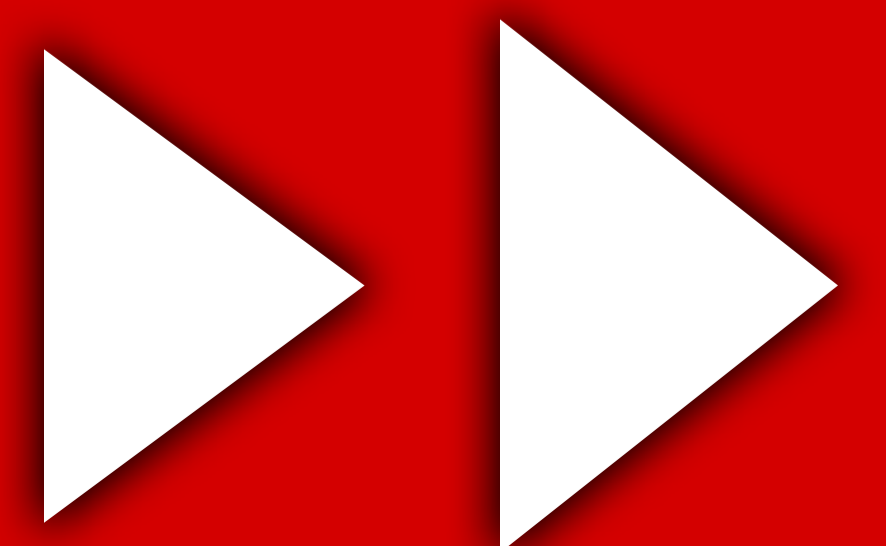




***Technical Evaluation of
Installing **Chem Screens**
through a pilot project
with 27 wells***

Case Study



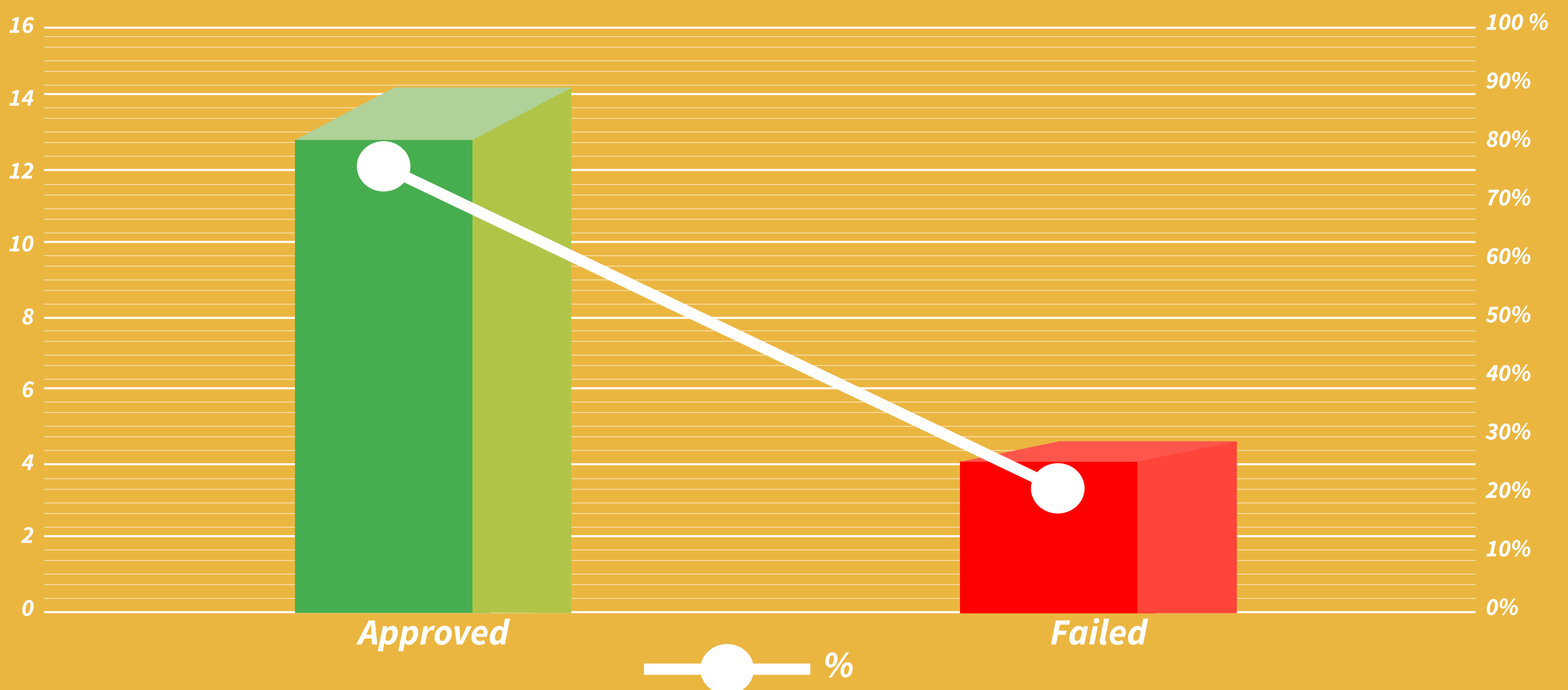
Wells evaluated and in evaluation

Stage	Well Name	Run Time	ALS	Longevity Expected (Days)	Accomplished	Comments	Evaluation
1	Well 1.1	609	ESP	548	111%	Chemical treatment over	Approved
	Well 1.2	898	ESP	548	164%	Chemical treatment over	Approved
2	Well 2.1	511	ESP	365	140%	Chemical treatment over	Approved
	Well 2.2	372	ESP	365	102%	Chemical treatment over	Approved
	Well 2.3	260	ESP	365	71%	Chemical treatment over	Failed
	Well 2.4	354	ESP	365	97%	Chemical treatment over	Approved
	Well 2.5	385	Gas Lift	365	105%	Chemical treatment over	Approved
	Well 2.6	352	ESP	365	96%	Chemical treatment over	Approved
	Well 2.7	187	ESP	365	51%	Chemical treatment over	Failed
	Well 2.8	450	SRP	365	123%	Chemical treatment over	Approved
	Well 2.9	398	SRP	365	109%	Chemical treatment over	Approved
	Well 2.10	296	SRP	365	81%	Chemical treatment over	Approved
	Well 2.11	332	SRP	365	91%	Chemical treatment over	Approved
3	Well 3.1	361	ESP	365	99%	Chemical treatment over	Approved
	Well 3.2	173	SRP	365	47%	Chemical treatment over	Failed
	Well 3.3	209	ESP	365	57%	Chemical treatment over	Failed
	Well 3.4	355	SRP	365	97%	Running	Approved
	Well 3.5	335	ESP	365	92%	Running	Approved
	Well 3.6	323	ESP	365	88%	Running	Approved
	Well 3.7	237	SRP	365	65%	Running	On progress
	Well 3.8	201	SRP	365	55%	Running	On progress
	Well 3.9	199	ESP	365	55%	Running	On progress
	Well 3.10	196	Gas Lift	365	54%	Running	On progress
	Well 3.11	188	SRP	365	52%	Running	On progress
	Well 3.12	173	SRP	365	47%	Running	On progress
	Well 3.13	167	SRP	365	46%	Running	On progress
	Well 3.14	127	SRP	365	35%	Running	On progress

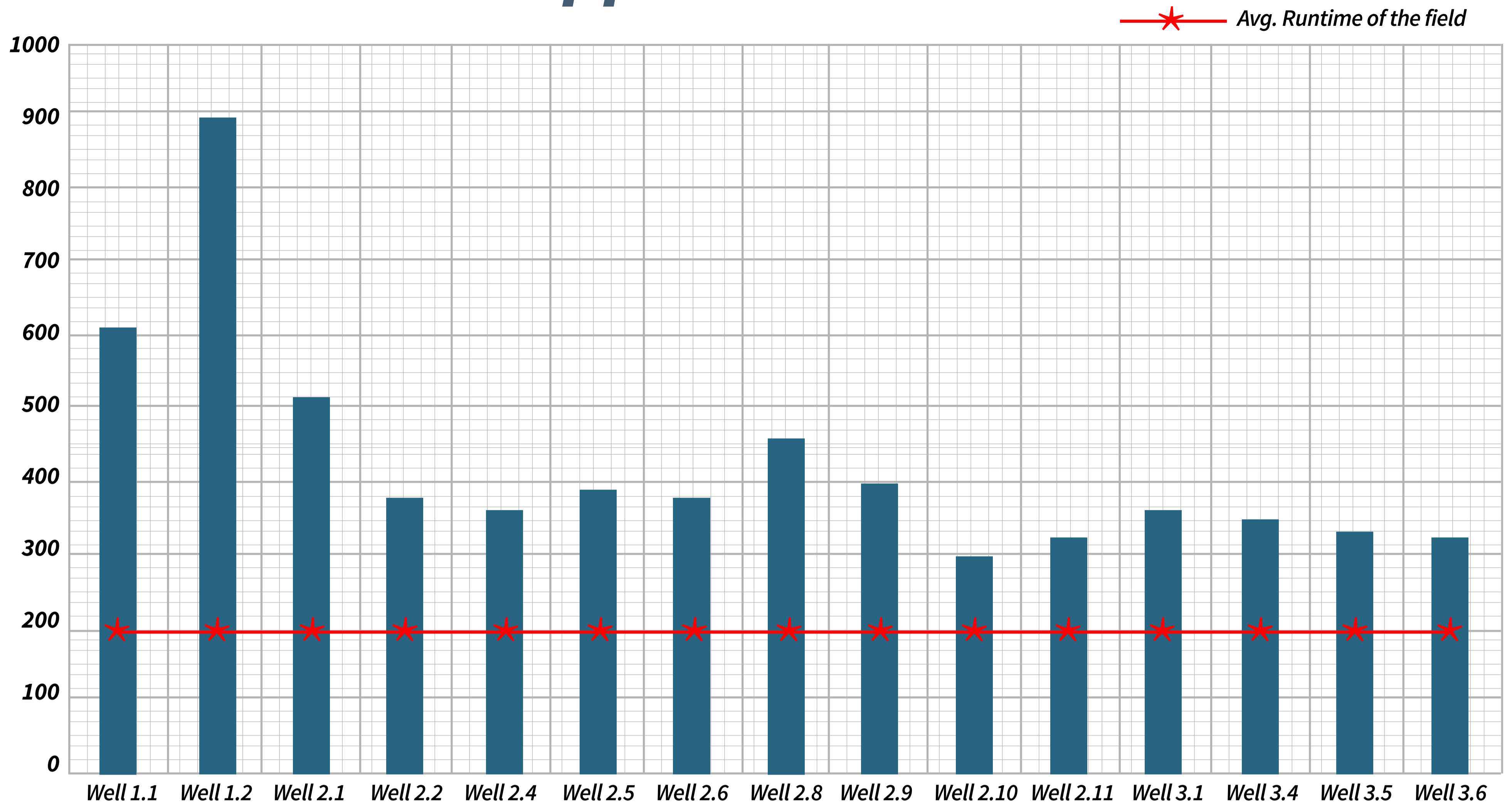
Successful cases - ALSs used



Wells Evaluated



Wells Approved – Run time



Wells on Progress



CONCLUSIONS

- *Despite the low historical runtime reported in this field (200 days in Avg.) and the high expectations of the operator, the downhole chemical treatment has succeeded in 79% of the wells evaluated. The evaluation is still in progress and the target is finalize the evaluation with a success rate greater than 80%*
- *The solutions proposed for each well showed high efficiency even with different ALSs. We recommend always do the previous analysis to identify the type of problem, amount of chemical and method of installation. These three steps will cover all the considerations need in the design*
- *The creation of the micro-encapsulated chemical matrix offers an optimal solution for chemical problems occurring in downhole, however, the design criteria and protocols must be followed to achieve a successful application*
- *The New Chemical Treatment for Downhole application has proved to be a successful tool to control challenging environments (Corrosion and Scale deposition) but OSI recognizes there are different variables to evaluate for develop a more accurate application. Ultra-high temperature conditions and heavy oil are under investigation right now*