STREN CO. INC. – 15045 Woodham Drive- Houston, Texas 77073
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SAND ANALYSIS REPORT

HOW MUCH ARE YOU PAYING FOR SAND?

This is a practical analysis of particles from this well...
and how it may be affecting your pump.

It is not how much sand is in the fluid that causes damage to the pump,
it is the size of the abrasive particles that flow between the barrel and plunger.

Conversion Chart
Standard Screen to Inch to Micron

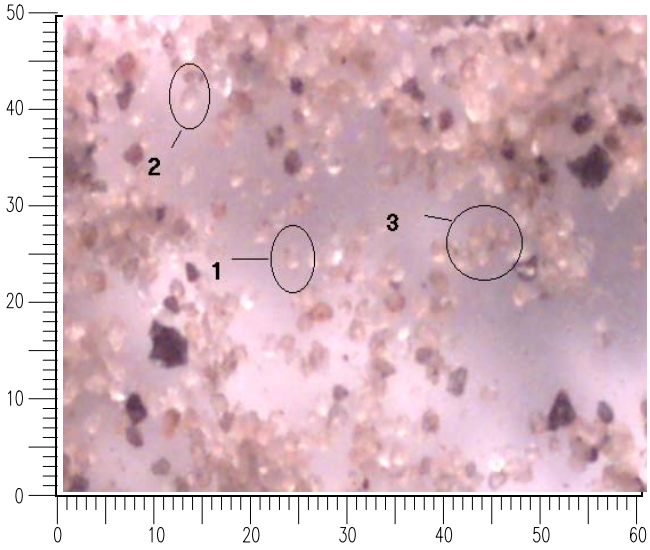
US & ASTM Std. Sieve No. (Meshes)	Equivalent Opening		
	Inches	MM	Microns
20	0.0331	0.841	841
30	0.0234	0.595	595
40	0.0165	0.420	420
50	0.0117	0.297	297
60	0.0098	0.250	250
70	0.0083	0.210	210
80	0.0070	0.177	177
100	0.0059	0.149	149
120	0.0049	0.125	125
140	0.0041	0.105	105
170	0.0035	0.088	88
200	0.0029	0.074	74
240	0.0025	0.063	63
270	0.0021	0.053	53
400	0.0015	0.037	37
550	0.0010	0.025	25
800	0.0006	0.015	15
1250	0.0004	0.010	10
-------	0.0002	0.005	5
------	0.00006	0.002	2

Typical Proppant (Frac Sand)

Table Salt

Typical Pump Plunger/Barrel Tolerance

PG Cartridge Control Point



READING THE PHOTOMICROGRAPH SCALE:
1 DIVISION REPRESENTS 50 MICRONS (OR)
1 DIVISION REPRESENTS 2 THOUSANDTHS OF AN INCH

PHOTOMICROGRAPH OF PARTICLES
30X ENLARGEMENT

TEST NUMBER: R00317-1 AREA: Calif. DATE: 17-March-2000

COMPANY: [redacted] LOCATION: [redacted]

WELL NAME AND NUMBER: [redacted] STREN REP: [redacted]

(1) SIZE OF PARTICLES: (#1) 100 X 130 (#2) 18O (#3) 120 / 100

(2) TYPE OF PARTICLES: (#1) SHARP SILICA FRAG. (#2) NODULAR SILICA GRAIN (#3) SIL.SAND FRAGMENTS

(3) BBLS/DAY: 250 (4) % WATER CUT: (5) API GRAVITY: (6) DEPTH PERFS:

(7) ACTUAL DAYS PUMPED BETWEEN REPAIRS: (8) AVERAGE COST TO REPAIR PUMP:

(9) REMARKS: PREDOMINANT FRACTION IS SILICA SAND WITH BROKEN GRAIN FRAGMENTS EVIDENT. NARROW PSD (Particle Size Distribution). THIS SAMPLE DIFFERS MARKEDLY FROM OTHER AREA WELLS OF VINTAGE IN OUR ANALYSIS FILES IN THE NARROW PSD & FRAGMENT CONCENTRATION. THESE FRAGMENTS ARE IN 50-250 MICRON RANGE MOST AGGRESSIVE TO CAUSING PLUNGER-BARREL DAMAGE. RECOMMENDED CONTROL RATING IS 100 MICRON.