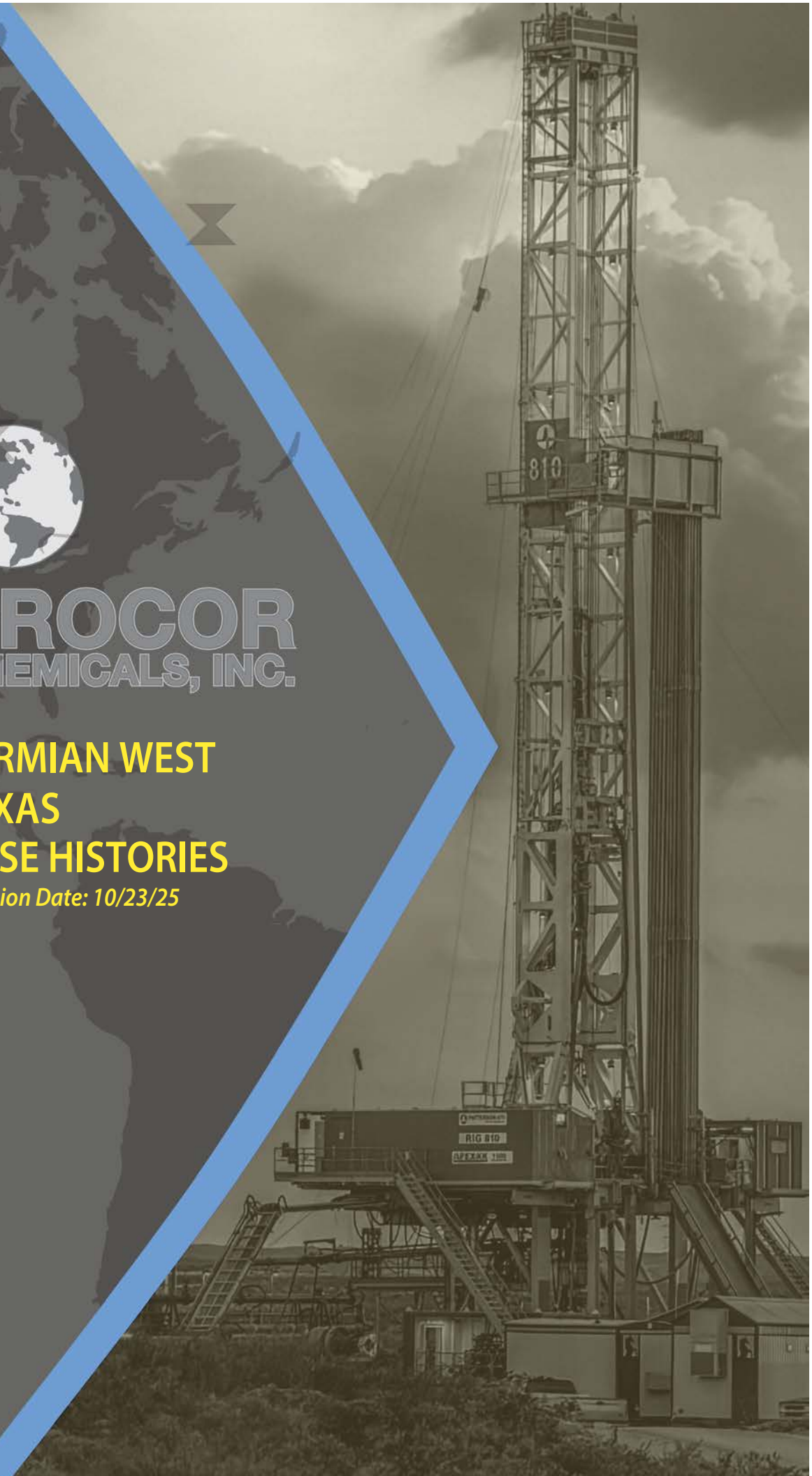
PROCOR
CHEMICALS, INC.

PERMIAN WEST TEXAS CASE HISTORIES

Revision Date: 10/23/25



PROCOR CHEMICALS, INC.

DATE: 10/23/2025	PERMIANBASIN / WOLFCAMP, BONE SPRINGS, SPRABERRY OPERATORS	

Company

Beryl Oil & Gas
Birch Resources
ConocoPhillips
EOG Resources
Energen Resources
ExxonMobil
Firebird Energy
Fleur De Lis Energy
Gordy Oil Company
Guidon Energy
Henry Resources
Hunt Oil
Lario Oil & Gas
Matador Resources
Moontower Resources
Permian Resources/ Earthstone
EnergyRiley Permian
SM Energy
Civitas Resources/ Tap Rock

Permian West Texas Case History:

Hockley County, TX - PRO SweepAid, SB SuperCeal, PRO V+, PROX

Date: 10/23/25
Operator: Beryl Oil & Gas
Well: CMC 6966H
Field: San Andres
County: Hockley County
Rig: Norton 21

Challenges
Wellbore stability, shale stabilization, filtration control, preventing fluid losses, ensuring a good cement job.

Solutions/Product Recommendations
Operator running preventative sweeps , 40bbls pill @ 20ppb (15PRO Sweep Aid 5ppb SB SuperCeal) Contingency Recommendation in place if needed; 80ppb , PRO V+ 30ppb, PRO X 30ppb, PRO Sweep Aid 15ppb, SB SuperCeal 5ppb.

Results
Well, TD without any problems , ran PRO V+ Pre-Cement Spacer ahead of casing with good cement returns.

Martin County, TX - PRO SweepAid, SB SuperCeal, PRO V+, PROX

Date: 8/25/25
Operator: ExxonMobil
Well: Davis-Fortune 44E 305H
Field: Spraberry Trend Area
County: Martin County
Rig: Ensign 123

Challenges
The Spraberry is notorious for micro-fractures, depleted streaks, high permeability stringers, and natural fracture swarms. This leads to partial to total losses of fluid. Interbedded shales and brittle siltstones create sloughing tendencies, tight spots, pack-off risk, and hole cleaning sensitivity. Achieving a competent cement sheath requires stable wellbore geometry, controlled fluid loss, proper mud conditioning, and prevention of losses during displacement.

Solutions/ Product Recommendations
Operator consistently running WBSM/ wellbore stability material lease wide, consisting of 10-20bbls every 100'-300' , 10-20ppb Pro Sweep Aid. Designed to strengthen the wellbore and reduce micro-fracture propagation. When drilling out of surface or intermediate, we recommend having a sweep mixed up ready to pump every connection. This ensures immediate response to any early stage losses.

Results
Drilling ahead @ 18,875' no fluid losses. The proactive WBSM + Pro Sweep Aid strategy successfully mitigated the high risk loss zone during drilling operations.

Note
Contingency Products on location
To address any unexpected severe losses:
PRO V+ - High-strength bridging blend for large fractures
PRO X - Rapid-sealing, high-performance LCM for total loss scenarios

Martin County , TX - SB SuperCeal, PRO V+, PROX

Date: 6/13/25
Operator: Birch Resources
Well: Willie the Wildcat 3-15F 7WD
Field: Spraberry
County: Martin County, TX
Rig: H&P 248

Challenges
Operator started experiencing fluid losses.

Solutions / Products Recommend
We recommended our product formula for sweeps and squeeze pill. Sweeps consisted of 30ppb; PRO X 10ppb, PRO V+ 15ppb, SB SuperCeal 5ppb.
Pill for squeeze consisted of 65ppb; PRO X 25ppb, PRO V+ 30ppb, SB SuperCeal 10ppb.

Results

Talked with company man and superintendent and they are having success getting returns with sweeps and are drilling ahead.

Lea County, TX – PRO V+, PRO X, PRO HG

Date: 5/15/25
Operator: Matador Resources
Well: John Callahan Fed Com 137H
Field: WC (Bone Spring)
County: Lea County, NM
Rig: Patterson 256

Challenges:
Operator experiencing losses while cementing with DV Tool.

Solutions/Recommendations:
Arrived on location and starting mixing 80bbl pill consisting of PRO V+ 30ppb, PRO X 30ppb, PRO HG 30ppb. Once pill was mixed weight went from 10ppg brine to 10.4ppg Active system was 10.7ppg so we did not use barite to weight pill.
Pumped pill down to depth of 5,543' closed in the well and started to pressure up to seal fracture. Pressured up to 591psi with the 1st pump, it jumped really quick on the pressure only 11 strokes. Squeezed another 2 bbls at the most to get to desired 750psi. kept pressure on for 30 minutes. POOH to pick up tools to drill out DV tool.

Results:
Pumped pill down to depth of 5,543' closed in the well and started to pressure up to seal fracture. pressured up to 591psi with the 1st pump, it jumped really quick on the pressure only 11 strokes. squeezed another 2 bbls at the most to get to desired 750psi with sustained pressure.
Followed up with the company man and they had no losses or problems drilling through tool, operations as of right now picking up curve assembly to drill ahead.

Reeves County, TX - – PRO V+, PRO X, PRO HG

Date: 10/11/24
Operator: BPX Operating Company
Well: Escarpa 57-T1 39X34 K W111H
Field: Phantom
County: Reeves County, TX
Rig: Savanna Rig 650

Challenges:
Operator experiencing water flow during cement job channeled through cement to surface. First set of perferations and new cement did not stop the water flow.

Solutions:
PROCOR recommended 40 bbls @ 80ppb: Pulled 38 bbls water. Add 1-2 sacks fresh water gel and allow to yield for product suspension, Added 48 sxs PRO V+ (30ppb), Added 48 sxs PRO X (30ppb), Added 40 sxs PRO HG (40ppb). Should yield 40 bbls @ fluid weight. When the squeeze packer was set, began pumping the slurry down the casing as the lead cement Aggressive LCM pill as recommended by the cement company. Once the cement was in place allowed recommended wait time by cement company no less than 4 hours for the PROCOR lead slurry. During the wait time, the hydrogels continued to absorb the water flow, preventing contamination or thinning of the cement by the water allowing it to set up and provide full compressive strength for the test.

Results
Pressures were constant during pumping procedure and flow was not an issue. This application was basically pumped to stop a slight water flow, absorb water and act as a median allowing the cement to set up.

Notes
Plan was to use the 50 bbl premix and transfer to the cement truck, 20 bbls in front and 20 bbls behind.

Lea County, TX - PRO V+, PRO Sweep Aid, SB Superceal

Date: 9/27/24
Operator: Lario Oil & Gas
Well: Sky Dweller Com 101H
Field: Bone Springs
Countyh: Lea County, TX
Rig: Nabors 895

Challenges:
While drilling ahead in 7.875 lateral section at 13,342 MD, we experienced a noticeable drilling break and nearly immediate full losses which are suspected to be related to a fault zone. We continued dry drilling while pumping 30 ppb LCM sweeps until partial returns were established resulting in ~150 bph losses. As we continued drilling ahead, we traversed another suspected fault zone at 13,777 MD resulting in similar drilling break & full losses. LCM treatments continued and partial returns were re-established with losses now at ~280 bph. As we continued drilling ahead to 14,929 MD, we experienced a reduction in the loss rate to approximately 65 bph prior to a bit trip. During the trip out, we experienced sporadic overpull through the losses intervals which in turn resulted in losing fluid on the trip out likely having ripped the LCM scab off. Currently, we are tripping back in hole and experiencing some minor wellbore instability likely resulting from the hole s inability to hold a column of fluid. We have approx. 1,300 to TD on this well prior to running our 5.5 production casing.

Solutions/ Product Recommendation:
If still drilling to TD upon product arrival, we recommend a strict sweep regimen through TD of the sections. Begin pumping sweeps every connection or as the prior sweep exits the bit. Sweeps should be 10-20bbls @ 65ppb (25ppb PRO V+, 25ppb Sweep Aid, 5ppb SB Superceal and 5ppb Sweep Aid). This sweep regimen will enhance hole cleaning, resins will coat and keep shales in good shape preventing reactivity, prevent minor seepage to moderate losses, enhance filtration control of the mud and help keep the well bore in gauge.

- 80bbl sweep slurry @ 65ppb
- Pull 70bbls system mud to slugging pit
- Add 80sx PRO V+ (25ppb)
- Add 80sx PRO X (25ppb)
- Add 16sx PRO Sweep Aid (5ppb)
- Add 16sx SB Superceal (5ppb)
- Top off to full 80bbls and agitate, pump sweeps as needed.

At TD if losses have occurred while drilling, we recommend spotting 50bbls @ 80ppb (35ppb PRO V+/35ppb PRO X/5ppb SB Superceal/5ppb Sweep Aid) across the area where suspected losses occurred prior to POOH to run casing. Mix and pump same pill ahead of cement to ensure returns on cement job.

Lessons Learned:
Would recommend going back up to the lost zone and squeezing the product into the formation to get a better seal in the zone.

Midland County, TX – PRO Slide

Date: 3/11/24
Operator: Pioneer Natural Resources
Well: Crawford-Welchest 27J 10H
Field: Spraberry (Trend Area)
County: Midland County, TX
Rig: H&P 487

Challenges:
Drilling the intermediate section on the 9H at 6,845 with WBM and previously running a competitors lube which was blinding off the shakers causing mud losses and having to slow down.

Solutions/Recommendations:
Recommended PRO Slide Synthetic Based Drilling Lubricant. Plan was to run PRO Slide in the production lateral with 2% in the active system and spotted 600 bbls in the lateral at TD to POOH and run casing.

Results:
Lubricant worked well by not blinding over the shakers. Decreased torque enough to help drill faster, allowing the use of WBM through out the well until total depth and the decrease of torque was between 12-20%. Spotting PRO Slide lubricant pills before running casing allowed for casing run to be smooth.

- Midland County, TX – PRO SweepAid, SB SuperCeal, PRO V+, PRO X

Date: 3/11/24
Operator: Pioneer Natural Resources
Well: Elkin 21L 12H
Field: Spraberry (Trend Area)
County: Midland County, TX
Rig: H&P 467

Challenges:
Operator experiencing fluid losses while drilling.

Solutions/ Product Recommendation:
They were pumping 30ppb sweeps to help with losses while drilling. Decision was made to mix up an 80ppb pill and spot with a light squeeze. Started with 40ppb (10ppb PRO Sweep Aid, 10ppb SB SuperCeal, 10ppb PRO V+, 10ppb PRO X) and increased to 80ppb. Decision was made to sweep the hole with the 80ppb pill and run liner.

Results:
The 80ppb sweeps fixed the losses and products were pumped through tools with no problems.

- Andrews County, TX – PRO SweepAid, SB SuperCeal, PRO V+, PRO X

Date: 5/1/23
Operator: Birch Resources
Well: Pepe Paisano 32 #3WA
Field: Spraberry
County: Andrews County, TX
Rig: HP 248

Challenges:
Operator did not get a good FIT and decided to apply PROCOR s squeeze product to increase formation integrity to correct pressure.

Solutions/Recommendations:
Recommended preforming squeeze by closing well in and Bull heading fluid into the wellbore.
We recommend starting off with 10-15bbl sweeps @ 50ppb sweeps every 100 or as needed (15ppb Sweep Aid, 5ppb SB Superceal, 15ppb PRO V+ and 15ppb PRO X). Utilize these sweeps from KOP to landing curve.
Build 80bbl 80ppb pill and spot just above lost zone. Pill will consist of (PV+ 30 ppb, PX 30 ppb, PRO Sweep Aid 10 ppb, SB SuperCeal 10 ppb)
We recommend spotting a pill across the loss zone and squeezing fluid into the formation till pressure required is achieved.

Results:
Improved FIT results to 9.8 ppg ECD (Equivalent Circulating Density) but needed to get 11.0 ppg ECD. Decision was made to go back in and continue drilling and bring weight of fluid up as need slowly. Will continue to sweep hole with sweep recommendation.

- *Midland County, TX* – *PRO Slide*

Date: 3/10/23
Operator: Pioneer Natural Resources
Well: Stimson-Nail W17K 11H
Field: Spraberry Trend Area
County: Midland County, TX
Rig: HP 472

Challenges:
Having torque issues while drilling with Water-Based mud in the lateral section of the well.

Solutions/Recommendations:
To run 3-5% by volume of PRO Slide into the active system to decrease torque and allow for smooth drilling.

Results:
Torque decrease with 4% by volume an average of 4-7K and drilling was completed.

- *Lea County, NM* – *PRO V+, PRO X, SB SuperCeal*

Date: 2/7/23
Operator: Matador Resources
Well: Uncle Richard State Com 214H
Field: West Jal
County: Lea County, NM
Rig: Patterson 256

Challenges:
Operator lost returns at approximately 4,456 and continued drilling for another 4,000 before calling out. Once we arrived on location operations were drilling ahead with no returns. Plan was to pump sweep down to regain returns and finish drilling to casing point. Talked with representatives on location and it was decided that the highest concentration would be 40 ppb, set up 30 bbl sweeps of the 40 ppb consisting of PRO V+, PRO X, and SB SuperCeal. Once sweep was pumped there was a noticeable rise in pump pressure, but no returns. The gain in pump pressure stayed until they decided to TOH to change out bit and motor due to low ROP. Before TOH they spotted a 40 ppb 80 bbl pill down around 4,400 to let soak while changing BHA. Pill did not regain returns.

Solutions/Recommendations:
Spotted a pill consisting of 40 pounds per barrel (Pro X 15 ppb, Pro V+ 10 ppb, SB SuperCeal 5 ppb). Products used , PRO V +, PRO X, SB SuperCeal.

Results:
Operator finished drilling interval without returns, but maintain sweeps.

- *Lea County, NM* – *PSA, PRO X, PRO V+, PRO SweepAid, SB SuperCeal*

Date: 11/5/22
Operator: Apache Corp.
Well: North Bonsai State Unit 1020AH
Field: Alpine High (Cons)
County: Reeves County, TX
Rig: H&P 656

Challenges:
Operator lost returns and continued drilling another 1,000 before calling PROCOR out. When we arrived to location operations were circulating gas out and keeping pressure on the well. Prior applications included 3 Poly Plug applications of 150 bbls were pumped down the drill pipe, through the perforations to seal off the losses which were not successful. Operator also tried using common generic LCM products from Newpark at 100 ppb with no success.
We used a premix pit for Procor products at 110 ppb and pumped down the annulus, we kept pressure on the pill for 4-5 hours. This allowed Apache to kill the well and get approval to P&A.
We also were called back out to location a few days la ter to pump another pill just ahead of cement. Pumped another 110 ppb pill ahead of cement allowing Apache to P&A well.

Solutions/Recommendations:
Spotted a pill consisting of 110 pounds per barrel (PRO X 40 ppb, PRO V+ 50 ppb, PRO Sweep Aid 10 ppb, SB SuperCeal 10 ppb). Products used , PRO V +, PRO X, PRO Sweep Aid, SB SuperCeal.

Results:
Product application allowed Apache to successfully P&A the well and move off of location.