble
B.I. to Jacob

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver

CO

80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 4806168

Client: Eagle

Client Project ID: Noelle-Wardlaw #20-28

Checklist Completed by: JE

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 6/13/2018 1520

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid ☒ Water ☐ Other: ☐

Cooler Number/Temperature: 1 154 °C 1 °C 1 °C 1 °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JP

Date/Time Reviewed 6/14/18

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-01R2
6/13/2018 1:06:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y806168-01 (Water)

BTEX by EPA 8260C

Benzene	198	1.00	ug/L	1	B8F1808	06/18/2018	06/18/2018	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	108 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.1 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.8 %	84-114			"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

MW-03

6/13/2018 11:41:00AM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y806168-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	84-121	"	"	"
Surrogate: Toluene-d8	95.5 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	97.1 %	84-114	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-05R

6/13/2018 11:51:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y806168-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	84-121			"	"	"	
Surrogate: Toluene-d8	95.8 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.0 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

MW-07R

6/13/2018 12:03:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y806168-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	84-121			"	"	"	
Surrogate: Toluene-d8	95.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.2 %	84-114			"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-09R

6/13/2018 12:13:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y806168-05 (Water)

BTEX by EPA 8260C

Benzene	1.07	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	107 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.8 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	97.5 %	84-114			"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

MW-11R

6/13/2018 12:19:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y806168-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	112 %	84-121	"	"	"
Surrogate: Toluene-d8	96.1 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	97.9 %	84-114	"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-12
6/13/2018 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y806168-07 (Water)

BTEX by EPA 8260C

Benzene	96.1	4.00	ug/L	4	B8F1808	06/18/2018	06/19/2018	
Toluene	ND	4.00	"	"	"	"	"	U
Ethylbenzene	4.08	4.00	"	"	"	"	"	
Xylenes, total	ND	4.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	84-121			"	"	"
Surrogate: Toluene-d8	94.8 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	97.5 %	84-114			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.
4101 Inca Street
Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

MW-13R

6/13/2018 11:21:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc. Y806168-08 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	111 %	84-121			"	"	"	
Surrogate: Toluene-d8	95.6 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.2 %	84-114			"	"	"	

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

MW-14R

6/13/2018 1:23:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y806168-09 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	84-121	"	"	"
Surrogate: Toluene-d8	97.8 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	97.3 %	84-114	"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

MW-16R

6/13/2018 12:25:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y806168-10 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	84-121	"	"	"
Surrogate: Toluene-d8	97.2 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	97.3 %	84-114	"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

MW-17R

6/13/2018 12:38:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y806168-11 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	109 %	84-121	"	"	"
Surrogate: Toluene-d8	97.2 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	97.7 %	84-114	"	"	"

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4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

SW-01

6/13/2018 1:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.

Y806168-12 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	107 %	84-121			"	"	"
Surrogate: Toluene-d8	97.0 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	98.7 %	84-114			"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

SW-02

6/13/2018 1:15:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
Y806168-13 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	109 %	84-121	"	"	"
Surrogate: Toluene-d8	96.8 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	99.3 %	84-114	"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

SW-04

6/13/2018 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y806168-14 (Water)

BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8F1808	06/18/2018	06/19/2018	U
Toluene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	111 %	84-121			"	"	"	
Surrogate: Toluene-d8	96.4 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.4 %	84-114			"	"	"	

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4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B8F1808 - EPA 5030B (Water)

Blank (B8F1808-BLK1)

Prepared: 06/18/2018 Analyzed: 06/18/2018

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5	95.3		84-121			
Surrogate: Toluene-d8	63		"	62.5	100		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B8F1808 - EPA 5030B (Water)

LCS (B8F1808-BS1)

Prepared: 06/18/2018 Analyzed: 06/18/2018

Benzene	53.3	1.00	ug/L	50.0	107	73.3-129
Toluene	55.6	1.00	"	50.0	111	76.2-123
Ethylbenzene	53.0	1.00	"	50.0	106	73.6-130
m,p-Xylene	106	2.00	"	100	106	76.1-126
o-Xylene	48.9	1.00	"	50.0	97.8	76.6-124
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5	94.3	84-121
Surrogate: Toluene-d8	63		"	62.5	101	85-115
Surrogate: 4-Bromofluorobenzene	64		"	62.5	102	84-114

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B8F1808 - EPA 5030B (Water)

Matrix Spike (B8F1808-MS1)		Source: Y806168-01			Prepared: 06/18/2018 Analyzed: 06/18/2018					
Benzene	240	1.00	ug/L	50.0	198	83.7	74-130			
Toluene	51.3	1.00	"	50.0	0.390	102	73-131			
Ethylbenzene	51.2	1.00	"	50.0	0.960	100	76-132			
m,p-Xylene	105	2.00	"	100	ND	105	69-139			
o-Xylene	51.7	1.00	"	50.0	ND	103	74-131			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.2	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.8	84-114			

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Denver CO 80211

Martin C Eckert III
Project Number: [none]
Project: Noble - Wardlaw #20-28

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B8F1808 - EPA 5030B (Water)										
Matrix Spike Dup (B8F1808-MSD1)					Source: Y806168-01					Prepared: 06/18/2018 Analyzed: 06/18/2018
Benzene	237	1.00	ug/L	50.0	198	78.6	74-130	1.07	20	
Toluene	48.7	1.00	"	50.0	0.390	96.5	73-131	5.22	20	
Ethylbenzene	49.0	1.00	"	50.0	0.960	96.0	76-132	4.39	20	
m,p-Xylene	99.3	2.00	"	100	ND	99.3	69-139	5.19	20	
o-Xylene	49.4	1.00	"	50.0	ND	98.8	74-131	4.59	20	
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	60		"	62.5		95.9	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	84-114			

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Wardlaw #20-28

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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Jen Pellegrini For Noelle Doyle Mathis, President

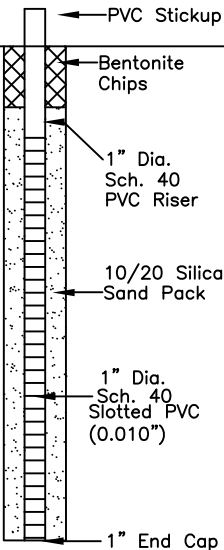


ATTACHMENT B

Well Completion Diagrams (New Wells Only)

Boring Log/Well Completion Diagram: MW-01R2

PAGE 1 OF 1

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0						N/A	N/A			
			DP	1	N/A	N/A	N/A			
						N/A				
5						N/A				
			DP	2	N/A	N/A	N/A			
						N/A				
10						N/A				
			DP	3	N/A	N/A	N/A			
	BoB @ 12'									
15										
20										
25										
30										

DP - Direct Push
HC - Hydrocarbon
BoB - Bottom of Boring
N/O - no odor
N/S - no staining
TOC - top of casing
bgs - below ground surface

START/COMPLETION DATE 06/05/2018

SAND PACK INTERVAL (FEET): 1.5-12

PROJECT: WARDLAW #20-28

BENTONITE/GROUT INTERVAL (FEET): 0-1.5

LOGGED BY: K. FORSMARK

WELL SCREEN INTERVAL (FEET): 2-12

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 12

WELL DEPTH (FEET): 12

PID INSTRUMENT: N/A

TIME STARTED/COMPLETED: 1220/1240

SAMPLE COLLECTION DEPTH (FEET)/TIME: N/A

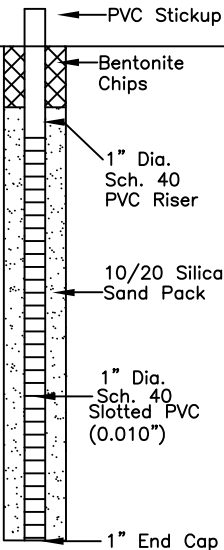


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Boring Log/Well Completion Diagram: MW-05R

PAGE 1 OF 1

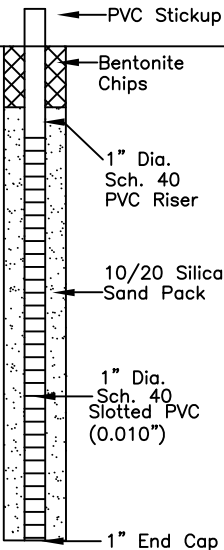
DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0						N/A	N/A		 <p>Diagram labels: PVC Stickup, Bentonite Chips, 1" Dia. Sch. 40 PVC Riser, 10/20 Silica Sand Pack, 1" Dia. Sch. 40 Slotted PVC (0.010"), 1" End Cap</p>	
			DP	1	N/A	N/A	N/A			
						N/A				
5						N/A		5		
			DP	2	N/A	N/A	N/A			
						N/A				
10						N/A	N/A	10		
			DP	3	N/A	N/A	N/A			
	BoB @ 12'									
15								15		DP - Direct Push HC - Hydrocarbon BoB - Bottom of Boring N/O - no odor N/S - no staining TOC - top of casing bgs - below ground surface
20								20		
25								25		
30										

30

START/COMPLETION DATE 06/05/2018		SAND PACK INTERVAL (FEET): 1.5–12	
PROJECT: WARDLAW #20–28		BENTONITE/GROUT INTERVAL (FEET): 0–1.5	
LOGGED BY: K. FORSMARK		WELL SCREEN INTERVAL (FEET): 2–12	
DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE		WELL DIAMETER (INCHES): 1	
BORING DEPTH (FEET): 12	WELL DEPTH (FEET): 12		
PID INSTRUMENT: N/A			
TIME STARTED/COMPLETED: 1015/1040			
SAMPLE COLLECTION DEPTH (FEET)/TIME: N/A			
		<div><div><div>EAGLE</div><div>ENVIRONMENTAL CONSULTING, INC.</div><div>4101 INCA STREET, DENVER, CO 80211 Ph: 303-433-0479 • F: 303-325-5449</div></div></div>	

Boring Log/Well Completion Diagram: MW-07R

PAGE 1 OF 1

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0						N/A	N/A		 <p> PVC Stickup Bentonite Chips 1" Dia. Sch. 40 PVC Riser 10/20 Silica Sand Pack 1" Dia. Sch. 40 Slotted PVC (0.010") 1" End Cap </p>	
			DP	1	N/A	N/A	N/A			
						N/A				
5						N/A		5		
			DP	2	N/A	N/A	N/A			
						N/A				
10						N/A	N/A	10		
			DP	3	N/A	N/A	N/A			
	BoB @ 12'									
15								15		
20								20		
25								25		
30										

DP - Direct Push
 HC - Hydrocarbon
 BoB - Bottom of Boring
 N/O - no odor
 N/S - no staining
 TOC - top of casing
 bgs - below ground surface

START/COMPLETION DATE 06/05/2018

SAND PACK INTERVAL (FEET): 1.5-12

PROJECT: WARDLAW #20-28

BENTONITE/GROUT INTERVAL (FEET): 0-1.5

LOGGED BY: K. FORSMARK

WELL SCREEN INTERVAL (FEET): 2-12

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 12

WELL DEPTH (FEET): 12

PID INSTRUMENT: N/A

TIME STARTED/COMPLETED: 0950/1010

SAMPLE COLLECTION DEPTH (FEET)/TIME: N/A

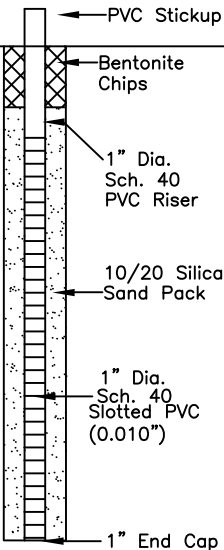


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Boring Log/Well Completion Diagram: MW-09R

PAGE 1 OF 1

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0						N/A	N/A			
			DP	1	N/A	N/A	N/A			
5						N/A				
			DP	2	N/A	N/A	N/A			
10						N/A				
			DP	3	N/A	N/A	N/A			
12	BoB @ 12'									
15										
20										
25										
30										

DP - Direct Push
HC - Hydrocarbon
BoB - Bottom of Boring
N/O - no odor
N/S - no staining
TOC - top of casing
bgs - below ground surface

START/COMPLETION DATE 06/05/2018

SAND PACK INTERVAL (FEET): 1.5-12

PROJECT: WARDLAW #20-28

BENTONITE/GROUT INTERVAL (FEET): 0-1.5

LOGGED BY: K. FORSMARK

WELL SCREEN INTERVAL (FEET): 2-12

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 12

WELL DEPTH (FEET): 12

PID INSTRUMENT: N/A

TIME STARTED/COMPLETED: 1125/1145

SAMPLE COLLECTION DEPTH (FEET)/TIME: N/A

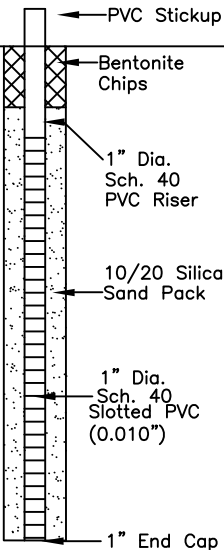


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Boring Log/Well Completion Diagram: MW-11R

PAGE 1 OF 1

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0						N/A	N/A		 <p> PVC Stickup Bentonite Chips 1" Dia. Sch. 40 PVC Riser 10/20 Silica Sand Pack 1" Dia. Sch. 40 Slotted PVC (0.010") 1" End Cap </p>	
			DP	1	N/A	N/A	N/A			
						N/A				
5						N/A		5		
			DP	2	N/A	N/A	N/A			
						N/A				
10						N/A	N/A	10		
			DP	3	N/A	N/A	N/A			
	BoB @ 12'									
15								15		
20								20		
25								25		
30										

DP - Direct Push
 HC - Hydrocarbon
 BoB - Bottom of Boring
 N/O - no odor
 N/S - no staining
 TOC - top of casing
 bgs - below ground surface

START/COMPLETION DATE 06/05/2018

SAND PACK INTERVAL (FEET): 1.5-12

PROJECT: WARDLAW #20-28

BENTONITE/GROUT INTERVAL (FEET): 0-1.5

LOGGED BY: K. FORSMARK

WELL SCREEN INTERVAL (FEET): 2-12

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 12

WELL DEPTH (FEET): 12

PID INSTRUMENT: N/A

TIME STARTED/COMPLETED: 1155/1210

SAMPLE COLLECTION DEPTH (FEET)/TIME: N/A



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Boring Log/Well Completion Diagram: MW-13R

PAGE 1 OF 1

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0						N/A	N/A			
			DP	1	N/A	N/A	N/A			
						N/A				
5						N/A		5		
			DP	2	N/A	N/A	N/A			
						N/A				
10						N/A	N/A	10		
			DP	3	N/A	N/A	N/A			
	BoB @ 12'									
15								15		DP - Direct Push HC - Hydrocarbon BoB - Bottom of Boring N/O - no odor N/S - no staining TOC - top of casing bgs - below ground surface
20								20		
25								25		
30										

START/COMPLETION DATE 06/05/2018

SAND PACK INTERVAL (FEET): 1.5–12

PROJECT: WARDLAW #20–28

BENTONITE/GROUT INTERVAL (FEET): 0–1.5

LOGGED BY: K. FORSMARK

WELL SCREEN INTERVAL (FEET): 2–12

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 1

BORING DEPTH (FEET): 12

WELL DEPTH (FEET): 12

PID INSTRUMENT: N/A

TIME STARTED/COMPLETED: 1250/1310

SAMPLE COLLECTION DEPTH (FEET)/TIME: N/A



EAGLE
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Boring Log/Well Completion Diagram: MW-14R

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DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %					
0						N/A	N/A			
			DP	1	N/A	N/A	N/A			
5						N/A				
			DP	2	N/A	N/A	N/A			
10						N/A				
			DP	3	N/A	N/A	N/A			
	BoB @ 12'									
15										
20										
25										
30										

DP - Direct Push
HC - Hydrocarbon
BoB - Bottom of Boring
N/O - no odor
N/S - no staining
TOC - top of casing
bgs - below ground surface

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WELL DEPTH (FEET): 12

PID INSTRUMENT: N/A

TIME STARTED/COMPLETED: 1050/1110

SAMPLE COLLECTION DEPTH (FEET)/TIME: N/A



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