



ESTERNA



# PLUGGING RECORD

NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC.

## I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: LAWS-02

Well owner: U.S. Department of Energy/Los Alamos National Laboratory Phone No.: 505-667-3005

Mailing address: P.O. Box 1663

City: Los Alamos State: New Mexico Zip code: 87545

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Boart Longyear
- 2) New Mexico Well Driller License No.: 1161 Expiration Date: 10/31/2014
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Boart Longyear
- 4) Date well plugging began: 7/31/14 Date well plugging concluded: 8/2/14
- 5) GPS Well Location: East: 1649536.9  
North: 1770848.3  
*Well coordinates are New Mexico State Plane Grid Coordinates, Central Zone (North American Datum, 1983 [NAD 1983]).*
- 6) Depth of well confirmed at initiation of plugging as: 140 ft (length: angle boring)  
by the following manner: Tag with tremie pipe
- 7) Static water level measured at initiation of plugging: Dry ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 07/03/2014
- 9) Were all plugging activities consistent with an approved plugging plan? No If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

LAWS-02 was proposed to be plugged/abandoned with cement grout placed from bottom to top with a tremie pipe. Hydrated bentonite pellets/chips were placed from TD (140 ft casing length) to 10 ft casing length with a tremie pipe. Portland Type I/II cement was placed from 10.0 to 2.0 ft casing length inside the well casing, and from 10.0 to 2.0 ft casing length within the annulus. The surface and well casings were cut level with ground surface and a concrete surface plug was emplaced from 2.0 ft casing length to surface.



- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

<u>Depth</u> (ft bgl)	<u>Plugging Material Used</u> (include any additives used)	<u>Volume of Material Placed</u> (gallons)	<u>Theoretical Volume of Borehole/ Casing</u> (gallons)	<u>Placement Method</u> (tremie pipe, other)	<u>Comments</u> ("casing perforated first", "open annular space also plugged", etc.)
0 2	Concrete	9.7 gallons	4.5 gallons	Other	Surface plug
10	Portland Type I/II Cement	74.8 gallons	29.2 gallons	Other	Calculated and actual volumes also include annular space between borehole and well casing from 10 to 2 ft bgl
	3/8-in. Hydrated Bentonite Chips and 1/4-in. Hydrated Bentonite Pellets	241.6 gallons	178.8 gallons	Tremie	
140					

MULTIPLY		BY		AND OBTAIN
cubic feet	x	7.4805	=	gallons
cubic yards	x	201.97	=	gallons

**III. SIGNATURE:**

I, \_\_\_\_\_, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

  
Signature of Well Driller

10-9-14  
Date

**ELEVATION (FT AMSL)**  
BRASS CAP (MARKER) TBD

**TOTAL LENGTH OF CASING (FT)** 156

**HOLE DRILLED AT 43° angle**  
AZIMUTH N40°E  
APPROXIMATE DEPTH 106 (FT BGS)

**SURFACE CASING CUT LEVEL WITH CONCRETE PAD**

**CONCRETE SURFACE PLUG** 0 TO 2 (FT)  
USED 1.3 (FT<sup>3</sup>), CALC 0.6 (FT<sup>3</sup>)

**NEAT PORTLAND CEMENT** 2 TO 10 (FT)  
USED 10.0 (FT<sup>3</sup>), CALC 3.9 (FT<sup>3</sup>)

GROUND SURFACE (TBD FT AMSL)

**10.0-IN CASING**  
0.0 TO 9.0 (FT)

**TYPE OF CASING**  
MATERIAL STEEL  
ID (IN) 10.0 OD (IN) 10.75

**6.0-IN CASING**  
0.0 TO 156 (FT)

**TYPE OF CASING**  
MATERIAL Schedule 80 PVC with scallops  
ID (IN) 5.8 OD (IN) 6.6

**3/8-IN HYDRATED BENTONITE CHIPS**  
**1/4-IN HYDRATED BENTONITE PELLETS**  
10 TO 140 (FT)  
USED 32.3 (FT<sup>3</sup>), CALC 23.9 (FT<sup>3</sup>)

**SLOUGH** 140 TO 156 (FT) →

**BOTTOM OF CASING** 156 (FT) →



**TerranearPMC**

Drafted By: TPMC  
Project Number: 86313

Date: August 12, 2014  
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**LAWS-02 Post-Abandonment Well Construction**  
Technical Area 72 (TA-72)  
Los Alamos National Laboratory  
Los Alamos, New Mexico

As-Built

**LAWS-02**

**NOT TO SCALE**