

Objective Criteria Review Memo - Mallard Exploration LLC

Harlequin 34-35-1HN -- Form 2 Application for Permit to Drill (APD) Doc# 402438330

Harlequin North Pad -- Form 4 Sundry to update Location BMPs Doc# 402436579

Approved Form 2A Oil & Gas Location Assessment (Doc# 401502121, approved 6/21/2018)

Location ID# 455576

This memo summarizes COGCC's technical review of the subject well within the context of SB 19-181 and the required Objective Criteria. The Form 2A and eight APDs for this location were approved on 6/21/2018. Mallard has since submitted this subject refile APD for this approved Oil & Gas Location.

For Oil & Gas Locations approved prior to SB 19-181, the Objective Criteria apply to any wells proposed on those approved or existing Oil & Gas Locations. This APD meets the following Objective Criteria:

1. (Criteria 8) Oil and Gas Locations with storage of hydrocarbon or produced liquid in more than 18 tanks or in excess of 5,200 barrels. The location is planned for 16 oil tanks and eight water tanks.

The following sections provide details regarding the evaluation of each criterion:

Criteria 8: Oil and Gas Locations with storage of hydrocarbon or produced liquid in more than 18 tanks or in excess of 5,200 barrels.

Site Specific Description of Applicability of Criteria 8: The location is planned for 16 oil tanks and eight water tanks.

Site Specific Measures to Address Criteria 8: The Operator provided the following BMPs to mitigate having 24 tanks planned for the location:

- Remote Monitoring: The location will utilize a SCADA (remote monitoring) system to monitor facility pressures and flows. The SCADA system is designed with alarms that are triggered by irregularities and will activate automatic shut-in of the well and facility. Location will also be equipped with remote monitoring capability including tank level alarms.
- Lined Containment: Operator will install an engineered containment system around the tank battery. The containment system is constructed of a perimeter of metal walls that are post driven into the ground around a flexible geotextile base. All components are then sprayed with a polyurea liner technology. The liner is then topped with pea gravel. Secondary containment will be installed around separators and treaters consisting of metal berm walls. The separators and treaters will be set on top of compacted road base.
- Emergency Response Plan: Operator consulted with the Briggsdale Fire Protection District and the Weld County Office of Emergency Management (OEM) regarding the

proposed facility and emergency response for this location. The site-specific Emergency Action Plan was approved by the OEM on June 21, 2018.

Summary: Mallard provided BMPs that address possible impacts to having more than 18 tanks of storage on location. The BMPs include remote monitoring/shut-in capabilities, lined containment, and an emergency response plan with local emergency responders.

Director Determination: Based on the Objective Criteria review, the Director has determined that this permit application meets the standard for protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.