STATE OF ALASKA

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February 19, 2010

AOGCC Industry Guidance Bulletin No. 10-002
Mechanical Integrity Testing

The Alaska Oil and Gas Conservation Commission (Commission) provides the following clarification of injection well mechanical integrity pressure test (MIT) requirements as outlined in regulations 20 AAC 25.252 and 25.402. Injection orders supplement Commission regulations by providing additional operating and testing obligations.

MIT Preparation

- The Commission must be notified at least 24 hours in advance (48 hours for wells located remote from the nearest Commission office) for an opportunity to witness the MIT;
- Pumping into and bleeding pressures from annuli should be avoided for 24 hours prior to the MIT; if necessary, information should be available to document such activity;
- The well's annulus must be fluid packed before the Commission arrives;
- Calibrated pressure gauges with suitable range and accuracy must be installed on the tubing, inner (tubing by casing) annulus, and outer (casing by casing) annulus; current calibration should be evident with proper labels or other documentation;
- Suitable flow measurement equipment should be available to determine the volume of fluids pumped into and returned from the tested space;
- Other equipment (e.g., tanks, lines, bleed trailers, etc.) that is necessary for the safe pressure testing and suitable for the operating environment should be rigged up prior to Commission arrival at the location.

The following information must be available at the location for Commission Inspector review:

- Copy of approved waivers (current; if any) relating to the integrity of the tested well;
- Current well schematic;
- Graph of tubing, inner annulus, and outer annulus pressures for the preceding 90 days.

Equipment Pressure Rating

Equipment that could be subject to test pressure must have a rated working pressure that meets or exceeds the planned test pressure. API defines the rated working pressure of equipment to be the maximum internal pressure that the equipment is designed to contain or control.

Test Cycle

After the initial MIT, Class II disposal wells injecting solid slurries (used muds, cuttings, produced sand, etc.) require an MIT once every 2 years; otherwise, MITs must be conducted once every 4 years.

Injection wells used for enhanced recovery operations must be tested once every 4 years. The Commission may, in its discretion, approve an alternate MIT schedule.

A 2- or 4-year MIT means the test must be performed not later than the 2- or 4-year anniversary of the most recent test date, unless a specific anniversary date for the MIT has been established by a Commission approval (e.g., Area Injection Order administrative approval). The Commission must be provided the opportunity to witness the MIT for a test to establish a new test due date. Operators are encouraged to take advantage of operating efficiencies in scheduling groups of MITs within the 2- or 4-year window. The Commission may require a witnessed test to be rescheduled to accommodate workload priorities.

A pre-injection MIT performed prior to demobilizing a drilling rig from a well should be documented on the Commission's MIT form and emailed to the Commission addressees noted on the test report form.

Test Pressure

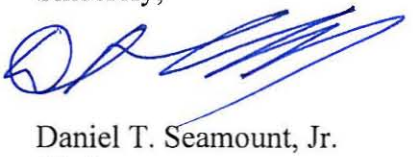
Unless otherwise required by the Commission, an MIT of the inner annulus is required to a minimum pressure of 1500 psi or a pressure determined by multiplying 0.25 psi per foot times the true vertical depth of the packer – whichever is greater. A minimum pressure differential of 500 psi should be maintained between the tested annulus and tubing or adjacent annulus. The operator has the discretion to test to a higher pressure. A passing MIT will have no more than a 10 percent decline in pressure (based on the actual test pressure), a stabilizing pressure trend, and a final pressure that is at or above the required test pressure. For example, the operator may choose to start a required 1500 psi test at or above 1650 psi (additional 150 psi to allow for the 10 percent pressure decline over test duration).

Shut-in Wells

The Commission's preference is to witness an MIT while a well is actively injecting and wellbore conditions (rate and temperature) are stable. If the well is in a short-term shut-in status when the MIT is due, the Commission should be notified and provided an alternate date for testing based on when injection will be recommenced. Injection wells that are shut in long-term (undetermined when injection will restart) need not be tested until they are ready to recommence injection. In lieu of an MIT for the long term shut-in well, the operator must provide to the Commission a quarterly graph of tubing, inner annulus and outer annulus pressures.

Please share this Guidance Bulletin with all appropriate members of your organizations. Questions or discussion regarding this guidance bulletin should be directed to James Regg at (907) 793-1236.

Sincerely,



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Chair