

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

Re: THE INVESTIGATION FINDINGS OF the ) Other Order 200  
Alaska Oil and Gas Conservation Commission ) Docket Number: OTH-22-012  
and notice of proposed enforcement action )  
regarding the subsurface blowout and gas release ) ConocoPhillips Alaska, Inc.  
from ConocoPhillips Alaska, Inc.'s Colville River ) Colville River Unit  
Unit well WD-03. ) Alpine CD1 Drill Site  
) Well CRU WD-03 Subsurface  
) Blowout and Gas Release  
)  
) June 28, 2023

**INVESTIGATION FINDINGS AND**  
**NOTICE OF PROPOSED ENFORCEMENT ACTION**

**IT APPEARING THAT:**

1. On March 4, 2022, ConocoPhillips Alaska, Inc. (CPAI) personnel reported to the Alaska Oil and Gas Conservation Commission (AOGCC) a gas release incident, which continued for several days at the Alpine CD1 Drill Site. The incident at the CD1 Drill Site was originally referred to as a gas release because the cause of the release, and the source of the gas, was not immediately known. The AOGCC has concluded, based on its investigation, that the CD1 gas release was in fact a shallow underground blowout<sup>1</sup> of the WD-03 well due to the uncontrolled nature of the event and because gas breached the surface at multiple locations (Subsurface Blowout and Gas Release). The AOGCC inspection and engineering teams initiated field and office support and opened an internal investigation. In CPAI's Incident Investigation Report to the AOGCC dated May 3, 2022, CPAI stated that the natural gas originated from Colville River Unit (CRU) well WD-03 (WD-03) during drilling operations and identified findings and causal factors for the gas release. The AOGCC continued its internal investigation into the Alpine CD1 Subsurface Blowout and Gas Release and called a hearing to address the following:
  - The casing and cementing program for well WD-03 per 20 AAC 25.030 as it relates to confining fluids to the wellbore, preventing the migration of fluids from one stratum to another and protecting significant hydrocarbon zones.
  - The gas disposition from the Alpine CD1 Drill Site per 20 AAC 25.235 as it relates to waste of resources.
  - The conduct of operations for well WD-03 per 20 AAC 25.526 as it relates to CPAI's internal Section Plan for the well and communication of pressure limits to the field.

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<sup>1</sup> A blowout is an uncontrolled flow of well fluids and/or formation fluids from the well bore. (Source: API RP 59, Recommended Practice for Well Control Operations, Second Edition, May 2006). A blowout is a technical term in the oil and gas industry and does not necessarily mean there was an explosion. In this case, there was no explosion.

- The well safety valve systems per 20 AAC 25.265 as they relate to producing natural gas up the outer annulus of well WD-03.
  - The change of an approved program per 20 AAC 25.507 as it relates to submission of an Application for Sundry Approvals form following oral approval from the commission.
2. Pursuant to 20 AAC 25.540, the AOGCC on its own motion scheduled a public hearing for October 25, 2022. The purpose of the hearing was to receive testimony related to the Subsurface Blowout and Gas Release. On September 20, 2022, the AOGCC published notice of the hearing on the State of Alaska's Online Public Notice website, on the AOGCC's website, electronically transmitted the notice to all persons on the AOGCC's email distribution list and mailed printed copies of the notice to all persons on the AOGCC's mailing distribution list. On September 23, 2022, the AOGCC published the notice in the Anchorage Daily News.
  3. On October 20, 2022, the AOGCC published a Notice of Postponement of Public Hearing for the scheduled October 25, 2022, hearing. This was necessary due to lack of a quorum of commissioners.
  4. On January 26, 2023, the AOGCC rescheduled the hearing for March 23, 2023. The AOGCC published the Second Notice of Public Hearing on the State of Alaska's Online Public Notice website, on the AOGCC's website, electronically transmitted the notice to all persons on the AOGCC's email distribution list and mailed printed copies of the notice to all persons on the AOGCC's mailing distribution list. On January 29, 2023, the AOGCC published the second notice in the Anchorage Daily News.
  5. CPAI provided numerous written responses to questions and requests for information from the AOGCC over the course of the AOGCC investigation, and in preparation of the scheduled hearing.
  6. One member of the public provided written comments prior to the hearing.
  7. The AOGCC held the public hearing on March 23, 2023. Testimony was received from CPAI and two members of the public.
  8. On March 23, 2023, after the conclusion of the hearing, the AOGCC requested that CPAI provide two documents that were embedded in the presentation slide pack in full for the record. CPAI provided both documents to the AOGCC on March 30, 2023.
  9. The hearing record was held open until 4:30 PM on March 24, 2023, to allow for additional comments. One member of the public provided additional written comments.
  10. CPAI's Incident Investigation Report, CPAI's responses to AOGCC's requests for information, the hearing record, and the AOGCC's records provide sufficient information to make an informed decision.

#### **PROPOSED ENFORCEMENT ACTION:**

Based on the results of its investigation, and pursuant to 20 AAC 25.535, the AOGCC hereby notifies CPAI of the AOGCC's proposed enforcement action regarding the Subsurface Blowout and Gas Release.

#### **Nature of the Apparent Violations or Noncompliance (20 AAC 25.535(b)(1))**

CPAI has violated the provisions of:

1. 20 AAC 25.030 ("Casing and cementing")

2. AS 31.05.095 (“Waste prohibited”) and 20 AAC 25.235 (“Gas disposition”)
3. 20 AAC 25.526 (“Conduct of operations”)
4. 20 AAC 25.265 (“Well safety valve systems”)
5. 20 AAC 25.507 (“Change of approved program”)

### **Basis for Finding the Violation or Noncompliance (20 AAC 25.535(b)(2))**

#### **1. 20 AAC 25.030 (“Casing and cementing”)**

AOGCC regulation 20 AAC 25.030 governs the casing<sup>2</sup> and cementing of wells during drilling and completion. Included in this regulation are requirements to confine fluids to the wellbore, prevent migration of fluids from one stratum to another, ensure control of well pressures encountered, protect significant hydrocarbon zones, and provide well control until the next casing is set considering all factors relevant to well control.

For reference, the Alpine Field in the CRU is located approximately 34 miles west of the Kuparuk River Unit. The field was discovered in 1994 and is composed of several onshore gravel pad drill sites, including CD1. The CD1 Drill Site has a total of 49 drilled wells of which 11 are active. Of the remaining 38 wells, 22 are inactive, 15 are in long-term shut-in status, and 1 is plugged and abandoned. CD1 is the original and main drill site at the Alpine Field, covering approximately 150 acres and encompassing the Alpine main camp, the Alpine Central Facility (ACF), aircraft runway, warehouses, and assorted buildings and structures.<sup>3</sup>

CPAI was drilling the CRU WD-03 well (Permit to Drill Number 221-103) from the CD1 Drill Site as an U.S. Environmental Protection Agency<sup>4</sup> (EPA) Class I Underground Injection Control (UIC) well at the time of the Subsurface Blowout and Gas Release. The purpose of the well was to provide additional capacity for Alpine Field waste disposal. The WD-03 well was being drilled per approved permits from the AOGCC and EPA. Drilling operations commenced on January 25, 2022, using the Doyon 142 drilling rig.

On February 2, 2022, the 13-3/8” surface casing<sup>5</sup> was set and cemented at 2,434 feet measured depth (MD).<sup>6</sup> The cement job went as planned with full returns, the plugs bumped, and the floats held. The cement bond log for the 13-3/8” surface casing was approved by the EPA as meeting the overall objectives. However, the log reflected poor cement bonding and a probable microannulus from the surface casing shoe at 2,434 feet to 1,935 feet MD.

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<sup>2</sup> Casing is the major structural component of a well. Casing is needed to maintain borehole stability, prevent contamination of water sands, isolate water from producing formations, and control well pressures during drilling, production, and workover operations.

<sup>3</sup> Reference Attachment 1: CD1 Drill Site map.

<sup>4</sup> The U.S. EPA is also conducting an investigation into the CD1 Subsurface Blowout and Gas Release.

<sup>5</sup> Surface casing is set to provide blowout protection, isolate water sands, and prevent lost circulation. It also often provides adequate shoe strength to drill into high-pressure transition zones.

<sup>6</sup> Reference Attachment 2: WD-03 wellbore schematic at time of Subsurface Blowout and Gas Release.

The 7-5/8" intermediate casing<sup>7</sup> was set and cemented at 9,268 feet MD on February 24 and 25, 2022 (Attachment 2). Using log information acquired while drilling the WD-03 well, CPAI identified the Qannik, K3/Narwhal, Nanuq, and Alpine C as significant hydrocarbon zones. The first-stage cement job isolated the Nanuq and Alpine C. The second-stage cement job isolated the Qannik and K3/Narwhal. During the intermediate casing primary cement jobs, normal returns were realized indicating successful cement placement. On February 28, 2022, a cement bond log (ultrasonic imaging tool (USIT)) was run in the intermediate casing to evaluate the two-stage cement job, and the results were approved by the EPA on March 2, 2022.

Prior to and immediately after drilling WD-03, CPAI's historically established geologic evaluation methods and criteria indicated that the C10/Halo<sup>8</sup> interval was not a significant hydrocarbon-bearing zone or abnormally geo-pressured.<sup>9</sup> Thus CPAI did not deem it necessary to cement across the C10/Halo to be in compliance with AOGCC regulations.<sup>10</sup>

On March 4, 2022, CPAI personnel observed intermittent gas releases in the well cellar of CD1-05, which is approximately 450 feet away from WD-03. CPAI reported the release to the AOGCC and suspended rig operations on WD-03. Operations at WD-03 were restarted later the same day with concurrence from the AOGCC. At that time, CPAI did not recognize the gas releases at CD1-05 were related to drilling activities on WD-03.

On March 7, 2022, CPAI personnel halted rig operations a second time after observing cracks in the surface of the gravel of the CD1 Drill Site and additional releases of natural gas along the well row. Cracks approximately 1/2" wide extended near and under the rig with gas concentrations measuring from 0% to 10% of the lower explosive limit<sup>11</sup> (LEL) of methane. All production and injection activities at the CD1 Drill Site were shut in and all non-critical personnel were evacuated. CPAI determined that the C10/Halo interval was the source of the released gas based on isotopic analysis of samples and diagnostic logging performed on March 25, March 30, and March 31, 2022.

CPAI's historically established well log and seismic evaluation methods previously used to identify significant hydrocarbon zones and geo-pressure failed to detect the significant accumulation of pressurized gas within the C10/Halo encountered by WD-03. During pre-drilling planning, this interval was not considered to be abnormally pressured or a significant hydrocarbon zone. CPAI's since-refined evaluation methods and criteria provide a greater degree of confidence

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<sup>7</sup> Intermediate casing is generally set in place after the surface casing and before the production casing. The intermediate casing in WD-03 isolates the uphole significant hydrocarbon zones and was set above the planned waste disposal zones. The casing also provides a barrier to release of injection fluids in the event of a tubing failure.

<sup>8</sup> The names C10/Halo and Qannik are informal, CPAI-specific terms. The C10/Halo lies approximately 1,350 feet MD above the Qannik in well WD-03. The Qannik interval comprises top-set beds that are a part of the Nanushuk Formation. Common or public field names assigned to accumulations in other, separate, similar topset-bed intervals within the Nanushuk are: Willow, Stirrup, Bear, Narwhal, Pikka and Coyote. The C10/Halo interval is part of the Tuluvak Formation.

<sup>9</sup> According to 20 AAC 25.990(2) "abnormally geo-pressured strata" means subsurface zones where the pore pressure exceeds a gradient of 0.50 psi/foot.

<sup>10</sup> Reference Attachment 3: WD-03 and CD1-15PB1: Qannik and Halo (gas-bearing) intervals.

<sup>11</sup> Reference Attachment 4: Lower Explosive Limit.

that significant hydrocarbon zones will be identified while planning and conducting future drilling operations.

Before the Subsurface Blowout and Gas Release from WD-03, a well near the WD-03 well path, CD1-48, showed indications of a shallow gas accumulation. Even though the Qannik interval was isolated with cement in CD1-48, efforts to bleed off pressure from the OA were unsuccessful. CPAI's inability to bleed off pressure from the OA of well CD1-48 indicated that a shallow gas source existed above the Qannik. In addition, CPAI utilizes the CRU CD1-15 well (Permit to Drill Number 210-047) to produce gas from the CRU Halo Undefined Gas Pool as a fuel source for black-starts<sup>12</sup> of the ACF in the CRU.

Following the Subsurface Blowout and Gas Release, CPAI re-evaluated and modified its well log and seismic evaluation methods and criteria for detecting the presence of possible significant hydrocarbon zones. These refined methods and criteria indicate the C10/Halo in WD-03 and in nine other wells at CD1 Drill Site constitute significant hydrocarbon zones. CPAI also acquired new shallow-focused seismic across the CD1 Drill Site area, but the data did not change CPAI's understanding of shallow hydrocarbons in the area.

Operations to cement across the WD-03 C10/Halo and plug and abandon the well commenced on April 1, 2022. One unsuccessful attempt was made to perforate and squeeze cement across the C10/Halo. On April 5, 2022, section milling was employed to remove the casing at and above the C10/Halo and enable the placement of the cement plug. Three attempts were made to place a cement plug that met AOGCC regulations and successfully plug the C10/Halo. The first two attempts were milled out after failing pressure tests. The third cement plug successfully isolated the C10/Halo on May 1, 2022. Complete well abandonment with cement to surface for WD-03 was achieved on May 2, 2022.<sup>13</sup>

Cement was not placed across the C10/Halo during the cementing of the 7-5/8" intermediate casing on February 24 and 25, 2022 and remained uncemented until the zone was confined with cement on May 1, 2022. During this time, CPAI failed to confine the C10/Halo to the wellbore, to prevent migration of fluids from one stratum to another and to protect significant hydrocarbon zones which is a violation of 20 AAC 25.030.

## **2. AS 31.05.095 (“Waste prohibited”) and 20 AAC 25.235 (“Gas disposition”)**

The waste of oil and gas in Alaska is prohibited per AS 31.05.095. AOGCC regulation 20 AAC 25.235 governs the waste of resources and requires that operators take action in accordance with good oil field engineering practices and conservation purposes to minimize the volume of gas released, burned, or permitted to escape into the air. Enforcing conservation practices to prevent the waste of resources is one of the AOGCC's most important regulator duties.

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<sup>12</sup> Black-starts are events where the facilities are restarted after being completely shut in and the gas from the Halo Pool is used to provide a fuel source for the facilities until enough production can be brought online through the production facilities to meet the fuel gas needs.

<sup>13</sup> Reference Attachment 5: WD-03 wellbore schematic after final well plugging and abandonment.

The first indication of the Subsurface Blowout and Gas Release was on March 4, 2022, when CPAI personnel observed intermittent gas releases in the well cellar of CD1-05, which is approximately 450 feet away from WD-03 (Attachment 1). Gas from the C10/Halo was able to enter the thaw bulb<sup>14</sup> beneath the CD1 Drill Site, and it was able to move freely beneath the Drill Site from higher to lower pressure until it found a route to the atmosphere. Although the conduit of the gas was the WD-03 well, initially gas did not escape to the atmosphere near the WD-03 well. The presence of a thaw bulb at the CD1 Drill Site provided a path of little resistance either horizontally or vertically to the movement of gas that was released from WD-03 into the subsurface strata and explains why the first observed gas released at surface was about 450 feet away at well CD1-05.

After the Subsurface Blowout and Gas Release began, real-time natural gas monitoring with gas sensors measuring the hydrocarbon LEL occurred at the CD1 Drill Site well rows and at Doyon 142. Air monitoring was also added at the CD1 Drill Site. Aerial Infrared Surveys through forward-looking infrared (FLIR) drone surveys and flights were conducted to detect natural gas releases. No natural gas was detected off the CD1 Drill Site. Also, CPAI has not observed a decrease in reservoir pressure in the C10/Halo zone as a result of the released gas as measured in the CD1-15 black-start well.

CPAI estimated the volume of gas released from WD-03 to the subsurface strata to be 7,200 thousand cubic feet (MCF). This estimate was based on the approximate gas flow rate from the time that C10/Halo gas started to flow until actions were taken to stop the flow of gas and was informed by the metered gas flow rate from the OA of WD-03.

Based on the AOGCC's own review and verification, it finds that CPAI's estimation of 7,200 MCF as the volume of gas released to the subsurface strata and/or atmosphere is reasonable.

In accordance with 20 AAC 25.235(b), this gas release constitutes waste because it was not controlled, was not de minimis,<sup>15</sup> and was not a routine field operation. AS 31.05.150(d) specifies that the civil penalty for wasting gas is equal to twice the prevailing value of the gas at the time the waste occurred.

### **3. 20 AAC 25.526 (“Conduct of operations”)**

AOGCC regulation 20 AAC 25.526 governs the conduct of operations and requires that operators carry on all operations at all times in a safe and skillful manner in accordance with good oil field engineering practices and having due regard for the preservation and conservation of the property and protection of freshwater.

On February 5, 2022, a leak-off test (LOT) was performed on the WD-03 well resulting in a 14.9 ppg equivalent mud weight (EMW) at the surface casing shoe (Attachment 2). After drilling WD-03's intermediate hole section and running and cementing the intermediate casing string in place,

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<sup>14</sup> Thaw bulbs are areas where permafrost used to exist but over time the production or injection of warm fluids has caused the permafrost to melt around the wellbores.

<sup>15</sup> Per 20 AAC 25.235(d), “de minimis” means there was less than 1 hour of flaring or venting and it was not measurable.

CPAI pumped freeze-protection fluids down the 13-3/8" by 7-5/8" outer annulus (OA) as is routinely done for wells where permafrost may be present.

CPAI's Section Plan 03<sup>16</sup> for pumping the freeze-protection fluids into WD-03 stated that the 14.9 ppg EMW LOT pressure of the surface casing shoe should not be exceeded.

On February 27, 2022, while initiating the freeze-protect pumping operation on WD-03, the pressure placed on the OA reached 18.2 ppg EMW at the surface casing shoe while pumping the initial 10.5 barrels of water. While pumping the next barrel, the OA pressure dropped to just below the approved 14.9 ppg EMW. Over the next several days, a total of 345 barrels of water and 170 barrels of diesel were pumped into the OA at the lower EMW. CPAI postulates that a much higher pressure was required to place freeze protection fluids in the OA (18.2 ppg EMW) than the original surface casing LOT (14.9 ppg EMW) due to bridging or pack-off from drilling solids downhole.

Exceeding the OA pressure limit of 14.9 ppg EMW set in the CPAI approved section plan caused the subsurface strata near the base of the surface casing to fracture. After fracturing the surface casing shoe and before gas was released to the subsurface strata and/or atmosphere, CPAI observed elevated OA pressure in WD-03 but took no action to evaluate the cause.

During freeze-protection operations, water in the WD-03 OA was displaced with diesel which reduced the hydrostatic pressure in the OA. This caused the OA to become hydrostatically underbalanced relative to the C10/Halo pore pressure and allowed the flow of gas out of the C10/Halo and into the OA. Gas from the C10/Halo was able to flow into the OA of the WD-03 well in part because the C10/Halo is geo-pressured and the freeze-protection fluids pumped into the well, which are lighter than water, did not provide enough hydrostatic pressure in the OA to keep gas within the C10/Halo from flowing.<sup>17</sup>

On March 29, 2022, gas flow into the OA of WD-03 stopped when CPAI pumped kill weight fluid into WD-03 and achieved source control.

CPAI's Section Plan 03 was not followed by field personnel. CPAI significantly exceeded the LOT pressure at the surface casing shoe, which fractured the cement shoe and created a pathway for gas from the C10/Halo to migrate upward to the thaw bulb beneath the CD1 Drill Site and eventual release to the atmosphere. The base of permafrost at the CD1 Drill Site is estimated at 1,500 feet true vertical depth subsea (TVDSS).

After freeze-protection operations, observed pressure increases in the WD-03 OA from March 1 to March 3, 2022, were not recognized or addressed.

This conduct is a violation of 20 AAC 25.526.

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<sup>16</sup> A Section Plan is a set of detailed, step-by-step instructions intended for CPAI rig personnel.

<sup>17</sup> The pressure gradient of the C10/Halo zone in the CD1-15 well of 0.480-0.488 psi/ft exceeds the hydrostatic pressure of a column of fresh water at 0.433 psi/ft.

CPAI has since developed a revised standard operating procedure (SOP) for freeze protection operations to include procedures, pressure limits, and contingent solutions when pumping operations reach limits. The pump schedule will clearly define maximum allowable annular surface pressure (MAASP) and translate the surface casing shoe LOT into surface pressures. The purpose of the revised SOP is to ensure that field personnel will not make a similar mistake in the future.

#### **4. 20 AAC 25.265 (“Well safety valve systems”)**

AOGCC regulation 20 AAC 25.265 governs well safety valve systems including requirements for where a safety valve system must be located and necessary performance testing.

On March 8, 2022, it was determined that WD-03 was the source of the gas being released at the CD1 Drill Site. Steps were then taken to produce gas up the OA of the well to depressurize the gas in the thaw bulb and provide a direct path to the existing surface production system for the gas flowing from the C10/Halo interval. CPAI received AOGCC approval of this operation orally on March 8, 2022, and via e-mail on March 11, 2022.

Despite taking specific action to reduce the volume of gas being released to the subsurface strata and/or atmosphere, CPAI failed to complete the following regulatory actions:

1. obtain an approved waiver for the well safety valve system installed on the WD-03 OA before commencing flow;
2. perform safety valve system performance tests on adjacent wells CD1-43 and CD1-48A used to access the Alpine facility production header.

CPAI testified that there were several safety systems in place to prevent or respond to a release of gas from the temporary flow path, including gas detection systems that were continuously alarmed, manual shutdown valves on the OA of WD-03 (eventually changed to remotely actuated valves), and pre-existing safety valve systems on CD1-43 and CD1-48A that would detect and close in the event of a temporary flowline failure. WD-03 flowed 10 days before CPAI requested approval of an alternate safety valve system for the OA of WD-03, in violation of 20 AAC 25.265(a), (b), and (c).

The surface safety valve systems on CD1-43 and CD1-48A had not been performance tested since February 17, 2019, and November 14, 2021, respectively. By regulation 20 AAC 25.265(h)(4) performance tests should have occurred not later than March 13, 2022, 5 days after initiating WD-03 OA gas flow. On March 25, 2022, an AOGCC Inspector witnessed successful function tests on the non-flowing side (CD1-43) OA outlet actuated valve and the surface safety valve on CD1-43. The flowing side safety valves (WD-03 actuated valve and CD1-48A surface safety valve) were never tested. Failure to test well safety valve systems is a violation of 20 AAC 25.265(h).

#### **5. 20 AAC 25.507 (“Change of approved program”)**

AOGCC regulation 20 AAC 25.507 governs changes to approved programs including a requirement to submit an Application for Sundry Approvals within three days of receiving verbal approval for final approval by the commission.



WD-03 gas flow from the OA began on March 8, 2022, after verbal approval from AOGCC with the produced gas flowing to the ACF via well CD1-48A. CPAI received AOGCC approval of this operation via e-mail on March 11, 2022. CPAI did not submit an Application for Sundry Approvals (Form 10-403) within three days of receiving verbal approval as required by 20 AAC 25.507(b) for final approval by the commission. Even though production of the gas up the OA and the routing of the gas to the ACF resulted in the controlled production of the C10/Halo gas and mitigated the damage of the uncontrolled release, CPAI was still required to submit an Application for Sundry Approvals.

### **Proposed Action (20 AAC 25.535(b)(3))**

#### **1. 20 AAC 25.030 (“Casing and cementing”)**

For violating 20 AAC 25.030, the AOGCC intends to impose a civil penalty on CPAI under AS 31.05.150(a) in the amount of \$760,000 for failure to confine fluids to the wellbore, prevent migration of fluids from one stratum to another, ensure control of well pressures encountered, protect significant hydrocarbon zones, and provide well control until the next casing is set considering all factors relevant to well control. The proposed civil penalty includes \$100,000 for the initial violation and \$10,000 per day for each of the 66 days from the start of the Subsurface Blowout and Gas Release until the C10/Halo was isolated with cement (February 24 to May 1, 2022).

The factors in AS 31.05.150(g) were considered in determining the appropriate penalty. The potential seriousness of the violation, the actual or potential threat to public health or the environment, benefits derived by the operator from the violation, need to deter similar behavior in future operations, and effort made by the operator to prevent future violations are the factors which most heavily influenced the AOGCC’s decision, and the penalty being assessed.

#### **2. AS 31.05.095 (“Waste prohibited”) and 20 AAC 25.235 (“Gas disposition”)**

The AOGCC concurs with CPAI’s estimated volume of gas released to subsurface strata and/or atmosphere from the C10/Halo of 7,200 MCF and deems that waste. Per the Alaska Department of Revenue’s website, the prevailing value for natural gas on the North Slope in the first quarter of 2022 was \$2.347/MCF.<sup>18</sup> For violating 20 AAC 25.235 and according to the statutory formula (AS 31.05.150(d)) to calculate civil penalties at twice the fair market value for waste of gas, the penalty is \$33,796.80.

#### **3. 20 AAC 25.526 (“Conduct of operations”)**

For violating 20 AAC 25.526, the AOGCC intends to impose a civil penalty on CPAI under AS 31.05.150(a) in the amount of \$100,000 for failing to follow the Section Plan instructions for freeze

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<sup>18</sup> The North Slope Prevailing Value of natural gas can be found on the Alaska Department of Revenue website at <http://tax.alaska.gov/programs/oil/prevailing/north.aspx>.

protecting the OA, failing to communicate pressure limits to field personnel, and the failing of field personnel to recognize OA pressure increases after freeze protect operations.

The factors in AS 31.05.150(g) were considered in determining the appropriate penalty. The potential seriousness of the violation, the actual or potential threat to public health or the environment, benefits derived by the operator from the violation, need to deter similar behavior in future operations, and effort made by the operator to prevent future violations are the factors which most heavily influenced the AOGCC's decision, and the penalty being assessed.

#### **4. 20 AAC 25.265 (“Well safety valve systems”)**

For violating 20 AAC 25.265, the AOGCC intends to impose a civil penalty on CPAI under AS 31.05.150(a) in the amount of \$20,000. Included are:

- a. \$10,000 for failing to seek approval of an alternate safety valve system before commencing WD-03 OA gas flow.
- b. \$10,000 for failing to test the well safety valve systems used for the WD-03 OA gas flow.

#### **5. 20 AAC 25.507 (“Change of approved program”)**

CPAI's failure to submit an Application for Sundry Approvals (Form 10-403) within three days of being granted verbal approval is a violation of 20 AAC 25.507(b). While CPAI is being noticed of this violation, the AOGCC is not proposing a civil penalty.

**The total proposed civil penalty is \$913,796.80.**

#### **Rights and Liabilities (20 AAC 25.535(b)(4))**

Within 15 days after receipt of this notification – unless the AOGCC, in its discretion, grants an extension for good cause shown – CPAI may file with the AOGCC a written response that concurs in whole or in part with the proposed action described herein, requests informal review, or requests a hearing under 20 AAC 25.540. If a timely response is not filed, the proposed action will be deemed accepted by default. If informal review is requested, the AOGCC will provide CPAI an opportunity to submit documentary material and make a written or oral statement. If CPAI disagrees with the AOGCC's proposed decision or order after that review, it may file a written request for a hearing within 10 days after the proposed decision or order is issued. If such a request is not filed within that 10-day period, the proposed decision or order will become final on the 11<sup>th</sup> day after it was issued. If such a request is timely filed, the AOGCC will hold its decision in abeyance and schedule a hearing.

If CPAI does not concur in the proposed action described herein, and the AOGCC finds that CPAI violated a provision of AS 31.05, 20 AAC 25, or an AOGCC order, permit or other approval, then the AOGCC may take any action authorized by the applicable law including ordering one or more of the following: (i) corrective action; (ii) suspension or revocation of a permit or other approval; and (iii) imposition of penalties under AS 31.05.150. In taking action after an informal review or hearing, the AOGCC is not limited to ordering the proposed action described herein, as long as

CPAI received reasonable notice and opportunity to be heard with respect to the AOGCC's action. Any action described herein or taken after an informal review or hearing does not limit the action the AOGCC may take under AS 31.05.160.

**DONE** at Anchorage, Alaska and dated June 28, 2023

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|--|--|---------------------------------------|--|
| <b>Brett W. Huber, Sr.</b>                 | Digitally signed by<br>Brett W. Huber, Sr.<br>Date: 2023.06.28<br>12:54:40 -05'00' | <b>Jessie L. Chmielowski</b>          | Digitally signed by<br>Jessie L. Chmielowski<br>Date: 2023.06.28<br>09:32:34 -08'00' |
| Brett W. Huber, Sr.<br>Chair, Commissioner |  | Jessie L. Chmielowski<br>Commissioner |  |

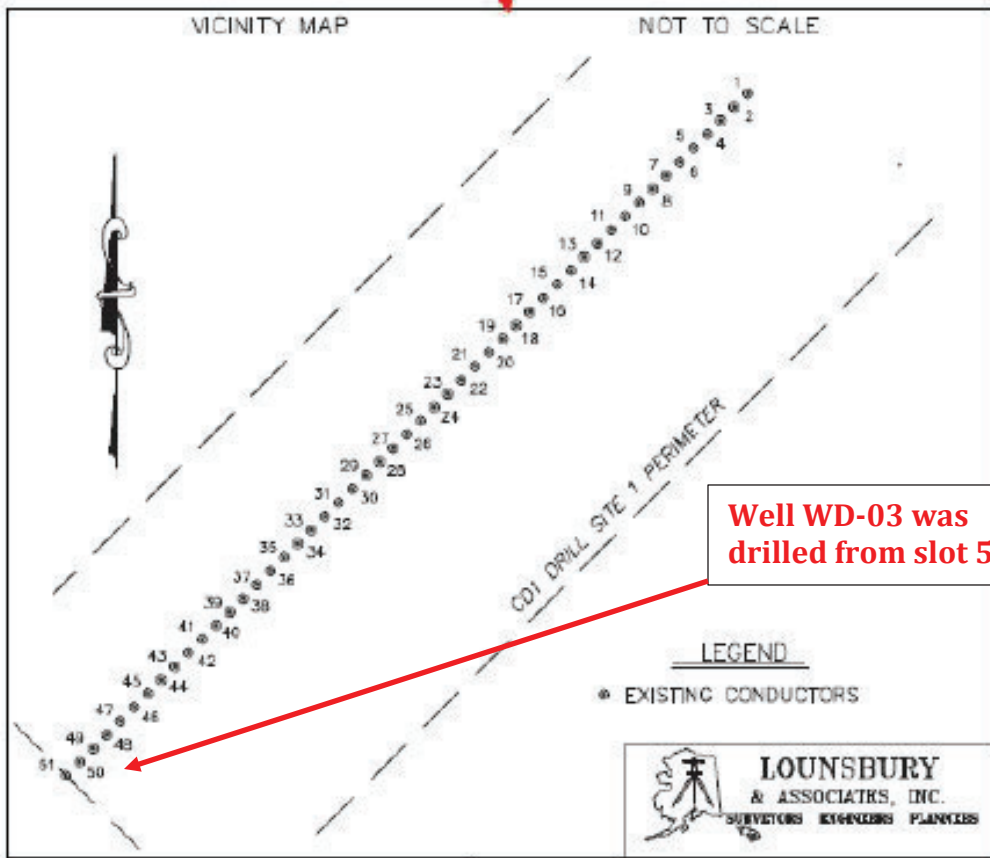
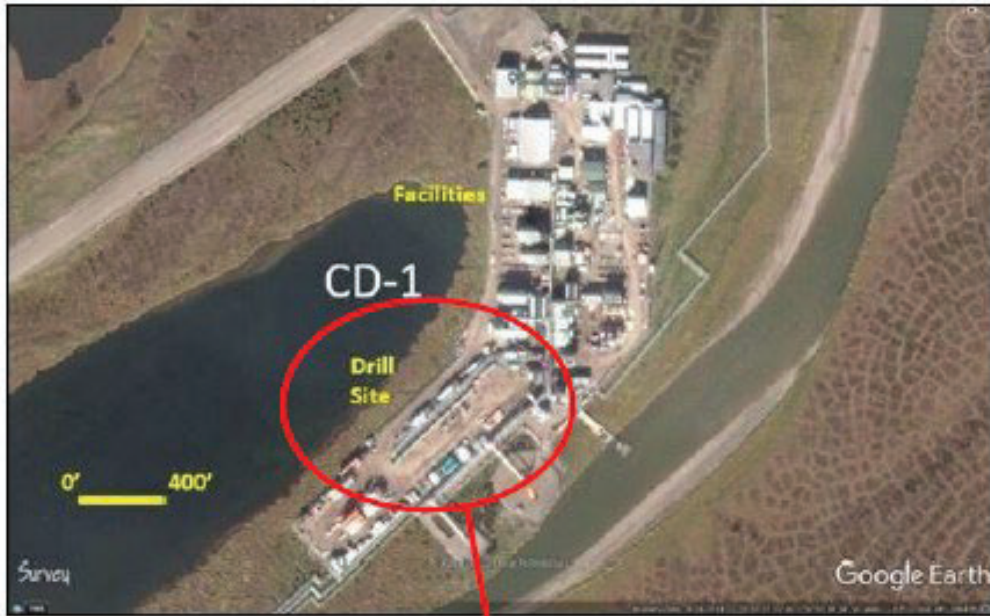
SENT CERTIFIED MAIL –  
RETURN RECEIPT REQUESTED  
7018 0680 0002 2052 9624

Mr. Greg Hobbs, P.E.  
Regulatory Engineer, Wells Team  
ConocoPhillips Alaska, Inc.  
PO Box 100360  
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Attachments:

1. CD1 Drill Site map (CPAI)
2. WD-03 wellbore schematic at time of Subsurface Blowout and Gas Release (CPAI)
3. WD-03 and CD1-15PB1: Qannik and Halo (gas-bearing) intervals (AOGCC)
4. Lower Explosive Limit (CPAI)
5. WD-03 wellbore schematic after final well plugging and abandonment (CPAI)

ATTACHMENT 1: CD1 Drill Site map (CPAI)



**Well WD-03 was drilled from slot 50**

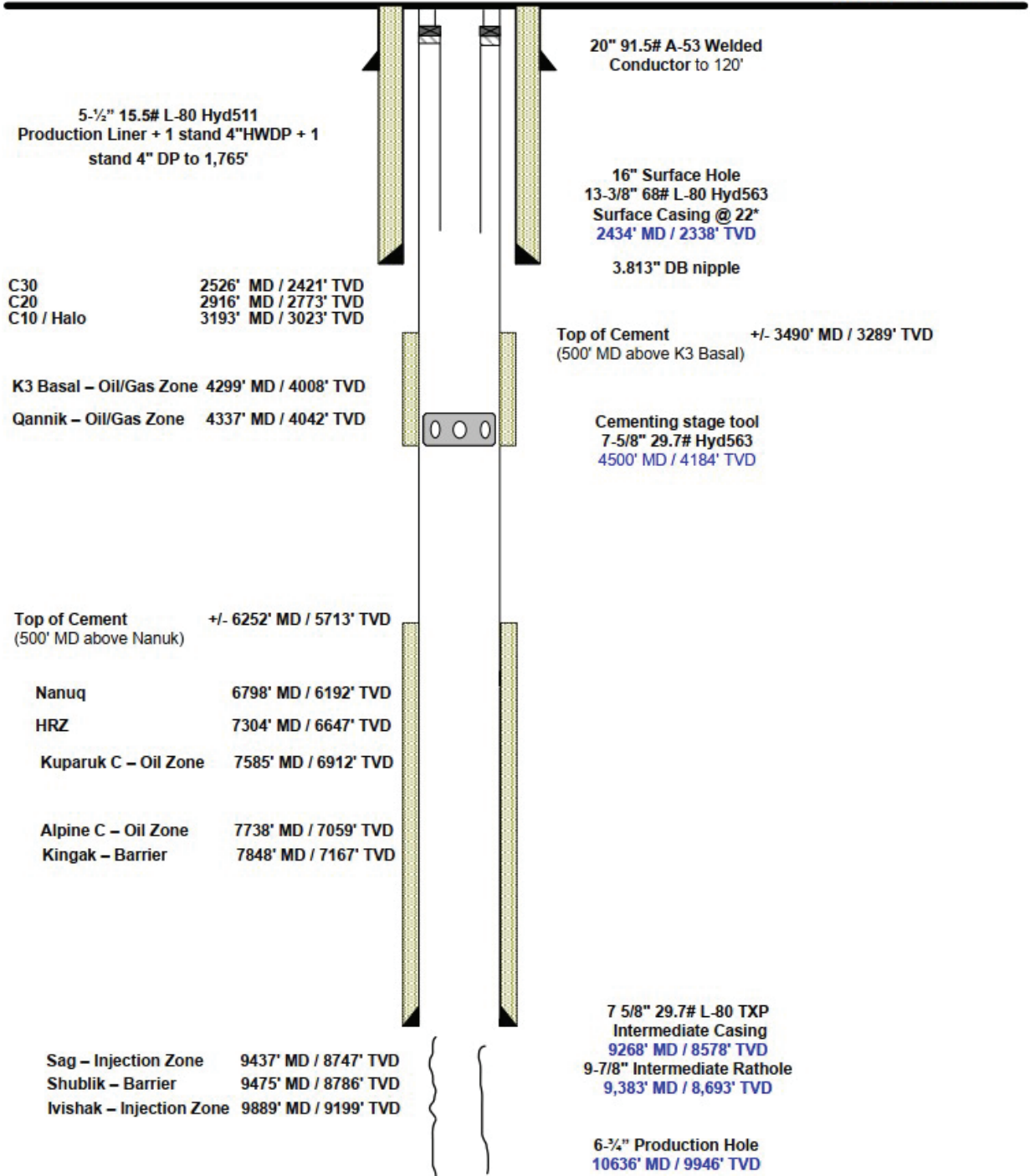
ATTACHMENT 2: WD-03 wellbore schematic at time of Subsurface Blowout and Gas Release (CPAI)

**Shut in UPR/Annular/Choke and Kill Manuals and locked handles**

**WD-03**

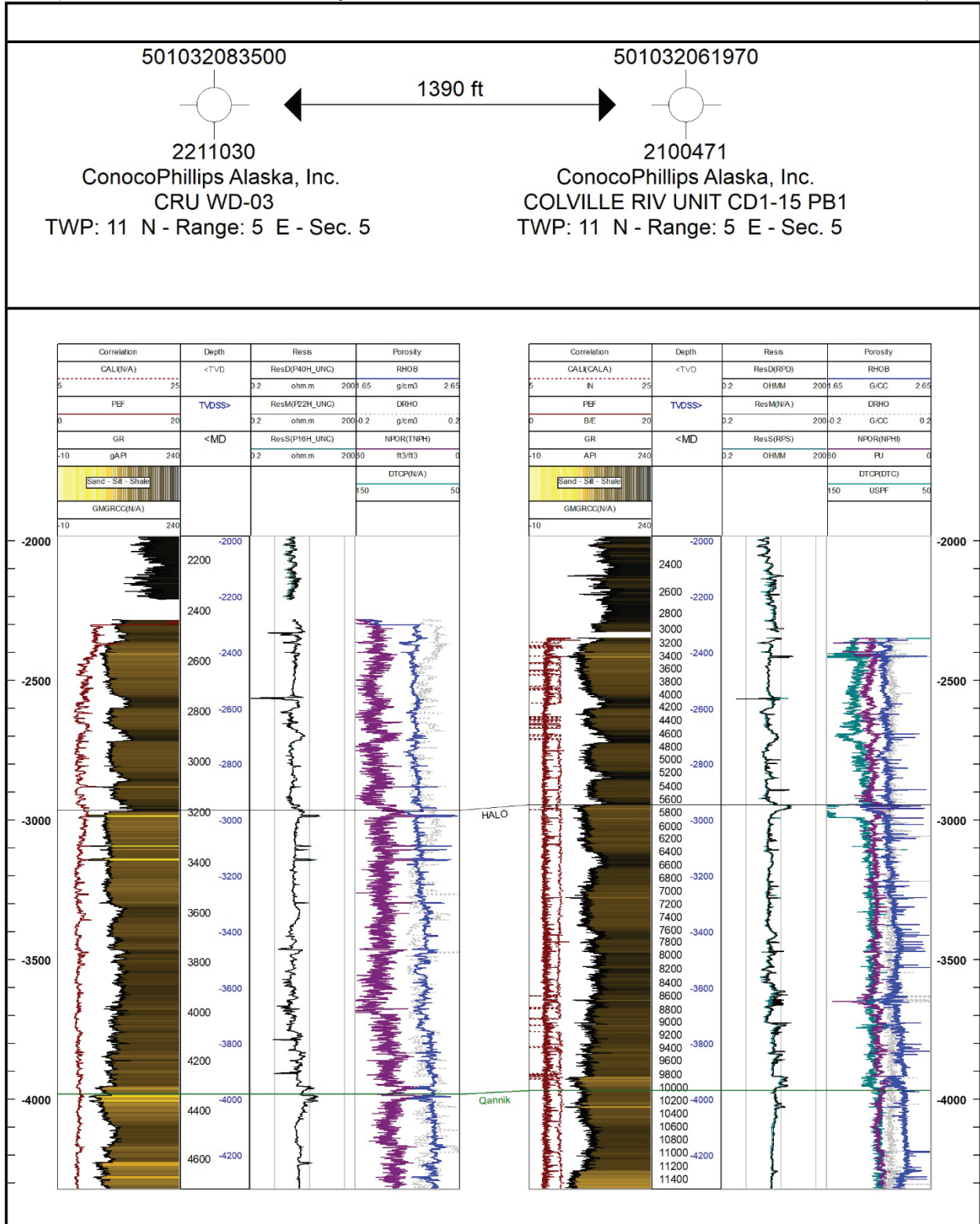
As Drilled Schematic

TVD Reference  
 Mean Sea Level 58.50 ft



ATTACHMENT 3: WD-03 and CD1-15PB1: Qannik and Halo (gas-bearing) intervals (AOGCC)

(Note the neutron and density curve cross-over within the Halo Interval in CD1-15PB1)



## ATTACHMENT 4: Lower Explosive Limit (CPAI)

### About the Lower Explosive Limit (LEL)

#### What is LEL?

The lower explosive limit is defined as the lowest concentration by percentage of gas or vapor in air that can produce a flash of fire in presence of an ignition source (arc, flame, heat).

#### How is LEL calculated and measured?

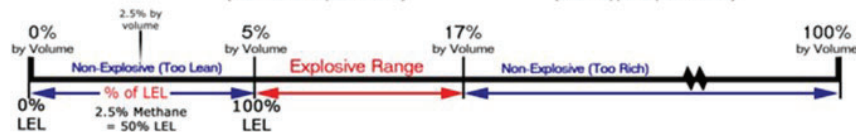
Methane is ignitable in air when concentrations are between 5% and 17% by volume of the total air composition.

Gas detection systems calculate the amount of gas present specified as a percentage (%) of LEL.

- 0% LEL denotes a combustible gas-free environment
- 100% LEL denotes an atmosphere in which ignition is possible (i.e., 5% concentration of methane in the atmosphere)

#### Example:

**Methane - LEL: 5% by volume in Air / UEL: 17% by volume in Air**  
(LEL = Lower Explosive Limit) (UEL = Upper Explosive Limit)



#### How is LEL used in normal operations?

LEL is used as an indicator to ensure it is safe to perform work in areas where a flammable atmosphere may be present.

- If LEL exceeds 10%, then additional approvals are required for work that may introduce an ignition source.
- LEL is not used as a measurement for environmental reporting purposes.

ATTACHMENT 5: WD-03 wellbore schematic after final well plugging and abandonment (CPAI)

