

<b>Well Name:</b> FARNSWORTH GAS COM A	<b>Well Location:</b> T30N / R13W / SEC 17 / SWNW / 36.816254 / -108.23407	<b>County or Parish/State:</b> SAN JUAN / NM
<b>Well Number:</b> 1E	<b>Type of Well:</b> CONVENTIONAL GAS WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM131355	<b>Unit or CA Name:</b> FARNSWORTH	<b>Unit or CA Number:</b> NMNM73564
<b>US Well Number:</b> 3004524491	<b>Well Status:</b> Producing Gas Well	<b>Operator:</b> ADVANCED WIRELESS COMMUNICATIONS LLC

**Notice of Intent**

**Sundry ID:** 2728043

**Type of Submission:** Notice of Intent

**Type of Action:** Plug and Abandonment

**Date Sundry Submitted:** 04/27/2023

**Time Sundry Submitted:** 11:30

**Date proposed operation will begin:** 05/01/2023

**Procedure Description:** Updated NOI. Original cement failed. This is a new NOI to notify that we intend to do a drill out and recement using a procedure developed by New Mexico Tech. One page summary attached. Updated proposed wellbore diagram attached.

**Surface Disturbance**

**Is any additional surface disturbance proposed?:** No

**NOI Attachments**

**Procedure Description**

NMT\_P\_A\_Design\_for\_Farnsworth\_30\_045\_24491\_\_1\_\_20230427112854.pdf

NMT\_\_P\_A\_\_New\_Additives\_\_One\_Page\_\_April\_26\_2023\_20230427112756.pdf

Accepted for record – NMOCD  
JRH 05/08/2023

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**Conditions of Approval**

**Specialist Review**

2728043\_NOIA\_1E\_3004524491\_KR\_04272023\_20230427124047.pdf

**Operator**

*I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a*

**Operator Electronic Signature:** KRYSTEN MOORE

**Signed on:** APR 27, 2023 11:29 AM

**Name:** ADVANCED WIRELESS COMMUNICATIONS LLC

**Title:** Vice President

**Street Address:** 5500 RAIL RD

**City:** FARMINGTON **State:** NM

**Phone:** (505) 608-5253

**Email address:** KRYSTEN@ADVANCEDWIRELESSLLC.COM

**Field**

**Representative Name:** Nell Lindenmeyer

**Street Address:**

**City:** **State:** **Zip:**

**Phone:**

**Email address:** nell@apluswell.com

**BLM Point of Contact**

**BLM POC Name:** KENNETH G RENNICK

**BLM POC Title:** Petroleum Engineer

**BLM POC Phone:** 5055647742

**BLM POC Email Address:** krennick@blm.gov

**Disposition:** Approved

**Disposition Date:** 04/27/2023

**Signature:** Kenneth Rennick

New Mexico Institute of Mining and Technology

## Challenges:

Hydrostatic pressure and viscosity of cement slurry class G might not be high enough to prevent gas bubbles escaping from surface cement plugs in high pressure gas wells. This might potentially cause leakages after a well is plugged and abandoned.

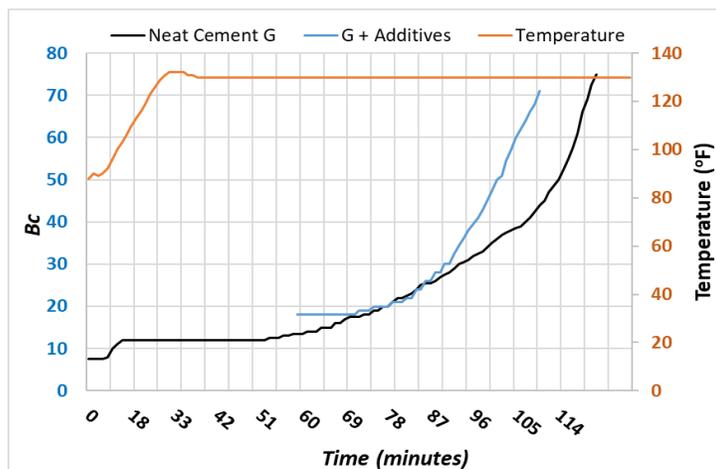
## Objectives:

Propose new additives to mitigate gas channelings in surface cement plugs of P&A oil/gas wells.

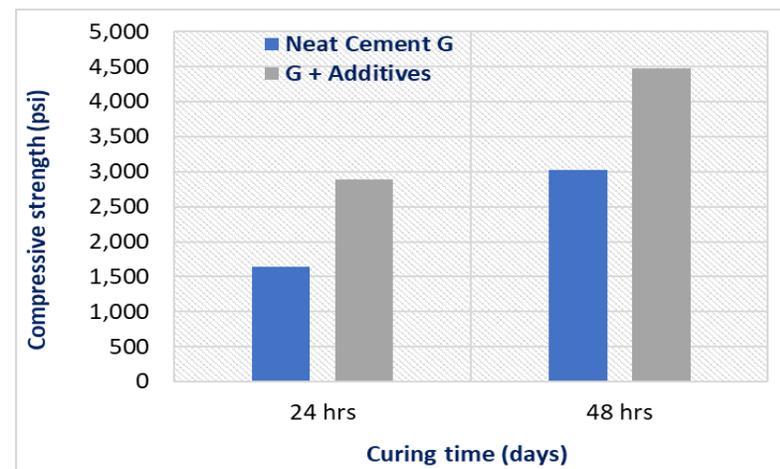
## Approach:

Combining, testing, and optimizing different additives to serve the following:

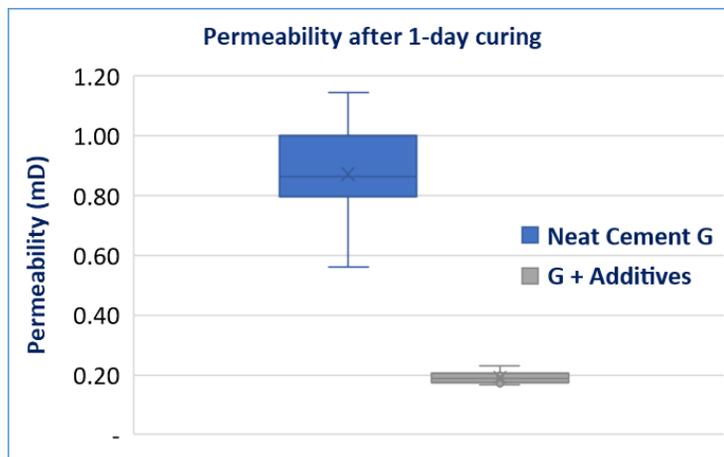
- (1) Improve compressive strength;
- (2) Reduce thickening time;
- (3) Reduce permeability;
- (4) Decrease bubble rise velocity;
- (5) Maintain reasonable pump pressure.



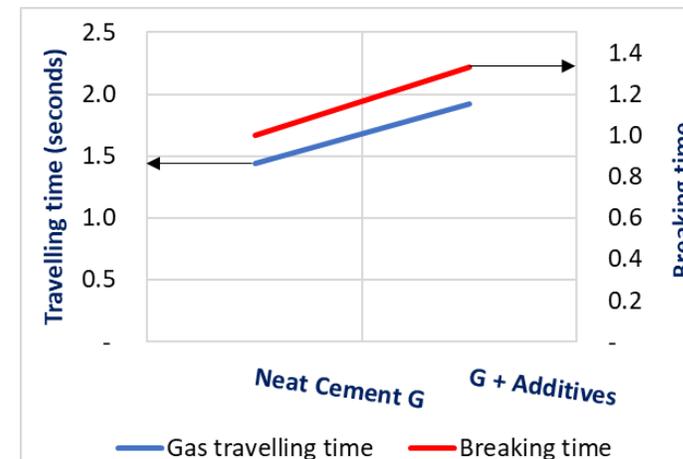
Thickening Time: About 10% reduction



Compressive Strength: About 50% Improvement

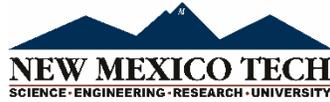


Compressive Strength: About 77% reduction



Breaking Time: About 40% reduction

**Conclusion:** The proposed additives are very promising to prevent gas channelings in surface cement plugs



Petroleum and Natural Gas Engineering Department  
 Production and Drilling Research Project (PDRP)  
 801 Leroy Pl Socorro, NM 87031  
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## P&A Design for Farnsworth Gas Unit A 1-E

### 1 Current Status

The Farnsworth Gas Unit A 1-E API 30-045-24491 was plugged and abandoned in 2021. The current status of this plugged well is shown in Fig. 1. However, due to active gas formations closer to the surface, this well has a leak and gas is escaping from the well. Therefore a remedial is recommended to stop the leak.

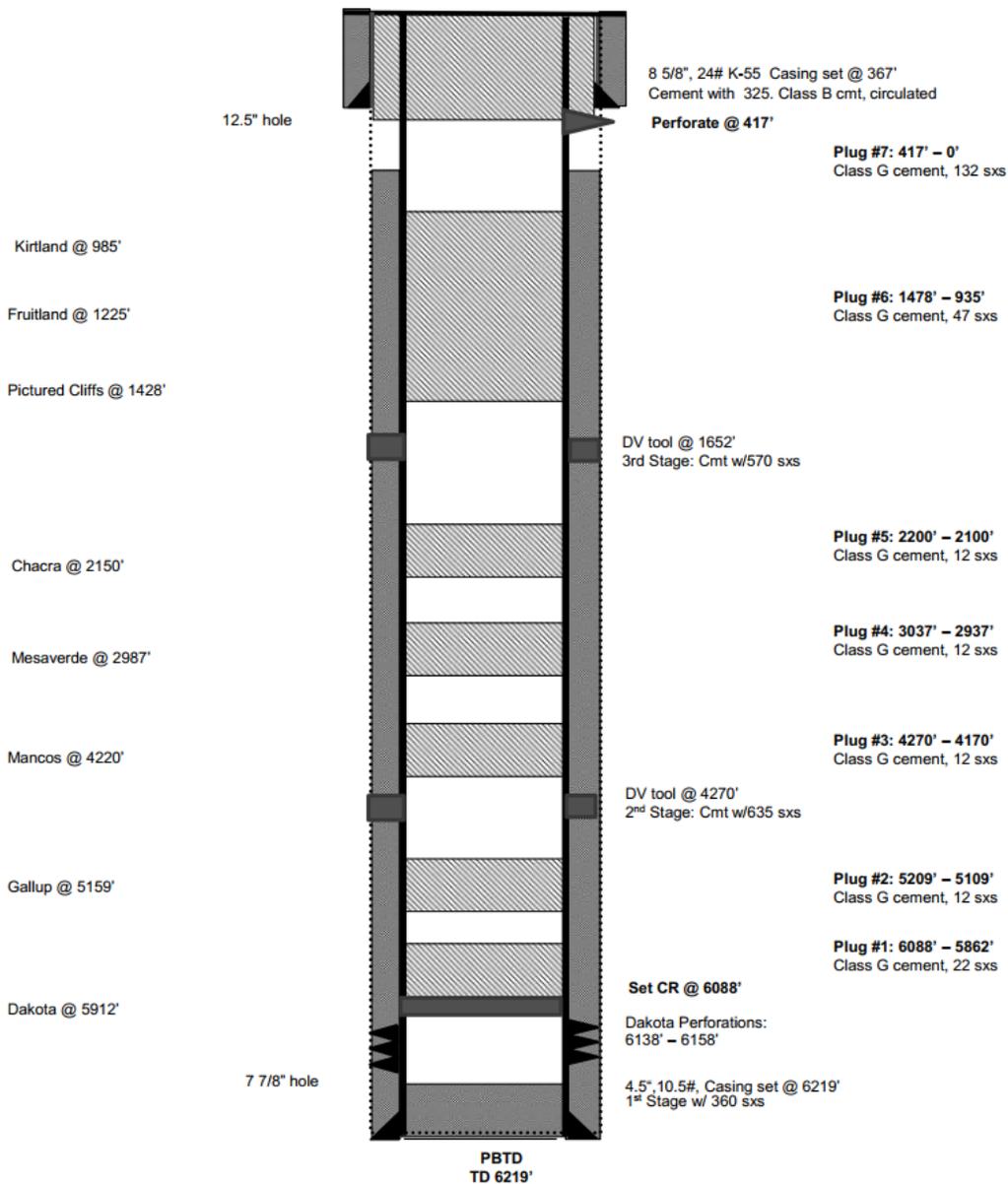


Figure 1: Current status of the well

## 2 Proposed Solution

New Mexico Tech (NMT) led by Dr. Nguyen has been working with A Plus P&A LLC company to plug this well. Following is the detailed procedure to stop the gas leak from this well:

- Step 0: Monitor CH<sub>4</sub> and CO<sub>2</sub> at the surface near the well.
- Step 1: Drill out the plug #7 which covered to the TD of 417-ft.
- Step 2: Mix 50 sacks of cement class G with the new additive provided by NMT. The final density of this cement slurry is expected to be around 14.1-ppg
- Step 3: Pump this cement slurry @ a pump rate of 1 BPM into the well using balanced method to cover the depth from 0 – 935-ft. Make sure to have cement out the casing.
- Step 4: Wait for at least 24 hours.
- Step 5: ND BOP, cut off wellhead below surface casing flange. Install P&A marker with cement to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. Cut off anchors and clean up location. Restore location per BLM stipulations.
- Step 6: Monitor CH<sub>4</sub> and CO<sub>2</sub> at the surface near the well for about 3 months.

The pumping time and pump pressure schedule is shown in Fig. 2.

The schematic of the well after pumping the new surface plug is shown in Fig. 3.

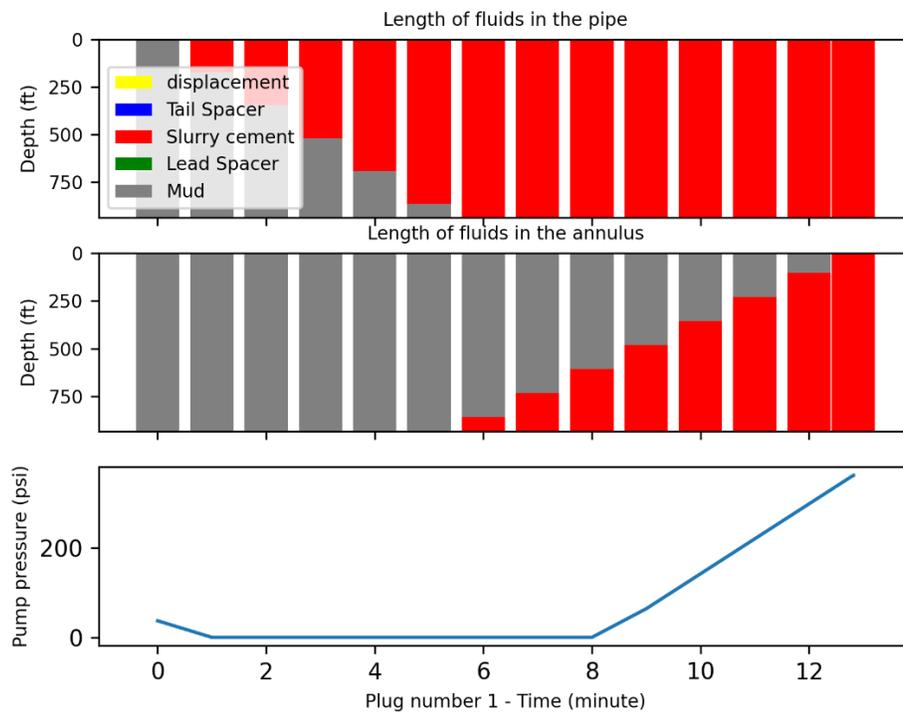


Figure 2: Pumping time and pump pressure when pumping the surface plug.

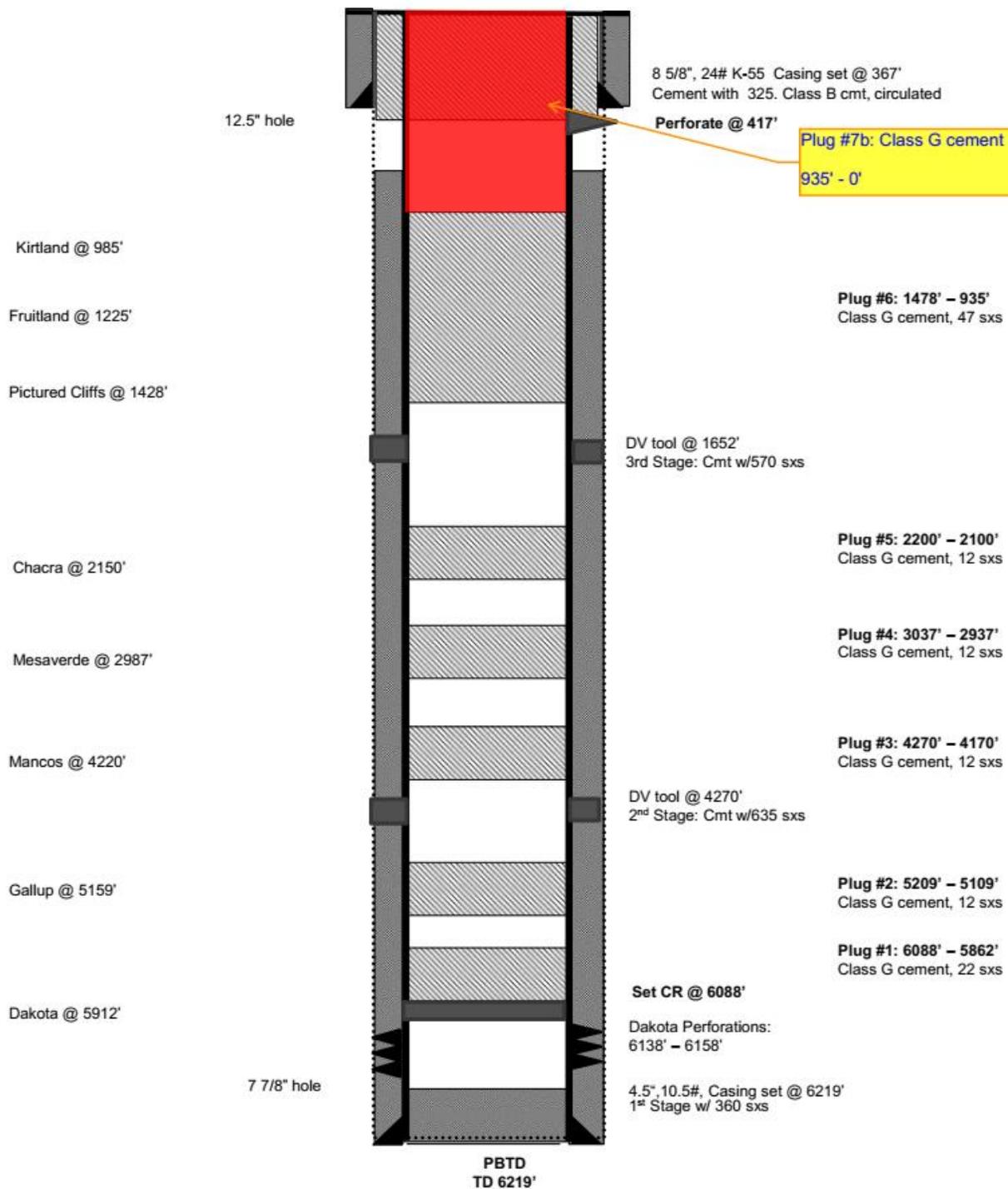


Figure 3: Final schematic of the well after pumping the surface plug

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

CONDITIONS

Action 211309

**CONDITIONS**

Operator: ADVANCED WIRELESS COMMUNICATIONS, L.L.C. 24 Road 1956 Farmington, NM 87401	OGRID: 371710
	Action Number: 211309
	Action Type: [C-103] Sub. Plugging (C-103P)

**CONDITIONS**

Created By	Condition	Condition Date
john.harrison	None	5/8/2023