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COMPASS: Other points of view

Alaska careful about blowout prevention

By DAN SEAMOUNT, JOHN NORMAN and CATHY FOERSTER

Given the attention to blowout prevention caused by recent events in the Gulf of Mexico, Alaskans should know how the State of Alaska protects against a catastrophic loss of well control, commonly referred to as a blowout.

While there are several state agencies engaged in oversight of oil and gas operations, the permitting, inspection and regulation of wells in Alaska is overseen by the Alaska Oil and Gas Conservation Commission (AOGCC).

The AOGCC has a codified, technically comprehensive well permitting process and a rigorous, interactive well operations inspection program, both of which are administered by a highly experienced and professional staff.

No oil, gas or geothermal well is allowed to be drilled in Alaska without a permit from the AOGCC. No permit will be approved or issued until the AOGCC's geologists and engineers have thoroughly reviewed the proposal. The review includes all technical aspects of the well and rock formations to be encountered and ensures that appropriate blowout prevention equipment is used.

Although its importance cannot be overestimated, from a drilling perspective blowout prevention equipment is like a car's air bag — the last line of defense. As a result, a substantial part of the AOGCC's efforts go to ensure the blowout prevention equipment is never needed, i.e., that all other aspects of the drilling proposal have been planned appropriately.

The first line of prevention is drilling fluid. An AOGCC geologist reviews the state's vast database of geologic information to identify any potential rock layers that the well will penetrate and that could have potential to flow. Then an AOGCC engineer reviews the drilling procedure to ensure that the planned drilling fluids are appropriate to overcome the an-



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ticipated pressures and prevent uncontrolled flow from the well during the drilling process.

The second line of prevention is well construction. The AOGCC mandates appropriate pipe sizes and setting depths, as well as cement formulas and volumes, to provide a competent barrier to flow from rock formations behind pipe.

Finally, no permit is granted until AOGCC engineers and geologists confirm that good oil field practices will be followed throughout the operation.

Before a rig is brought into service, an AOGCC field inspector inspects it to ensure it is fit for purpose and appropriately equipped.

While rigs are in service, their blowout preventers and other safety equipment are tested every 14 days (every seven days for exploratory wells) to ensure that they perform properly. An AOGCC inspector witnesses approximately one fourth of these tests. An AOGCC engineer reviews all tests to ensure that they are being performed properly and the equipment is functioning as intended.

This review includes validation that tests not witnessed have been performed correctly. If any major component of a blowout preventer fails a test, AOGCC regulations require drilling operations to be suspended until it passes. The inspector also ensures that all equipment being

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used is consistent with the approved permit, provides redundant levels of safety, and is suitable for the application.

Records show that AOGCC inspectors check every rig in the state at least once every 60 days, personally ensuring that the blowout prevention equipment is in working order. The expertise of the AOGCC engineer in charge of the field inspection program was nationally recognized by his recent nomination to serve on a joint committee of the National Academy of Engineering and the National Research Council that will analyze the causes of the Deepwater Horizon blowout.

After drilling is finished and a well is ready to produce, additional AOGCC regulations require installation, use and maintenance of safety-related well hardware such as surface safety valves for certain types of wells, subsurface safety valves for certain wells, and various well production flow control devices. AOGCC inspectors regularly test and inspect these safety valve systems for proper operation. The AOGCC also periodically makes unannounced inspections.

Although concerns regarding blowout prevention equipment are undoubtedly justified, Alaska has a long and proud record of safe oil and gas drilling. In no small measure this is due to constant oversight of drilling operations by the capable staff of the AOGCC.

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