

Director Objective Criteria Review Memo – Bonanza Creek Energy Operating Company, LLC, State Antelope 43-13, Form 2A 401928845

This summary explains how COGCC staff conducted its technical review of the State Antelope 43-13, Form 2A 401928845 within the context of SB 19-181 and for the required Director's Objective Criteria. This Form 2A permit application met the following Director's Objective Criteria -

1. (Criteria 5.c) The proposed Location lies within a Sensitive Area for water resources (within an area of potential shallow groundwater).

COGCC staff met with the Director to discuss whether the Objective Criteria were sufficiently addressed and whether the Form 2A could be approved with the proposed Best Management Practices (BMPs) and applied Conditions of Approval (COAs). The following sections provide details regarding the evaluation of each criterion.

Criteria 5.c: Oil and Gas Locations within a Sensitive Area for water resources.

Site Specific Description of Applicability of Criteria 5.c: The proposed location is in a sensitive area due to shallow groundwater. Well logs from nearby monitoring wells indicate the occurrence of groundwater is likely less than 20 feet below ground surface.

Site Specific Measures to Address Criteria 5.c: The proposed Location will produce to a remote Centralized Production Facility (Antelope CPF O-1) and will have minimal hydrocarbon storage, including separators, gas/diesel motors, electric motors, electric generators, a pigging station and 1 condensate tank (for maintenance purposes). OGLA staff reviewed the proposed Form 2A and required additional BMPs to protect groundwater: the operator proposed the use of a portable liner during drilling activities, installation of an engineered liner for the production facilities, built-in containment for the separators and anchoring equipment along the flowlines to limit movement of the lines at the 90-degree joints to reduce the potential for a release from the flowline. In addition, the operator provided a leak detection plan that includes remote monitoring and remote shut-in capabilities.

Determination: The Director determined that Criteria 5.c was sufficiently analyzed and that the implementation of additional BMPs that address the protection of ground and surface water resources met the standard for protection of the sensitive environment and water resources.