

**HALLIBURTON**  
Global Radiation Safety  
3000 N. Sam Houston Parkway East - Building M, Room M1F21  
Houston, Texas 77032-3219

March 13, 2014

U.S. Nuclear Regulatory Commission – Region IV  
612 East Lamar Blvd., Suite 400  
Arlington, TX 76011-4125

Attn: Division Director - DNMS

**Re: Notification of Well Logging Sealed Source Abandonment  
Halliburton Energy Services, Inc.  
USNRC License No. 42-01068-07**

This letter comprises the required 30-day written notification of source abandonment as required by 10 CFR 39.77(d). This is a follow-up to the communications between Mr. Steve Woods (Halliburton) and Mr. James L. Thompson (NRC Region IV) on February 14, 2014, in which permission to proceed with the abandonment was granted. The abandonment procedure was completed on February 17, 2014.

Date of Occurrence: 17 February 2014

Company Name: Shell Offshore  
PO BOX 301440  
Houston, TX 77054

Well Name & Registration No.: OCS-G-PI001 ST001 BP01  
608174112302

Well Location: Offshore Louisiana  
Mississippi Canyon 810  
USA

Sources Abandoned: One 2.0 Curie (74 GBq) Cs-137 doubly-encapsulated  
radioactive sealed source, solid, special form.  
QSA Global, Inc. Model CDC.CY13.  
Source Serial Number B36391B

Logging source held within the source port contained within the sidewalls of heavy pipe wall Measurement While Drilling (MWD) logging tool.  
Source threaded into the source port and torqued down.

Two Energy Compensation Sources (ECS) were contained within the detector assembly installed in the density logging tool:

One 108.5 nanoCurie Cs-137 ECS source, Eckert & Ziegler Model IND1402. Source serial number 76535.

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MAR 14 2014

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One 96.9 nanoCurie Cs-137 ECS source, Eckert & Ziegler Model IND1402. Source serial number 76990.

Immobilization method:

A 200 ft. cement plug on top of the fish. Install mechanical bridge plug 100 ft. above top of expandable liner and pressure test to 1,500 PSI. Spot 100 ft. cement plug on top of mechanical plug. Set mechanical plug 50 ft. above 11 7/8" hanger. Set whipstock in place.

Results of Efforts to Immobilize and set sources in place:

Abandonment procedure completed on 17 Feb 2014

Depth of Well:

20,424 ft. MD / 17,687 ft. TVD

Depth of Bottom of Fish:

20,317 ft. MD / 17,627 ft. TVD

Depth of Sources:

Cs-137 sources located at 20,218 ft. MD / 17,571 ft. TVD

Depth of Top of Fish:

19,259 ft. MD / 16,999 ft. TVD

Depth of Bottom of Cement Plug:

19,259 ft. MD / 16,999 ft. TVD

Depth of Top of Cement Plug:

19,055 ft. MD / 16,873 ft. TVD

Description of Recovery Attempts:

12 February 2014

07:25 Drill string hanging up bit depth 20,317 ft. MD ; Source depth 20,218 ft. MD  
07:30-09:15 Circulate  
09:30-11:00 Attempting to free drill string, jarring  
09:50 Radiation site survey: <.01 mR/hr  
11:00-14:15 Circulate  
14:15-14:55 Attempting to free drill string, jarring  
14:55-15:25 Circulate  
15:25-15:50 Attempting to free drill string, jarring  
19:00 Radiation site survey: <.01 mR/hr  
15:50-23:59 Circulate / Attempting to free drill string, jarring

13 February 2014

00:00 Radiation site survey: <.01 mR/hr  
00:00-06:00 Circulating while attempting to free drill string, jarring  
02:30 Radiation site survey: <.01 mR/hr  
05:30 Radiation site survey: <.01 mR/hr  
08:30 Radiation site survey: <.01 mR/hr  
08:43-09:47 Attempt to free drill string, jarring  
11:30 Radiation site survey: <.01 mR/hr  
13:30-14:30 Attempt to free drill string, jarring  
14:30 Radiation site survey: <.01 mR/hr  
17:00 Radiation site survey: <.01 mR/hr  
17:15-18:00 Attempt to free drill string, jarring

20:00 Radiation site survey: <.01 mR/hr  
21:00-21:45 Attempt to free drill string, jarring  
23:00 Radiation site survey: <.01 mR/hr

14 February 2014

23:35-00:28 Attempt to free drill string, jarring  
02:00 Radiation site survey: <.01 mR/hr  
02:38-03:30 Attempt to free drill string, jarring  
03:50-04:00 Attempt to free drill string, jarring  
04:00-05:00 Circulating  
05:00-08:00 Circulating  
08:00 Radiation site survey: <.01 mR/hr  
08:00-09:15 Circulating  
09:15-11:00 Attempt to free drill string, jarring  
11:00 Radiation site survey: <.01 mR/hr  
12:00 Rig up wireline  
13:34 Approval to abandon sources granted by  
James Thompson with the NRC  
14:00 Radiation site survey  $\leq$  .01 mR/hr  
17:00 Radiation site survey  $\leq$  .01 mR/hr  
20:00 Radiation site survey  $\leq$  .01 mR/hr  
22:00 Wireline P/U explosives to sever pipe  
23:00 Radiation site survey  $\leq$  .01 mR/hr

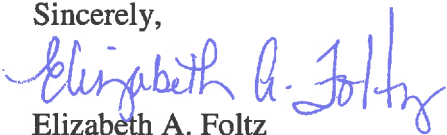
15 February 2014

02:00 Radiation site survey  $\leq$  .01 mR/hr  
04:45 Attempt to sever pipe, wireline shorted out  
04:50 POOH to check short on wireline  
05:00 Radiation site survey  $\leq$  .01 mR/hr  
07:30 Wireline OOH  
08:00 Radiation site survey  $\leq$  .01 mR/hr  
10:00-10:30 Attempt to shear pipe  
10:30 Verified pipe is sheared  
11:00 Radiation site survey  $\leq$  .01 mR/hr  
17:00 Radiation site survey  $\leq$  .01 mR/hr  
20:00 Radiation site survey  $\leq$  .01 mR/hr  
23:00 Radiation site survey  $\leq$  .01 mR/hr

Warning Plaque:

A permanent identification warning plaque will be fabricated and provided to Shell Offshore for mounting at the wellhead as practicable. Attachment 1 includes a representation of the warning plaque.

Sincerely,



Elizabeth A. Foltz  
Global Radiation Safety Officer  
Halliburton Energy Services, Inc.  
Email: [Elizabeth.Foltz@Halliburton.com](mailto:Elizabeth.Foltz@Halliburton.com)

Attachment: (1) Representation of Warning Plaque

ATTACHMENT 1



*Representation of Permanent Warning Plaque*