Great Bear Petroleum Operating LLC

Alcor #1

Vertical Suspension Program V3

*Dylan Garrett – Halliburton Project Management, Completions Engineer*

11/20/2012

# Objective of Operation

The goal of this procedure will be to suspend the Alcor #1 upon completion of flowtest operations. There are currently two zones perforated. Both zones need to have a CIBP set above them, along with a cement top. Then a required kill string will be set using coil tubing along with the proper well head equipment.

# Health – Safety – Environmental – Quality

* HES’ safety regulations are to be adhered to at all times by all personnel on location – no exceptions.
* Zero accidents.
* Zero environmental incidents.
* Perform daily safety meetings with crews and pre-job JSAs.
* Make daily HSEQ inspections.
* Minimum of four near misses to be documented per month of completion operations.
* Ensure that all vendors follow correct billing instructions.
* Ensure that all costs are captured in a timely manner.

# Contact Information

* Neil Bosley – Well Site Supervisor: (307) 262-1189
* Pablo Headworth – Well Site Supervisor: (307) 315-3666
* Gary Smiley – Completions Superintendent: (307) 258-8480
* Dylan Garrett – Engineer: (720) 261-2755
* Buzz Yohman – Project Manager: (907) 230-2291
* Allan Ballard – HSE: (303) 947-4156

# General Information

* Single Vertical 10,812 ft MD / 10,802 ft TVD [10,665 ft MD at Landing Collar]
* Legals: T7N-R14E-Sec. 5, 2769 ft FSL, 549’ FEL
* Location: North Slope, AK
* GL: 164 ft KB = 23 ft
* Wellhead - WoodGroup 11”, 10K X 7-1/16”, 10K Tubing Head Adapter [7-1/16, 10K Frac Valves]
* Completion Fluid – 9.8 ppg NaCl with 6.6 gpt Aldacide G

# Tubulars

**Depth Type Specifications Burst Collapse ID/Drift**

**0-2,491’** Surface 95/8”, 40#, L-80, BTC 5,750 psi 3,090 psi 8.835”/8.679”

**0-8,311’** Intermediate 7”, 29#, P-110, BTC 11,220 psi 8,510 psi 6.184”/6.059”

**7,983-10,753’** Prod. Liner 41/2”, 13.5#, P-110, Hydro 521 12,410 psi 10,690 psi 3.920”/3.795”

# Vertical Completions Suspension Program

1. MI 300 bbls of 10.8 kill fluid to roll hole. RIH with coil and tag TD (10,530). Pump 298 bbls of 10.8 brine and pull coil up to 1,400 ft. Circulate 50 bbls of diesel to act as a freeze protect cap in the permafrost zone.

1. MIRU Eline and Slickline Units
2. With Eline, RIH with 3.7” gauge ring (Eline lubricator drift = 4.89”, 4.5” csg drift = 3.795”) from surface to bottom of Kuparuk perforations at 9,250 ft. Confirm depth and POOH.
3. RIH with Cast Iron Bridge Plug and set above the top Kuparuk perfs at 9,210 ft and POOH.
4. RIH with Slickline and dump bail 30 ft of cement above CIBP. POOH and RD Slickline. Allow 8 hrs to let the cement set.
5. With Eline, RIH with 3.7” gauge ring (Eline lubricator drift = 4.89”, 4.5” csg drift = 3.795”) and tag top cement at ~9,180. Confirm depth and POOH.
6. RIH with Cast Iron Bridge Plug and set no more than 50 ft above the top HRZ perf at 9,160, POOH.
7. RIH with Slickline and dump bail 30 ft of cement above CIBP. POOH and RD Slickline. Allow 8 hrs to let the cement set.
8. RIH with Slick line and tag top of cement. Confirm depth and POOH and RDMO Slick line unit.
9. MIRU pump to pressure test casing to 2,500 psi. Monitor and record.
10. MIRU crane.
11. RD flows cross and pull 7” frac sleeve. RU tubing hanger and Install 7-1/16”10k x 7-1/16” 5K X-over then install 7-1/16 5K master valve.
12. RDMO equipment.

