

AP - 001

# P&A REPORT

09 / 23 / 2015



Enriching lives through innovation

September 23, 2015

Mr. Glenn Von Gonten  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Subject: Plugging and Abandonment Field Activities Report  
Former Brickland Refinery Site  
Sunland Park, New Mexico  
(Abatement Plan AP-001) – New Mexico Oil Conservation Division Approval Correspondence

Dear Mr. Von Gonten:

Huntsman is providing this letter to the NMOC to report the Well Plugging and Abandonment Field Activities at the Former Brickland Refinery Site. This report includes a description of the field work performed, photographic documentation, and state well plugging reports for all wells plugged and abandoned.

#### Monitor Well Plugging and Abandonment

On July 20, 2015, Huntsman observed and provided limited field oversight for the plugging and abandoning of twenty one monitoring wells at the Former Brickland Refinery. A New Mexico-licensed well driller (Maverick Drilling, Marvin McGee) removed the surface completions by way of pulling protective casings using a backhoe due to soft site conditions. In accordance with New Mexico Administrative Code, 19.27.4 NMAC, *Natural Resources and Wildlife, Underground water, well driller licensing; construction, repair and plugging of wells*, all well casings were attempted to be removed by pulling straight up using a backhoe and chain wrapped around the casing. Although effort to remove the casing was made, in some locations not all of the casing was removed due to the casing breaking off below ground surface. The remaining casing and borehole was tremie grouted from the bottom up to ground surface. As recorded by Maverick Drilling, Table 1 below lists the well names, locations, total depths, and the footage of casing removed from the well.

**Table 1: Plugged and Abandoned Monitoring Well information**

WELL NAME	CASING SIZE (in)	TOTAL DEPTH (ft)	CASING PULLED (ft)
MW-1	4	14.25	3
MW-4	4	14	10
MW-7	4	13.66	10
MW-12	4	25	15
MW-14	4	23.3	2
MW-15	4	32.2	0
MW-16	4	29.7	2
WP-1	2	9.5	0

WELL NAME	CASING SIZE (inches)	TOTAL DEPTH (foot)	CASING PULLED (foot)
WP-2	2	17.6	1
WP-3	2	8.8	1
WP-7	2	17.2	1
WP-14	2	5.6	2
WP-25	2	Unknown	0
WP-26D	2	18.9	10
WP-26S	2	10.8	1
WP-27D	2	14.9	1
WP-27S	2	11.8	1
WP-30	2	10.1	3
WP-31	2	13.5	2.5
WP-32	2	12.6	2
WP-33	2	12	3

The removed well casings were taken by the drillers as directed by Arcadis for disposal at the local landfill. The metal pipes were taken to the recycling facility.

The drilling subcontractor is required by the State of New Mexico to submit State of New Mexico Plugging Reports which includes the wells location, construction, depth, backfill material, and methods of backfill. The State of New Mexico Plugging Reports for all twenty one (21) wells plugged and abandoned are included as an attachment to this letter report.

This letter report for plug and abandonment will be provided to the NMOCD with the Annual Groundwater Report due on or before April 1, 2016 as well.

We appreciate your approval to modify the sampling performed at the former Brickland Refinery site. If you have any questions or require additional information on our addendum, please contact me at 281-719-3039 or via email at [ed\\_l\\_gunderson@huntsman.com](mailto:ed_l_gunderson@huntsman.com).

Sincerely,

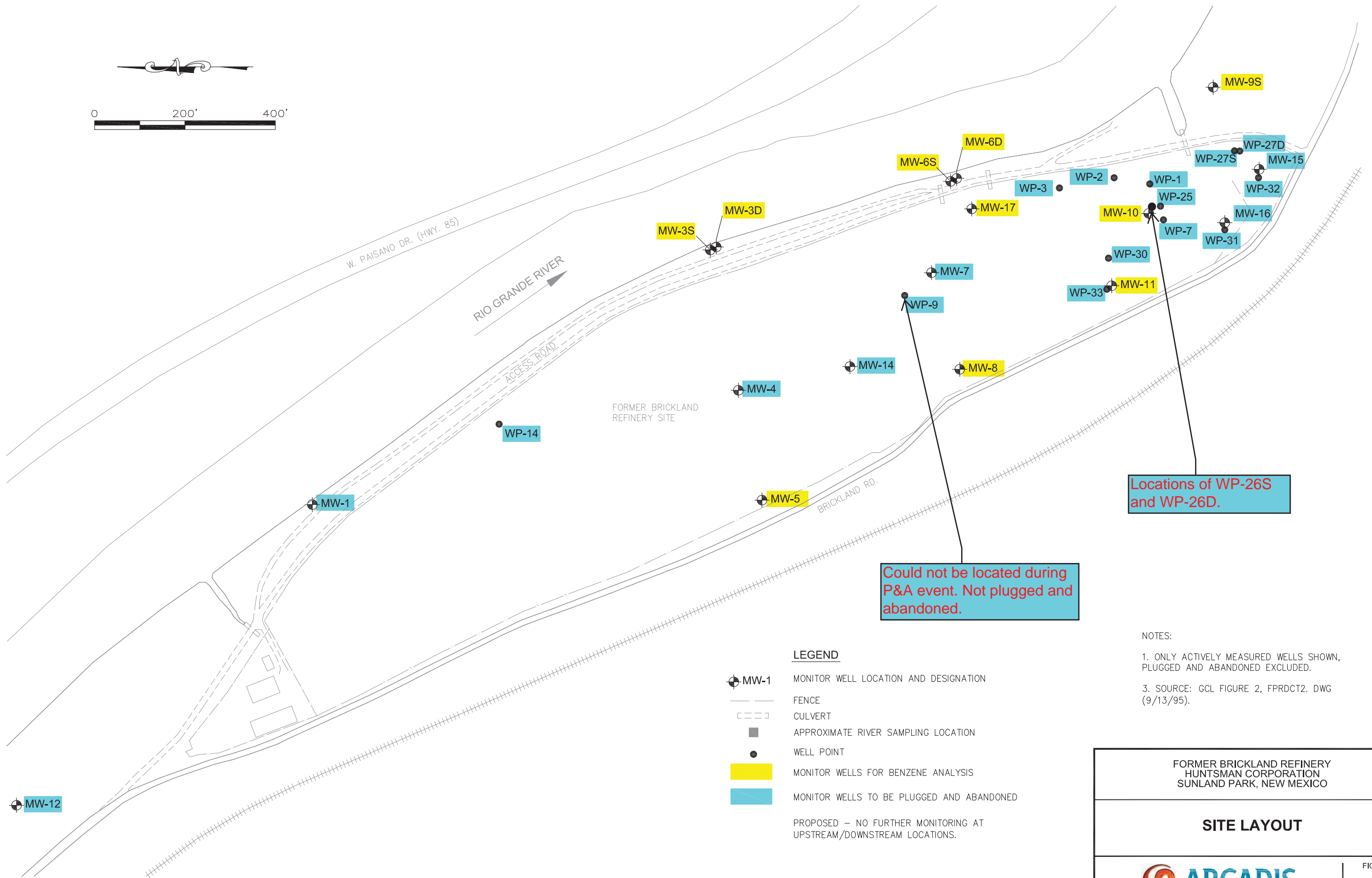
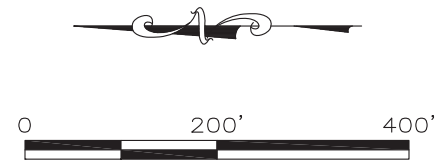


Ed Gunderson  
Senior Manager, EHS Legal and Regulatory Compliance

Attachment A

Site Map

DRAWN BY: S. MEN CHECKED BY: TDR PROJECT MANAGER: DRE  
G:\PROJECT\HUNTSMAN\A03185-0001\Figures\3185-01-02B.dwg PLOTTED: 10/22/2014 9:50 AM BY: MEN, SOTHON



#### LEGEND

- MW-1 MONITOR WELL LOCATION AND DESIGNATION
- FENCE
- CULVERT
- APPROXIMATE RIVER SAMPLING LOCATION
- WELL POINT
- MONITOR WELLS FOR BENZENE ANALYSIS
- MONITOR WELLS TO BE PLUGGED AND ABANDONED
- PROPOSED – NO FURTHER MONITORING AT UPSTREAM/DOWNSTREAM LOCATIONS.

#### NOTES:

1. ONLY ACTIVELY MEASURED WELLS SHOWN, PLUGGED AND ABANDONED EXCLUDED.
3. SOURCE: GCL FIGURE 2, FPRDCT2. DWG (9/13/95).

FORMER BRICKLAND REFINERY  
HUNTSMAN CORPORATION  
SUNLAND PARK, NEW MEXICO

#### SITE LAYOUT



Attachment B

State of New Mexico Plugging Records





# 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: LRG-16012 MW-15

Well owner: Edward Gunderson, Huntsman International, LLC.

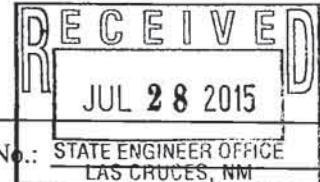
Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381

Phone No.: STATE ENGINEER OFFICE  
LAS CRUCES, NM



## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 39.33 sec  
Longitude: 106 deg, 31 min, 59.88 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 32.2 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 4 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe  
differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 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.

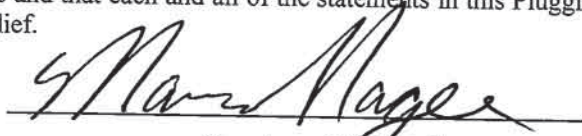
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
20					
32.2	Neat cement grout -----TD-----	21	21	Tremie	Removed casing
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date





# PLUGGING RECORD



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

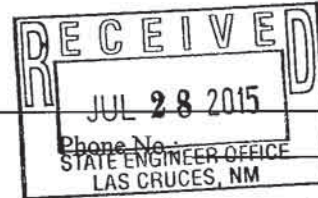
## I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: LRG-16012 MW-1

Well owner: Edward Gunderson, Huntsman International, LLC.

Mailing address: 8600 Gosling Road

City: The Woodlands State: Texas Zip code: 77381



## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 50.49 sec  
Longitude: 106 deg, 32 min, 08.51 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 14.25 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 1 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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- 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.

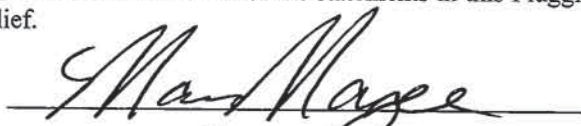
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie	Removed casing
14.25	-----TD-----	9	9		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

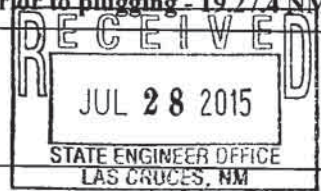
Date



# 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: LRG-16012 MW-14

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 39.20 sec  
Longitude: 106 deg, 32 min, 05.13 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 23.3 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 1.5 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
20	Neat cement grout				
23.3	-----TD-----	15	15	Tremie	Removed casing
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date



# 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: LRG-16012 MW-12

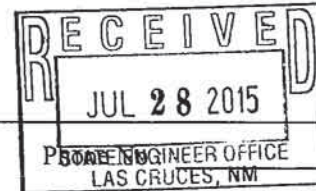
Well owner: Edward Gunderson, Huntsman International, LLC.

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381



## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 57.96 sec  
Longitude: 106 deg, 32 min, 16.77 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 25 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 1 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 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.

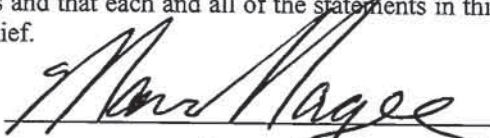
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
20	Neat cement grout				
25	-----TD-----	16	16	Tremie	Removed casing
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date





# PLUGGING RECORD



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

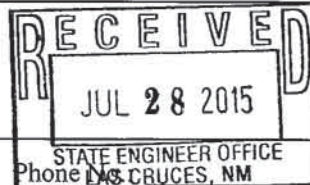
## I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: LRG-16012 MW-16

Well owner: Edward Gunderson, Huntsman International, LLC.

Mailing address: 8600 Gosling Road

City: The Woodlands State: Texas Zip code: 77381



## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 31.05 sec  
Longitude: 106 deg, 32 min, 01.28 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 32.2 ft below ground level (bgl),  
by the following manner: Tape measure
- 7) Static water level measured at initiation of plugging: 4 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

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- 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.

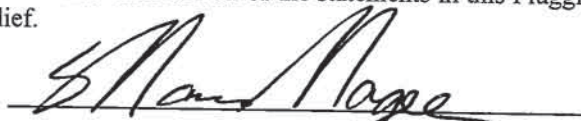
For each interval plugged, describe within the following columns:

<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					
20					
29.7	Neat cement grout -----TD-----	19	19	Tremie pipe	Removed casing
40					
60					
80					

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

**III. SIGNATURE:**

I, Marvin Magee, 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

July 28 2015  
Date



# 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: LRG-16012 MW-4

Well owner: Edward Gunderson, Huntsman International, LLC.

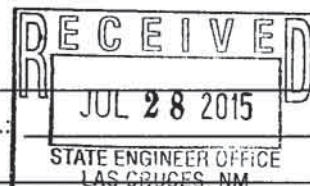
Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381



## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 14.69 sec  
Longitude: 106 deg, 32 min, 05.11 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 14 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 1.5 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie	removed casing
14	-----TD-----	9	9		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date



# 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: LRG-16012 MW-7

Well owner: Edward Gunderson, Huntsman International, LLC.

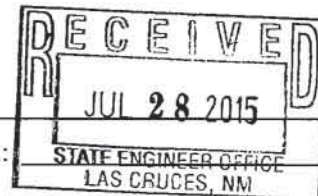
Phone No.:

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381



## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 36.76 sec  
Longitude: 106 deg, 32 min, 02.42 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 13.66 ft below ground level (bgl),  
by the following manner: Tape measure
- 7) Static water level measured at initiation of plugging: 2 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie pipe	Removed casing
13.66	-----TD-----	9	9		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date





# 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: LRG-16012 WP-1  
Well owner: Edward Gunderson, Huntsman International, LLC. Phone No.: \_\_\_\_\_  
Mailing address: 8600 Gosling Road  
City: The Woodlands State: Texas Zip code: 77381

## **II. WELL PLUGGING INFORMATION:**

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 32.77 sec  
Longitude: 106 deg, 32 min, 00.27 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 9.5 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 2.5 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
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- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie	Removed casing
9.5	-----TD-----	6	6		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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.

Marvin Magee  
Signature of Well Driller

July 28 2015  
Date



# 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: LRG-16012 WP-2

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 33.14 sec  
Longitude: 106 deg, 32 min, 00.13 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 17.6 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 2.5 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
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- 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.

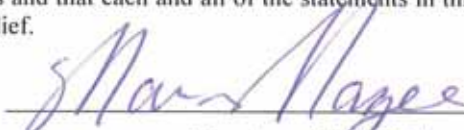
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
17.6	Neat cement grout				
20	-----TD-----	3	3	Tremie	Removed casing
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date



# 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: LRG-16012 WP-3  
Well owner: Edward Gunderson, Huntsman International, LLC. Phone No.: \_\_\_\_\_  
Mailing address: 8600 Gosling Road  
City: The Woodlands State: Texas Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 33.62 sec  
Longitude: 106 deg, 32 min, 00.17 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 8.8 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 2.5 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
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- 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.

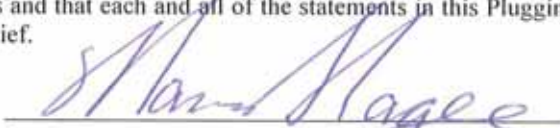
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie	Removed casing
8.8	-----TD-----	1.5	1.4		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date





# 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: LRG-16012 WP-7

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands State: Texas Zip code: 77381

## II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Maverick Drilling, Inc.

2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett

4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015

5) GPS Well Location: Latitude: 31 deg, 47 min, 32.47 sec  
Longitude: 106 deg, 32 min, 01.25 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 17.2 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_

7) Static water level measured at initiation of plugging: 2.5 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

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- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
17.2	Neat cement grout			Tremie	Removed casing
20	-----TD-----	2.5	2.8		
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date



# 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: LRG-16012 WP-14  
Well owner: Edward Gunderson, Huntsman International, LLC. Phone No.: \_\_\_\_\_  
Mailing address: 8600 Gosling Road  
City: The Woodlands State: Texas Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 47.01 sec  
Longitude: 106 deg, 32 min, 07.05 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 5.6 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 1 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
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- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
5.6	Neat cement grout -----TD-----	1	1	Tremie	Removed casing
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date



# 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: LRG-16012 WP-25  
Well owner: Edward Gunderson, Huntsman International, LLC. Phone No.: \_\_\_\_\_  
Mailing address: 8600 Gosling Road  
City: The Woodlands State: Texas Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 32.51 sec  
Longitude: 106 deg, 32 min, 00.85 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 15 ft below ground level (bgl),  
by the following manner: Tape measure
- 7) Static water level measured at initiation of plugging: 2.5 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

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- 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.

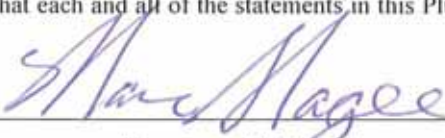
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
15	Neat cement grout				
20	-----TD-----	2	2.4	Tremie pipe	Removed casing
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date





# 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: LRG-16012 WP-26D

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 32.76 sec  
Longitude: 106 deg, 32 min, 01.04 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 14.7 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 2 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
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- 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.

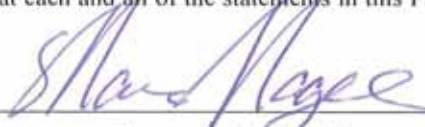
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie pipe	Removed casing
14.7	-----TD-----	2.5	2.4		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date



# 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: LRG-16012 WP-26S

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 32.76 sec  
Longitude: 106 deg, 32 min, 01.00 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 13.7 ft below ground level (bgl),  
by the following manner: Tape measure
- 7) Static water level measured at initiation of plugging: 2 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
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OFFICE OF THE STATE ENGINEER

- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie pipe	Removed casing
13.7	-----TD-----	2	2.2		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date





- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments (“casing perforated first”, “open annular space also plugged”, etc.)
0	Neat cement grout			Tremie	Removed casing
14.9	-----TD-----	2	2.5		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date



# 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: LRG-16012 WP-27S

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 30.14 sec  
Longitude: 106 deg, 31 min, 59.39 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 11.8 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 4 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe  
differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
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- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie	Removed casing
11.8	-----TD-----	2	1.9		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date





# 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: LRG-16012 WP-30

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands

State: Texas

Zip code: 77381

## II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Maverick Drilling, Inc.

2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett

4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015

5) GPS Well Location: Latitude: 31 deg, 47 min, 33.73 sec  
Longitude: 106 deg, 32 min, 02.37 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 10.1 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_

7) Static water level measured at initiation of plugging: 2.5 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

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- 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.

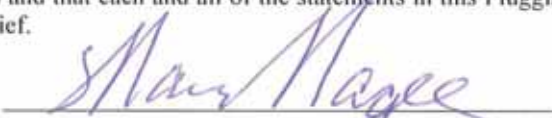
For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0	Neat cement grout			Tremie	Removed casing
10.1	-----TD-----	1.5	1.6		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date



# 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: LRG-16012 WP-31

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands State: Texas Zip code: 77381

## II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Maverick Drilling, Inc.

2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett

4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015

5) GPS Well Location: Latitude: 31 deg, 47 min, 31.09 sec  
Longitude: 106 deg, 32 min, 01.48 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 13.5 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_

7) Static water level measured at initiation of plugging: 2.5 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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LAND & WATER

- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
	Neat cement grout			Tremie	Removed casing
13.5	-----TD-----	2	2.2		
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date





# 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: LRG-16012 WP-32  
Well owner: Edward Gunderson, Huntsman International, LLC. Phone No.: \_\_\_\_\_  
Mailing address: 8600 Gosling Road  
City: The Woodlands State: Texas Zip code: 77381

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Maverick Drilling, Inc.
- 2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett
- 4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015
- 5) GPS Well Location: Latitude: 31 deg, 47 min, 30.36 sec  
Longitude: 106 deg, 32 min, 00.07 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 12.6 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_
- 7) Static water level measured at initiation of plugging: 4 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe  
differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- 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:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
0					
12.6	Neat cement grout -----TD-----	2	2	Tremie	Removed casing
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015

Date



# 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: LRG-16012 WP-33

Well owner: Edward Gunderson, Huntsman International, LLC.

Phone No.: \_\_\_\_\_

Mailing address: 8600 Gosling Road

City: The Woodlands State: Texas Zip code: 77381

## II. WELL PLUGGING INFORMATION:

1) Name of well drilling company that plugged well: Maverick Drilling, Inc.

2) New Mexico Well Driller License No.: WD-1449 Expiration Date: June 30, 2016

3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Marvin Magee and Johnny Arnett

4) Date well plugging began: July 21, 2015 Date well plugging concluded: July 21, 2015

5) GPS Well Location: Latitude: 31 deg, 47 min, 33.55 sec  
Longitude: 106 deg, 32 min, 03.01 sec, WGS 84

6) Depth of well confirmed at initiation of plugging as: 12 ft below ground level (bgl),  
by the following manner: \_\_\_\_\_

7) Static water level measured at initiation of plugging: 2.5 ft bgl

8) Date well plugging plan of operations was approved by the State Engineer: July 1, 2015

9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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STATE ENGINEER

- 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:

Depth (ft bgl) 0	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments (“casing perforated first”, “open annular space also plugged”, etc.)
12	Neat cement grout -----TD-----	2	2	Tremie	Removed casing
20					
40					
60					
80					

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

### III. SIGNATURE:

I, Marvin Magee, 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

July 28 2015  
Date



Attachment C

Photographic Documentation

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>1</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Pulling protective casing from well MW-4 using a backhoe.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>2</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Pulling casing from well MW-4.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>3</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Showing 10 feet of casing pulled from well MW-4.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> 4	<b>Date:</b> 7/20/15		
<b>Description:</b>  Grouting MW-4 using a hose starting at the bottom of the well and pulling it up as the well fills with cement grout.			



## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>5</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Pulling casing from well WP-25 using a backhoe.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>6</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  WP-25 hole after casing was pulled			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>7</b>	<b>Date:</b> 7/20/15		
<b>Description:</b> WP-25 grouted			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>8</b>	<b>Date:</b> 7/20/15		
<b>Description:</b> WP-27D casing pulled using a backhoe.			



## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico		<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>9</b>	<b>Date:</b> 7/20/15			
<b>Description:</b> Well casing WP-26S being pulled with a backhoe.				

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico		<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>10</b>	<b>Date:</b> 7/20/15			
<b>Description:</b> Well WP-26S grouted with cement grout after being pulled.				

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>11</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  WP-2 being plugged using a bucket full of cement grout due to the location being in soft sand, trailer could not drive to location.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>12</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Well point casing WP-14 being pulled with a backhoe.			



## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>13</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  WP-14 close up of where the pipe broke at approximately 2 feet below surface.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>14</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  A stake was placed as a marker on WP-14 to locate it in the future for excavation of "tar" material below ground surface.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>15</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Pulling casing from well MW-1.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>16</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Grouting MW-1 using a hose starting at the bottom of the well and pulling it up as the well fills with cement grout.			



## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>17</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Pulling protective casing from well MW-12.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>18</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Pulling casing from well MW-12.			



## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>19</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  Grouting MW-12 using a hose starting at the bottom of the well and pulling it up as the well fills with cement grout.			

## PHOTOGRAPHIC LOG

<b>Property Name:</b> Former Huntsman Refinery Site		<b>Location:</b> Sunland Park, New Mexico	<b>Project No.</b> LA003185.2015
<b>Photo No.</b> <b>20</b>	<b>Date:</b> 7/20/15		
<b>Description:</b>  MW-12 grouted.			