Umiat Well Pluggings – 2004

Operations Summary

BLM initiated well plugging operations in the Umiat area on April 21, 2004 under contract to Olgoonik Environmental Services (OES). The following legacy wells were plugged before the cessation of operations on May 11, 2004:

- Umiat #8
- Umiat #10
- Umiat #4
- Umiat #3

Plugging operations were conducted to stop a leaking gas well (Umiat #8) and to plug other wells in the Umiat area that were abandoned following the U.S. Navy’s exploration efforts in the late 1940’s and 50’s. At the completion of operations, the well heads were preserved due to their potential historical significance. The wells are located near Umiat, a former Navy site constructed in the 1940’s as a base of operations supporting oil exploration within the formerly named Naval Petroleum Reserve – 4. Umiat is located on the banks of the Colville River approximately 100 miles southwest of Prudhoe Bay.
Figure 2 – Umiat #8 and #10 wellheads during the summer of 2003.

Figure 3 – Umiat #4 and #3 wellheads during the summer of 2003.
Figure 4 – Umiat Camp April 25, 2004

Figure 5 – Offloading equipment at Umiat runway
Figure 6 – Operations at Umiat #8 (Well is inside wooden enclosure)

Figure 7 – Umiat #8 wellhead inside wooden enclosure
Figure 10 – Operations at Umiat #3
Umiat #8
Rig: Cardwell Unitized Spudder Model K
Spud: May 2, 1951
Umiat
Meridian Township Range Section Start P+A
Umiat 1N 1W 34 4/22/04
End P+A
Current Wellbore Schematic
GL: 735' AMSL DF: 740' AMSL
Wellhead is 10' above GL 5/2/04

Original RDF = 5.0' Above GL

<table>
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<tr>
<th>Size</th>
<th>Weight</th>
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<th>Type</th>
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<td>Conductor</td>
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<td>8 5/8&quot;</td>
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<td>2.5&quot;</td>
<td>6.5#</td>
<td>H-40</td>
<td>Tubing</td>
<td>2.102&quot;</td>
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Casing and Tubing Detail

Well Fluids

<table>
<thead>
<tr>
<th>Item</th>
<th>Location</th>
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<th>Btm</th>
<th>Vol (bbl)</th>
<th>Comments</th>
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<td>Tubing</td>
<td>949</td>
<td>1312</td>
<td>2.10</td>
<td>Bottom cement plug</td>
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<td>2</td>
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<td>431</td>
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<td>3.00</td>
<td>Fresh water spacer</td>
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<td>3</td>
<td>Tubing</td>
<td>287</td>
<td>431</td>
<td>0.82</td>
<td>Gel pill</td>
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<tr>
<td>4</td>
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<td>1.67</td>
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<tr>
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<tr>
<td>9</td>
<td>Annulus</td>
<td>11</td>
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Fish/Fill Information

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<th>Depth</th>
<th>Comment</th>
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<tbody>
<tr>
<td>A</td>
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<td>1312</td>
<td>Tubing string cemented in place</td>
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Cement  Arctic Set 3; yield 4.44 cf/sx; 10.7 ppg
Gel Pill  MI Gel; yield cf/sx; 10 ppg
Fresh Water
Umiat #10

Cardwell Unitized Spudder Model K

Rig: Cardwell Unitized Spudder Model K
Spud: September 9, 1951

Umiat
Meridian Township Range Section Start P+A
Umiat 1N 1W 33 5/1/04 End P+A

Current Wellbore Schematic
GL: 741’ AMSL DF: 746’ AMSL End P+A
Wellhead is 10’ above GL 5/6/04

Original RDF = 5.0’ Above GL

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<tr>
<td>?”</td>
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<td>Structural</td>
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<td>Surface</td>
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Casing and Tubing Detail

Fluid Level = unknown

Wellbore Items

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<th>Btm</th>
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<td>105</td>
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<td>Inflatable Bride plug</td>
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<td>105</td>
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<td>Circulating Brine</td>
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<td>4</td>
<td>OH/Csg</td>
<td>? Unknown</td>
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<td>Wellbore Fluids</td>
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Fish/Fill Information

Cement
Arctic Set 3; yield 4.44 cf/sx; 10.7 ppg

Wellbore Fluids
Unknown

Fresh Water
Rig: Spud:
Meridian Township Range Section Start P+A
Umiat 1S 1W 3 5/7/04
End P+A 5/9/04

Original Conductor Pipe = 1' above GL

Size Weight Grade Typ ID Top Btm
11 3/4" --- --- Conductor --- 0 33
??? --- --- Tubing --- ??? ???

Item Location Top Btm Vol (bbl) Comments
1 OH/Csg 11 70 13.96 Surface cement plug
2 Open Hole 70 102 3.33 Gel pill
3 Open Hole 102 201 11.90 Fresh Water
4 Open Hole 201 840 ? Wellbore Fluids

Wellbore Fluids

Bucyrus-Armstrong Cable Tool (29-W)
May 26, 1950

Current Wellbore Schematic

15" Hole

Fluid Level = 201'

12 sx of Cal-Seal

17.7 sx of Arctic Set 3

10 3/4" Hole

425'

15" Hole

425'

8" Hole

692'

6" Hole

TD = 840' PBTD = 840'

Fish/Fill Information

Item Date Depth Comment
A 5/8/04 ?? Rods cut and dropped in well inside tubing
B 5/8/04 ?? Tubing cut and dropped in well
C 7/29/50 792 Cable Tool Fish

Cement
Arctic Set 3; yield 4.44 cf/sx; 10.7 ppg

Gel Pill
MI Gel; yield cf/sx; 10 ppg

Wellbore Fluids
Unknown

Fresh Water
Umiat #3

Rig: Failing Model 1500 (314-C)
Spud: November 15, 1946

Umiat
Meridian Township
Range 1S
Section 1W
Start P+A 5/9/04
End P+A 5/11/04

Current Wellbore Schematic
GL: 351' AMSL
KB: 360' AMSL
End P+A
Wellhead is 6' above GL 5/11/04

Original RKB = 9.0' Above GL

Casing and Tubing Detail

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Well Fluids

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<th>Btm</th>
<th>Vol (bbl)</th>
<th>Comments</th>
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<td>572</td>
<td>?</td>
<td>Wellbore Fluids</td>
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Fish/Fill Information

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<tbody>
<tr>
<td>A</td>
<td>5/11/04</td>
<td>???</td>
<td>Tubing cut and dropped in well</td>
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</table>

Cement

Arctic Set 3; yield 1.533 cf/sx; 10.7 ppg

Gel Pill

MI Gel; 10 ppg

Wellbore Fluids

Unknown