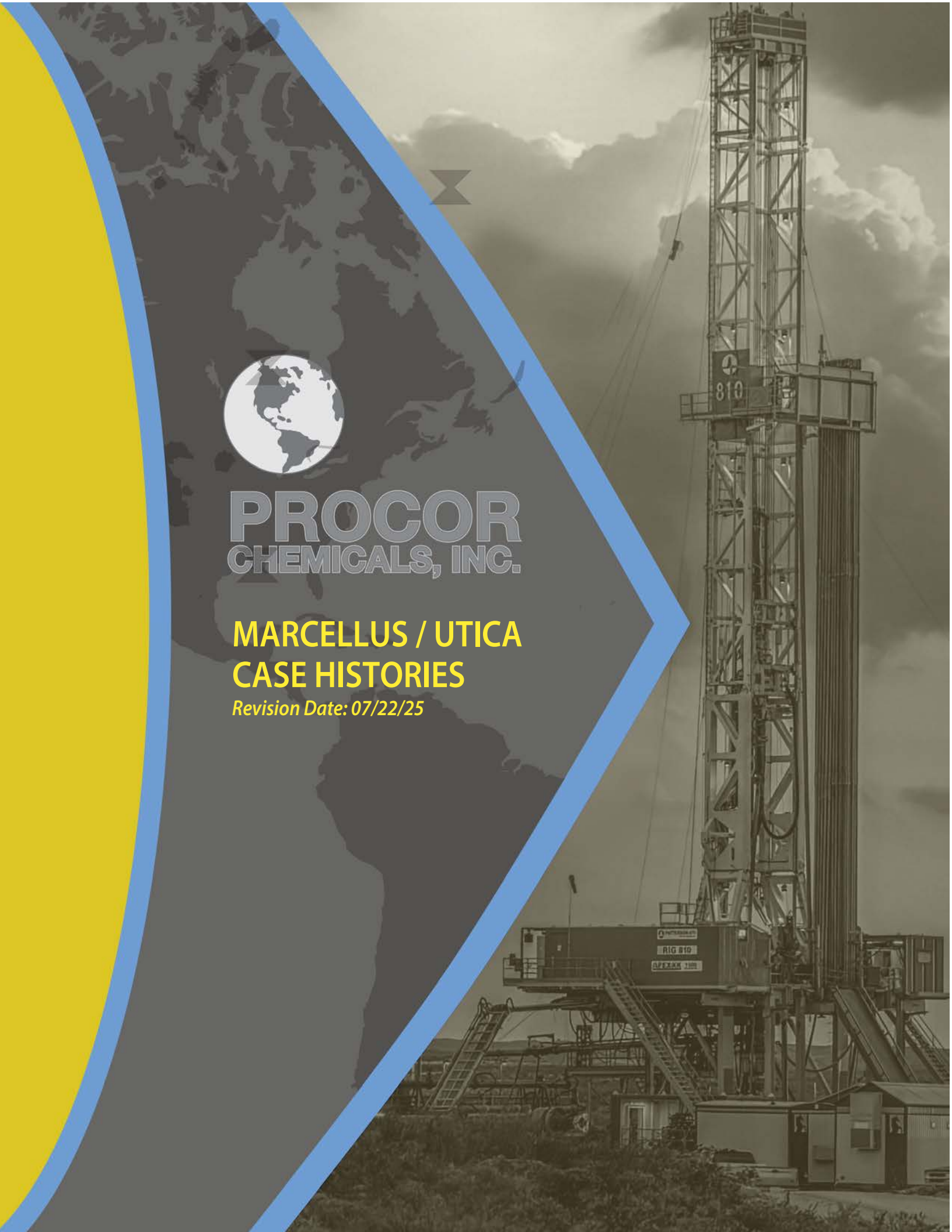




PROCOR
CHEMICALS, INC.

**MARCELLUS / UTICA
CASE HISTORIES**

Revision Date: 07/22/25





PROCOR CHEMICALS, INC.

DATE: 07/22/25

**MARCELLUS / UTICA
CUSTOMER LIST**

Encino Energy
Expand Energy
Gulfport Energy

Marcellus/Utica Case Histories:

Harrison County, OH – PRO V+, PRO HG

Date: 7/22/25
Operator: Expand Energy
Well: McFrederick K UP BLT 15H
Field: Utica
County: Harrison County, OH
Rig: EDC 501

Challenges:

They were 7' off bottom and couldn't move pipe and had 250bbls base oil on backside with no returns and were concerned cutting bed had packed off.

Solutions / Product Recommendation:

The 1st 3 pills we pumped were 80bbls @50ppb, 2nd pill 80bbls @ 75ppb and 3rd 80bbls @ 100ppb, all pumped as a sweeps since they could not spot and POOH. We displace each sweep out, shut down for 30 minutes to an hour then attempted to circulate, never saw any pressure. The Operator was convinced losses were on bottom but not sure and could be something back on up hole. They agreed to backream out slowly to prevent pack off. Backreamed 500' where we mixed and pumped 80bbls of 100ppb 30 PRO V+/40 PRO X/30 PRO HG followed by mud and 40bbls of 50ppb mud vendor LCM.

Results:

We used the mud company LCM to try and clear the tools of any hydrogels. Pumping went txt book, pressures went up as the pills exited, went down after everything cleared and over displaced by 10bbls. Shut down for 2.5 hours. Began pumping finally caught pressure after 38bbls and drill pipe plugged. The good news is we tested backside and was locked tight, squeeze successful. First time they were able to hold pressure on backside for days. Worked on unplugging tools and Operator was happy with outcome.

Tuscarawas County, OH – PRO V+, PRO V

Date: 6/19/25
Operator: Encino Energy Pearley
Well: TC PER 5H Northern Utica
Field: Patterson
County: Tuscarawas County, OH
Rig: 577

Challenges:

Experiencing fluid losses while drilling

Solutions/Product Recommendations:

When we arrived on location pill was already spotted, 84 bbls @ 120 ppb of PRO V+/PRO X @ 60 ppb each, POOH to L/D BHA and P/U dumb iron, repair flow line leak, slip cut drill line, rig service, TIH T/ shoe. We spotted the 1st pill to POOH and losses slowed but didn't stop until we were a ways away from it. Tripped back in with minimal losses spotted 2 PV/HG/PX pills on top of each other and walked the pressures right on up to over desired. POOH now to pick up BHA. We stayed in communication with CM until they washed through and start drilling.

Results

Circulating with full returns, Shut in well and squeeze 1.3 bbls to 233 psi which was desired pressure, decision made to increase pressure to 280 psi for 11.0 MWE, pressure achieved, decision made to wait 30 mins, open well, TIH to bottom and stage up pumps to 500 gpm, full returns observed with zero losses, decision made to POOH for directional assembly and resume drilling ahead, we were released from rig by company man with thanks and smiles.

Noble County, OH – SuperCeal, PSA

Date: 3/1/25
Operator: Encino Energy Bears
Well: NB BUF 205H
Field: Unknown
County: Noble County, OH
Rig: Patterson 579

Challenges:

Preventative sweeps are working but as they pass and seepage comes back @ 525gpm. They can drill with 500gpm but the directional tool company needed 525gpm to steer so Operator decided to treat the system with preventative WBSM products.

Solutions/Product Recommendations:

We recommended treating the system with 7ppb SB SuperCeal and 3ppb PRO Sweep Aid

Results

Completed system treatment , no losses, even increased MW to 12ppg

Note

Operator decided to pump sweeps and not squeeze since they didn't have losses when they displaced and decided to not use the squeeze products to determine if the squeeze was working and determined squeeze application was obviously working.

Harrison County, OH – PRO V+ PRO X, SuperCeal, PSA

Date: 1/6/25
Operator: Encino Energy
Well: Stitt 1H
Field: Utica Shale
County: Harrison County, OH
Rig: Patterson 571

Challenges:

Expecting Coal section @ 381' and water flow @ 750' , ensuring a good cement job.

Solutions/ Product Recommendation:

After running 8.75" csg, operator runs 80 bbls @ 100 ppb of PROCOR WBSM/ LCM across and through top of Clinton formation, then perform squeeze to 12.3 EMW once back to shoe. Also pumping 65ppb sweeps in lateral section. Mixed sweeps at 65 ppb consisting of 25ppb PRO V+ 25 ppb PRO X, 5 ppb SB SuperCeal and 5ppb Sweep Aid. Currently pumping 20 bbl sweeps every 200-300' or as needed to control fluid loss and help with cleaning wellbore.

Results:

Successfully drilled well to TD.

Carroll County, OH – PRO V+, PRO X, SuperCeal, PSA

Date: 12/16/24
Operator: Encino Energy
Well: Snyder SH
Field: Utica Shale
County: Carroll County, OH
Rig: Patterson 571

Challenges:

Expecting Coal section @ 381' and water flow @ 750', ensuring a good cement job.

Solutions/ Product Recommendation:

After running 8.75" csg, operator runs 100 ppb of PROCOR WBSM/ LCM across and through top of Clinton formation, then perform squeeze to 12.3 EMW once back to shoe. Also pumping 65ppb sweeps in lateral section. Mixed sweeps at 65 ppb consisting of 25ppb PRO V+ 25ppb PRO X, 5 ppb SB SuperCeal and 5ppb PRO Sweep Aid. Currently pumping 20 -30 bbl sweeps every 200-300' or as needed to control fluid loss and help with cleaning wellbore.

Results:

Drilled to TD with no problems and no fluid losses.

Guernsey County, OH – PRO V+, PSA, SuperCeal

Date: 10/29/24
Operator: Encino Energy
Well: Blue Butterfly 10H
Field: Utica Shale
County: Guernsey County, OH
Rig: H&P 608

Challenges:

Arrived on location 10/27/24, Check in with Co Man. Currently drilling ahead with occasional losses of 10-40 bbls/hr.

Solutions/ Product Recommendation:

Cut back pre-mixed pill from 100 ppb to 50 ppb of PROCOR LCM, pumped in 30 bbl sweeps. Losses reduced, mixed sweeps at 40 ppb consisting of 15 ppb PRO V+ 15 ppb PRO Sweep Aid and 10 ppb SB SuperCeal. Currently pumping 20 bbl sweeps every 200-300' or as needed to control fluid loss and help with cleaning wellbore.

Results:

Drilling ahead at report time at 250-300 ft/hr with little to no fluid loss.

Belmont County, OH – PRO V+, PRO X

Date: 6/11/24
Operator: Encino Energy
Well: David Weaver HN STO 6H
Field: Utica
County: Harrison County, OH
Rig: Patterson 579

Challenges:

Operator experiencing fluid losses.

Solutions/ Product Recommendation:

PROCOR recommended pumping a squeeze pill of 80bbls at 80ppb using 50% PRO V+ and 50% PRO X and PRO V+ @ 40ppb and PRO X @ 40ppb.

Results:

Minor fluid seepage continued same as last well we had just squeezed off so we spotted another 80bbls @ 80ppb. We just achieved 13ppg EMW with about 30bbls in formation. Plan is to bump up a couple more times to get our back-end bleed down a little higher. Top end holds 690-700psi perfect, bleeds down to about 560 after 1hr, so now we were trying to get the back end to settle a little higher. Mud weight to drill to TD is 10.8 - 11.2ppg which would stay below squeeze EMW and was another successful application.

Belmont County, OH - PRO Sweep Aid, SB SuperCeal

Date: 12/1/23
Operator: Gulfport
Well / Area: Clark 1B
Field: Clark Pad
Parish/County: Belmont County, OH
Rig: Patterson 873

Challenges:

Fluid losses observed while drilling lateral section of well. Goal is to control and stop any and all fluid loss.

Solutions/ Product Recommendation:

Mud company LCM consisting of cedar fiber and CaCO3. Broad range of recommendations given depending on losses. Recommendation followed was our 25 ppb sweep mix. PRO V+ at 15 ppb, SBSC at 5 ppb, PSA at 5 ppb totaling 25 ppb for all sweeps. Products mixed into slugging pit through hopper, then pumped using rig pumps. No problems encountered during this mixing procedure and no issues pumping products through tools or bit.

Results:

After pills were spotted, well went static and returns were achieved at the shoe with no losses. Procedure went as planned and returns were regained; however, decision was made to cement and P&A by management.

Carroll County, OH – PRO V+, PRO X

Date: 8/30/22
Operator: Encino Energy
Well / Area: Krantz CR Mon 3H
Field: Patt 571
Parish/County: Unassigned
Rig: Carroll County, OH

Challenges

Operator needed to improve the well integrity of the “Clinton formation” and prevent fluid losses.

Solutions / Products Recommended

Recommended 80bbl Pill of our High Solids/High Fluid Loss Squeeze Products which included PRO V+ @ 40ppb and PRO X @ 40ppb. After successfully squeezing the formation recommended following up with sweeps as needed to keep the “Clinton” coated and sealed. We also included our PRO V+ Pre-Cement application, 50bbls @ 50ppb, which is something that has been successful when getting cement returns might be a concern due to drilling weaker formations. We pumped an aggressive LCM pill ahead of cement as if it is not there with the design that it will seal any weak formation prior to the heavier cement getting to these formations allowing the cement to lift pass these weaker areas. Products Used : SBSC, PSA, PV+, PX

Results

Operator never lost a drop of mud the entire well. At TD they decided to test the well at full drill rate and weighting up to 11.5ppg. When 11.5ppg got all the way around it started seeping on them. Pumped a sweep, lowers gpm and losses stopped. They are pooh to run pipe and cement. Plan to pump the 50bbl @ 50ppb ahead of cement. If they have losses running casing, we will probably increase to 65ppb

Note

With this exact application Operator estimated it will save them \$300,000 - 500,000 per well.