

Best Management Practices for APDs/Form 2 and Form2A:

1. Traffic Control:

- a. To minimize disturbance, equipment and vehicles will be confined to a proposed access. Existing roads will be maintained and kept in the same condition as previously approved, except for existing unimproved road segments which will be upgraded if required by the landowner agreements. All improved access roads and associated structures will be constructed or reconstructed to the minimum standards in Bureau of Land Management (BLM) Manual 9113-Roads and BLM Manual 9112-Bridges and Major Culverts unless otherwise approved by BLM
- b. Reduced Speed Signs will be used wherever necessary. During the initial planning of the project, Chevron utilized the following practices to minimize the total disturbance of the project
 - i. Wherever possible, the proposed pad location was placed near an existing improved access road with only short proposed approach to the location.
 - ii. Access road widths were kept to the minimum safe width appropriate for vehicle volume
 - iii. Wells were co-located on a pad where possible to reduce the total number of well pads required
 - iv. Horizontal wells were planned with extended laterals when possible to reduce the total number of wells drilled within a lease as the total number of pads and associated access, thereby reducing overall surface disturbances.

2. General Housekeeping: Handling Waste

- a. A third-party service company approved by COGCC will be contracted to manage, treat, and dispose of all drilling related wastes associated with proposed wells.
- b. As the drill cuttings move off the shaker, they will be properly screened, chemically treated with a drying agent, and placed into metal storage containers. The containers are then hauled off by a third-party service company.
- c. There will not be a reserve pit on the proposed pads. Drilling fluids will be hauled and disposed of in a manner approved by the BLM Authorized officer.
- d. Upon completion of the drilling operations, any remaining oil-based fluids would be removed from the well location and either recycled into the OBM system on a subsequent well or disposed of in accordance with BLM and/or COGCC rules and regulations.
- e. At any given time, Chevron is planning to truck waste from Flowback fluids, completion/stimulation frac waters, and produced water to one or more individually, permitted by CDEQ disposal wells and/or evaporation ponds, depending on which facilities are accepting fluids on that particular day.
- f. No trash will be buried on the location. A covered trash container will be on site during all drilling/completion operations to contain trash, and this will be hauled off location within thirty (30) days of well completion to an approved landfill.
- g. A portable, self-contained chemical toilet will be provided for human waste disposal during drilling and completion operations. Upon completion of operations, or as required, the toilet holding tank will be pumped and the contents disposed of in an approved sewage disposal facility. It will be removed within ten (10) days following well completion of any future workover operations.

3. Storm Water/Erosion Control:

- a. Temporary controls may be used in conjunction with permanent controls around draws, or at locations where erosion hazards are high. BMPS will be used as designed for the special

- areas to reduce any migration of soils onto and off of site. Energy dissipating controls will be installed at culverts and other areas that have the potential for increasing the concentration of water volume and velocity that could increase erosion.
- b. Drainage dips, ditch relief culverts, and water wings, when used, will be spaced and placed to divert water flow off the graded rights-of-way onto well-vegetated areas with low erosion potential.
 - c. Non-Structural practices spoils excavated will be stored in a manner to prevent displacement. Wattles or other adequate erosion control practices will be implemented around the spoils to minimize erosion. Interim Stabilization controls will be used throughout construction and after construction until a permanent vegetative cover is in place. All Best Management Practices employed will be designed to withstand a twenty-five(25) year weather event. The type and frequency of BMPs used will be determined by slope, topography, soil types and vegetation and potential runoff from adjacent areas that could affect the overall performance of the controls. Diversion ditches will be designated to discharge runoff into well vegetated areas or locations with a low erosion potential. Water bars or wings, when used, will be spaced and placed to divert water flow off disturbed areas and onto well-vegetated areas. Temporarily controls may be used in conjunction with permanent controls around spoil piles, draws, or at locations where erosion hazards are high. BMPs will be used as designed for the specific areas to reduce any migration of soils off site. Energy dissipating controls will be installed at culverts and other areas that have the potential for increasing the concentration of water volume and velocity that can increase erosion.
 - d. Rat and mouse holes will be backfilled on release of the completion rig from the location. Backfilling, leveling and re-contouring are planned as soon as reasonable possible following drilling and completion operations. Fill slopes will be smoothed and reshaped to near pre-disturbed conditions to match the native contour. Fill slopes will be restored to cuts and blended or reshaped into large natural berms that provided visual and storm water benefits. If damages to reclaimed areas occurs as a result of well operations and maintenance, including work over operations, affected areas will be reclaimed again following operations.
4. Interim Reclamation: Any moisture content of the drill cuttings pit will be dewatered and at the time of closure the drill cuttings will meet the standards in table 910-1. The disturbed area not needed for well operation will be revegetated after the site has been properly prepared-recontouring the area to blend with surrounding topography. Broadcast certified seed using seed blend recommended by BLM, in fall (Sept 2011) seeding prior to prolonged ground frost.
 5. Construction:
 - a. Construction may be restricted due to weather, wildlife stipulations, or constraints placed on the leaseholder in the area by federal and/or state agencies. Pad and road construction is usually completed within a short time frame with permanent controls installed once the construction activities are completed.
 - b. Construction specifications:
 - i. The areas to be excavated or occupied by fill shall be cleared and grubbed of all vegetation, boulders, and debris. All such material will be disposed of by stacking, piling, windrowing, removal from site, and or other approved methods.
 - ii. Clearing of vegetation shall be kept to the minimum necessary for construction plus the installation of sediment controls.

- c. Site stabilization during construction
 - i. Controls such as roughening, seeding, re-vegetation, and reclamation practices will use the designated seed mix and shall be monitored to maximize the potential for germination.
 - ii. Waterways of the state will be protected with barriers of vegetation, berms, silt fence, or the other techniques listed to prevent disturbed soils from migrating off site.
 - iii. Fill material will be placed in compacted lifts or layers over the length of the fill. Each lift shall be compacted by compaction equipment such as a sheep's foot or pad roller, with compaction to visible non-movement of the embankment material. Compaction efforts shall not exceed optimum moisture limits. Each lift shall be adequately compacted before beginning the next lift.
- 6. Planning: Chevron trains all employees in safe work practices, good environmental stewardship, health and wellness issues and to ensure that proper personal protective equipment is available and is being used. Chevron has an up to date Spill Protection Control and Countermeasure plan for Rangely Field. Chevron has a zero tolerance regarding drug usage, with education and compliance programs to help reinforce these policies.
- 7. Drilling/Completion Operations:
 - a. Adequate blowout prevention equipment will be used on all well servicing operations
 - b. A closed loop system will be implemented during drilling, using a cuttings catch pit, dewatering system, centrifuge system. Any skim oil will be trucked to chevron Main Water Plant (~4 miles) and pipelined to an oil gathering collection station.
 - c. Prior to drilling operations, chevron will perform an anti-collision scan of existing offset wells that have the potential of being within proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, the operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is no risk of a collision, or harm to people or environment. For the proposed well, upon conclusion of drilling operations, an as-constructed gyro survey will be submitted to COGCC with the form 5.
 - d. Rule 317.P - Requirements to log well: One of the first wells drilled on the pad will be logged with open hole Resistivity Log and Gamma Ray Log from the kick-off point into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or an intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. The Form 5, Completion report for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole Logs were run" and shall clearly identify (By API#, well name and number) the well in which open hole logs were run.
- 8. Horizontal Well Drilling/Completion Operations:
 - a. Unless the production casing has been run and cement or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other wells.

With reference to 604.C.2 Location specific requirements for Mitigation measures, Chevron will do the following:

A. Noise. Operations involving pipeline or gas facility installation or maintenance, or the use of a drilling rig will be contained within maximum permissible noise levels for Light Industrial Zones, as measured at the nearest Building Unit. Chevron will make sure Short-term increases are within allowable limits as described in 802.c. Stimulation or re-stimulation operations and Production Facilities will be governed by Rule 802.

B. Closed Loop Drilling Systems – Pit Restrictions. Closed loop drilling systems will be utilized. Pits would not be constructed within the Buffer Zone Setback, except fresh water storage pits, reserve pits to drill surface casing, and emergency pits as defined in the 100-Series Rules. Fresh water pits within the Exception Zone, Chevron will seek prior approval of a Form 15, Earthen Pit Report/Permit. In the Buffer Zone, fresh water pits shall be reported within 30-days of pit construction. Fresh water storage pits within the Buffer Zone Setback shall be conspicuously posted with signage identifying the pit name, the Chevron's name and contact information, and stating that no fluids other than fresh water are 600-8. Produced water, recycled E&P waste, or flowback fluids will not be routed to fresh water storage pits. Fresh water storage pits within the Buffer Zone Setback shall include emergency escape provisions for inadvertent human access.

C. Green Completions – Emission Control Systems. Flow lines, separators, and sand traps capable of supporting green completions as described in Rule 805 will be installed at Location at which commercial quantities of gas are reasonably expected to be produced based on existing adjacent wells within 1 mile. There will be no Uncontrolled venting within an Urban Mitigation Area. Temporary flowback flaring and oxidizing equipment shall include the following: Adequately sized equipment to handle 1.5 times the largest flowback volume of gas experienced in a ten (10) mile radius; Valves and porting available to divert gas to temporary equipment or to permanent flaring and oxidizing equipment; and Auxiliary fuel with sufficient supply and heat to sustain combustion or oxidation of the gas mixture when the mixture includes noncombustible gases.

D. Traffic Plan. If required by the local government, a traffic plan shall be coordinated with the local jurisdiction prior to commencement of move in and rig up. Any subsequent modification to the traffic plan will be coordinated with the local jurisdiction.

E. Multi-well Pads. Where technologically feasible and economically practicable, chevron will consolidate wells to create multi-well pads, including shared locations with other operators. Multi-well production facilities shall be located as far as possible from Building Units. The pad shall be constructed in such a manner that noise mitigation may be installed and removed without disturbing the site or landscaping. Pads shall have all weather access roads to allow for operator and emergency response.

F. Leak Detection Plan. Chevron already has a plan to monitor Production Facilities on a regular schedule to identify fluid leaks. Chevron will continue to do the same for new wells as well.

G. Berm construction. Berms or other secondary containment devices in Designated Setback Locations shall be constructed around crude oil, condensate, and produced water storage tanks and shall enclose an area sufficient to contain and provide secondary containment for one-hundred fifty percent (150%) of the largest single tank. Berms or other secondary containment devices shall be sufficiently impervious to contain any spilled or released material. All berms and containment 600-9, devices will be inspected at regular intervals and maintained in good condition. No potential ignition sources will be installed inside the secondary containment area unless the containment area encloses a fired vessel. Refer to API Bulletin D16: Suggested Procedure for "Development of a Spill Prevention Control and Countermeasure Plan," 5th Edition (April 2011). Only the 5th Edition of the API bulletin applies to this rule; later amendments do not apply. All material incorporated by reference in this rule will be made available for public inspection during normal business hours from the Public Room Administrator at the office of the Commission, 1120 Lincoln Street, Suite 801, Denver, Colorado 80203. In addition, these materials may be examined at any state publications depository library and are available from API at 1220 L Street, NW Washington, DC 20005-4070.

H. Blowout preventer equipment ("BOPE"). Blowout prevention equipment for drilling operations in a Designated Setback Location will consist of (at a minimum): Rig with Kelly. Double ram with blind ram and pipe ram; annular preventer or a rotating head, or Rig without Kelly. Double ram with blind ram and pipe ram. Mineral Management certification or Director approved training for blowout prevention will be held by least one (1) person at the well site during drilling operations.

I. BOPE testing for drilling operations. Upon initial rig-up and at least once every thirty (30) days during drilling operations thereafter, pressure testing of the casing string and each component of the blowout prevention equipment including flange connections shall be performed to seventy percent (70%) of rated working pressure or ram testing pressure or seventy percent (70%) of the internal yield of casing, whichever is less. Pressure testing will be conducted, and the documented results will be retained by the Chevron for inspection by the Director for a period of one (1) year. Activation of the pipe rams for function testing will be conducted daily when practicable.

J. BOPE for well servicing operations. Adequate blowout prevention equipment will be used on all well servicing operations. Backup stabbing valves will be used in well servicing operations during reverse circulation. Valves will be pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.

K. Pit level indicators. Pit level indicators will be used, where applicable. Closed chamber drill stem tests may be conducted. Chevron will seek approval from director for all other drill stem tests.

M. Fencing requirements. Unless otherwise requested by the Surface Owner, well sites constructed within Designated Setback Locations, will be adequately fenced to restrict access by unauthorized persons.

N. Control of fire hazards. Any material not in use that might constitute a fire hazard will be removed a minimum of twenty-five (25) feet from the wellhead, tanks and separator. Any electrical

equipment installations inside the bermed area shall 600-10 Chevron will comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.

O. Loadlines. All loadlines shall be bullplugged or capped.

P. Removal of surface trash. All surface trash, debris, scrap or discarded material connected with the operations of the property will be removed from the premises or disposed of in a legal manner.

Q. Guy line anchors. All guy line anchors left buried for future use will be identified by a marker of bright color not less than four (4) feet in height and not greater than one (1) foot east of the guy line anchor.

R. Tank specifications. All newly installed or replaced crude oil and condensate storage tanks will be designed, constructed, and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). Chevron will maintain written records verifying proper design, construction, and maintenance, and will make these records available for inspection by the Director. NFPA Code 30 may be examined at any state publication depository library. Upon request, the Public Room Administrator at the office of the Commission, 1120 Lincoln Street, Suite 801, Denver, Colorado 80203, will provide information about the publisher and the citation to the material.

S. Access roads. At the time of construction, all leasehold roads shall be constructed to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition.

T. Well site cleared. Within ninety (90) days after a well is plugged and abandoned, the well site will be cleared of all non-essential equipment, trash, and debris. For good cause shown, an extension of time may be granted by the Director.

U. Identification of plugged and abandoned wells. Chevron will identify the location of the wellbore with a permanent monument as specified in Rule 319.a.(5). Chevron will also inscribe or imbed the well number and date of plugging upon the permanent monument.

V. Development from existing well pads. Where possible, Chevron will provide for the development of multiple reservoirs by drilling on existing pads or by multiple completions or commingling in existing wellbores (refer Rule 322).

W. Site-specific measures. During Rule 306 consultation, Chevron will develop a mitigation plan to address location specific considerations not otherwise addressed by specific mitigation measures identified in this subsection 604.c.

X. Dust, Lights, Odor: Operator will implement measures like watering down the pad location frequently to keep the dust from rising, install measures to control proppant dust, and will ensure the lights are directed towards pad location and provide adequate barriers to prevent light pollution to neighbors. Chevron shall make provisions to control odors during drilling, disposing waste materials, fracturing, flowback, and production to the satisfaction of COGCC.

Y. Zero flaring or venting of gas upon completion of flowback, excepting upset or emergency conditions, or with prior written approval from the Director for necessary maintenance operations.