

WATER QUALITY MONITORING PLAN
Eastern Hills 4-65 17-18 South
Location ID Pending

Crestone Peak Resources Operating, LLC
1801 California Street #2500
Denver, CO 80202

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ATTACHMENTS

1. Eastern Hills 4-65 17-18 South area map with DWR Water Sources identified within a ½ mile radius
2. DWR Water Sources Inventory

INTRODUCTION

This Water Quality Monitoring Plan (plan) was developed by Apex Companies, LLC (Apex) for Crestone Peak Resources Operating, LLC (Crestone) as required by the City of Aurora (City) Operator Agreement. The plan complies with the procedures, guidelines, and reporting requirements in accordance with the Colorado Oil and Gas Conservation Commission (COGCC) Model Sampling and Analysis Plan (COGCC SAP, 2020) and COGCC Rule 609.

DESKTOP ASSESSMENT

The following describes the process Crestone used for identifying sampling / monitoring locations, and frequency of sampling / monitoring to establish a baseline of existing conditions prior to the construction of the Eastern Hills 4-65 17-18South (Eastern Hills South).

Water sources and associated reference data for this effort were acquired from publicly available datasets, including the Colorado Division of Water Resources (DWR). Spatial analysis will be completed using queries in a geographic information system (GIS) desktop environment.

For purposes of the assessment, water sources included water wells that are registered with DWR, including household, domestic, livestock, irrigation, municipal/public, and commercial wells; permitted or adjudicated springs; and monitoring wells installed for the purpose of complying with groundwater baseline sampling / monitoring requirements under COGCC Rule 609.

When evaluating locations as potential available water sources (AWS) for sampling / monitoring, Crestone considered water sources for which the water well owner, owner of a spring, or a land owner, as applicable, had given consent for sampling and testing and had consented to having the sample data obtained made available to the public, including without limitation, being posted on the COGCC website.

Water Well Identification

Crestone identified all AWS within a ½ mile radius of the Eastern Hills South and evaluated the DWR water sources using the selection, exception, and timing criteria identified in COGCC Rule 609. Those criteria include DWR permit status, proximity to the proposed oil and gas production surface location, type of water source, orientation of sampling locations, source aquifer, direction of groundwater flow, and condition of water sources among others.

As shown on the attached map and DWR Water Sources inventory, one available water source was identified within the ½ mile radius. A variance request will be submitted for City approval.

Requested and City Easement Well(s)

If required by the City, Crestone will drill and construct a Westbay System or equivalent for multilevel monitoring well. A well diagram will be provided upon request.

FIELD ASSESSMENT / DATA EVALUATION

Field assessment, sampling processes, and data evaluation for identified water wells, requested wells and City Easement wells have been completed in accordance with the COGCC SAP (2020).

PROTECTION AND MITIGATION MEASURES

Mitigation

If needed, a mitigation plan will be developed on a case-by-case basis depending on the degradation observed and the degree of impairment. The plan will identify locations and frequency for sampling to document baseline groundwater conditions prior and subsequent to drilling activities.

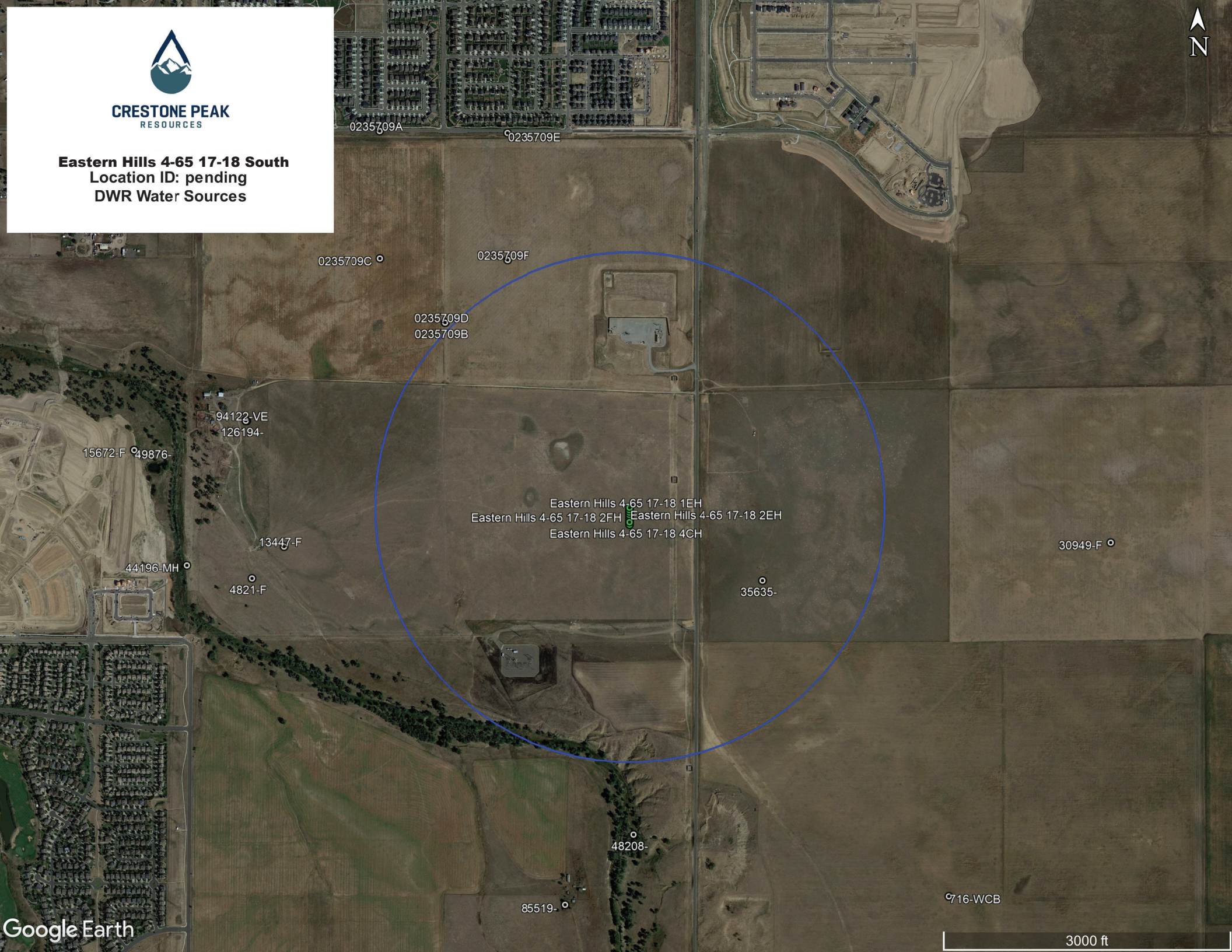
REFERENCES

Colorado Oil & Gas Conservation Commission. (2020, April). *Model Sampling and Analysis Plan Rules 609 and 318A.e(4) Colorado Oil and Gas Conservation Commission Version 2* Retrieved May 28, 2020, from https://cogcc.state.co.us/documents/about/COGIS_Help/COGCC_Model_SAP_20200414.pdf



CRESTONE PEAK
RESOURCES

Eastern Hills 4-65 17-18 South
Location ID: pending
DWR Water Sources



DWR Water Sources**Eastern Hills 4-65 17-18 South**

Status	Receipt	Permit	Permit Status	Contact Name	County	TwN	Rng	Sec	Q40	Q160	Latitude	Longitude	Use(s)
1 -- Water source will be sampled upon landowner permission	9006798	35635-	Well Constructed	SMITH, PAUL H	ARAPAHOE	4S	65W	16	SW	SW	39.698244	-104.676	Stock