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2/18/88

PROPOSED ORDER R-111-P

IT IS THEREFORE ORDERED THAT:

[~~That~~] This order shall be known as The Rules and Regulations Governing the Exploration and Development of Oil and Gas in Certain Areas Herein Defined, which are Known to contain Potash Reserves.

I.

OBJECTIVE

The objective of these Rules and Regulations is to prevent waste, protect correlative rights, assure maximum conservation of the oil, gas and potash resources of New Mexico, and permit the economic recovery of oil, gas and potash minerals in the area hereinafter defined.

II.

THE POTASH[~~-OIL~~] AREA

(1) The Potash[~~-Oil~~] Area, as outlined in Exhibit A attached hereto and made a part hereof, represents the area in various [~~part~~] parts of which potash mining operations are now in progress, or in which core tests indicate commercial potash reserves. Such area is coterminous with the Known Potash Leasing Area (KPLA) as determined by the U.S. Bureau of Land Management (BLM).

(2) The Potash[~~-Oil~~] Area, as outlined herein, may be revised by the [~~Commission~~] Division after due notice and hearing at the regular pool nomenclature hearings, to reflect changes made by BLM in its KPLA.

III.

DRILLING IN THE POTASH AREA

(1) All drilling of oil and gas wells in the Potash Area shall be subject to these Rules and Regulations.

(2) No wells will be drilled for oil or gas at a location which, in the opinion of the [~~Commission~~] Division or its duly authorized representative, would result in undue waste of potash deposits or constitute a hazard to or interfere unduly with potash deposits.

No mining operations will be conducted in the Potash Area that would, in the opinion of the [~~Commission~~] Division or its duly authorized representative, constitute a hazard to oil or gas production, or that would unreasonably interfere with the orderly development and production from any oil or gas pool.

(3) Upon discovery of oil or gas in the Potash Area, the Oil Conservation [~~Commission~~] Division [~~shall~~] may

promulgate pool rules for the affected area after due notice and hearing in order to address conditions not fully covered by these rules and the general rules.

(4) The Division's District Supervisor, may waive the requirements of Section IV(3), upon satisfactory showing with concurrence of the BLM, that a location is outside the LMR and surrounding buffer zone and that no potash resources will be endangered.

(5) All encounters with flammable gas, including hydrogen sulfide during drilling operations shall be reported immediately to the appropriate OCD District office followed by a written report of same.

IV.

DRILLING AND CASING PROGRAM

(1) [~~For the purpose of the regulations and the drilling of oil and gas exploratory test wells, shallow and deep zones are defined, as follows:~~] For the purpose of the regulations and the drilling of wells for oil and gas, shallow and deep zones are defined, as follows:

(a) The shallow zone shall include all formations above the base of the [~~Delaware sand~~] Delaware

Mountain Group or above a depth of 5,000 feet, whichever is the lesser.

(b) The deep zone shall include all formations below the base of the [~~Delaware sand~~] Delaware Mountain Group or below a depth of 5,000 feet, whichever is the lesser.

(2) Surface Casing String:

(a) A surface casing string of new or used oil field casing in good condition shall be set in the "Red Bed" section of the basal Rustler formation immediately above the salt section, or in the anhydrite at the top of the salt section, as determined necessary by the regulatory representative approving the drilling operations, and shall be cemented with not less than one hundred and fifty percent (150) percent of calculated volume necessary to circulate cement to the ground surface.

(b) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

(c) Casing and water-shut-off tests shall be made both before and after drilling the plug and below the casing seat as follows:

(i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of six hundred (600) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per square inch or more should occur within thirty (30) minutes, corrective measures shall be applied.

(ii) If cable tools are used, the mud shall be bailed from the hole, and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

(d) The above requirements for the surface casing string shall be applicable to both the shallow and deep zones.

(3) Salt Protection String:

(a) A salt protection string of new or used oil field casing in good condition shall be set not less than one hundred (100) feet nor more than six hundred (600) feet below the base of the salt section; provided that such string shall not be set below the top of the highest known oil or gas

zone. With prior approval of the OCD District Supervisor the wellbore may be deviated from the vertical after completely penetrating Marker Bed No. 126 (USGS) but that section of the casing set in the deviated portion of the wellbore shall be centralized at each joint.

(b) The salt protection string shall be cemented, as follows:

(i) For wells drilled to the shallow zone, the string may be cemented with a nominal volume of cement for testing purposes only. If the exploratory test well is completed as a productive well, the string shall be re-cemented with sufficient cement to fill the annular space back of the pipe from the top of the first cementing to the surface or to the bottom of the cellar, or may be cut and pulled if the production string is cemented to the surface as provided in sub-section IV (5), (i) below.

(ii) For wells drilled to the deep zone, the string must be cemented with sufficient cement to fill the annular

space back of the pipe from the casing seat to the surface or to the bottom of the cellar; however, where the base of the Delaware Mountain Group is definable the casing rules in (IV) (3b) (i) shall apply even if the depth of the bottom of the Delaware Mountain Group is greater than 5,000 feet. For the purpose of identification, the base of the Delaware Mountain Group is hereby identified as the equivalent of the base of such formation as found at a depth of 7485 feet in the Richardson and Bass No. 1 Rodke well in Section 27, Township 20 South, Range 31 East, NMPM, [~~Lea~~] Eddy County, New Mexico, ~~immediately overlying the Bone Springs~~ formation.

(c) If the cement fails to reach the surface or the bottom of the cellar, where required, the top of the cement shall be located by a temperature or gamma ray survey and additional cementing shall be done until the cement is brought to the point required.

(d) The fluid used to mix with the cement shall be saturated with the salts common to the zones

penetrated and with suitable proportions but not less than 1% of calcium chloride by weight of cement.

(e) Cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

(f) Casing tests shall be made both before and after drilling the plug and below the casing seat, as follows:

(i) If rotary tools are used, the mud shall be displaced with water and a hydraulic pressure of one thousand (1000) pounds per square inch shall be applied. If a drop of one hundred (100) pounds per ~~square inch or more should occur within~~ thirty (30) minutes, corrective measures shall be applied.

(ii) If cable tools are used, the mud shall be bailed from the hole and if the hole does not remain dry for a period of one hour, corrective measures shall be applied.

(g) The [~~Commission~~] Division, or its duly authorized representative, may require the use of centralizers on the salt protection string when in their judgment the use of such centralizers would offer further protection to the salt section.

(h) Before drilling the plug the casing outlet shall be equipped with rupture disc or other automatic pressure-relief device set at 80% of rated burst pressure of new casing or 60% of rated burst pressure of used casing, together with piping to divert any flow a safe distance from the rig. Such device shall remain installed so long as drilling activities continue in the well until the intermediate or production casing is cemented to surface.

(i) The above requirements for the salt protection string shall be applicable to both the shallow and deep zones except for sub-section IV (3), (b), (i) and (ii) above.

(4) Intermediate String:

(a) [~~In the drilling of oil and gas exploratory test wells to the deep zone,~~] In drilling wells to the deep zone for oil or gas, the operator shall have the

option of running an intermediate string of pipe, unless the [~~Commission~~] Division requires an intermediate string.

(b) Cementing procedures and casing tests for the intermediate string shall be the same as provided under sub-sections IV (3), (c), (e) and (f) for the salt protection string.

(5) Production String:

(a) A production string shall be set on top or through the oil or gas pay zone and shall be cemented as follows:

(i) For wells drilled to the shallow zone the production string shall be cemented to the surface if the salt protection string was cemented only with a nominal volume for testing purposes, in which case the salt protection string can be cut and pulled before the production string is cemented; provided, that if the salt protection string was cemented to the surface, the production string shall be cemented with a volume adequate to protect

the pay zone and the casing above such zone.

(ii) For wells drilled to the deep zone, the production string shall be cemented with a volume adequate to protect the pay zone and the casing above such zone; provided, that if no intermediate string shall have been run and cemented to the surface, the production string shall be cemented to the surface.

(b) Cementing procedures and casing tests for the production string shall be the same as provided under sub-section IV (3), (c), (e) and (f) for the salt protection string; however if high pressure oil or gas production is discovered in an area, the [~~Commission~~] Division [~~shall~~] may promulgate the necessary rules to prevent the charging of the salt section.

V.

DRILLING FLUID FOR SALT SECTION

The fluid used while drilling the salt section shall consist of water, to which has been added sufficient salts of

a character common to the zone penetrated to completely saturate the mixture. Other admixtures may be added to the fluid by the operator in overcoming any specific problem. This requirement is specifically intended to prevent enlarged drill holes.

VI.

PLUGGING AND ABANDONMENT OF WELLS

(1) All wells heretofore and hereafter drilled within the Potash Area shall be plugged in a manner and in accordance with field rules established by the [~~Commission~~] Division that will provide a solid cement plug through the salt section and any water-bearing horizon and prevent liquids or gases from entering the hole above or below the salt section.

(2) The fluid used to mix the cement shall be saturated with the salts common to the salt section penetrated and with suitable proportions but not more than three (3) percent of calcium chloride by weight of cement being considered the desired mixture whenever possible.

VII.

LOCATION FOR WELLS

(1) Within 90 days following the effective date of this order, and on January 31 each year thereafter, each potash lessee shall file with the District Manager of the BLM a designation of the potash deposits on his lease which he considers to be "life-of-mine reserves" (LMR) as described in the agreement of the Potash-Oil and Gas Work Committee dated November 23, 1987, attached hereto as Exhibit "B". Upon verification of the selection of LMR lands by the BLM such lands shall be committed to a map which, together with appropriate buffer zones shall constitute lands on which drilling applications will not be approved, except as provided in ~~(3)~~ (4) hereinabelow.

(2) Before commencing drilling operations for oil or gas on any lands within the Potash Area, the well operator shall prepare a map or plat showing the location of the proposed well, said map or plat to accompany each copy of the Notice of Intention to Drill. In addition to the number of copies required by the [~~Commission~~] Division, the well operator shall send one copy by registered mail to all potash operators holding potash leases within a radius of one mile of

the proposed well, as reflected by the plats submitted under paragraph IX (2).

(3) The well operator shall furnish proof of the fact that said potash operators were notified by registered mail of his intent by attaching return receipt to the copies of the Notice of Intention to Drill and plats furnished the [~~Commission~~] Division.

[~~The Commission, or its authorized representative, may approve such Notice of Intention to Drill if no objection to the location of the proposed well is made by a potash operator within ten days after receipt. If the location of the proposed well is objected to by the potash operator, the matter shall be referred to the Secretary-Director of the Commission for arbitration. If a satisfactory settlement cannot be reached, the Secretary-Director of the Commission shall refer the matter to a hearing before the Commission after due notice and a decision either approving or denying the operator's plans to drill shall be entered by the Commission.~~]

(4) Drilling applications on federal lands will be processed for approval by BLM. Applications on state or patented lands will be processed by the Division, and, in the case of state lands, in collaboration with the Commissioner of

Public Lands. The Division will first ascertain from the BLM that the location is not within the LMR area. Any application to drill in the LMR area, including buffer zones, may be approved ~~only after notice and~~ by mutual agreement hearing, or by mutual agreement of lessor and lessees of both potash and oil and gas interests. Applications to drill outside the LMR and associated buffer zones will be approved as indicated in the guidelines established in Exhibit B.

VIII.

INSPECTION OF DRILLING AND MINING OPERATIONS

[. ~~A representative of the potash operator may be present during drilling, cementing, casing, and plugging of all oil or gas wells within a radius of one mile of the well location to observe conformance with these regulations.~~] A representative of any potash lessee within a radius of one mile from the well location may be present during drilling, cementing, casing, and plugging of any oil or gas wells to observe conformance with these regulations. Likewise, a representative of the oil and gas lessee may inspect mine workings on his lease to observe conformance with these regulations.

IX.

FILING OF WELL SURVEYS, MINE SURVEYS AND POTASH DEVELOPMENT PLANS

(1) Directional Surveys:

The [~~Commission~~] Division may require an operator to file a certified directional survey from the surface to a point below the lowest known potash-bearing horizon on all wells drilled within the Potash Area. These surveys may be required where, in the [~~Commission's~~] Division's judgment, the exact location of the well-bore must be determined in order to aid mining operations.

(2) Mine Surveys:

Within 30 days after the adoption of this order and thereafter on or before January 31st of each year, each potash operator shall furnish the Division two copies of a plat of a survey of the location of his leaseholdings and all of his open mine workings, which plat shall be available for public inspection.

[~~(3) Potash Development Plan:~~

~~Within 30 days after adoption of this order and thereafter on or before January 31st of each year, each potash operator shall furnish two copies of a projection of development plans in the form of a plat, which plat shall be for the confidential use of the Commission and for inspection by any affected oil or gas operator. The projection shall cover not less than 3 nor more than a 5 year development program.~~]

X.

APPLICABILITY OF STATEWIDE RULES AND REGULATIONS

All general statewide rules and regulations of the Oil Conservation [~~Commission~~] Division governing the development, operation, and production of oil and gas in the State of New Mexico not inconsistent or in conflict herewith, are hereby adopted and made applicable to the areas described herein.

(Exhibit A to be attached as defining the Potash Area)

(Exhibit B to be attached defining LMR)

Done at Santa Fe, New Mexico on the day and year hereinabove designated.

STATE OF NEW MEXICO