A variety of existing wellbore conditions in the DJ Basin can create a theoretic potential for communication between horizontal wells that are being hydraulically stimulated and nearby offset wells. For the purposes of this policy, the "DJ Basin" shall be defined as including the following counties: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Elbert, Jefferson, Morgan and Weld. In early 2013, DJ Basin operators obtained and analyzed a significant body of data in an effort to more thoroughly understand the effects of horizontal well stimulations on nearby offset wells. Based on the data collected, horizontal well Applications for Permits to Drill (Form 2 APDs) in the DJ Basin must meet the following requirements.

Beginning March 1, 2013, all horizontal well APDs in the DJ Basin shall have the COGCC’s standard “Offset Well Evaluations” document attached. The COGCC Engineer will carefully evaluate all wells within 1500’ of the proposed wellbore to determine if those wells are adequately isolated. In general, adequate isolation includes isolation of the formation(s) to be treated in the proposed wellbore and isolation of all groundwater zones. If COGCC identifies any offset wells without adequate isolation within 1500’ of the proposed wellbore, the APD cannot be approved until the operator acknowledges the need for mitigation of the identified wells by a method defined in this policy, and commits to conducting the mitigation prior to hydraulic stimulation of the proposed horizontal wellbore. Additionally, the offset well shall have surface equipment (wellhead and master valve) rated to 5000 psi or adequate downhole mechanical isolation. For the remainder of this document, “Existing Well” shall be defined as any offset well (producing, shut-in, temporarily abandoned, plugged and abandoned, dry and abandoned, etc.) that does not meet the requirements identified above. Beginning June 20, 2013, notice shall be provided to all offset well operators within 1500’ of the horizontal wellbore 90 days prior to the anticipated commencement of hydraulic stimulation.

When an Existing Well and the proposed horizontal well are under different operatorship, the Existing Well operator may not refuse to have their well appropriately mitigated to meet the requirements of this policy as set forth above. This policy is explicitly meant to protect the Public Health, Safety and Welfare not correlative rights and shall not be interpreted to provide any legal presumption that production of offset wells is impacted positively or negatively.

The operator submitting the proposed horizontal well APD has a number of options to mitigate the situation in an Existing Well and enable the hydraulic stimulation of the proposed well, including the following:

1. If the Existing Well is to remain, provide the remedial cement needed to properly isolate all formations.
2. If the Existing Well is to be plugged, adequately plug the Existing Well to isolate all formations.
3. If the Existing Well is PA or DA, re-enter and re-plug the inadequately plugged well.
4. Secure COGCC approval for an alternative form of mitigation or COGCC agreement that additional mitigation is unnecessary under the circumstances.
Requirements for the Mitigation Options

Option 1: If the Existing Well is to remain, provide the remedial cement needed to properly isolate all formations.

1. Operator shall acknowledge the proximity of the Existing Well and agree to provide the remedial cement needed to properly isolate all formations.
2. COGCC staff will add a corresponding COA to the pending Form 2 APD for the proposed horizontal well.
3. APD for proposed horizontal well will be approved.
4. Operator shall submit Form 4 Sundry Notice for a Well Repair on the Existing Well.
   a. Describe proposed remedial cement required to isolate all productive formations and all ground water zones and receive approval of the same.
5. After remedial cementing is completed, operator shall submit a Final Form 5 Drilling Completion Report with the Cement Bond Log attached to verify compliance with the proposed remedial cement plan.
6. Remedial cementing shall be completed prior to hydraulic stimulation of the proposed horizontal well.
7. Operator shall submit a Form 42 - OFFSET MITIGATION COMPLETED for the remediated well, referencing the API Number of the proposed horizontal well, to report that appropriate mitigation was completed prior to the hydraulic stimulation of the proposed horizontal well.

Option 2: If the Existing Well is to be plugged, adequately plug the well to isolate all formations.

1. Operator shall acknowledge the proximity of the Existing Well and agree to adequately plug the well to isolate all formations.
2. COGCC staff will add a corresponding COA to the pending Form 2 APD for the proposed horizontal well.
3. APD for proposed horizontal well will be approved.
   a. Required attachments:
      i. Current and Proposed Plugged Wellbore Diagrams
      ii. Proposed Plugging Procedure
   b. If no As-built well location GPS has been reported, COGCC staff will place COA on Form 6 - Intent to submit as-built GPS well location data on Form 6: Subsequent Report of Abandonment.
5. Operator shall submit Form 6 Well Abandonment Report: Subsequent Report of Abandonment after plugging of the Existing Well is completed.
   a. Required attachments: Plugged Wellbore Diagram and all applicable Plugging Verification Reports for each person or contractor actually setting the plugs. As determined by the COGCC Engineer, this may include, Cement Job Summary, Wireline Job Summary, Operations Summary, and any other reports describing the plugging.
   b. As-Built GPS well location data, if required by COA on Form 6 - Notice of Intent to Abandon.
6. Plugging shall be completed prior to hydraulic stimulation of the proposed horizontal well.
7. Operator shall submit a Form 42 - OFFSET MITIGATION COMPLETED for the plugged well, referencing the API Number of the proposed horizontal well, to report that appropriate mitigation was completed prior to the hydraulic stimulation of the proposed horizontal well.

Option 3: If the Existing Well is PA or DA, re-enter and re-plug the inadequately plugged well.

1. Operator shall acknowledge the proximity of the Existing Well and agree to re-enter and re-plug the inadequately plugged well.
2. COGCC staff will add a corresponding COA to the pending Form 2 APD for the proposed horizontal well.
3. APD for proposed horizontal well will be approved.
4. Operator shall have adequate Financial Assurance for the proposed Re-entry and Re-plugging operations.
5. Operator shall submit Form 6 Well Abandonment Report: Notice of Intent to Abandon to re-enter and re-plug the existing PA or DA well. (Use eForms “Re-plug By Other Operator” to submit Form 6.)
   a. Reason for Abandonment is OTHER; Other Describe: Re-enter to Re-Plug
   b. Required Technical Detail/Comments:
      i. Purpose is to re-enter and adequately re-plug prior to hydraulic stimulation of proposed horizontal well per DJ Basin Offset Policy, dated December 16, 2013
      ii. Closed loop system will be used
      iii. Describe details of proposed re-entry procedure or attach Operations Summary
      iv. Describe details of proposed re-plugging procedure or attach Proposed Plugging Procedure
   c. Required Attachments:
      i. Signed Surface Use Agreement or Surface Owner Consent
      ii. Current and Proposed Plugged Wellbore Diagrams
      iii. Operations Summary of proposed re-entry procedure if not in Technical Detail/Comments
      iv. Proposed Plugging Procedure if not in Technical Detail/Comments
      v. Current site photos - minimum of four (4) color photographs, one (1) from each cardinal direction; each photograph shall be identified by: date taken, well name, and direction of view.
6. No pits shall be constructed for the Re-entry and Re-plugging operations; closed loop system is required
7. If no as-built well location GPS data has been reported for the well: Operator shall obtain the GPS data and submit it on the Form 6 Well Abandonment Report: Subsequent Report of Abandonment
8. If site has not undergone Final Reclamation, Operator shall contact COGCC Field Inspector for a joint onsite inspection prior to any new disturbance.
9. If the Operator discovers existing contamination from the previous oil and gas operations it shall be immediately reported to the Director (see Rule 906).
10. Operator shall be responsible for reporting and remediating any and all spills or releases related to their re-entry and re-plugging operations.
11. Operator shall be responsible for the reclamation of the site to pre-disturbance conditions as shown in site photos submitted with the Form 6 – Notice of Intent to Abandon and as verified in a joint onsite inspection with COGCC (if held).
   a. Whenever possible, Operator shall utilize procedures that minimize surface impact, such as the use of truck-mounted rigs with rubber tires.
12. Operator shall submit Form 6 Well Abandonment Report: Subsequent Report of Abandonment after plugging has been completed. (Use eForms “Re-plug By Other Operator” to submit Form 6.)
   a. Reason for Abandonment is OTHER; Other Describe: Re-enter to Re-Plug
b. Required Technical Detail/Comments:
   i. Purpose is to re-enter and adequately re-plug prior to hydraulic stimulation of proposed horizontal well per DJ Basin Offset Policy, dated December 16, 2013

c. Required Attachments:
   i. Plugged Wellbore Diagrams
      ii. All applicable Plugging Verification Reports for each person or contractor actually setting the plugs. As determined by the COGCC Engineer, this may include: Cement Job Summary, Wireline Job Summary, Operations Summary, and any other reports describing the plugging.

d. If required by COA on Form 6 – Notice of Intent to Abandon: As-Built GPS well location data.

13. Re-plugging shall be completed prior to hydraulic stimulation of the proposed horizontal well.

14. Operator shall submit a Form 42 - OFFSET MITIGATION COMPLETED for the re-plugged well, referencing the API Number of the proposed horizontal well, to report that appropriate mitigation was completed prior to the hydraulic stimulation of the proposed horizontal well.

15. Operator shall begin Final Reclamation as soon as practicable and submit Sundry Notice, Form 4 to report date Final Reclamation will commence. (Use eForms “Submit By Other Operator” to submit Form 4.)

16. Operator shall submit Sundry Notice, Form 4 to report Final Reclamation is complete; site is ready for inspection. (Use eForms “Submit By Other Operator” to submit Form 4.)

Option 4: Secure COGCC approval for an alternative form of mitigation or COGCC agreement that additional mitigation is unnecessary under the circumstances.

1. Operator shall provide a statement to acknowledge the proximity of the Existing Well and to explain why the alternative mitigation is sufficient to mitigate the potential for communication or why additional mitigation is unnecessary for this purpose.

2. The COGCC Engineer will decide whether to approve the alternative mitigation or exempt the proposed well from additional mitigation.

   a. If the COGCC Engineer approves alternative mitigation, then:
      i. COGCC staff will attach the operator’s statement and add a corresponding COA to the pending Form 2 APD for the proposed horizontal well.
      ii. APD for proposed horizontal well will be approved.
      iii. Operator shall submit the necessary forms and perform the appropriate work based upon the alternative mitigation approved.
      iv. Alternative form of mitigation shall be completed prior to hydraulic stimulation of the proposed horizontal well.
      v. Operator shall submit a Form 42 - OFFSET MITIGATION COMPLETED for the remediated well, referencing the API Number of the proposed horizontal well, to report that appropriate mitigation was completed prior to the hydraulic stimulation of the proposed horizontal well.

   b. If the COGCC Engineer exempts the proposed well from additional mitigation, then:
      i. COGCC staff will attach the operator’s statement and the exemption to the submitted APD.
      ii. APD for the proposed horizontal well will be approved.

   c. If the COGCC Engineer neither approves the alternative mitigation nor exempts the proposed well from additional mitigation, then the operator must select another option.
Workflow for Mitigation Options

1. COGCC Engineer evaluates the Offset Well Evaluation submitted by the operator and all wells within 1500’ of the proposed wellbore for adequate isolation and enters the comment, “Evaluated offset wells for adequate isolation.”

2. If COGCC Engineer determines all wells within 1500’ of the proposed wellbore have adequate isolation, APD for proposed horizontal well will be approved.

3. If COGCC Engineer determines that, at least one Existing Well does not have adequate isolation.
   a. COGCC Engineer places APD “on hold” with comment detailing situation and any wells without adequate isolation.
   b. COGCC Engineer emails operator notification of:
      i. Inadequate isolation determination
      ii. APD “on hold” status
      iii. The options to mitigate the situation for APD approval
      iv. Attaches this DJ Basin Horizontal Offset Policy to email to operator
      v. Copies COGCC Permit Tech on email
   c. Operator notifies COGCC Engineer and Permit Tech of acknowledgement of existing well proximity and agreement to mitigate per the DJ Basin Horizontal Offset Policy.
   d. COGCC Engineer takes APD off “on hold” when requirements for APD approval are satisfied and enters appropriate comments and COAs to explain the operator’s acknowledgements and required mitigation.
   e. APD for proposed horizontal well will be approved.
   f. Operator shall submit the necessary documentation and perform the appropriate work based on the mitigation option selected, as specified above. All such documentation shall be submitted or copied via email (Subject: HZ Offset Well Mitigation Please Respond) to the COGCC Engineer.
   g. COGCC Engineer and other COGCC staff shall approve all necessary documentation for the mitigation option selected as soon as practicable following their submittal.
   h. Prior to the hydraulic stimulation, operator may select and secure COGCC approval for a different mitigation option. To seek such approval, operator shall submit a Sundry Notice Form 4 identifying the new mitigation option. The operator must also submit the necessary documentation and perform the appropriate work for the new mitigation option.
   i. Mitigation shall be completed prior to hydraulic stimulation of the proposed horizontal well.
   j. Operator shall submit a Form 42 - OFFSET MITIGATION COMPLETED for the remediated well, referencing the API Number of the proposed horizontal well, to report that appropriate mitigation was completed prior to the hydraulic stimulation of the proposed horizontal well.

**NOTE:** This process shall also apply to any Change of Location Sundry Notice Form 4 that results in a proposed wellbore being within 1500’ of an existing well, as defined above.