

## Process and permit approval for Oil and Gas production in New Mexico

### STEP 1: ACQUIRE THE LEASE (State Land Office)

**STEP 2: THE APD:** Once an operator has obtained a lease from the landowner (federal, state, private, tribal), the operator must apply to the New Mexico Oil Conservation Division (NMOCD) to obtain a permit to drill. The operator submits a formal **APPLICATION FOR PERMIT TO DRILL**, colloquially known as an APD.

*(If you are drilling on federal or tribal land, an operator also has to get an APD. This is a summary for state permitting only.)*

**INFORMATION REQUIRED TO BE INCLUDED IN AN APD:** To receive approval to drill from NMOCD, an operator must identify the following:

- the location of well;
- how the well will be drilled;
- what sort of equipment will be used during the drilling;
- what is the depth to groundwater at the drilling location;
- what is the distance from the drilling site to the nearest fresh water well;
- what is the distance from the drilling site to the nearest surface water;
- what is the size of the casings (pipe) that will be used in the well construction;
- how many strings of casings will be used *(What is a “string”? A string is an industry term that describes the number of layers used in the construction of well. To help explain, consider the following example: If four strings of casings are being used to construct a well, that means four different layers, or steel straws, of differing diameters are used to seal the well. Each steel string, or straw, fits into each other to create an additional protective layer. So, during construction, each steel straw is inserted inside each other into the ground, and then cement is pumped in between each steel straw layer to ensure well integrity);*
- what is the specific casing material used;
- what is the casing material and drilling technique being used for casings through groundwater zones;
- what kind of cement is used during well construction;
- where and what depth will the cement be circulated, and does that match each string of casing depth;
- how will the driller perform well integrity tests, and which specific tests will be used;
- what kind of safety measures will the driller use to prevent a blowout during construction; and
- what special equipment will be on site to prevent or contain a blowout during construction. *(The geology of New Mexico, on the whole, presents no serious threat from blowouts during drilling onshore. Nevertheless, the extra steps to prevent such an occurrence are required and need to be documented for permit approval.)*

Finally, all operators are required to give local municipalities, i.e. a city, town, or village, special notice if of an APD that will be drilled within the jurisdiction of the local municipality.

**STEP 3: CLOSED LOOP or PIT:** Operators must also fill out a required form indicating if the well will be utilizing a closed loop system or a pit to handle produced water. Both a closed loop system or a pit have very specific siting requirements that must be approved by NMOCD. For a Closed Loop System, an operator will have a tank or tanks that connected to each other to collect and store produced water until it is removed for disposal. In a Closed Loop System, there is neither the existence of an outdoor exposed pit, nor is there any surface work done that requires digging down into the Earth to create a pit to hold fluids. In Pit system: Operators are allowed to use a pit to hold produced water, but the approval is dependent upon very, very specific and strict siting requirements. For example, Pits must have certain liner requirements and must have leak detection systems installed under the Pits for ground protection. Likewise, an operator is required to provide NMOCD requirements about how sites must be maintained and operated for both Closed Loop Systems and Pits. Finally, an operator is required to obtain additional permits that indicate NMOCD has reviewed and approved the operator's plan for closure and site reclamation.

**STEP 4: HYDROGEN SULFIDE PLAN:** All operators must submit a Hydrogen-Sulfide Plan to NMOCD, and these plans must be submitted and approved prior to any well operation. The purpose of this plan is to protect workers and to protect the surrounding communities from exposure to hydrogen sulfide. Notification plans and protocol must also be on record with the NMOCD that document how local authorities and/or local fire departments will be notified in the unlikely event that an incident were to occur at the wellsite.

**STEP 5: TRANSPORTATION:** WHEN all of the above permits are approved, and drilling and production has begun, operators must get further permission to transport the produced oil or gas, whether that will be by truck or whether it will be sent to a pipeline for export. These product transportation approved permits are a requirement from NMOCD. Depending on an operator's plans for transportation, this approval may come quickly at the time of other permit approvals. Or such approvals may come shortly thereafter depending on when and how an operator finalizes their own product export transportation plans. Such a permit can come at a later date after well permits are approved, as specifics and infrastructure for such midstream duties may not yet be in place during initial well construction.

**STEP 6: WATER, WASTE AND PRODUCED WATER:** NMOCD has prescribed rules in place for oil and gas producers on how to dispose, or better yet, recycle and reuse produced water. Produced water is the water that is naturally occurring with the hydrocarbons that comes out of a well. NMOCD has specific rules as far as it pertains to containment and recycling facilities, which require permits. The permit must include very specific siting requirements, leak detection requirements, and liner requirements. All of these will either be accepted or rejected by NMOCD. NMOCD will reject applications if they feel a plan is not protective enough. (A common misconception that outsider groups have when these ARE approved quickly is that they are rubber stamped, however, many applications come from areas that have the same, or similar, geology, which makes it easier for state regulators to understand and quickly approve.) Produced water permit applications must also contain detailed information from the operator about where produced water will be handled and that distance to groundwater and surface waters sources, etc. For Produced Water, NMOCD will sometimes approve permits but require conditions of approval. These conditions can come from both the state NMOCD in Santa Fe or the NMOCD District Offices.

**STEP 7: AIR EMISSIONS:** In the summer of 2018, the New Mexico Environment Department (NMED) adopted two new General Construction Permits for the Oil and Gas Industry. NMED is completely separate state agency than Energy, Minerals and Natural Resources Department (EMNRD), which oversees Oil and Gas through the NMOCD. The new NMED permits, known as General Construction Permits, regulate to how operators capture air emissions from facilities. This includes any emissions

coming from the wellhead, associated tank batteries, compressors and additional site equipment. All of these additional permits are required through the NMED Air Quality Bureau has the authority over those permits.

**STEP 8: CO-MINGLING:** An operator in New Mexico can pulling oil, gas and other minerals from two separate geologic formations in the same area using a single well or cluster of wells (for example, wells that pull from both the Wolf Camp and the Bone Springs underground formations). If that operator wishes to put all of this production into one tank, or tank battery, so the operator has a smaller surface footprint, that operator has to apply for permission from the NMOCD to “co-mingle”. To obtain this permit, an operator must submit a surface facility diagram, which offers specific details to the state on how the operator will build and operator the co-mingled surface facility. Industry has placed a heavy emphasis on keeping a surface footprint as small as possible. This also saves area on the wellpad for potential future equipment needs, like vapor recovery units and/or additional meters. The required co-mingling permit represents yet another opportunity for NMOCD to either approve, deny, or approve with conditions.

**ADDITIONAL STEPS:** Additional circumstances exist that may require an operator to obtain yet additional permits for operation, depending on the wellsite location. These include, but are not limited to: ENDANGERED, THREATENED OR SPECIES OF CONCERN PROVISIONS; Right of Way (ROW) or Business Leases, New Mexico Crucial Habitat Assessment Tool (NM CHAT) approvals, Candidate Conservation Agreements (CCAs), and Candidate Conservation Agreements with Assurances (CCAAs). With all of the additional layers of regulatory approval now required in the state of New Mexico, an operator is already essentially going through the requirements of the National Environmental Policy Act (NEPA), only on a state level.

**For Federal Lands, there are separate BLM requirements:**

Federal approvals to drill do require an operator to follow the NEPA process. But, because in most instances, the federal government owns both surface and mineral rights, the federal government requires strict evaluation and approval for additional surface aspects related to oil and gas operations. In short, the BLM is looking at leases from both the landowner perspective and regulator, where as in New Mexico, those tasks are reviewed and permitted by two different agencies with distinctly different missions.

**For Private Land:**

Issues should be addressed through Surface Use Agreement, which vary on stringency levels. The Surface Owners Protection Act (SOPA), passed by the New Mexico Legislature and signed into law in 2007, gives more authority and creates more requirements for operators. Under SOPA, an operator must notify landowners 30 days before drilling, have a written agreement already in place with a surface owner, and pay for the use of the land surface.

**All Lands Require Financial Assurance Bonding:** Money to put up in the event something goes wrong, money will assist with rectifying that wrong.

**How long does it take to get your fully submitted APD to get approved?**

NEW MEXICO APD Approval:	Average 10 days (per November 2018)
FEDERAL APD Approval:	Average 8 months (per November 2018)