DEVELOPMENT OF THE HYDRAULIC FRACTURING REGULATIONS FOR NEVADA

PRESENTATION TO MINING OVERSIGHT AND ACCOUNTABILITY COMMISSION (MOAC)

September 24, 2014

Richard Perry, Administrator, NDOM

Dave Gaskin, Deputy Administrator, NDEP

FOUR AGENCIES CAN BE INVOLVED WITH DRILLING AN OIL WELL IN NEVADA

- BLM – drilling on Federal lands, leasing process, NEPA process
- NDEP – Air permits for surface area disturbance, UIC permits if water is to be re-injected, water pollution control permits if water is to be discharged outside of containment.
- NDOM – Permits to drill on private/state lands, coordinates w/ BLM for drill permits on Federal lands.
- NDWR – For any water used in drilling, dust control or hydraulic fracturing

Team that developed regulations

- 2 Sr. Members from NDEP: Dave Gaskin and Alan Tinney
- 3 Sr. Members from NDOM: Lowell Price, Mike Visher and Rich Perry
- CMR Oil and Gas Commissioner Art Henderson
- Consultant: Tom Gallagher, formerly with State Engineer

DEVELOPMENT OF REGULATIONS

1. **Reviewed regulations of 32 current oil-producing states**
2. **Reviewed BLM proposed rule on hydraulic fracturing**
3. **Utilized Interstate Oil and Gas Compact Commission (IOGCC) resources on HF**
4. **Staff discussed what works and what does not with regulators in Arkansas, California, Colorado, Kansas, North Dakota, Ohio, Pennsylvania, Texas and Utah.**
5. **Borrowed portions of "rule 609" from Colorado's recent update: water well sampling.**
6. **Benchmarked regulatory elements with other States**
7. **Comments from public workshops in March in CC, Elko, LV**

SB 390 NAC 522.119

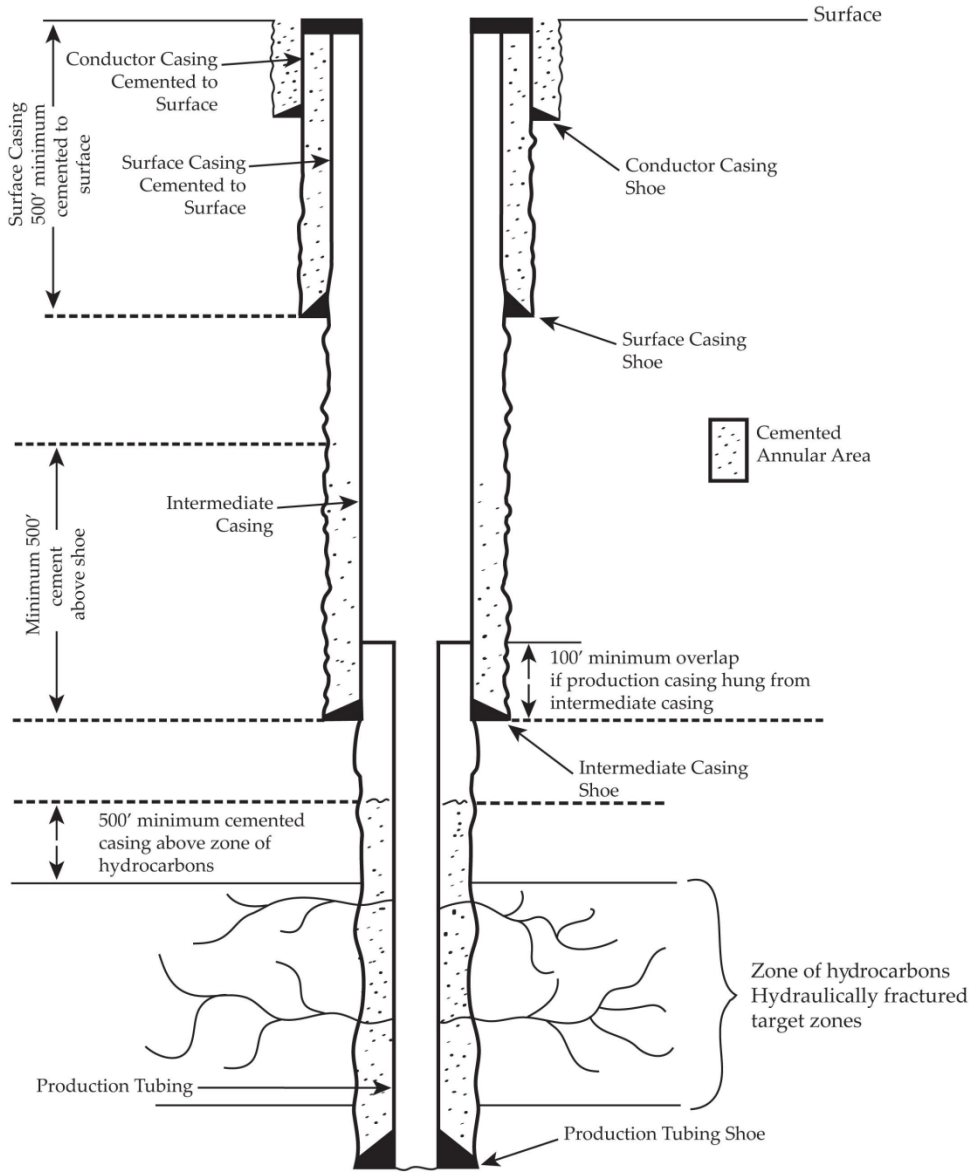
- **NRS 522.119 Development of program; regulations.**

- **The Division of Minerals and the Division of Environmental Protection shall, jointly, develop a hydraulic fracturing program to:**

HOW PROGRAM AND REGULATIONS ADDRESS SB390

- (a) Assess the effects of hydraulic fracturing on the waters of the State of Nevada
  - Permit application to include 1-mile radius Area of Review (AOR)
  - Groundwater baseline sampling and monitoring of up to 4 available water sources within one mile radius of proposed well by operator before, and twice after HF treatment
  - Source-control monitoring of well bore
  - DRI study “Aquifer quality assessment program”, of upper Humboldt basin by Noble

Oil & Gas Resource Well
Proposed for Hydraulic Fracturing
Vertical



March 14, 2014

Nevada Division of Minerals

HOW PROGRAM AND REGULATIONS ADDRESS SB390

- (b) Require a person who engages in hydraulic fracturing to disclose each chemical used to engage in hydraulic fracturing;

  - Division has approved list of HF chemicals on web site
  - 30-day approval process for additions to list
  - Division can deny use of any chemical proposed if deemed unsafe
  - Operator to post information and chemicals used on a publically-available chemical disclosure registry http://fracfocus.org

HOW PROGRAM AND REGULATIONS ADDRESS SB390

- (c) Provide for notice to members of the general public concerning activities relating to hydraulic fracturing in this state
  - Approved Applications for Permit to Drill (APD's) and Conditions of Approval (COA's) on Division web site: http://minerals.nv.gov/
  - 14-day notification to land owners, county commission and Division prior to HF by operator
  - Recent presentations and peer-reviewed papers updated regularly on NDOM web site

NRS 522.119 (SB390)

- Program to be developed by July 1, 2014
- Regulations to implement the program to be adopted by January 1, 2015

UPDATES TO NAC 522 AND NAC 534A

- **500 feet minimum cemented surface casing**
- **500 feet of cemented intermediate or production casing from bottom of shoe or highest hydrocarbon producing zone**
- **Casing specification minimum A.P.I. 5CT**
- **Casing cement specification minimum A.P.I. 10A**
- **Cement and pressure test report submission to NDOM**
- **Administrator can require a cement bond log if cement/pressure reports are inconclusive**
- **B.O.P.E. rating 3000 p.s.i. Division to witness or approve**
- **Increase in administrative production fee from $0.10 to $0.15 per barrel**

SCHEDULE

- Development of draft regulations by NDOM and NDEP staff – August to November, 2013
- Stakeholder meeting – Nov 21, 2013
- Draft changes to NAC 522 – Dec. 2013
- Public meeting Jan 16, 2014. CMR-approved draft
- LCB pre-adoption review January, 2014.
- Public Workshops – March 17-21 in CC, Elko, LV
- Public comment ended 5 PM March 28th
- Edits based on public comments April-June, 2014
- LCB Pre-adoption review of edits – July, 2014
- CMR adopted regulations at August 28, 2014 hearing.
- MOAC review and recommendations 9-24-2014
- Legislative Commission's Subcommittee review – t.b.d.

HOW DO THESE PROPOSED REGULATIONS COMPARE WITH OTHER STATES ?

- Center of Energy Economics and Policy

"The State of State Shale Gas Regulation"

- Of the 20 regulatory elements evaluated in the benchmark study, Nevada's proposed regulations address all 20:
  - 16 command-and-control regulations
  - 3 case-by-case permitting
  - 1 performance standard

http://www.rff.org/centers/energy_economics_and_policy/Pages/Shale_Maps.aspx




102WL
STINGER
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United Rentals



QUESTIONS ?