



May 1, 2013

Mr. Brandon Danforth
Environmental Specialist
WPX Energy Rocky Mountain LLC
1058 County Road 215
Parachute, Colorado 81635

RE: Baseline Water Quality Sampling Evaluation – GM 245-1 Drill Pad

Dear Mr. Danforth,

Western Water & Land, Inc. (WWL) has completed a hydrologic water source evaluation for the WPX Energy Rocky Mountain LLC (WPX) GM 245-1 Drill Pad in accordance with COGCC Rule 609. The evaluation considered all water sources as defined in Rule 609 within a 0.5-mile radius of the referenced drill pad. Water sources located on the basis of section quarters were included in the evaluation if the any portion of the section quarter(s) lies within the 0.5-mile radius area. A preliminary screening of the water sources was completed to identify the sources considered to be potentially available for sampling pending field inspections to verify sampling feasibility and the consent of the structure owners. Each potentially available water source was then evaluated to identify the preferred sources for the baseline program. If the resulting number of potentially available sources was four or less, all of the sources were included in the list of preferred sources. If more than four sources were potentially available, the sources were prioritized based on WWL's hydrologic and water chemistry expertise and in accordance with the guidelines specified in Rule 609.

Water Sources

Water sources as defined in Rule 609 include water wells registered with the Colorado Division of Water Resources (DWR), permitted or adjudicated springs, and monitoring wells installed for baseline sampling and monitoring under COGCC Rules 318A.e(4), 608, or 609. Water sources located within a 0.5-mile radius of the GM 245-1 Drill Pad are shown in Figure 1. The Structure Summary Report for the decreed groundwater right (NOSR-3 Wells) located within the 0.5-mile radius evaluation area is provided in Attachment A. Structure owners are identified as reported in DWR databases. Property owners are identified as reported in county property records. The water sources within a 0.5-mile radius of the drill pad are summarized as follows:

- Naval Oil Shale Reserve Water Right (note: water right exists but has no evidence of development)
 - Water Right Owner: Naval Oil Shale Reserve
 - Property Owner:
 - White River Field Office
 - 220 E. Market Street
 - Meeker, CO 81641
 - Uses: Industrial

- Location: Distance from section lines

There is no water source identified within the 0.5-mile radius area that is considered to be a potentially available water source. Colorado DWR has no evidence that the well was actually installed.

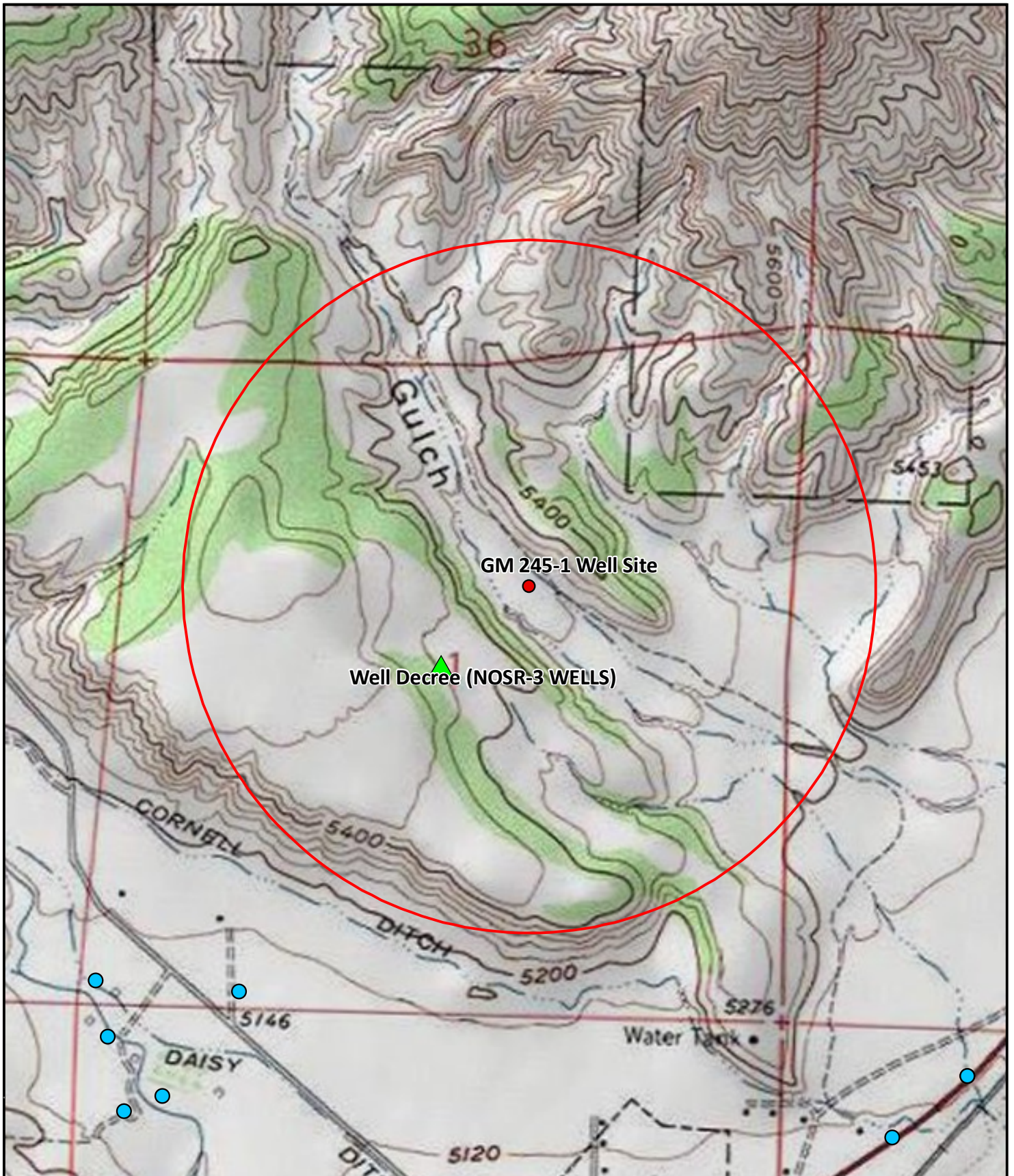
If you have any questions or concerns, please contact me at (970) 242-0170.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce D. Smith". The signature is fluid and cursive, with the first name "Bruce" being more legible than the last name "Smith".

Bruce D. Smith
Principal Hydrogeologist
WESTERN WATER & LAND, INC.

Attachment



Legend

- Permitted Well
- Decreed Spring
- Well GM 245-1
- 0.5-Mile Radius Evaluation Area



Feet
1,100 550 0 1,100

Basemap Source: USGS Topo, NGS (2007), and Esri ArcGIS Online

**Figure 1: GM 245-1 Drill Pad Location Map
One Half Mile Radius Water Source Evaluation
SW1/4, NE1/4, S1, T7S, R96W, 6PM**

WPX Energy Rocky Mtn. LLC
Garfield County, Colorado



Western Water & Land, Inc.
Applications in Earth Science

Attachment A

Water Source Records

Structure Name: NOSR-3 WELLS				Water District: 39		Structure ID Number: 5629		
Source:		PARACHUTE CREEK						
Location:		Q10	Q40	Q160	Section	Twnshp	Range	PM
					1	7S	96W	S
Distance From Section Lines:		From N/S Line:			From E/W Line:			
UTM Coordinates (NAD 83):		Northing (UTM y): 4373057			Easting (UTM x): 236889.7		Spotted from PLSS distances from section lines	
Latitude/Longitude (decimal degrees):		39.466895			-108.058437			
Water Rights Summary:		Total Decreed Rate(s) (CFS):			Absolute:		0.0000	Conditional: 0.0000
		Total Decreed Volume(s) (AF):			Absolute:		100.0000	Conditional: 0.0000
							AP/EX:	0.0000
							AP/EX:	0.0000

Water Rights -- Transactions									
Case Number	Adjudication Date	Appropriation Date	Administration Number	Order Number	Priority Number	Decreed Amount	Adjudication Type	Uses	Action Comment
W0467	1987-12-31	1924-09-27	27298.00000	0		100.0000 AF	O	4	RESERVED RIGHT, LOCATIONS NOT DETERMINED,

Water Rights -- Net Amounts										
Adjudication Date	Appropriation Date	Administration Number	Order Number	Priority/Case Number	Rate (CFS)			Volume (Acre-Feet)		
					Absolute	Conditional	AP/EX	Absolute	Conditional	AP/EX
1987-12-31	1924-09-27	27298.00000	0	W0467				100.0000	0	0

Irrigated Acres Summary -- Totals From Various Sources	
GIS Total (Acres):	Reported:
No data available for this report	
Diversion Comments Total (Acres):	Reported:
Structure Total (Acres):	Reported:

Irrigated Acres From GIS Data						
Year	Land Use	Acres Flood	Acres Furrow	Acres Sprinkler	Acres Drip	Acres Groundwater
Acres Total						
No data available for this report						

Diversion Summary in Acre-Feet - Total Water Through Structure																	
Year	FDU	LDU	DWC	Maxq & Day	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Total
No data available for this report																	
Minimum:																	
Maximum:																	
Average:																	

Notes:

The average considers all years with diversion records, even if no water is diverted.
The above summary lists total monthly diversions.
* = Infrequent Diversion Record. All other values are derived from daily records.
Average values include infrequent data if infrequent data are the only data for the year.

Diversion Comments			
IYR	NUC Code	Acres Irrigated	Comment
No data available for this report			
Note: Diversion comments and reservoir comments may be shown for a structure, if both are available.			

Water Rights Report by Structure Name

State of Colorado

HydroBase

WD	ID	Water Right Name	Struct Type	Stream Information		Cty	Legal Location				Use Type	Decreed Amt		Adj. Type	Adj. Date	Padj Date	Apro Date	Admin No	O #	Priority No.	Court Case	Seq #	P/A	Alter ID	Comment								
				#	Name		Q10	Q40	Q160	sec		ts	rng													pm	U						
39	5629	NOSR-3 WELLS	2	5	PARACHUTE CREEK	GAR				1	7	S	96	W	S	4		100.0000	A	O				1987-12-31		1924-09-27		27298.00000	0			W0467	RESERVED RIGHT, LOCATIONS NOT DETERMINED, LIMITED TO 100AF/YR

Explanation of Codes:

Struct Type: 0 - other, 1 - ditch, 2 - well, 3 - reservoir, 4 - spring, 5 - seep, 6 - mine, 7 - pipeline, 8 - pump, 9 - power plant

Use Codes: 0 - storage, 1 - irrigation, 2 - municipal, 3 - commercial, 4 - industrial, 5 - recreation, 6 - fishery, 7 - fire, 8 - domestic, 9 - stock, A - augmentation, B - export from basin, C - cumulative accretion to river, D - cumulative depletion from river, E - evaporation, F - federal reserve, G - geothermal, H - household use only, K - snow making, M - minimum streamflow, N - net effect of river, P - power generation, Q - other, R - recharge, S - export from state, T - transmountain export, W - wildlife, X - all beneficial use

Adj Type: AB - abandoned, AP - alternate point, C - conditional, CA - conditional made absolute, EX - exchange, O - original, S - supplemental, TF - transfer from, TT - transfer to

Admin Number is a number developed by DWR to provide a simple and efficient method of ranking decrees in order of seniority.