

Schlumberger Technology Corporation
Radiation Explosives Compliance
300 Schlumberger Drive, MD 121
Sugar Land, TX 77478



December 01, 2016

Jason vonEhr
United States Nuclear Regulatory Commission
Region IV
1600 East Lamar Blvd
Arlington, Texas 76011

RE: Source Abandonment for Highlands Natural Resources Helios 5-52-16-32

Dear Jason,

This letter is to confirm the abandonment of an irretrievable radioactive logging source in a well in accordance with 10 CFR §39.77(d). Information for this abandonment is attached.

Licensee: Schlumberger Technology Corporation (License# 42-00090-03)

If you have any questions or require additional information, please contact me at 281-285-8775 or mclaughlin8@slb.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Timothy P. McLaughlin".

Timothy P. McLaughlin
Radiation Safety Officer
Schlumberger Technology Corporation

Source Abandonment - Highlands Natural Resources Well: Helios 5-52-16-32

Date of Occurrence: Declared irretrievable: October 20, 2016

Source #1

Identification: 63 GBq, CS-137, Gamma Ray Source, Serial # A5416
Manufacturer: QSA Global
Model: GSR-J (CDC.CY3)
Depth: 2300 ft MD

Well Identification Company: Highlands Natural Resources
Well: Helios 5-52-16-32
Field: Wildcat
County: Custer, Montana
API Number: 25-017-21178

Seal Results: On October 21, 2016, the rig ran in hole with drill pipe and pumped enough cement to establish a cement plug 500 ft. in length (2273 ft. MD to 1773 ft MD). After waiting on cement to cure, the rig ran in the hole with a bit and drill pipe and tagged the top of cement at 1773 ft. MD. The rig then pulled out of the hole with drill pipe and dropped a bit in the hole to serve as a deflection device. Finally, the rig set two additional cement plugs, and permanently abandoned the well.

Recovery Attempts: On October 17, 2016, at approximately 11:00 am a wireline tool string containing a single logging source was lowered into the well with the goal of reaching bottom at 3058 feet. After several attempts, the tool was unable to descend below 2300 feet and was being pulled out of the well when it became disconnected from the wireline (pulled-off) near surface and fell back into the well. The rig then ran in the hole with a standard retrieval equipment to recover the tool, but was unable to descend below 2270 feet and failed to recover the tool. The rig then tried jetting and circulating fluid to break through the obstruction without drilling or milling, but was unsuccessful. After it became apparent that further recovery attempts would require techniques (drilling and milling) that might jeopardize the source integrity, the client declared the logging tool and source irretrievable and ceased recovery operations. Because the tool fell back in the well and was never re-engaged the true depth of the wireline tool with source could not be accurately determined. Therefore, the source depth was chosen based upon the deepest depth achieved with drillpipe and provides adequate safety in case of future drilling.

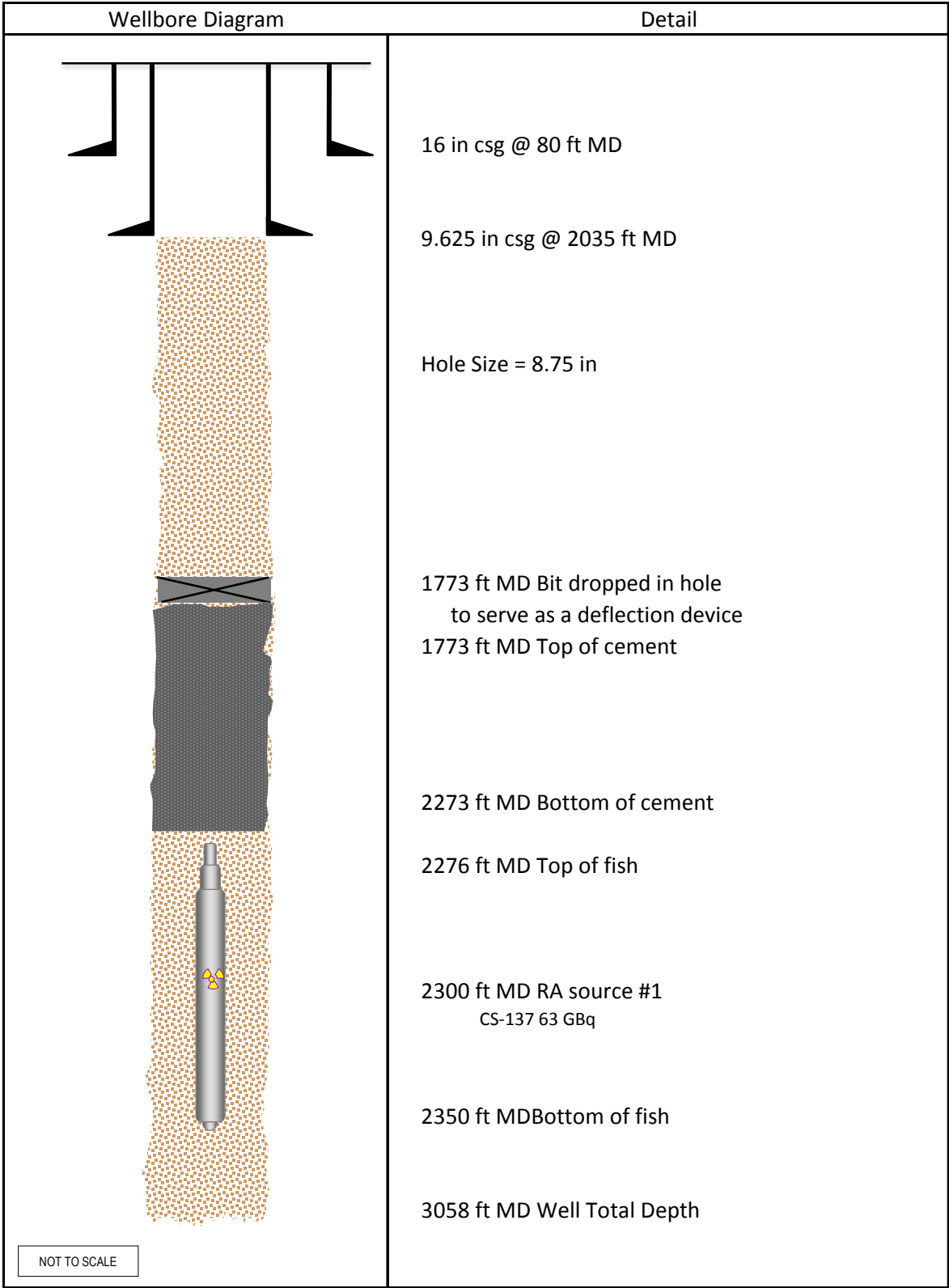
Depth of Well: 3058 ft MD

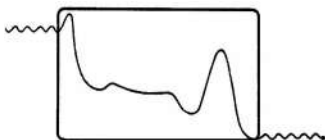
Identification Plaque as required by 10 CFR §39.15(a)(5)(iii) will be provided for attachment to wellhead, if practical.

Reports: No other agency will receive a copy of this report.

Initial Contact: By telephone with Michael Vasquez on October 20, 2016 09:22 AM.

Highlands Natural Resources
Helios 5-52-16-32





Monitoring Services

P.O. BOX 266677, HOUSTON, TEXAS 77207 . AREA CODE 713/478-6820 . FAX 281/532-0929

SEALED SOURCE LEAK TEST CERTIFICATE

RSO

SCHLUMBERGER 6650

Customer#: 751

531 EAST COMMERCE
AVE

Source #: 4489

FORT MORGAN

CO

80701

Account #: 6650

RADIONUCLIDE: CS-137

ACTIVITY: 1.7

CI

SERIAL NO: A5416

WIPE DATE: 9/19/2016

SOURCE CODE: GSRJ

EFFICIENCY: 0.95

NET CPM: 5

GROSS CPM: 29

BKG CPM: 24

NET CPM

=MICROCURI

EFF X 2.22x10⁶ DPM/u CI

THE ABOVE SOURCE WIPE TEST HAS BEEN ASSAYED IN ACCORDANCE WITH OUR RADIOACTIVE MATERIAL LICENSE AND THE APPROPRIATE REGULATORY REQUIREMENTS. THE REGULATIONS DEFINE A LEAKING SOURCE AS ONE FROM WHICH AN APPROPRIATE WIPE TEST HAS REMOVED 0.005 (5.0x10E-3) MICROCUIRE OR MORE OF ACTIVITY.

THE REMOVABLE ACTIVITY

WAS: 2.371E-006

MICROCURI

8.772E-002

Bq

ASSAY NO: 10/16/2016 58

DATE: 10/16/2016

ASSAYED BY:

Schlumberger Technology Corporation
Radiation Explosives Compliance
300 Schlumberger Drive, MD 121
Sugar Land, Tx 77478



FAX

To:	Ernie Jilek	Date:	Nov 18, 2016
		Fax:	985-727-2165
From:	Charles Deible	Tel:	(281) 285-8119
		Fax:	(281) 285-8526
Subject:	Abandonment Plaque	Pages:	2 (including cover)

Ernie,

Request for abandonment plaque for Highlands Natural Resources, well information follows.

Regards,

Chuck

Schlumberger Technology Corporation
Radiation Explosives Compliance
300 Schlumberger Drive, MD 121
Sugar Land, Tx 77478



Graphics N' Metal
1200 Clausel Street
Mandeville, La. 70448
(504) 669-6082
(985) 727-2165

November 18, 2016

Attn: Ernie Jilek,

Please construct the standard abandonment plaque with the following information:

Company	Highlands Natural Resources
Well Name	Helios 5-52-16-32
Field	Wildcat
County	Custer
State	Montana
API#	25-017-21178
Date of abandonment	October 21, 2016
Well depth	3058 ft MD
Plug back depth	Surface
Top of fish	2276 ft MD
Abandoned Source	CS-137, 63 GBq, Gamma Ray Source @ 2300 ft MD

Special Instructions: DO NOT DRILL BELOW PLUG BACK DEPTH BEFORE CONTACTING REGION IV OF THE
NUCLEAR REGULATORY COMMISSION

Please forward the completed plaque and invoice to me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Charles Deible", with a long horizontal line extending to the right.

Charles Deible
Radiation Safety Officer
Schlumberger U.S.