FIELDPRO Approach to Complex Fracture Systems (Including Handling Of Discrete Fracture Networks).

FIELDPRO is focused on DATA, ANALYSIS & interfacing with operations personnel to allow good decisions

Components of this capability may be applied to CFS (or DFN), with the following aspects as background:

1. **Deterministic Evaluation: FIELDPRO fracture models have served to match (orders) 10**5 jobs. It's Still Usual To See Models, Justified By "Complexity", That Can't Even Match Basic Frac Data SO FIELDPRO allows import/display/comparison with any models (w/clean I/O), as a contrast.**
2. **Fracture Geometries Are Not Restricted: Simple Geometry Is Only For Absence Of More Data. Anybody Can Draw Pictures Of Something That "Looks Real" (Complex): How Is That Verified?**
3. **When Complementary (e.g., Micro-Seismic) Data Exist, They Can Serve To Modify Geometries. FIELDPRO Is Already Adapting Geometries w/MS But Avoids "Inventing" (Random) Complexity**
4. **Models In FIELDPRO Were Developed And Tested At MIT (1980s), The Only Valid Tests (In HF): All Other (Lab/Field) Tests Have Suffered From Various Misrepresentations (Of Actual Physics). Tests Included Detailed Studies (Lab & Numerical Simulator) Of Complex Fracture Interactions -The Only Solid Basis (So Far) For Modeling Of Shadowing, Turning, Multi-Frac & Stress Effects**
5. **Models Were Calibrated (e.g., w/Complex 3D Gridded Simulator) To Allow Practical Field Use (Not Only Were/Are Credible Gridded Simulators Too Slow (Operations), They Are Impractical, Since Key Data Required Is Never Available (In O&G) & They Require Enormous Care In Usage: We Spent Many Man-Centuries (At MIT), Using Supercomputers; Others Just Create Pictures).**
6. **The Calibrated Models Were Then Tested In The Field (1st On Experimental Wells, During '80s), With Extraordinary Successes Matching/Predicting Precise Data (Without Distorting Switches, As Is Still Done By Most/All Other Models In Industry, e.g. Manipulating Viscosity To "Match")**
7. **These Proven Models Were Implemented On Commercial Wells By (Practically) All Companies, Leading To Adoption Of Early FIELDPRO Capabilities (e.g., in Fracpro), As "Industry Standard". Because Of Pressure From One Service-Company To Be "The Fracpro (& FIELDPRO) Company", "Fracpro '99" Was Spun Off To Service That Company/Clients: FIELDPRO Stayed Independent. However, Some Momentum Was Lost, Allowing Resurrection Of (Provably) Distorted Models.**
8. **FIELDPRO Has Continued To Serve Operating Company Clients (But With No Vendor Influence So Capabilities Are Developed That Are Op. Co. Need-Driven, Not To Sell Products & Services).**
9. **This Approach Means That ALL Projects With FIELDPRO Have Been Justified By Practical Needs (And Conditions That Allow Success With Specific (Op. Co.) Clients, For Long-Term Successes).**
10. **The Team Behind FIELDPRO Is Extremely Flexible And Fast In Adapting To Real Client Requests, Making It Unique In The Industry (When Resources & Data Support A Task, It Gets Done Fast).**

Handling Of CFS (DFN) Is Just Such A Task: (Credibly) Modeling And Displaying Complex Arrays Of Fractures (e.g., Guided By (Micro) Seismic) Can Use Just FIELDPRO Tools Already Available. But It Needs Commitment By Clients, To Avoid Being Confused With "Arm-Wavers" (for DFN): "Everybody Has A Model" (as in 1980s, before FIELDPRO); Few Will Prove To Be Of Any Value. Technical Details & Applications (e.g. CFS/DFN) Will Be Worked Out, With Committed Clients: Unlike Environments That Led To Fracpro & Attempted Copiers, FIELDPRO Stays Confidential. Eventually, As With Tools Like IPhone, It Will Be More Public, But Copiers Will Wait (Awhile).