

**HALLIBURTON**  
Global Radiation Safety  
3000 N. Sam Houston Parkway East - Plaza 1, Office 5320J  
Houston, Texas 77032-3219

RECEIVED  
MAR 31 2016

March 24, 2016

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

DNMS

Attn: Division Director - DNMS

Re: **Notification of Well Logging Sealed Source Abandonment**  
**Halliburton Energy Services, Inc.**  
**USNRC License No. 41-01068-07**

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 Jillian Mead (Halliburton) and Mr. James Thompson (NRC Region IV) on March 14, 2016 at 12:43 pm, in which permission to proceed with the abandonment was granted.

Date of Occurrence: 13 March 2016

Company Name: Anadarko  
P.O.Box 1330  
Houston, Texas 77251

Well Name & Registration No.: OCS-G 21447 007 ST00BP00  
608084005600

Well Location: Keathley Canyon 919  
Offshore Gulf of Mexico  
USA

Sources Abandoned: One 15.0 Curie Am-241/Be doubly- encapsulated radioactive sealed source, solid, special form. AEA Technology QSA Inc. Model AMN.CY19. Source Serial Number 74812B.

One 2.0 Curie Cs-137 doubly-encapsulated radioactive sealed source, solid, special form. AEA Technology QSA, Inc. Model CDC.CY13. Source Serial Number 54909B.

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

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

One 108.2 nanoCurie Cs-137 ECS source, North American Scientific, Model IND1402. Source serial number 15659.

One 91.12 nanoCurie Cs-137 ECS source, Eckert & Ziegler, Model IND1402. Source serial number J7-662.

Immobilization method:

Cement plug on top of the fish. The cement plug also serves as the kickoff device.

Results of Efforts to Immobilize and set sources in place:

Abandonment procedure successfully completed on 15 March 2016

Depth of Well:

17,054 ft. MD

Depth of Bottom of Fish:

17,039 ft. MD

Depth of Sources:

Am-241/Be source located at 16,939 ft. MD  
Cs-137 sources located at 16,956 ft. MD

Depth of Top of Fish:

16,394 ft. MD

Depth of Bottom of Cement Plug:

16,440 ft. MD

Depth of Top of Cement Plug:

15,440 ft. MD

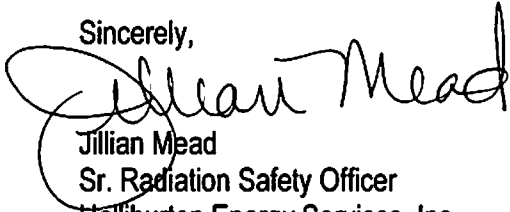
Description of Recovery Attempts:

3/13/16 06:45 - drilling ahead @ 17,054 MD and began gaining fluid in the pits. 07:05 - Shut in well 08:18 - Open well and attempt to pull off bottom and circulate. 08:30 - Hole packed off, attempt to free tools 08:30-09:40 - Jarred 23 times Stuck 09:40 - Rig-site survey done all normal 09:40 - 14:30 - Jarred on tools 67 times 14:30 - Rig-site survey done all normal 14:30 - 15:45 - Jarred on tools 18 times 15:45 - 18:30 - Jarred on tools 12 times 18:30 - Rig-site survey done all normal 22:30 - Rig-site survey done all normal 3/14/16 00:30 - Rig-site survey done all normal 00:30 - Drop WIPR shear tool 02:30 - Rig-site survey done all normal 04:30 - Rig-site survey done all normal 00:30 - 5:00 - Jarred on tools 10 times 06:10 - Shear WIPR sub 07:02 - Circulate and weight up mud, well on choke 07:20 - Rig-site survey done all normal

Warning Plaque:

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

Sincerely,

A handwritten signature in cursive script that reads "Jillian Mead". The signature is written in black ink and is positioned above the printed name and title.

Jillian Mead

Sr. Radiation Safety Officer

Halliburton Energy Services, Inc.

Email: [Jillian.Mead@Halliburton.com](mailto:Jillian.Mead@Halliburton.com)

Attachment: (1) Representation of Warning Plaque

ATTACHMENT 1  
*Representation of Permanent Warning Plaque*

