

HALLIBURTON

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January 4, 2011

U.S. Nuclear Regulatory Commission - Region IV
Texas Health Resources Tower
612 E. Lamar Blvd., Suite 400
Arlington, TX 76011-4125

RECEIVED
JAN - 7 RECD
DNMS

Attn: Division Director - DNMS

Re: **Notification of Source Abandonment**
Halliburton Energy Services, Inc.
USNRC License # 42-01068-07

This letter comprises the required 30-day written notification of source abandonment as per 10 CFR 39.77(d). This is a follow-up to the telephone conversation between Craig Zawadzki (Halliburton) and Mr. Charles Cain (NRC Region IV) on December 10, 2010 in which permission to proceed with the abandonment was granted.

Date of Occurrence: December 11, 2010

Company Name: Conoco Phillips Inc.
PO Box 100360
Anchorage, AK 99510

Well Name & Registration No: CD4-298
50-103-20623-00

Well Location: Drill site CD4
Alpine Field, North Slope Borough
Alaska USA

Source(s) Abandoned: Two 4 Curie Am-241/Be doubly-encapsulated special form radioactive sources. QSA Global, Inc. Model AMN.CY17. Source Serial Numbers 7329NK/7330NK.

One 2.0 Curie Cs-137 doubly-encapsulated special form radioactive source. QSA Global, Inc. Model CDC.CY13. Source Serial Number 46817B.

Logging sources held within source ports contained in the sidewalls of heavy pipe wall Measurement While Drilling (MWD) logging tools. Sources threaded into place and torqued down.

Two energy compensation sources contained within detector assembly installed in density tool collar. One 135 nanoCurie Cs-137 sealed source, Eckert & Ziegler Model A3888, serial number E4-169. One 230 nanoCurie Cs-137 sealed source, Eckert & Ziegler Model A3888, serial number E6-951.

Depth of Well: 14,161 ft. MD (6,025 ft. TVD)

Depth of Bottom of Fish: 14,161 ft. MD (6,205 ft. TVD)

Depth of 8 Ci Am-241/Be source: 14,077 ft. MD (6,207 ft. TVD)

Depth of 2.0 Ci Cs-137 source: 14,091 ft. MD (6,207 ft. TVD)

Depth of Top of Fish:
(Top of Abandoned Drillstring) 10,900 ft. MD (6,223 ft. TVD)

Length of Abandoned Drillstring located above sources: 3,177 feet of drill pipe above abandoned sources

Depth of Bottom of Cement Plug: 13,874 ft. MD (6,213 ft. TVD)

Depth of Top of Cement Plug: 10,830 ft. MD (6,215 ft. TVD)
(3,044 ft. cement plug)

Recovery Efforts: 02:49am- 3:07 am Drilled down to 14161' MD, 6205'TVD. Density source @ 14091'MD, 6207'TVD Neutron source @ 14077'MD, 6207'TVD Top source to top of LWD tool 27.99' Weight On Bit 8-12k, 130 Revolutions Per Minute, 200GPM, 2800 psi, Mud Weight 9.5 ppg, approximately 11 barrels loss/hr 24% deflection. PU wt 225 klbs. Connection. Survey Measured Depth 14079', Inclination 91.36, Azimuth 152.43. 03:07-03:15am Drilled ahead to 14149', worked pipe to 14137' twice. MW 9.5 ppg. 03:15-03:20 Drilled to 14153' picked up to 14140'. 12k WOB, 130 RPM, 200 gpm, 30% deflection, 2900 stand pipe pressure. 03:30 Surveyed pits and Ball mill - <0.02 mr/hr 03:20-03:40 Drilling ahead @ 14161' and hole packed off/rotary stalled. Attempted to pull string free. Still stuck. 03:40-03:48 Regain circulation and bring pumps up to 200 gpm 2980 psi. Cannot pick up or rotate. MW 9.4lb 03:48-04:14 Circ 200GPM with full returns while jarring up to 320klbs. 04:30 Surveyed pits and Ball mill - <0.02 mr/hr 04:14-06:00 Circ 65-110 GPM with full returns. MW 9.4 Jarred on string up to 320 klbs 05:30 Surveyed pits and Ball mill - <0.02 mr/hr 06:00 - 07:20 Cir @ 110 gpm with full returns while jarring up to 400 klbs. 06:30 & 07:30 Surveyed pits and Ball mill - <0.02 mr/hr 9:30 Surveyed pits and Ball mill - <0.02 mr/hr 07:20 - 09:47 Cir @ 110 gpm

with full returns while jarring up to 400 klbs. 09:47 – 10:26 Cir @ 125 gpm with full returns while jarring up to 410 klbs. 10:30 Surveyed pits and Ball mill – <0.02 mr/hr 10:26 – 11:31 Cir @ 95 gpm with full returns while jarring up to 380 klbs. 11:30 Surveyed pits and Ball mill – <0.02 mr/hr 11:31 – 12:10 Brought flow up to 145 gpm. Hole packed off. Jarring up to 375 klbs with partial returns. 12:30 – Surveyed pits and Ball mill – <0.02 mr/hr 12:10 – 14:18 Cir intermittently @ 45 gpm with partial returns while jarring up to 400 klbs. 12:30 & 13:30 – Surveyed pits and Ball mill – <0.02 mr/hr 14:18 – 14:33 Cir @ 180 gpm with while picking up to 285 klbs. 14:33 – 14:33 Cir @ 180 gpm with while picking up to 285 klbs. 14:33 – 15:08 Cir intermittently @ 70 gpm with while picking up to 415 klbs. 15:08 – 15:19 Cir @ 195 gpm with minimal loses. 14:30 & 15:30 – Surveyed pits and Ball mill – <0.02 mr/hr 7- Dec-10 00:20 – 00:30 Flow 50gpm. Pulling 426klbs. Surveyed pits and Ball mill -<0.02mr/hr. 00:30 – 01:00 – No flow. Jarring up to 426klbs. 01:15 – 01:30 – Flow 50GPM 01:30 - No flow. Surveyed pits and Ball mill - <0.02mr/hr. 01:30-02:00 Pulling to 438klbs. 02:00 – 02:15- Flow 50GPM. 02:30 - Surveyed pits and Ball mill - <0.02mr/hr. 02:30 – 03:00 – Pulled up, intermittently. No pumping. 03:00 – 03:30 – Pump 80GPM. 03:30 – 04:00 – Surveyed pits and Ball mill -<0.02mr/hr, Pump 80GPM. 16:30 & 17:30 – Surveyed pits and Ball mill – <0.02 mr/hr 15:08 – 17:30 Cir intermittently @ up to 190gpm with jarring to 420 klbs. 17:30 – 20:30 Cir intermittently @ up to 250 gpm with jarring to 426 klbs. 18:30 & 19:30 – Surveyed pits and Ball mill – <0.02 mr/hr. 20:30 & 21:30 – Surveyed pits and Ball mill – <0.02 mr/hr. 20:45 - Stop jarring. Low flow to 50 gpm. 22:30 & 23:30 – Surveyed pits and Ball mill – <0.02 mr/hr. 23:55-00:20 Begin jarring. 23:55-00:20 Begin jarring. 7- Dec-10 00:20 – 00:30 Flow 50gpm. Pulling 426klbs. Surveyed pits and Ball mill -<0.02mr/hr. 00:30 – 01:00 – No flow. Jarring up to 426klbs. 01:15 – 01:30 – Flow 50GPM 01:30 - No flow. Surveyed pits and Ball mill -<0.02mr/hr. 01:30-02:00 Pulling to 438klbs. 02:00 – 02:15- Flow 50GPM. 02:30 - Surveyed pits and Ball mill -<0.02mr/hr. 02:30 – 03:00 – Pulled up, intermittently. No pumping. 03:00 – 03:30 – Pump 80gpm. 03:30 – 04:00 – Surveyed pits and Ball mill -<0.02mr/hr, Pump 80GPM. 04:00 – 04:30 - Pulled up, intermittently. No pumping 04:30 – Surveyed pits and Ball mill -<0.02mr/hr. 04:30 – 04:45 Pumped 80gpm. 04:45 – 05:03 - Pulled up, intermittently. No pumping. 05:03 – 05:20 – Pumped 85gpm 05:20 – 05:30 – Pulled up intermittently. No pumps. 05:30 – Surveyed pits and Ball mill -<0.02mr/hr. 05:30 – 07:27 Cir intermittently @ up to 55 gpm with jarring to 365 klbs. 06:30 & 07:30 – Surveyed pits and Ball mill -<0.02mr/hr. 07:27 – 07:45 Pull 395 klbs continuously and bring pumps up to 45 gpm. 07:45 – 10:24 Cir intermittently @ up to 55 gpm with jarring to 365 klbs. 08:30, 09:30 & 10:30 – Surveyed pits and Ball mill -<0.02mr/hr. 10:24 – 11:04: Pull 270 – 356 klbs continuously and bring pumps up to 38 gpm. 11:30 & 12:30 – Surveyed pits and Ball mill -<0.02mr/hr. 11:04 to 11:57 – Intermittent Flow to 55 gpm. Limited jarring to 390 klbs. 13:30 & 14:30 – Surveyed pits and Ball mill -<0.02mr/hr. 11:57 to 14:47 – Circ up to 85 gpm and limited jarring to 285 klbs. 15:30 & 16:30 – Surveyed pits and Ball mill -

<0.02mr/hr. 17:30 – Surveyed pits and Ball mill -<0.02mr/hr. 14:47 to 17:30 – Circ up to 91 gpm and limited jarring to 430 klbs. 17:30 – 18:30 – No flow to low flow. Limited jarring up to 420 klbs. 18:30 & 19:30 – Surveyed pits and Ball mill -<0.02mr/hr. 20:30 – Surveyed pits and Ball mill -<0.02mr/hr. 18:30 – 21:30 – No flow. No jarring. Rigging up wireline. 21:30 – Surveyed pits and Ball mill -<0.02mr/hr. 22:30 – Surveyed pits and Ball mill -<0.02mr/hr. 23:30 - Surveyed pits and Ball mill -<0.02mr/hr. 00:30 – Surveyed pits and Ball mill -<0.02mr/hr. 01:30 – Surveyed pits and Ball mill -<0.02mr/hr. 02:30 – Surveyed pits and Ball mill -<0.02mr/hr. Pre-Job for free-point. 03:30 – Surveyed pits and Ball mill -<0.02mr/hr 04:15– 04:50 – No flow. Apply torque and work into string. No flow 04:50 - 06:25 Continue rigging up string shot. No flow/no jarring. 06:25 - 08:35 Pull @ 268 klbs. No flow/no jarring. 08:35 – 10:13 Pickup @ 250 klbs while pumping down the string shot @ up to 250 gpm. 09:00 – Surveyed pits and Ball mill -<0.02mr/hr. 10:13 – 12:54 Pickup @ 250 klbs while pumping intermittently to 220 gpm. 10:30 – Surveyed pits and Ball mill -<0.02mr/hr. 12:54 – 13:18 Slack off without pumping. Shoot string shot at bottom of bumper jars. 13:30 – Surveyed pits and Ball mill -<0.02mr/hr. 13:18 – 14:26 Attempt to jar free without luck. 14:30 – Surveyed pits and Ball mill -<0.02mr/hr. 14:26 – 15:10 Pick up @ 205 klbs and pump 125 gpm. 15:30 – Surveyed pits and Ball mill -<0.02mr/hr 15:10 – 15:51 Jar up to 311 klbs no flow. 15:51 – 18:15 Slack off to 128 klbs and circ intermittently @ 48 gpm. 18:15 – Stop circulating. No jarring. 16:30 – Surveyed pits and Ball mill -<0.02mr/hr 17:30 – Surveyed pits and Ball mill -<0.02mr/hr 20:00 – Second wire line attempt begins. 22:41 – Begin circulating to 150-230gpm to push string shot charge. Detecting and decoding pulses. 22:45 – Surveyed pits and Ball mill -<0.02mr/hr. Stop flow. 23:30 – Surveyed pits and Ball mill -<0.02mr/hr. No pumping. String shot unsuccessful at reaching bottom. Pullout. 9-Dec-2010 03:00 – Begin to run back in with string shot. 03:30 – Surveyed pits and Ball mill -<0.02mr/hr 05:04 – 06:00 Pump down string shot @ 230 gpm with complete mud losses. 06:00 – Surveyed pits and Ball mill -<0.02mr/hr 06:00 – 07:40 Pump down and shoot string shot. No returns. 07:00 – Surveyed pits and Ball mill -<0.02mr/hr 07:40 – 11:58 Jar on string up to 293 klbs. No flow. 12:00 – Surveyed pits and Ball mill -<0.02mr/hr 11:58 – 12:08 Work torque into string. 12:08 – Rig up string shot #3. 14:07 – 15:16 Pump down string shot @ 230 gpm. 14:30 – Surveyed pits and Ball mill -<0.02mr/hr 15:30 - Surveyed pits and Ball mill -<0.02mr/hr 16:30 - Surveyed pits and Ball mill -<0.02mr/hr No pumping. 17:20-18:30 – Free-point/Stringsot procedures 19:20 – String shot unsuccessful. Rig down string shot equip. Tools to cut pipe ordered. 20:00-02:00 Wait on chemical pipe cut tools. 2:00-03:40 Rig up pipe cut equip. No flow. 3:40- 05:40 Freefall chem cut equip. No flow. 06:00 & 07:00 - Surveyed pits and Ball mill -<0.02mr/hr 05:40 – 08:20 Pump intermittently up to 174 gpm. 08:00 & 09:00 - Surveyed pits and Ball mill -<0.02mr/hr 08:20 – 09:26 Cut pipe with Chem Cutter. No flow. 08:20 – 09:26 Cut pipe with Chem Cutter. No flow. 09:26 – 09:45 Circ up to 154 gpm. 10:00 - Surveyed pits and Ball mill -<0.02mr/hr 09:45 – 12:25 POOH w/ chem. Cutter.

No flow. 12:25 - 14:18 – Jar on string up to 400 klbs. Flow intermittently up to 155 gpm w/o returns. 13:30 - Surveyed pits and Ball mill <0.02mr/hr 14:18 – 15:00 Rig up to run explosives for pipe. No flow. 15:00-19:00 No flow 19:30-21:30 Stay clear of rig floor for loading explosives to run in hole. 21:30- 22:50 - RIH with explosives. 22:50-23:30 – Pump to push explosive down pipe. 00:30 - Surveyed pits and Ball mill <0.02mr/hr, No pumping. 01:30 - Surveyed pits and Ball mill <0.02mr/hr 02:30 – 02:45 – Pull up and keep pipe under tension, try to free string and shoot off wireline explosive. 03:00 - Lay down wireline tools. 03:30 – 04:00 Pump, rotate and work pipe. Pumping with returns. Surveyed pits and Ball mill <0.02mr/hr. 04:00 – 05:11 Jar on string up to 400 klbs. No flow. 05:11 – 06:42 Pump intermittently to 72 gpm. 06:30 - Surveyed pits and Ball mill <0.02mr/hr 06:42 – 10:58 Jar on string up to 400 klbs. No flow 11:00 - Surveyed pits and Ball mill <0.02mr/hr 10:58 – 16:00 Rig up string shot. No flow 16:00 – 16:11 Pump down string shot up to 231 gpm. 16:00 - Surveyed pits and Ball mill <0.02mr/hr 16:00 – 17:00 Log hole w/ wireline and string shot. No flow 17:30 – String free. 19:00- 20:00 Circulate. Work Pipe. Surveyed pits and Ball mill <0.02mr/hr 21:15 - Surveyed pits and Ball mill <0.02mr/hr. No pumping. 22:00- Surveyed pits and Ball mill <0.02mr/hr 22:00-04:00 Pull pipe out of hole. To test BOP and pump cement.

Results of Efforts to Immobilize and Seal the Source in Place:

On December 13, 2010 the BHA with radioactive sources and the drill string above the BHA were immobilized by placement of a cement plug.

Warning Statement:

A warning plaque will be made and provided to Conoco Phillips for mounting on the wellhead. See attachment for template of warning plaque.

Regards,

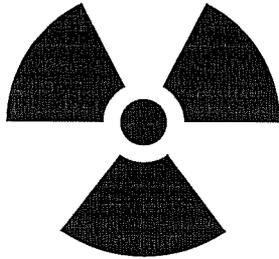


Steve Woods
Sr. Radiation Safety Officer
Halliburton Energy Services

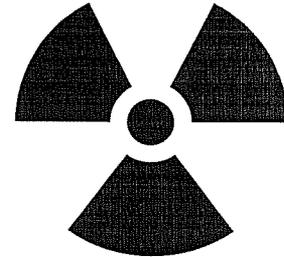
Attachments: Warning Statement

ABANDONMENT PLAQUE

**ConocoPhillips
CD4-298
50-103-20623-00**



CAUTION



ONE 8.0 CURIE Am-241Be RADIOACTIVE
SOURCE, AND ONE 2.0 CURIE Cs-137
RADIOACTIVE SOURCE ABANDONDED 11
DECEMBER, 2010 AT 14,077 FT. MD (6,207 FT.
TVD), AND AT 14,091 FT. MD (6,207 FT. TVD).
PLUG BACK DEPTH 10,830 FT. MD (6,215 FT.
TVD)

DO NOT RE-ENTER THIS WELL BEFORE
CONTACTING THE
US NUCLEAR REGULATORY COMMISSION