

**Public Comment Consideration Memo - Great Western Operating Company
Ivey LC Pad - Location ID# 442411**

Ivey LC 26-365HN Application for Permit to Drill (APD) - Doc# 402129777: 330 public comments
Ivey LC 26-362HC Application for Permit to Drill (APD) - Doc# 402129484: 15 public comments
Ivey LC 26-363HN Application for Permit to Drill (APD) - Doc# 402129340: 15 public comments
Ivey LC 26-368HN Application for Permit to Drill (APD) - Doc# 402129111: 13 public comments
Ivey LC 02-033HC Application for Permit to Drill (APD) - Doc# 402125539: 12 public comments
Ivey LC 26-363HNX Application for Permit to Drill (APD) - Doc# 402129424: 12 public comments
Ivey LC 02-036HC Application for Permit to Drill (APD) - Doc# 402125793: 11 public comments
Ivey LC 26-365HC Application for Permit to Drill (APD) - Doc# 402129594: 11 public comments
Ivey LC 26-362HN Application for Permit to Drill (APD) - Doc# 402129538: 10 public comments
Ivey LC 26-366HN Application for Permit to Drill (APD) - Doc# 402129348: 10 public comments
Ivey LC 26-366HNX Application for Permit to Drill (APD) - Doc# 402129495: 10 public comments
Ivey LC 26-368HC Application for Permit to Drill (APD) - Doc# 402128807: 10 public comments

Public Comment Summary:

Great Western Operating Company submitted a Form 2 Application for Permit to Drill (APD) to the COGCC for 12 refile APD's on their existing Ivey LC Pad location. The Operator provided the following brief narrative as to the history of this location:

"The Ivey Pad was originally permitted through the COGCC and Adams County by Ward Petroleum. The 2A for this site was first submitted and approved in 2015. In 2018, Great Western acquired the pad and refiled the Form 2A to show fewer tanks than originally planned. The refiled 2A was approved on 8/21/2018."

Great Western has since submitted this subject refile APD for this approved, built Oil & Gas Location. This location was previously approved for 26 wells total, but Great Western has abandoned all but 12 wells previously approved for this location. There are currently no wells drilled at this location. This refile APD is one of 12 total refile APD's to change wellbore orientations. A total of 459 public comments were received between 11/21/2019 - 12/22/2019.

1. COGCC staff reviewed and considered all public comments received for the 12 refile APD's for the Ivey LC Pad (Location ID# 442411).
2. Of the 459 public comments received across all 12 APD's, approximately 295 of the public comments were determined to not be duplicates.
3. Of the 27 comments where the commenter specifically identified where they lived:
 - a. Three commenters do not live in Colorado.
 - b. Six commenters do not live in the proximate local government jurisdiction (City of Thornton).
 - c. Eleven commenters lived between half a mile to greater than two miles from the location.
 - d. Seven commenters specifically said they lived within the Fairfield neighborhood which is almost entirely within 2000' of the location.

4. Many of the public comments usually expressed more than one specific topic of concern. The following is a percentage breakdown of the topics of concern that were mentioned by more than one commenter:
- a. 74% of the public comments expressed concerns about the distance of the oil and gas location to the nearby neighborhood/residential building units.
 - b. 56% of the public comments expressed concerns about the distance of the oil and gas location to a nearby school.
 - c. 44% of the public comments expressed concerns about the possible impacts to air quality by the oil and gas location.
 - d. 25% of the public comments expressed concerns about the possible impacts to the nearby floodplain by the oil and gas location.
 - e. 13% of the public comments expressed concerns about possible impacts of truck traffic to and from the oil and gas location.
 - f. 11% of the public comments expressed concerns about the possible impacts to water resources by the oil and gas location.
 - g. 10% of the public comments expressed concerns about the possible impacts to wildlife by the oil and gas location.
 - h. 4% of the public comments expressed concerns about the possible impacts to the nearby open space by the oil and gas location.
 - i. 2% of the public comments expressed concerns about the possible noise impacts by oil and gas location.
 - j. 1% of the public comments expressed concerns about the possible light impacts of oil and gas location.
 - k. One public comment expressed specific concerns regarding leak detection and inspections on the oil and gas location.
 - l. One public comment expressed specific concerns regarding site safety on the oil and gas location.
 - m. One public comment expressed specific concerns regarding seismic surveys related to the oil and gas location.
 - n. One public comment expressed specific concerns regarding whether Spanish language information is available for non-English speakers in the notification zone.
 - o. One public comment specifically requested the location undergo review under the Objective Criteria.
 - p. 23% of the public comments expressed concerns about oil and gas activities in general and were not site specific to this location.
 - q. 3% of the public comments expressed positive support for the siting of the oil and gas location.

COGCC Response:

Distance of the oil and gas location to the nearby neighborhood/residential building units - The location is 1302' from the nearest building unit and there are 102 building units between 1300' to 2000' from the location (these building units primarily are within the Fairfield neighborhood). The Operator has provided BMPs to mitigate having a location with building units within 1500' of its location, including: 32' sound walls on all side of the location, Group 3 oil-based drilling mud, dust mitigation controls, and air monitoring on location during pre-production activities and for the first six months of production (plan to be reviewed and approved by COGCC Director prior to implementation). Additionally, as part of the Adams County permit for this location, the Operator has been holding

quarterly neighborhood meetings since Q2 2019, where all residents within 2640' of the location are sent invitations.

Distance of the oil and gas location to a nearby school - The location is approximately 3100' from a school facility (Silver Creek Elementary School). The location is beyond the COGCC school/child care center set back distance of 1000' and beyond the notice distance for a school/child care center of 1320'. To mitigate against potential traffic concerns, the Operator has worked out a traffic plan with the local government that would limit or stop any traffic to/from the location during specific pick-up and drop-off times at the school.

Impacts to air quality by the oil and gas location - The Operator provided BMPs to mitigate possible impacts to air quality, including Group 3 oil-based drilling fluid and drilling rig and completion equipment engine exhaust will be directed upward, away from the closest occupied buildings to mitigate noise and emissions. The Operator will also conduct air monitoring on location during pre-production activities and for the first six months of production (plan to be reviewed and approved by COGCC Director prior to implementation).

Impacts to the nearby floodplain by the oil and gas location - The northeastern portion of the oil and gas location is located within a mapped floodplain. The Operator provided BMPs to mitigate possible impacts to the floodplain, including: use of drip pans during routine fueling and maintenance, daily inspections, remote monitoring/shut-in capabilities, and significant stormwater and erosion controls around the entire site including: wattles, rip-rap, culverts, ditch, berm, check dams, erosion control blankets, silt fence, crimped straw mulch, seeded and sediment trap. Additionally, this location is subject to Rule 603.h. Statewide Floodplain Requirements.

Impacts of truck traffic to and from the oil and gas location - The Operator provided the following information and BMPs regarding truck traffic at this oil and gas location: dust Controls in the form of speed restrictions, regular road maintenance, restrictions of construction activities during high wind days, and silica dust controls when handling sand used in hydraulic fracturing operations, and a street sweeper and/or water tank will be on call to limit dust when necessary; a traffic plan with the local government that would limit or stop any traffic to/from the location during specific pick-up and drop-off times at the nearby school; and the Operator obtained deceleration and turn lane permits from the City of Thornton to construct a turn lane and access road for the location. Additionally, there is oil and gas pipeline takeaway which will reduce the number of truck trips to the location once it is in the production phase.

Impacts to water resources by the oil and gas location - The location lies within a sensitive area for water resources. The Operator provided BMPs to mitigate possible impacts to water resources, including: use of drip pans during routine fueling and maintenance, daily inspections, lined containment for tank area, specialized containment for separator area, remote monitoring/shut-in capabilities, and significant stormwater and erosion controls around the entire site including: wattles, rip-rap, culverts, ditch, berm, check dams, erosion control blankets, silt fence, crimped straw mulch, seeded and sediment trap.

Impacts to wildlife by the oil and gas location - The most recently approved Form 2A contained a comment from CPW regarding a "mapped Recovery and Conservation Water along the nearby creek, which contains some species of Eastern Plains native fish". At the time of original approval COGCC placed the following COA on the Form 2A: "The proposed location may lie within a sensitive area within

proximity to two drainages and the Big Dry Creek. Operator shall use tertiary containment around the down- and cross-gradient perimeters of the Location.” COGCC OGLA Staff and a COGCC Field Inspector conducted a site visit on 10/09/2019 to, among other things, observe how the Operator was complying with this COA. The site visit found that the Operator was complying with the COA and has installed significant stormwater and erosion controls around the entire site including: wattles, rip-rap, culverts, ditch, berm, check dams, erosion control blankets, silt fence, crimped straw mulch, seeded and sediment trap. The entirety of the inspection report can be found at doc# 697500699 and inspection photos at doc# 697500700. Based on these observations the Operator is complying with the COA that was placed on the original Form 2A.

Impacts to the nearby open space by the oil and gas location - The Operator has provided BMPs to mitigate possible impacts to nearby open space, including: 32’ sound walls on all side of the location, Group 3 oil-based drilling mud, dust mitigation controls, and air monitoring on location during pre-production activities and for the first six months of production (plan to be reviewed and approved by COGCC Director prior to implementation). Additionally, the site will be subject to COGCC Rule 1003 regarding interim reclamation.

Noise impacts by oil and gas location. -The Operator has provided BMPs to mitigate possible impacts from noise, including: 32’ sound walls on all sides of the location and drilling rig and completion equipment engine exhaust will be directed upward, away from the closest occupied buildings to mitigate noise.

Light impacts of oil and gas location - The Operator has provided BMPs to mitigate possible impacts from light, including: 32’ sound walls on all sides of the location, light sources will be directed downwards, and away from occupied structures, and there will be no permanently installed lighting on site.

Leak detection and inspections on the oil and gas location. - The Operator provided BMPs relating to leaks and spills, including: use of drip pans during routine fueling and maintenance, daily inspections, remote monitoring/shut-in capabilities, and significant stormwater and erosion controls around the entire site including: wattles, rip-rap, culverts, ditch, berm, check dams, erosion control blankets, silt fence, crimped straw mulch, seeded and sediment trap.

Site safety on the oil and gas location - The Operator provided the following BMPs and information regarding site safety: site fencing including a solid screen wood fence with a locked gate and an emergency response plan.

Seismic surveys related to the oil and gas location - The Operator has expressed there are no future plans for seismic surveys related to this location.

Spanish language information availability for non-English speakers in the notification zone - The Operator has indicated that spanish language translations of pertinent information can be provided upon request to residents within the notification zone.

Request the location undergo review under the Objective Criteria - The Operator submitted the subject refile APDs after the passage of SB19-181 and thus this location was reviewed under the Objective Criteria prior to considering any of the APDs for approval.