

Evaluated For:
Example Company

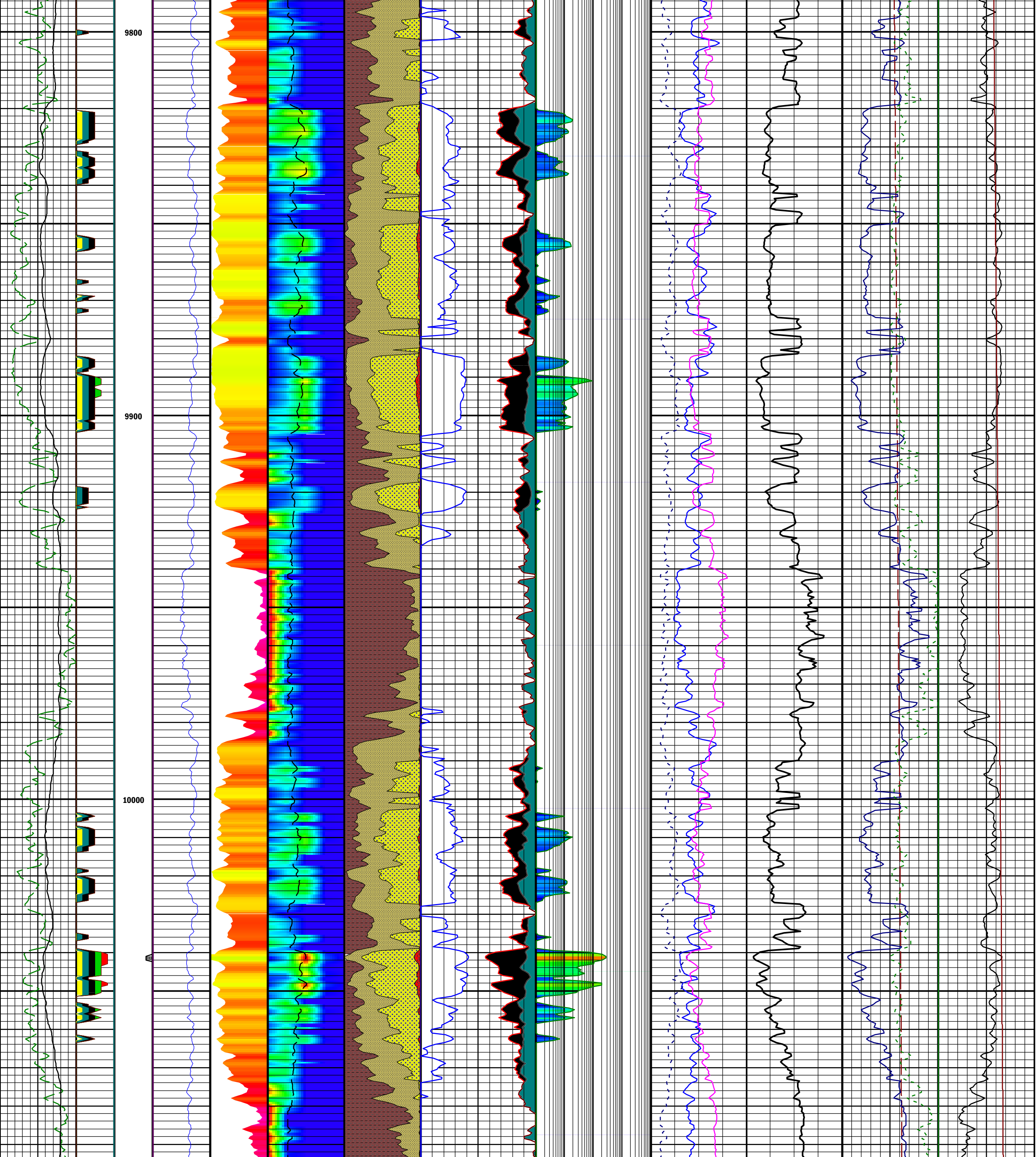
UPI:
Completed:

Company	COTTON VALLEY EXAMPLE		
Well			
Field			
County	HARRISON	State TEXAS	Country USA
Location			
Section	Township	Range	API Num
Permanent Datum		Elevation	K.B.
Log Measured From		Above Perm Datum	D.F.
Drilling Meas From			G.L.

	Run 1	Run 2	Run 3
Date			
Depth - Driller	10160		
Depth - Logger	10174		
Btm Log Interval	10166		
Top Log Interval	1301		
Casing - Driller	9.625@1302		
Casing - Logger	1301		
Bitsize	8.75		
Type Fluid in Hole	DISPERSED		
Dens. / Visc.	10.05 / 36		
pH / Fluid Loss	9.8 / 10.6		
Source of Sample	CIRCULATION TANK		
Rm @ Meas. Temp	0.438 @ 102		
Rmc @ Meas. Temp	0.526 @ 102		
Source: Rmf / Rmc	CALC / CALC		
Rm @ BHT	0.197 @ 235		
Max. Rec. Temp.	235		

COTTON VALLEY EXAMPLE
13 Feb 2007 @ 15:31
DEPTH (FT)
Interval: 9790.00 to 10110.00
Depth Scale Ratio: 1/240

GRC 0 GAPI 150	FW_FLAG 6 0	DEPTH FT 140 0	DTC(NSCA) 140 40	NUMATR 1 0	NUSPEC 0 0.1	CLAY 0 1	SW DEC -1 0	NUPERM 0.01 MD 100	YMS(NSCA) 0 ES 10000000	STRESS_N 6000 10000	POREP 4000 psi 6000	ACTVATI 0 (kcal/mo 10
CALI 6 16	FF_FLAG 6 0	PERF 6 0	CALIFLG 0 10	NUMATR 1 0	TEXGM 0 100	SMALL 0 1	BVW DEC 0 0	NUPERM 0.01 MD 100	BIOTSCON 0.6 1		BHTP 7000 psi 11000	RXNORDER 0 1
SPBL -160 NV 40	LW_FLAG 0 6	PERF 0 0	TENS -500 LBF 1000			MEDIUM 0 1	PHIE DEC 0 0	NUPERM 100	PR_NSC 0 0.5		TOUGHNES 0 psi 2000	SPECHEAT 0.18 (BTU/lb* 0.3
	FHC_FLAG 0 6		CALIFLG 0			LARGE 0 1	BVI DEC 0 0					T 200 DEGF 250
	KF_FLAG 0 6					VLS 1 DEC 0	1 SW					
	KG_FLAG 0 6					CLAY 0	BVW BVI					
	FW_FLAG 0 6					CLAY SMALL	PHIE BVW					
	FF_FLAG 0 6					SMALL MEDIUM	BVI 0					
	LW_FLAG 0 6					MEDIUM LARGE						
	FHC_FLAG 0 6					VLS 0						
	KF_FLAG 0 6											
	KG_FLAG 0 6											



NOTES

NuFIT Product Description

NuFIT is an analysis oriented product in which NuTech will aid in the development of a specific injection test procedure and provide the analysis of this procedure in order to achieve direct measurements of the formation. These measurements include a calculation of closure and pore pressure along with the average formation permeability. NuFIT (NuTech Fracture Injection Test) may be used to aid in the calibration steps of the NuStim process prior to hydraulic fracturing. Thank you for using NuTech.

NuFIT Analyst's Remarks

Pseudo-Radial flow was not observed in this well. This flow regime is critical to determine the permeability from the after closure analysis. The before closure analysis can also be used for a permeability estimate when in normal leak-off. This data set shows evidence of fracture extension and "height recession" in the before closure regime. This type of leak-off will effect and negate the perm calculation from the before closure portion of the data as the fracture area is changing during the shut-in period and the rate of leak-off is changing as a system of secondary porosity is closing.

Therefore there are two options left for estimating the permeability of the system, to match the rate of leak-off during the before closure period or to do a permeability estimate from the after closure data by extrapolating the data to a maximum possible permeability. Trying to match the before closure leak-off rate will give a faulty view of the perm because the leak-off area is changing because of the fracture extension. An estimate of permeability from the after closure analysis was obtained, however this value should be regarded as a maximum value of permeability and the actual value is likely much lower.

The analysis shows a g-time closure of 8.8 which indicates a zone of marginal permeability.

All interpretations are opinions based on inferences from electrical or other measurements, and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any officers, agents, or employees of NuTech Energy Alliance. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

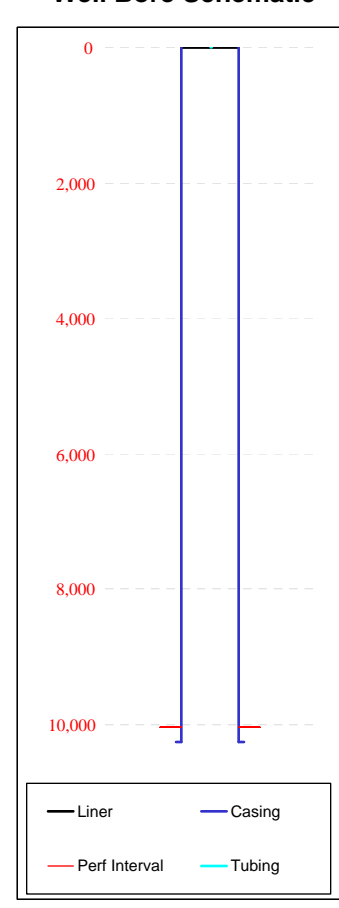
PROJ. ID: COTTON VALLEY NuFIT EXAMPLE

Stage 1 NuFIT Analysis:
WELL #1
(10,041 - 10,042 FT) COTTON VALLEY TAYLOR
HARRISON COUNTY, TX

Reservoir Information	
Porosity (%)	7.3
Gross Height (ft):	63.5
Net Height (ft):	23
Young's Modulus (e6 psi):	4.1
Poisson's Ratio:	0.25
Perforations (ft):	10,041 - 10,042

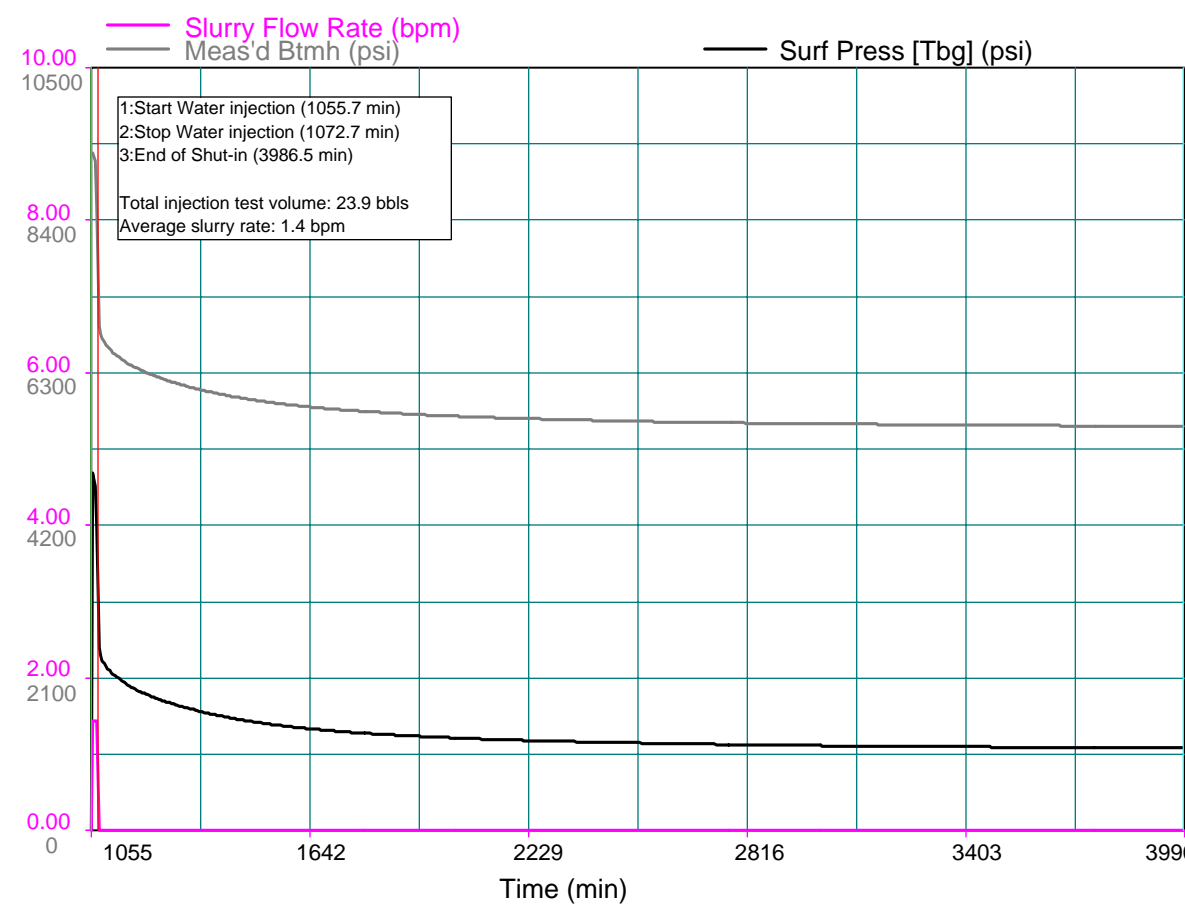
Test Information	
Pressure Transducer Location:	Surface
Average Pump Rate (bpm):	1.4
Total Volume Pumped (bbbls):	23.9
Total Time Pumping (min):	17.1
Hydrostatic Pressure (psi):	4427
Surface ISIP (psi):	2956
BHTP (psi):	7383
Fracture Gradient (psi/ft):	0.735
Wellbore Fluid:	2% KCl
Pumped Fluid:	2% KCl

Well Bore Schematic



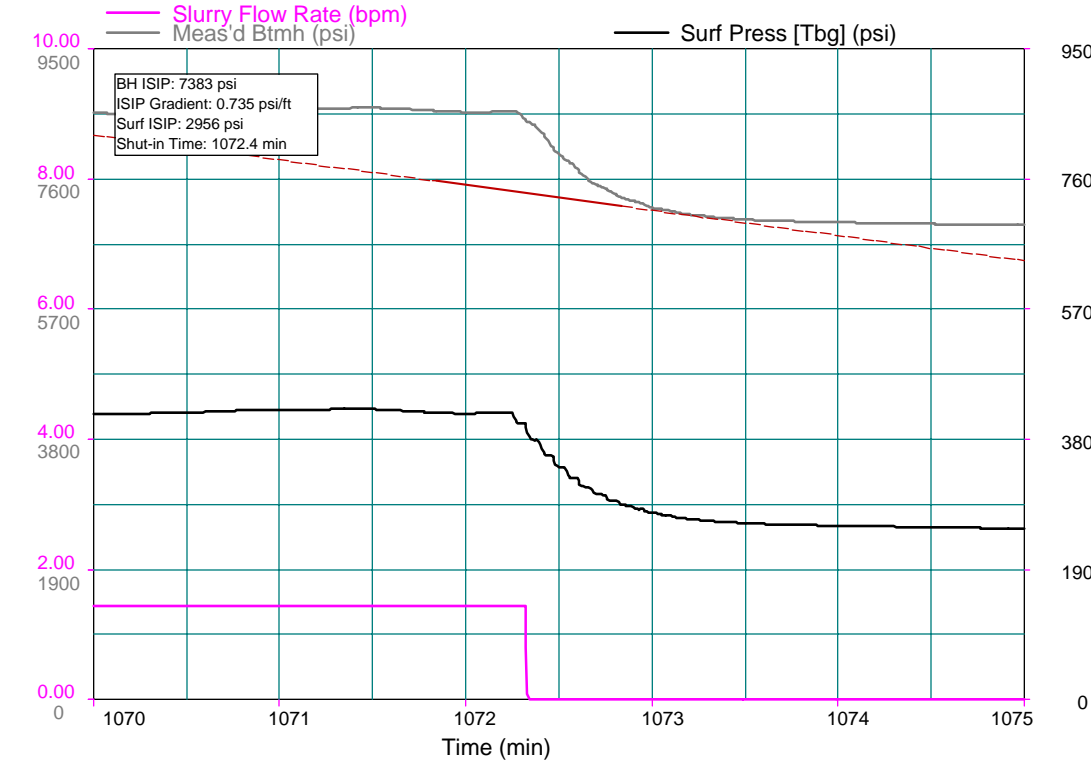
Job Data

Pump In and Leak-Off



The job display plot shows the actual injection test performed on the reservoir and the pressure decline after the test. From this plot we can determine the ISIP (2956 psi), average pump rate (1.4 bpm), volume pumped (23.9 bbbl) and the amount of time to pump the treatment (17.1 minutes). These data points and the subsequent pressure decline are used in the calculations to determine the reservoir properties.

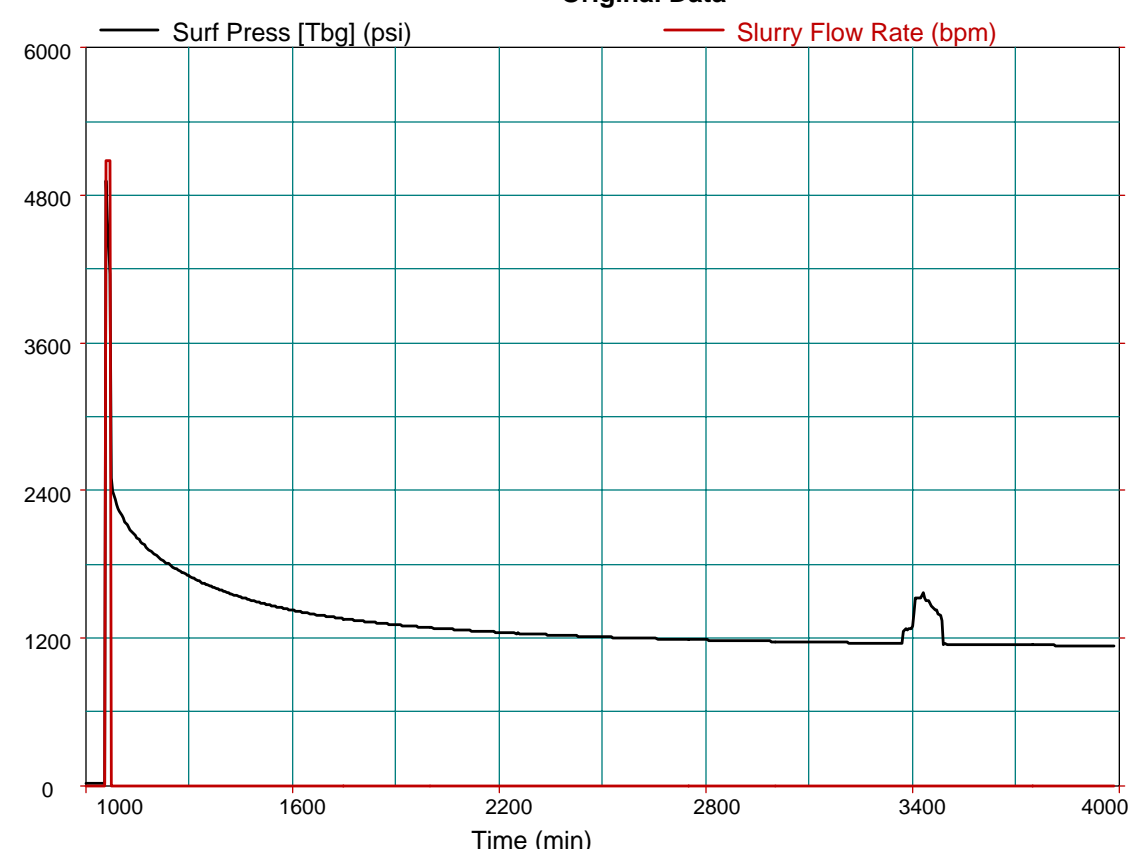
ISIP Plot



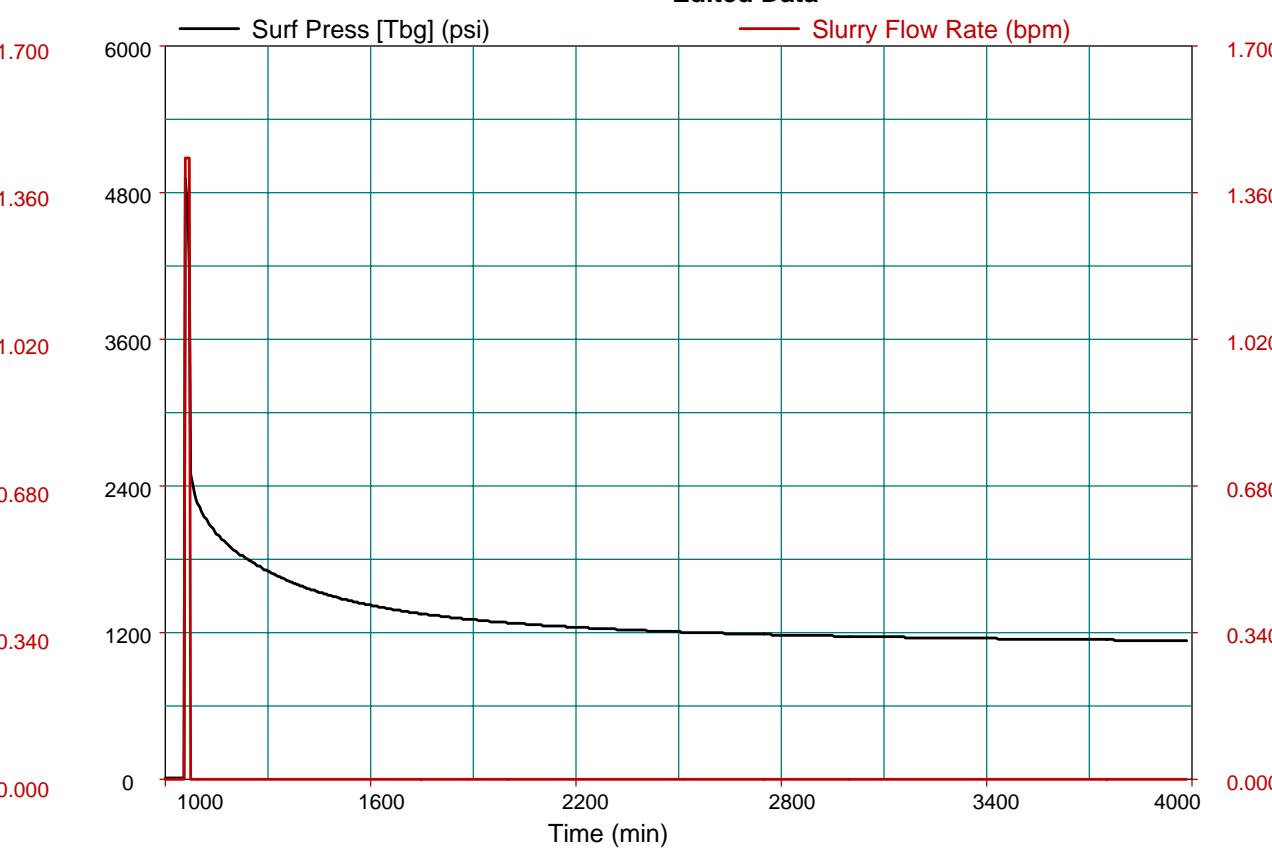
Data Quality

Pressure data was provided in two files for this analysis. Since both files contain the exact same values it is assumed that the data from only one gauge was provided. The gauge appears to function normally during most of the test interval. Two discrepancies were noted in the data, one at 1250 minutes and the other at 3400 minutes. The first one is very small and easily edited from the data, the second one is much larger but using average data across this interval still seems to provide a valid analysis. No digital data was provided on the pumping rate or volume. A curve describing assumed volume and rate of 1,000 gallons at 1.4 bpm was generated. If these values are close to the actual there should be little impact on the overall analysis without this digital information.

Original Data

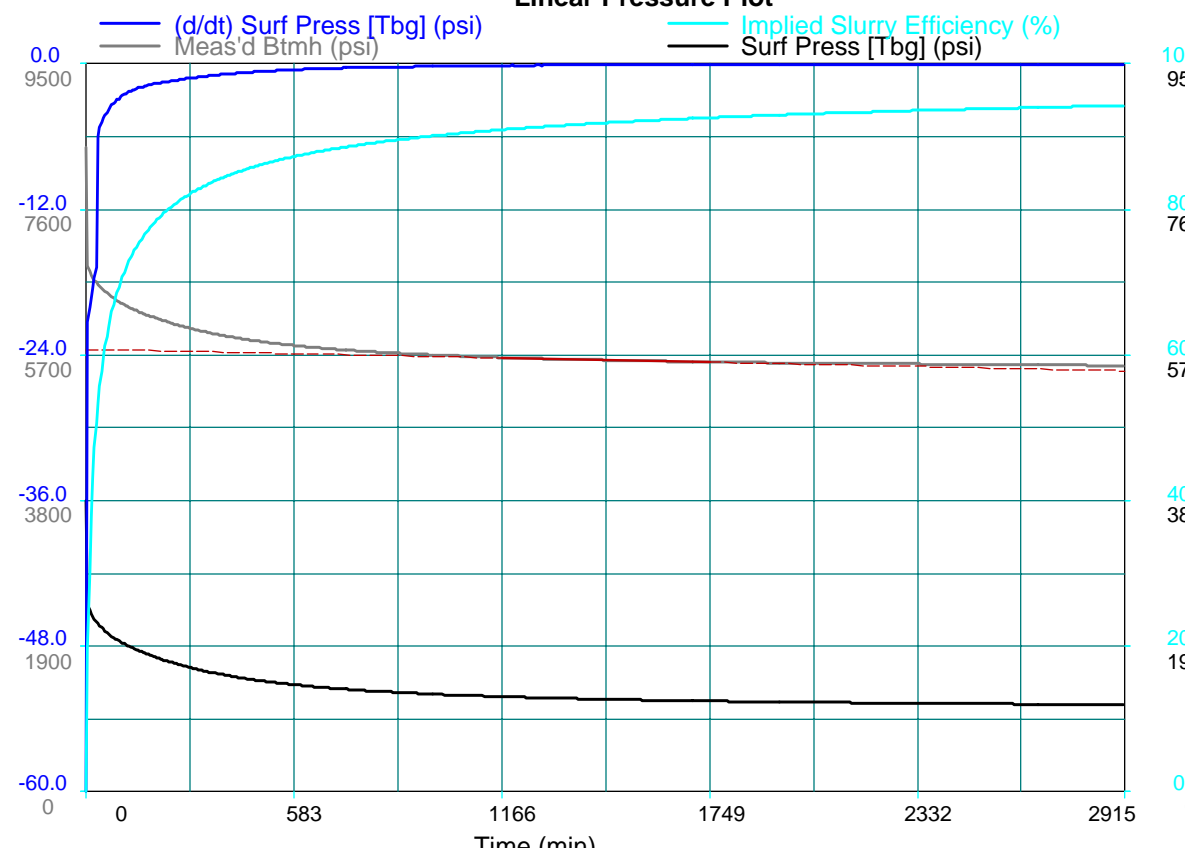


Edited Data

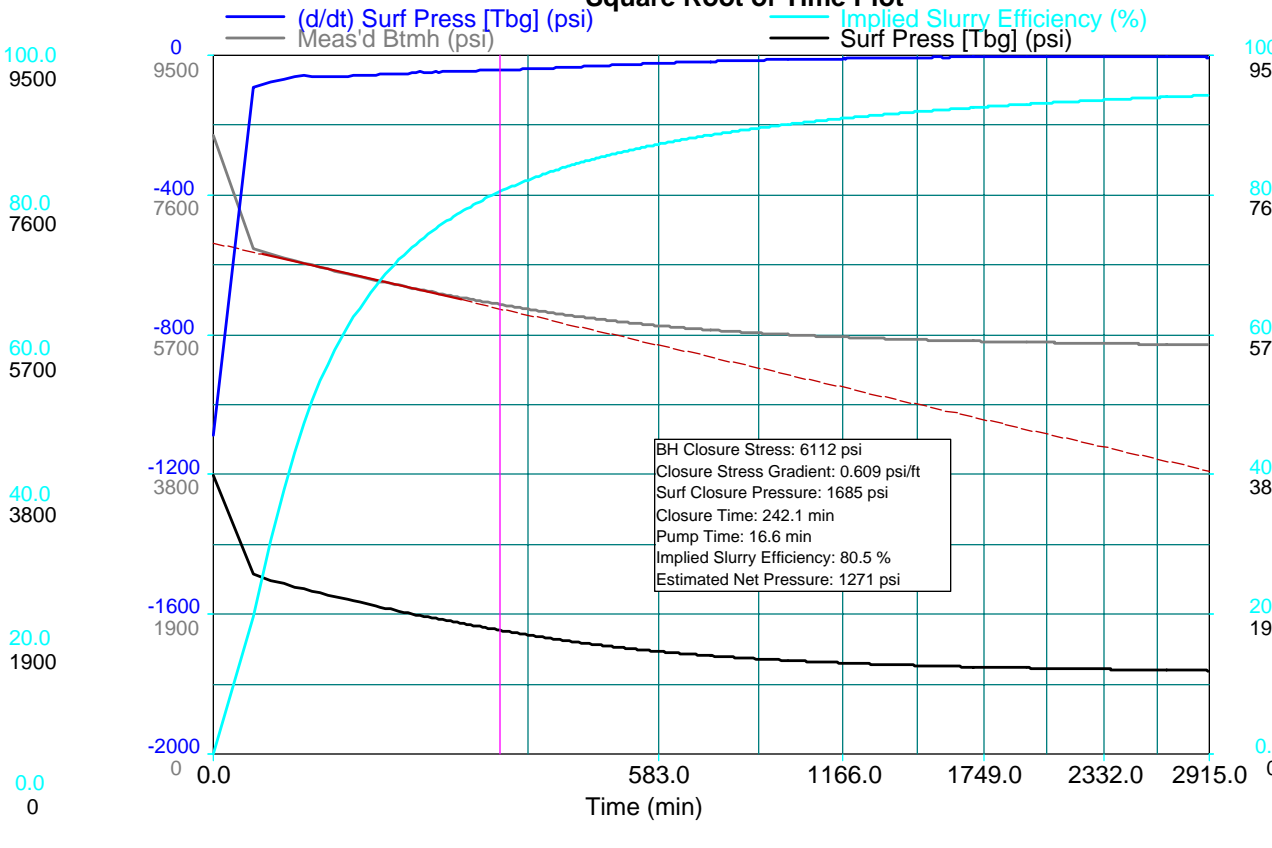


Before Closure Analysis

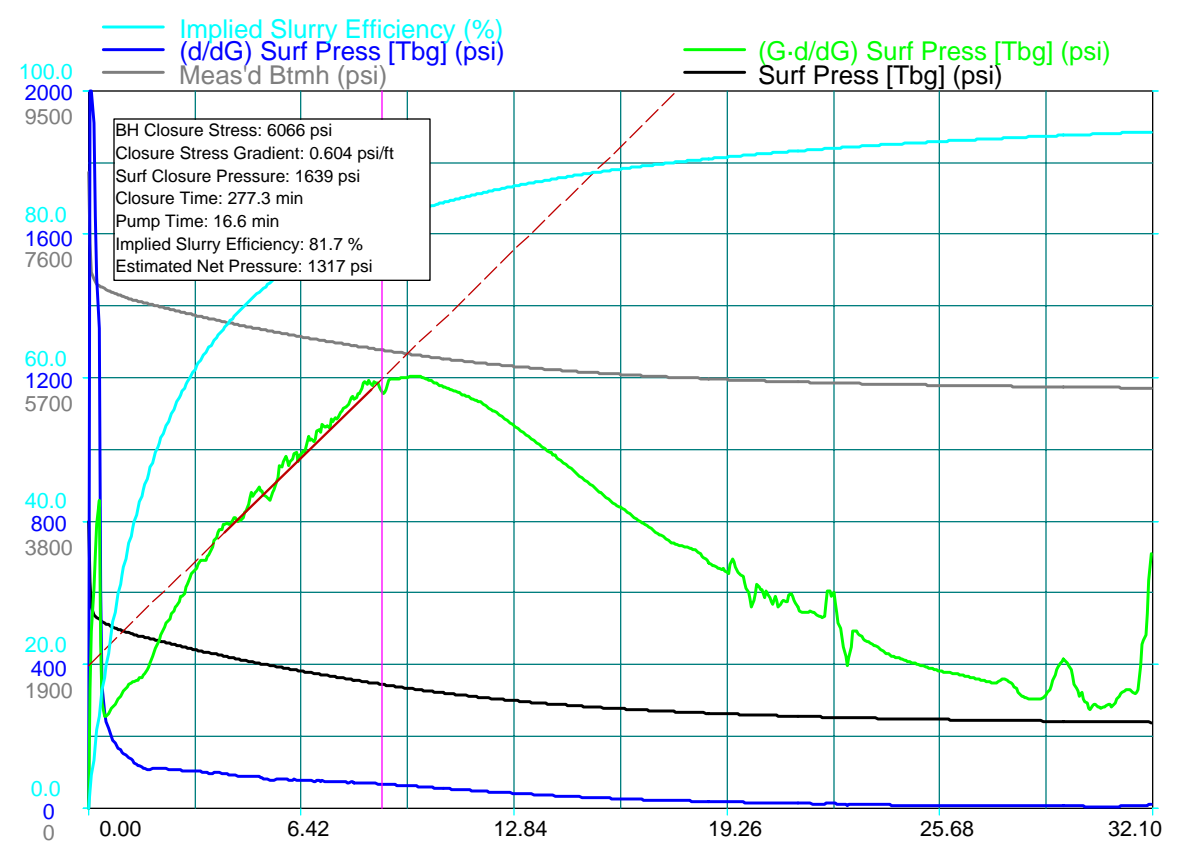
Linear Pressure Plot



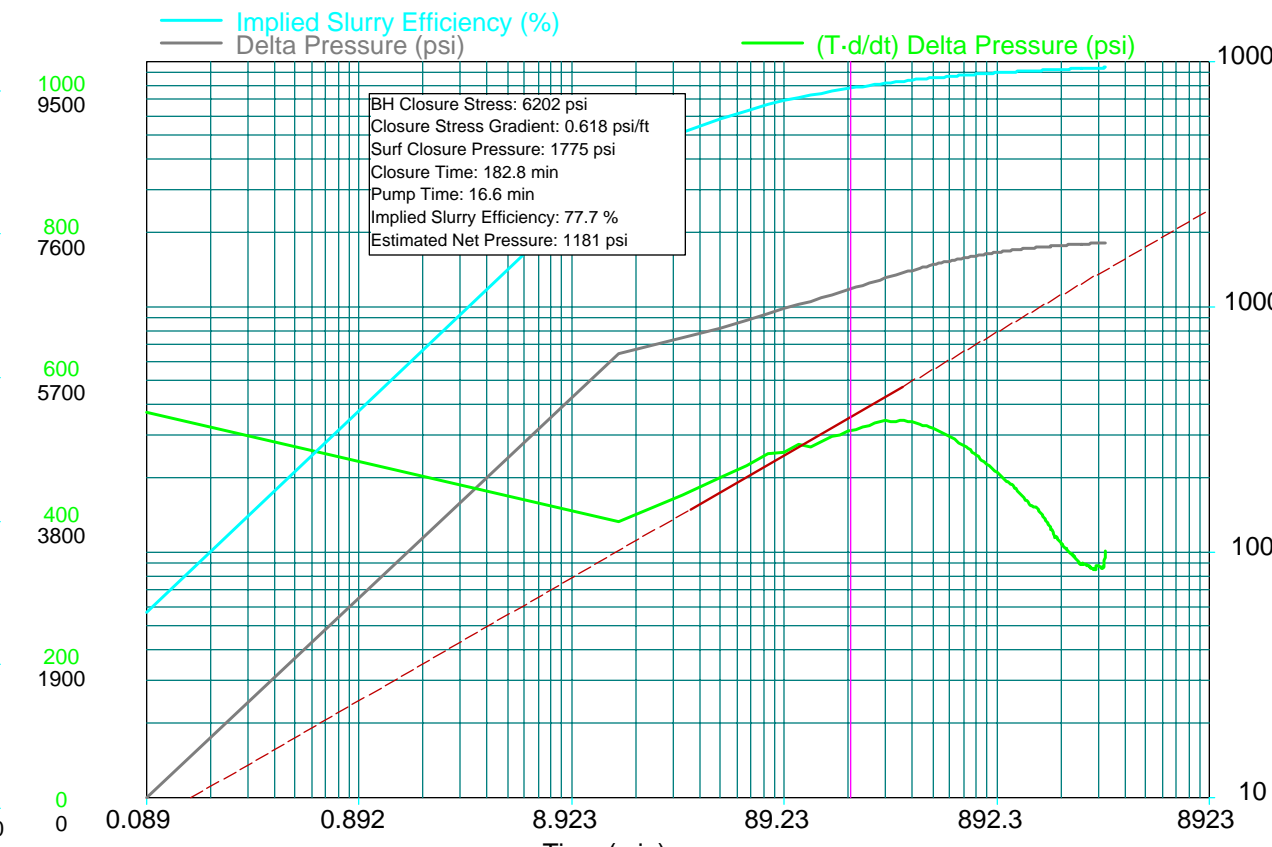
Square Root of Time Plot



G-Function



Log Log Pressure Plot



The g function plot is a diagnostic plot that allows for determination of the type of leak-off in the induced fracture and the point at which closure occurs. This plot uses the g-function, which is a function of the derivative of pressure and time, and plots this against g-time, which is a dimensionless time unit based on the amount of time used to pump the injection test. These equations provide for a unique relationship that provides a method of determining the type of leak-off based on the shape of the g-function curve.

The log-log plot of pressure provides another diagnostic method to observe fracture closure. On this plot three different flow regimes are identified by slopes of 1, 0.5 and 0.25. These slopes represent three separate flow regimes: well bore storage, bi-linear flow, and fracture linear flow. On this plot closure should occur between the 0.5 and 0.25 slope points. Often this plot can have unusual characteristics due to a non-ideal leak-off regime. Therefore this plot is normally used only as a secondary indicator since it can not determine the type of leak-off and the indicated closure point can be mis-leading in a non-ideal leak-off case.

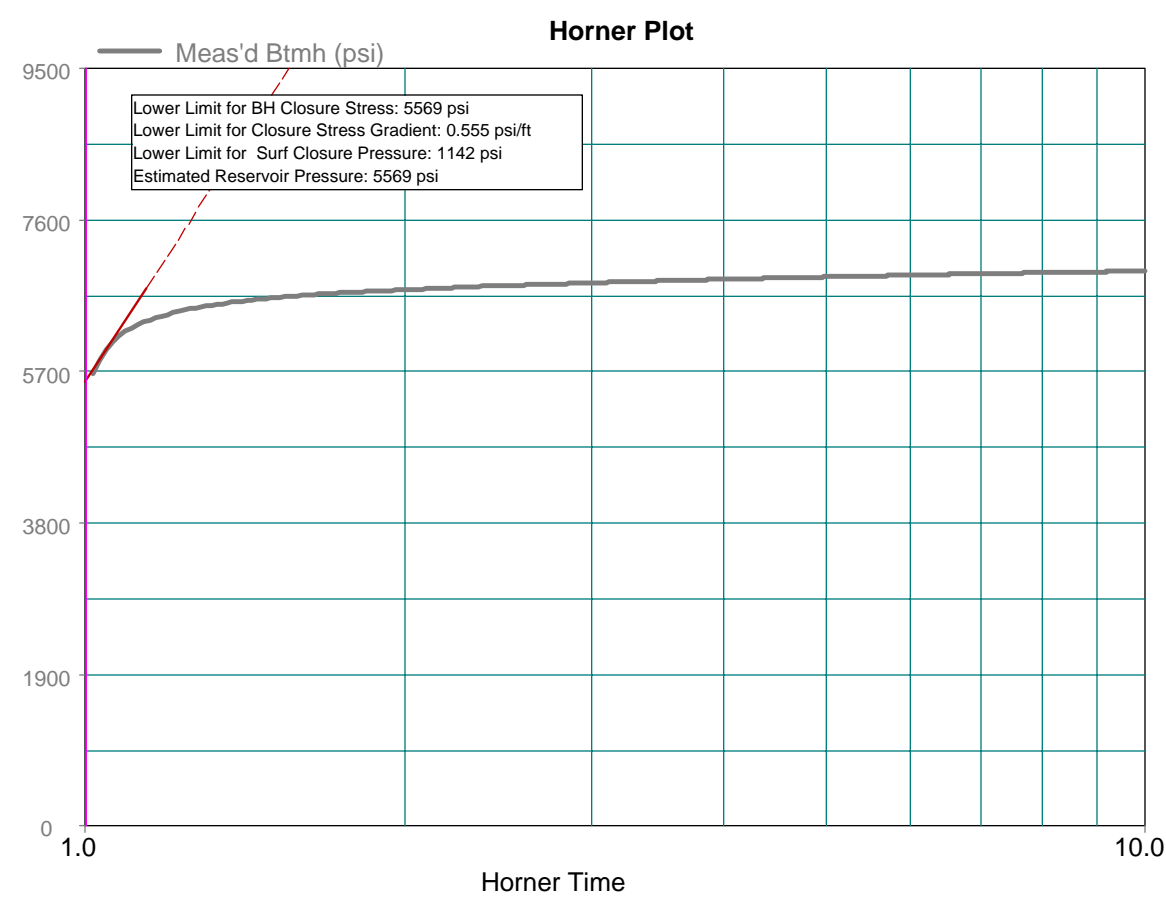
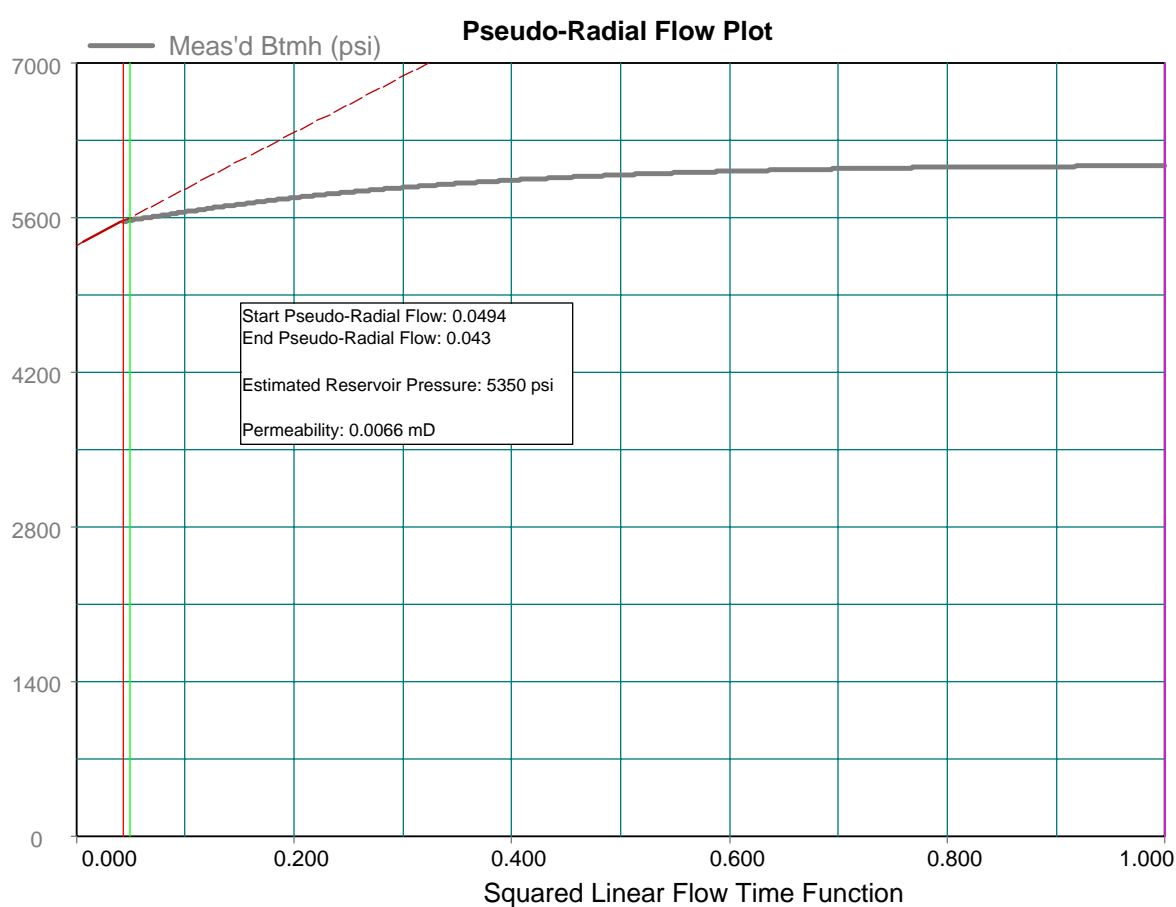
Primary Leak-off Mechanism Frac Extension

To determine the type of leakoff a straight line is drawn through the early time data and normally this line will intersect the origin. In this case a straight line drawn through the early time data will not pass through the origin. Instead the data will fit very well on a straight line, but the intercept will be above the origin which indicates fracture extension. Here the pressure in the fracture is not being relieved by pressure decline in to the reservoir, but instead it is being relieved by creating additional fracture length. This is an indication of low reservoir permeability.

Before Closure Analysis Results

Primary Leak-off Mechanism:	Frac Extension
Secondary Leak-off Mechanism: <td>Height Recession</td>	Height Recession
Closure Time (min):	277.26
G-Time Closure:	8.8
BH Closure Pressure (psi):	6066
Closure Gradient (psi/ft):	0.604
Fissure Opening Pressure (psi):	N/A
Fluid Efficiency (%):	81.7
KANE Pad (%):	3.3
NOLTE Pad (%):	8.3
Shell Pad (%):	10.1

After Closure Analysis



Results:

Reservoir Pore Pressure (psi):	5350
Reservoir Permeability Ft (md-ft)	0.080
Net Height (ft)	12
Reservoir Permeability (md)	0.0066

The Horner plot can be used to make an estimate of the reservoir pore pressure. Once the pressure decline has entered a period of pseudo radial flow a straight line can be drawn through that data. The intercept of that line on the Y-axis provides an estimate of the reservoir pressure. If the data set is limited and the well has not entered pseudo radial flow the plot can still provide an estimated maximum possible reservoir pressure.

Note: Pseudo-Radial flow was not observed during the shut-in period on this zone. This flow regime is critical to determine the permeability from the after closure analysis.

The above report is based on sound engineering practices, but because of variable well conditions and other information which must be relied upon, NuTech Energy Alliance makes no warranty, express or implied, as to the accuracy of the data or any calculations or opinions expressed herein. You agree that NuTech Energy Alliance shall not be liable for any loss or damage whether due to negligence or otherwise arising out of or in connection with such data calculations or opinions.