



**STATE OF NEW MEXICO**  
**OFFICE OF THE STATE ENGINEER**  
**ROSWELL**

**Mike A. Hamman, P.E.**  
State Engineer

**DISTRICT II**  
1900 West Second St.  
Roswell, New Mexico 88201  
Phone: (575) 622-6521  
Fax: (575) 623-8559

October 10, 2023

Office of the State Engineer  
1900 West 2<sup>nd</sup> Street  
Roswell, NM 88201


RE: Well Plugging Plan of Operations for well No. RA-4941

Greetings:

Enclosed is your copy of the Well Plugging Plan of Operations for the above referenced well subject to the attached Conditions of Approval. The proposed method of operation is found to be acceptable and in accordance with the Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells 19.27.4 NMAC adopted June 30, 2017 by the State Engineer. subject to the attached Conditions of Approval.

Within 30 days after the well is plugged, the well driller is required to file a complete plugging record with the OSE and the permit holder.

Sincerely,

  
\_\_\_\_\_  
Kashyap Parekh  
Water Resources Manager I



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1900 West Second St.  
 Roswell, New Mexico 88201  
 Phone: (575) 622-6521  
 Fax: (575) 623- 8559

Applicant has identified a well, listed below, to be plugged. JA Drake Well Service Inc will perform the plugging.

Permittee: Office of the State Engineer  
 NMOSE Permit Number: RA-4941

<b>NMOSE File</b>	<b>Casing diameter (inches)</b>	<b>Well depth (feet bgl)</b>	<b>Approximate static water level (feet bgl)</b>	<b>Latitude</b>	<b>Longitude</b>
RA-4941	6.413	650.0	0.0	33° 25' 42.47"	104° 23' 28.28"

**Specific Plugging Conditions of Approval for Well located in Chaves County.**

1. Theoretical volume of sealant required for abandonment is approximately 123.9 cubic feet. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 530.0 feet below ground surface (b.g.s.).
2. A Type I/II Portland cement mixed with 5.2 to 6.0 gallons of fresh water per 94-lb sack of cement is approved for the plugging the well.
3. Sealant shall be placed by pumping through a tremie pipe extended to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces the standing water column upwards from below. Tremie pipe may be pulled as necessary to retain minimal submergence in the advancing column of sealant.
4. Should cement "shrinks-back" occur in the well, use of a tremie for topping off is required for cement placement deeper than 20 feet below land surface or if water is present in the casing. The approved sealant for topping off is identified in condition 3. of these Specific Conditions of Approval.
5. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then

placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.

6. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.
7. NMOSE witnessing of the plugging of the well will not be required.
8. Any deviation from this plan must obtain an approved variance from this office prior to implementation.
9. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions.

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 10<sup>th</sup> day of October 2023

Mike A. Hamman, P.E. State Engineer

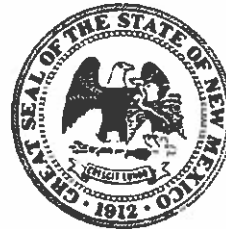
By: K. Parekh

Kashyap Parekh  
Water Resources Manager I





## WELL PLUGGING PLAN OF OPERATIONS



NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

**Alert!** Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology [geoinfo.nmt.edu/resources/water/cgmn/](http://geoinfo.nmt.edu/resources/water/cgmn/) if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email [nmbg-waterlevels@nmt.edu](mailto:nmbg-waterlevels@nmt.edu), prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

**I. FILING FEE:** There is no filing fee for this form.

**II. GENERAL / WELL OWNERSHIP:** ☐ Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: RA-04941 (0-2-CH-110)

Name of well owner: Office of the State Engineer

Mailing address: 1900 West 2nd Street

County: \_\_\_\_\_

City: Roswell

State: \_\_\_\_\_

New Mexico

Zip code: \_\_\_\_\_

Phone number: 575-622-6521

E-mail: \_\_\_\_\_

### III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: JA Drake Well Service, Inc.

New Mexico Well Driller License No.: NA

Expiration Date: \_\_\_\_\_

**IV. WELL INFORMATION:** ☐ Check here if this plan describes method for plugging multiple monitoring wells on the same site and attach supplemental form WD-08m and skip to #2 in this section.

Note: A copy of the existing Well Record for the well(s) to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 33 deg, 25 min, 42.47 sec  
Longitude: 104 deg, 23 min, 28.08 sec, NAD 83

2) Reason(s) for plugging well(s):

Damaged wellhead on artesian well resulting in discharge at surface.

3) Was well used for any type of monitoring program? Yes If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? Yes If yes, provide additional detail, including analytical results and/or laboratory report(s): Elevated chloride, sulfate, and TDS

5) Static water level: 0.0 feet below land surface / feet above land surface (circle one)

6) Depth of the well: ~650 feet

- 7) Inside diameter of innermost casing: 6.413 inches.
- 8) Casing material: Steel
- 9) The well was constructed with:  
☒ an open-hole production interval, state the open interval: 630 to 650 feet  
☐ a well screen or perforated pipe, state the screened interval(s): \_\_\_\_\_
- 10) What annular interval surrounding the artesian casing of this well is cement-grouted? unknown
- 11) Was the well built with surface casing? Yes If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? Yes If yes, please describe:  
 Cemented with 50 sx in 1961.
- 12) Has all pumping equipment and associated piping been removed from the well? Yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

**V. DESCRIPTION OF PLANNED WELL PLUGGING:** ☐ If plugging method differs between multiple wells on same site, a separate form must be completed for each method.

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal. Attach a copy of any signed OSE variance to this plugging plan.

Also, if this planned plugging plan requires a variance to 19.27.4 NMAC, attach a detailed variance request signed by the applicant.

- 1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:  
 TIH with 2-3/8" tubing to set inflatable packer at 530 ft. R/U cementing services. Cement from 530 ft. to surface with ~105 sx. TOOH. WOC. Top off well with cement. Cut off wellhead.
- 2) Will well head be cut-off below land surface after plugging? Yes

**VI. PLUGGING AND SEALING MATERIALS:**

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant. Attach a copy of the batch mix recipe from the cement company and/or product description for specialty cement mixes or any sealant that deviates from the list of OSE approved sealants.

- 1) For plugging intervals that employ cement grout, complete and attach Table A.
- 2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.
- 3) Theoretical volume of grout required to plug the well to land surface: 123.9 cubic feet
- 4) Type of Cement proposed: Type I/II
- 5) Proposed cement grout mix: 5.23 gallons of water per 94 pound sack of Portland cement.
- 6) Will the grout be: \_\_\_\_\_ batch-mixed and delivered to the site  
X mixed on site

- 7) Grout additives requested, and percent by dry weight relative to cement:

No additives proposed. Cement will be neat Portland Type I/II.

- 8) Additional notes and calculations:

**VII. ADDITIONAL INFORMATION:** List additional information below, or on separate sheet(s):

**VIII. SIGNATURE:**

I, Jim Griswold/ NM Oil Conservation Division, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Digitally signed by Jim Griswold  
Date: 2023.10.10 14:54:13 -06'00'

Signature of Applicant

Date

OSE DT OCT 10 2023 PM 3:26

**IX. ACTION OF THE STATE ENGINEER:**

This Well Plugging Plan of Operations is:

☒ Approved subject to the attached conditions.  
☐ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 10<sup>th</sup> day of October, 2023



Mike A. Hamman P.E., New Mexico State Engineer

By: K. Parekh  
KASHYAP PAREKH  
W.R.M. I

WD-08 Well Plugging Plan  
Version: March 07, 2022  
Page 3 of 5

**TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.**

	<b>Interval 1 – deepest</b>	<b>Interval 2</b>	<b>Interval 3 – most shallow</b> Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	0		
Bottom of proposed interval of grout placement (ft bgl)	530		
Theoretical volume of grout required per interval (gallons)	927		
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	5.23		
Mixed on-site or batch-mixed and delivered?	Mixed on-site		
Grout additive 1 requested	None		
Additive 1 percent by dry weight relative to cement			
Grout additive 2 requested			
Additive 2 percent by dry weight relative to cement			

**TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.**

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)			
Bottom of proposed sealant of grout placement (ft bgl)			
Theoretical volume of sealant required per interval (gallons)			
Proposed abandonment sealant (manufacturer and trade name)			

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## Analytical Report

Lab Order 2303040

Date Reported:

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: PVACD

Client Sample ID: PVACD

Project: Bitter Lakes Refuge

Collection Date: 2/28/2023 11:30:00 AM

Lab ID: 2303040-001

Matrix: AQUEOUS

Received Date: 3/1/2023 9:45:00 AM

Analyses	Result	MCL	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: JMT
Fluoride	ND	4.0	0.50		mg/L	5	3/1/2023
Chloride	2800	250	250	*	mg/L	500	3/4/2023
Nitrogen, Nitrite (As N)	ND	1.0	2.0		mg/L	20	3/1/2023
Bromide	0.71		0.50		mg/L	5	3/1/2023
Nitrogen, Nitrate (As N)	ND	10	0.50		mg/L	5	3/1/2023
Phosphorus, Orthophosphate (As P)	ND		2.5		mg/L	5	3/1/2023
Sulfate	1600	250	250	*	mg/L	500	3/4/2023
<b>EPA METHOD 200.7: METALS</b>							Analyst: VP
Calcium	540		10		mg/L	10	3/2/2023
Magnesium	150		5.0		mg/L	5	3/2/2023
Potassium	9.1		1.0		mg/L	1	3/2/2023
Sodium	2000		20		mg/L	20	3/2/2023
<b>SM2510B: SPECIFIC CONDUCTANCE</b>							Analyst: CAS
Conductivity	16000		100		µmhos/c	10	3/7/2023
<b>SM2320B: ALKALINITY</b>							Analyst: CAS
Bicarbonate (As CaCO <sub>3</sub> )	ND		20.00		mg/L Ca	1	3/6/2023
Carbonate (As CaCO <sub>3</sub> )	ND		2.000		mg/L Ca	1	3/6/2023
Total Alkalinity (as CaCO <sub>3</sub> )	ND		20.00		mg/L Ca	1	3/6/2023
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>							Analyst: DML
Total Dissolved Solids	7830	500	50.0	*	mg/L	1	3/6/2023

USE ON OCT 10 2023 PM 3/23

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers: \* = Value exceeds Maximum Contaminant Level(MCL)

MCL = EPA Maximum Contamination Level

RL = Reporting Limit: Laboratory Detection Level

H = Holding times for preparation or analysis exceeded

ND = Not Detected at the RL

B = Analyte detected in the associated Method Blank

P = Sample pH Not in Range

S = % Recovery outside of range due to dilution or matrix

Page 1 of 0

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS  
  
Action 275068

CONDITIONS

Operator: PRE-ONGARD WELL OPERATOR 1220 S St Francis Santa Fe, NM BADADDR	OGRID: 214263
	Action Number: 275068
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
jgriswold	None	10/12/2023