

**STATE OF ALASKA**  
**ALASKA OIL AND GAS CONSERVATION COMMISSION**  
**333 West Seventh Avenue, Suite 100**  
**Anchorage, Alaska 99501**

Re: Reconsideration of conclusions in the Alaska ) Other Order No. 51  
Oil and Gas Conservation Commission letter dated )  
June 26, 2007, regarding the Burglin 33-1 well. )  
October 1, 2007

**IT APPEARING THAT:**

This matter concerns the applications of Mr. Gregory Micallef and Alaskan Crude Corporation (“ACC”) (collectively, “Applicants”) for reconsideration of determinations of the Alaska Oil and Gas Conservation Commission (“Commission”) regarding the Burglin 33-1 exploratory well (located in the Arctic Fortitude Unit in Section 33, Township 10 North, Range 14 East, North Slope Borough, Alaska). Applicants seek reconsideration of the Commission’s determination that the well cannot be classified as a “gas well” for purposes of AS 46.04.050(c), which exempts natural gas exploration facility wells from the response planning standard requirements of 18 AAC 75.430(c)(1) and 18 AAC 75.434. Presumably, Applicants also seek reconsideration of the Commission’s determination that the well is unlikely to produce liquid hydrocarbons to the surface in amounts greater than 825 barrels of oil per day (“bopd”).

The Commission confirms the first determination: the Burglin 33-1 well cannot be classified as a gas well: neither new information nor compelling arguments were submitted to justify amending the determination. The Commission amends the second determination based on a submission of the Alaska Department of Environmental Conservation (“ADEC”): the strata above a maximum depth of 6,196 feet measured depth are highly unlikely to produce liquid hydrocarbons to the surface in amounts greater than 600 barrels of oil per day (“bopd”).

**BACKGROUND**

On April 30, 2007, the Commission received a letter, dated April 26, 2007, that ACC, the operator of the Burglin 33-1 well, sent to the Division of Spill Prevention and Response of the Alaska Department of Environmental Conservation (“ADEC”). ACC requested a reduction, under 18 AAC 75.430(c)(1) and 18 AAC 75.434, in the response planning standard (“RPS”) for the Burglin 33-1 well. The letter states that “an 85% reduction in the RPS for this well is warranted.” Attached to the letter was a half-page list titled “Information in Support of a Reduction in RPS for the Re-entry of the Burglin 33-1 Well.”

By a letter dated June 26, 2007 (“June 26 Letter”), the Commission responded to ACC’s RPS reduction request. In responding, the Commission made several findings:

- ACC will not test below 6,196 feet: *i.e.*, it will test only in the Ugnu and West Sak Formations.
- The Ugnu and West Sak Formations contain moveable oil on the North Slope.
- The interval ACC intends to test is behind pipe.
- All perforations that were opened when the well was drilled in 1985 have been squeezed.
- Core analysis showed relatively good permeability, averaging approximately 100 millidarcies and as high as 259 millidarcies.
- Some shows indicated the presence of oil, but no oil was recovered during the drill stem testing, indicating that the oil is most likely residual oil that is not capable of flowing.

Based on these findings, the Commission applied the ACC-requested 85% RPS reduction to ADEC's then-interpretation of 18 AAC 75.430(c)(1) and 18 AAC 75.434(b)); pursuant to that interpretation, the maximum potential reduction was 85% of 5,500 bpod or 825 bpod. The Commission determined: "The strata of the Ugnu and West Sak Formations in the Burglin 33-1 exploratory well, above a maximum depth of 6,196 feet md [*i.e.*, measured depth], are highly unlikely to produce liquid hydrocarbons to the surface in amounts greater than 825 bpod. This is an 85% reduction of the RPS of 5,500 bpod." In reaching this determination, the Commission stated: "it has been demonstrated with reasonable certain[t]y that exploratory or development wells drilled in this area will not encounter liquid hydrocarbon bearing sands in the Ugnu or West Sak Formation[s]." Nonetheless, the Commission also concluded: "because there are signs of oil in the cores and the Ugnu and West Sak Formations are known to contain movable oil elsewhere on the North Slope, it is inappropriate to classify this exploratory well as a gas well."

On July 18, 2007, Mr. Gregory Micallef, an overriding royalty owner of an oil and gas lease in the Arctic Fortitude Unit, appealed the Commission's conclusion (in its June 26, 2007, letter) that the Burglin 33-1 well could not be classified as a gas well. On July 26, 2007, ACC also appealed that conclusion. Presumably, Applicants also seek reconsideration of the conclusion that the well is unlikely to produce liquid hydrocarbons to the surface in amounts greater than 825 bpod. Applicants assert that these conclusions are contrary to the Commission's determination that there is a reasonable certainty that liquid hydrocarbon bearing sands would not be encountered even if the two shallowest plugs in the well were removed.

On July 30, 2007, Mr. Micallef, and on August 2, 2007, ACC, were notified by the Commission that the matter would be set for a hearing. On August 3, 2007, the Commission published a notice of public hearing in the ANCHORAGE DAILY NEWS. The notice stated that the requests for reconsideration had been granted and a consolidated hearing was tentatively

scheduled for September 6, 2007. To learn whether the hearing would be held, the notice instructed interested persons to call the Commission after August 23, 2007. Comments were to be received by the Commission by September 4, 2007, if the hearing was not held, and by September 6, 2007, if the hearing was held. The Commission sent ACC the notice. Mr. Micallef was not sent the notice because he did not respond to the Commission's request, in the July 30, 2007, letter, to provide his official mailing address for the purpose of sending him the notice.

On September 5, 2007, the Commission received comments from ADEC. ADEC noted that, under AS 31.05.030(I) and AS 46.04.050(c), an operator can request that the Commission determine whether a natural gas exploration well is a gas-only well not capable of flowing oil to the surface that is, therefore, exempt from requirements relating to oil discharge prevention and contingency plans ("c-plans"). ADEC noted that ACC did not seek a determination that the Burglin 33-1 well is a natural gas exploration well, but in fact applied for a c-plan to develop the well as an oil and gas exploration well. Also, ADEC stated that it now interprets the reduction limitation of 18 AAC 75.430(c)(1) to apply only with respect to the determination of the extent to which prevention measures can be taken into account in lowering the RPS *after* the RPS has been set under 18 AAC 75.434(b). Therefore, the absolute floor for the RPS is not 15% of 5,500 bopd or 825 bopd. Finally, ADEC noted that, even if the Commission were to determine that the expected flow from a stratum is 0 bopd, that would not dictate that ADEC set the RPS volume at 0 bopd.

On September 6, 2007, the consolidated hearing was held. No parties appeared.

## ANALYSIS

### **I. DETERMINATION THAT THE BURGLIN 33-1 WELL IS NOT A GAS WELL FOR THE PURPOSE OF AS 31.05.030(I)**

In the June 26 Letter, the Commission determined that the Burglin 33-1 well is not a gas well for the purpose of AS 31.05.030(I).<sup>1</sup> As explained in the letter, this determination is based on the following findings: (1) there are signs of oil in the cores; and (2) the Ugnu and West Sak Formations contain moveable oil elsewhere on the North Slope.

In addition, the Commission notes that, in the Burglin 33-1 well, only a very small portion of the West Sak and Ugnu Formations have been flow tested. As indicated in ACC's January 24, 2006, Application of Sundry Approvals for proposed work at the Burglin 33-1 well, although the West Sak Formation is approximately 570 feet thick, no more than the bottom 34 feet were flow tested, and although the Ugnu Formation is approximately 1,575 feet thick, no more than 40 feet (near the top of the formation) were flow tested. In the adjacent Prudhoe Bay Unit and elsewhere on the North Slope, however, the West Sak Formation is productive in multiple individual reservoirs throughout a several hundred foot thick accumulation.

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<sup>1</sup> The Commission did not determine that the Burglin 33-1 well is not a "gas well" under 20 AAC 25.990(30).

Applicants have presented no evidence or arguments demonstrating that the Commission's findings and the determination (based on them) are incorrect. Rather, Applicants' requests for reconsideration are based on the Commission's conclusion that, "in accordance with AS 31.05.030(l)[,] . . . it has been demonstrated with reasonable certain[t]y that exploratory or development wells drilled in this area will not encounter liquid hydrocarbon bearing sands in the Ugnu or West Sak Formation[s]."<sup>2</sup> On reconsideration, the Commission determines that this conclusion is incorrect.

Under AS 31.05.030(l), at issue is not a determination regarding the likelihood that a particular well may encounter hydrocarbon bearing sands, but a determination regarding the likelihood that a well "at a natural gas exploration facility" may penetrate "a formation capable of flowing oil to the ground surface." The Burglin 33-1 well is not a natural gas exploration facility; nor could the Commission determine that the evidence demonstrates with reasonable certainty that it will not penetrate a formation capable of flowing oil to the ground surface.

First, the Burglin 33-1 well is not a natural gas exploration facility. AS 31.05.030(l) refers to AS 46.04.050(c) for the definition of a "natural gas exploration facility." AS 46.04.050(c) defines such a facility as "a platform, facility, or structure that, except for storage of refined petroleum products in a quantity that does not exceed 10,000 barrels, is used solely for the exploration for natural gas." In its April 26, 2007, application, ACC stated that it intends to produce liquid hydrocarbons: the Burglin 33-1 well "zones to be tested are likely charged with relatively high viscosity oil similar to the nearby West Sak and Ugnu oil pools," and "[t]he operator assumes the well will not flow to surface and intends to mobilize equipment to pump or mechanically lift fluids to the surface."

Second, the Commission could not find that the available evidence demonstrates with reasonable certainty that the Burglin 33-1 well will not penetrate a formation capable of flowing oil to the ground surface. This is so because at least the West Sak Formation—even in the vicinity of the Burglin 33-1 well—is indisputably capable of flowing oil to the ground surface.

Applicants also emphasize the Commission's findings that the Burglin 33-1 well interval that will be tested is "currently" behind pipe, and all perforations opened for the initial testing have been squeezed. Because the relevant issue is whether the subject formations are capable of flowing oil to the ground surface, these facts are irrelevant to a determination under AS 31.05.030(l). In any event, testing the well will require re-perforating the pipe.

Thus, the Commission affirms its determination that the Burglin 33-1 well is not a gas well for the purpose of AS 31.05.030(l), but withdraws its conclusion that "it has been demonstrated with reasonable certain[t]y that exploratory or development wells drilled in this

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<sup>2</sup> The Commission also notes that, contrary to its statement in the June 26 Letter, its determination was not "in accordance with AS 31.05.030(l):" it was not made "upon application by the operator," as required by AS 31.05.030(l), and, as explained below, does not constitute a finding that is relevant to AS 31.05.030(l).

area will not encounter liquid hydrocarbon bearing sands in the Ugnu or West Sak Formation[s].”

## **II. DETERMINATION THAT THE BURGLIN 33-1 WELL IS UNLIKELY TO PRODUCE LIQUID HYDROCARBONS TO THE SURFACE IN AMOUNTS GREATER THAN 825 BOPD**

The Commission relied on ACC’s application for an 85% reduction in the RPS in determining that the “strata of the Ugnu and West Sak Formations in the Burglin 33-1 exploratory well, above a maximum depth of 6,196 feet md, are highly unlikely to produce liquid hydrocarbons to the surface in amounts greater than 825 bopd.” In light of ADEC’s amended interpretation of its regulations, the Commission now determines that the maximum flow rate for the Burglin 33-1 well is 600 bopd.

The Commission bases this determination on Ryder Scott’s SNAP software application to calculate maximum unassisted production rates over a range of input conditions. Because, compared to the Ugnu Formation, the West Sak Formation is deeper, warmer, higher pressured, and has less viscous oil, it has a higher potential for unassisted flow and was therefore chosen for analysis. Based on the drill stem tests and core analyses previously performed for the Burglin 33-1 well, the average properties for the SNAP flow potential analysis are:

- 22° API gravity;
- 100 millidarcy permeability;
- 2,500 pounds per square inch reservoir pressure; and
- 100° F reservoir temperature.

Because permeability values as high as 259 millidarcies were reported in the core analyses, a sensitivity analysis was performed that investigated permeabilities as high as 300 millidarcies. Sensitivity analyses on other properties were also investigated, but were less significant than variations in permeability. Based on the results of these analyses, 600 bopd represents a reasonable maximum unassisted flow rate potential for the Burglin 33-1 well.

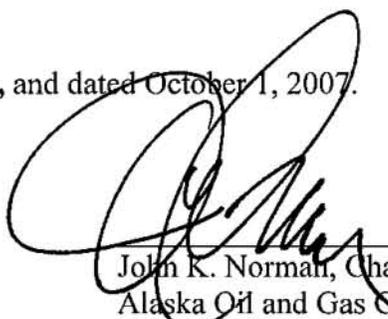
## DECISION

The Commission affirms its determination that the Burglin 33-1 well is not a gas well for the purpose of AS 31.05.030(l).

The Commission amends its determination that the strata above a maximum depth of 6,196 feet md are highly unlikely to produce liquid hydrocarbons to the ground surface in amounts greater than 825 bopd. The Commission determines that the maximum flow rate for the Burglin 33-1 well is 600 bopd.

**DONE at Anchorage, Alaska,** and dated October 1, 2007.



  
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John K. Norman, Chairman  
Alaska Oil and Gas Conservation Commission

  
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Daniel T. Seamount, Jr., Commissioner  
Alaska Oil and Gas Conservation Commission

  
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Cathy P. Foerster, Commissioner  
Alaska Oil and Gas Conservation Commission

AS 31.05.080 provides that within 20 days after receipt of written notice of the entry of an order, a person affected by it may file with the Commission an application for rehearing. A request for rehearing must be received by 4:30 PM on the 23<sup>rd</sup> day following the date of the order, or next working day if a holiday or weekend, to be timely filed. The Commission shall grant or refuse the application in whole or in part within 10 days. The Commission can refuse an application by not acting on it within the 10-day period. An affected person has 30 days from the date the Commission refuses the application or mails (or otherwise distributes) an order upon rehearing, both being the final order of the Commission, to appeal the decision to Superior Court. Where a request for rehearing is denied by nonaction of the Commission, the 30-day period for appeal to Superior Court runs from the date on which the request is deemed denied (i.e., 10<sup>th</sup> day after the application for rehearing was filed).