

**Well Name:** Husky et al Keele River L-52  
**Location:** L-52

**Spud Date:** Mar 6, 2008 @ 16:00  
**Days from Spud:** 10  
**K.B. Elevation:** 314.42  
**Ground Elevation:** 310.17

**Date:** Mar 16, 2008  
**Time:** 600 hrs  
**Rotating Hours:** 1.50 hrs

**Depth (MD):** 895.00  
**Depth (TVD):** 894.96  
**Depth (SSL):** -580.54  
**Progress:** 0.00  
**Average R.O.P.:** 0.00

**Daily Costs:** \$79,584

**Accumulated Cost:** \$1,465,594

**Formation:** Slater River

**Operational Status:** 2400H Tripped in well / well flowing @ 895m.  
 0600H Circulate & Condition hole prepare to POOH to test BOPs @ 895m.

**Operational Summary:** Circulate & Condition hole / POOH to 240m / Circulate & Condition hole / Wait on loggers / Well flowing / 1 liter per 5 mins / Trip in hole / Circulate & Condition hole prepare to POOH to test BOPs.

**Report From:** Clarence G. Kennedy (403) 537-2561  
**Report To:** Louise Klatzel-Mudry 298-6182 / Wayne Dwyer 298-60  
**Remarks:**

Survey 884m 1.5

Den 1050; Vis 57; FL 7.0; pH 8.0

Weather -32c Clear; Location Clear / Roads Good

Log with Schlumberger

### Formation Summary

**Kelly Bushing Elevation:** 314.42  
**Ground Elevation:** 310.17

**Casing Flange Elevation:**  
**Storage Units:**

Metric

Group Formation Member	Prognosed Top (TVD)	Sample Top (MD)	Sample Top (TVD)	Subsea Elevation	Thickness	Difference from Prognosis
<i>Total Depth</i>	830.00			-515.58		0.00

### Lithology Summary

## Sample Descriptions

Storage Units:    Metric

25.00 to 30.00 (5.00)	40%	<b>CEMENT</b>	
	30%	<b>SHALE</b> medium to dark gray, medium hard, silty, trace carbonaceous, trace micro pyrite, blocky.	
	30%	<b>SANDSTONE</b> clear, pink, quartz, chert, feldspar, unconsolidated, coarse to very coarse grained, subround to angular, moderately sorted, siliceous with clay cement, tight to poor intergranular porosity (5-10%).	
30.00 to 35.00 (5.00)	60%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, feldspar, unconsolidated, medium to very coarse grained, subround to angular, poorly sorted, siliceous with clay cement, tight to poor intergranular porosity (5-10%).	
	20%	<b>SHALE</b> medium to dark gray, medium hard, silty, as above.	
	20%	<b>CEMENT</b>	
35.00 to 40.00 (5.00)	80%	<b>SANDSTONE</b> clear black, pink, quartz, chert feldspar, unconsolidated, medium to coarse grained, subround to angular, poorly sorted, siliceous with calcareous cement, tight to poor internal granular porosity (5-10%).	
	20%	<b>SHALE</b> medium to dark gray, medium hard, silty, as above.	
40.00 to 45.00 (5.00)	70%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, feldspar, unconsolidated, medium to very coarse grained, as above.	
	30%	<b>SHALE</b> medium to dark gray, medium hard, silty, as above.	
45.00 to 50.00 (5.00)	70%	<b>SANDSTONE</b> clear, red brown, quartz, chert, unconsolidated, very fine to coarse grained, subangular to angular, poorly sorted, argillaceous cement, tight to poor intergranular porosity (3-5%), argillaceous.	
	30%	<b>SHALE</b> gray brown, red brown, medium gray, medium hard, silty, trace micro pyrite, blocky.	
50.00 to 55.00 (5.00)	60%	<b>SANDSTONE</b> clear, black, white, pink, quartz, chert, feldspar, mica, unconsolidated, fine to very coarse grained, subround to angular, poorly sorted, siliceous cement, tight to poor intergranular porosity (3-5%).	

## Sample Descriptions

Storage Units:    Metric

50.00 to 55.00 (5.00)	40%	<b>SHALE</b> medium gray, red brown, gray brown, medium hard, silty, trace micro pyrite, blocky.
55.00 to 60.00 (5.00)	80%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, unconsolidated, very fine to medium grained, subangular, moderately sorted, siliceous cement, tight to trace intergranular porosity (3%), argillaceous, trace micro pyrite.
	20%	<b>SHALE</b> medium gray, red brown, brown, medium hard, silty, as above.
60.00 to 65.00 (5.00)	90%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, unconsolidated, very fine to medium grained, as above.
	10%	<b>SHALE</b> medium gray, red brown, brown, medium hard, silty, trace micro pyrite, blocky.
65.00 to 70.00 (5.00)	80%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, unconsolidated, very fine to coarse grained, subround angular, poorly sorted, siliceous cement, tight to trace intergranular porosity (3%), trace pyrite.
	20%	<b>SHALE</b> medium gray, red brown, brown, medium hard, as above.
70.00 to 75.00 (5.00)	80%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, unconsolidated, very fine to coarse grained, as above.
	20%	<b>SHALE</b> medium gray, red brown, brown, medium hard, as above.
75.00 to 80.00 (5.00)	80%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, unconsolidated, very fine to fine grained, with large floating grains, subangular, moderately sorted, siliceous cement, tight to trace intergranular porosity (3%), trace pyrite.
	20%	<b>SHALE</b> medium gray, red brown, brown medium hard, as above.
80.00 to 85.00 (5.00)	80%	<b>SANDSTONE</b> clear, black, pink, quartz, chert, unconsolidated, very fine to fine grained, with large floating grains, as above.
	20%	<b>SHALE</b> medium gray, red brown, brown, medium hard, as above.
85.00 to 90.00 (5.00)	70%	<b>SANDSTONE</b> clear, black, slightly pink, unconsolidated, very fine to fine grained, with large floating grains, as above.

## Sample Descriptions

Storage Units:    Metric

85.00 to 90.00 (5.00)	30%	<b>SHALE</b> medium gray, red brown, brown, medium hard, silty, sandy, blocky.
90.00 to 95.00 (5.00)	95%	<b>SANDSTONE</b> clear, black, slightly pink, unconsolidated, very fine to fine grained, with large floating grains, subangular, moderately sorted, siliceous cement, tight to trace intergranular porosity (3%), trace pyrite.
	5%	<b>SHALE</b> medium gray, red brown, brown, medium hard, as above.
95.00 to 100.00 (5.00)	80%	<b>SANDSTONE</b> clear, black, slightly pink, unconsolidated, very fine to fine grained, moderately sorted, as above.
	20%	<b>SHALE</b> medium gray, brown, medium hard, as above.
100.00 to 105.00 (5.00)	50%	<b>SHALE</b> medium gray, light brown, medium hard, very silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.
	50%	<b>SANDSTONE</b> clear, light gray, quartz, chert, friable to unconsolidated, very fine to fine grained, occasionally large floating grains, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (3-5%), trace carbonaceous matter, argillaceous, trace pyrite, slightly calcareous in part.
105.00 to 110.00 (5.00)	60%	<b>SANDSTONE</b> clear, light gray, quartz, chert, friable to unconsolidated, very fine to fine grained, occasionally lower floating grains, as above.
	40%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
110.00 to 115.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, friable to unconsolidated, fine to coarse grained, subround to subangular, poorly sorted, siliceous with clay cement, tight to poor intergranular porosity (3-5%), trace carbonaceous matter, argillaceous, trace pyrite.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
115.00 to 120.00 (5.00)	50%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
	50%	<b>SANDSTONE</b> light gray, clear, friable to unconsolidated, fine to coarse grained, as above.
120.00 to 125.00 (5.00)	70%	<b>SHALE</b> light brown, light gray, medium hard, very silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.

## Sample Descriptions

Storage Units:    Metric

120.00 to 125.00 (5.00)	30%	<b>SANDSTONE</b> clear, light gray, black, unconsolidated, fine to coarse grained, subangular to subround, poorly sorted, siliceous with clay cement, tight to poor intergranular porosity, (3-5%), trace carbonaceous matter, argillaceous, trace pyrite.
125.00 to 130.00 (5.00)	80%	<b>SANDSTONE</b> clear, black, light gray, quartz, chert, unconsolidated, fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous with clay cement, tight to poor intergranular porosity (3-5%), trace carbonaceous matter, argillaceous, trace pyrite.
	20%	<b>SHALE</b> light to medium gray, medium hard, very silty, trace micro pyrite, trace carbonaceous matter, blocky.
130.00 to 135.00 (5.00)	70%	<b>SHALE</b> light to medium gray, medium hard, very silty, as above.
	30%	<b>SANDSTONE</b> clear, black, light gray, quartz, chert, unconsolidated, fine to medium grained, with large floating grains, as above.
135.00 to 140.00 (5.00)	70%	<b>SHALE</b> light to medium gray, medium hard, very silty, as above.
	30%	<b>SANDSTONE</b> clear, black, light gray, quartz, chert, unconsolidated, as above.
140.00 to 145.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, with large floating grains, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (3-5%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, silty, trace micro pyrite, trace carbonaceous matter, blocky.
145.00 to 150.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
150.00 to 155.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.

## Sample Descriptions

Storage Units:    Metric

155.00 to 160.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, chert, friable to unconsolidated, fine to medium grained, with large floating grains,
	30%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
160.00 to 165.00 (5.00)	60%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	40%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
165.00 to 170.00 (5.00)	60%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grsw, as above.
	40%	<b>SHALE</b> medium gray, light brown, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
170.00 to 175.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, very silty, as above.
175.00 to 180.00 (5.00)	70%	<b>SANDSTONE</b> clear, black, light gray, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above.
180.00 to 185.00 (5.00)	70%	<b>SANDSTONE</b> clear, black, light gray, quartz, chert, unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above.
185.00 to 190.00 (5.00)	70%	<b>SANDSTONE</b> light gray, quartz, medium hard, very fine to fine grained, subangular, moderately sorted, siliceous with clay cement, tight to trace intergranular porosity (3%), trace carbonaceous maty, argillaceous, silty, trace micro pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above.
190.00 to 195.00 (5.00)	60%	<b>SANDSTONE</b> light gray, quartz, medium hard, very fine to fine grained, as above.

## Sample Descriptions

Storage Units:    Metric

190.00 to 195.00 (5.00)	40%	<b>SHALE</b> medium gray, medium hard, silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.
195.00 to 200.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, quartz, chert, very fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous with clay cement, tight to trace intergranular porosity (3%), trace carbonaceous matter, argillaceous, silty, trace micro pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above.
200.00 to 205.00 (5.00)	60%	<b>SANDSTONE</b> light to medium gray, quartz, chert, medium hard, very fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous with clay cement, tight to trace intergranular porosity (3%), trace carbonaceous matter, very argillaceous, very silty, trace pyrite.
	40%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.
205.00 to 210.00 (5.00)	60%	<b>SANDSTONE</b> light to medium gray, quartz, chert, medium hard, very fine to medium grained, with large floating grains, as above.
	40%	<b>SHALE</b> medium gray, medium hard, very silty, as above.
210.00 to 215.00 (5.00)	60%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard to unconsolidated, fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous with clay cement, tight to trace intergranular porosity (3%), trace carbonaceous matter, very argillaceous, very silty, trace pyrite.
	40%	<b>SHALE</b> medium gray, light brown, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
215.00 to 220.00 (5.00)	80%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard to unconsolidated, fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous with clay cement, tight to trace intergranular porosity (3%), trace carbonaceous matter, very argillaceous, very silty, calcareous, trace pyrite.
	20%	<b>SHALE</b> medium gray, light brown, medium hard, very silty, sandy, trace micro pyrite, blocky.
220.00 to 225.00 (5.00)	50%	<b>SHALE</b> medium gray, light brown, medium hard, as above.

## Sample Descriptions

Storage Units:    Metric

220.00 to 225.00 (5.00)	50%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard to unconsolidated, fine to medium grained, with large floating grains, as above.
225.00 to 230.00 (5.00)	70%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
230.00 to 235.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, medium hard to unconsolidated, fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous with clay cement, tight, trace carbonaceous matter, very argillaceous, very silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
235.00 to 240.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, medium hard unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
240.00 to 245.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, medium hard unconsolidated, fine to medium grained, with floating grains, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
245.00 to 250.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, medium hard, fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous with clay cement, tight, trace carbonaceous matter, very argillaceous, very silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, very silty, sandy, trace micro pyrite, blocky.
250.00 to 255.00 (5.00)	40%	<b>CEMENT</b>
	30%	<b>SHALE</b> medium gray, medium hard, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.



## Sample Descriptions

Storage Units:    Metric

250.00 to 255.00 (5.00)	30%	<b>SANDSTONE</b> light gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, argillaceous, silty, trace pyrite, abundant large floating quartz & chert grains.
255.00 to 260.00 (5.00)	50%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	50%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty.
260.00 to 265.00 (5.00)	60%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, as above.
	40%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
265.00 to 270.00 (5.00)		<b>No Sample</b>
270.00 to 275.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty, trace micro pyrite.
275.00 to 280.00 (5.00)	60%	<b>SHALE</b> medium gray, medium hard, very silty, as above.
	40%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, as above.
280.00 to 285.00 (5.00)	50%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
	50%	<b>SANDSTONE</b> gray brown, light gray, quartz, chert, hard, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty, trace micro pyrite.
285.00 to 290.00 (5.00)	60%	<b>SANDSTONE</b> gray brown, light gray, quartz, chert, hard, fine to medium grained, as above.
	40%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, as above.

## Sample Descriptions

Storage Units:    Metric

290.00 to 295.00 (5.00)	60%	<b>SANDSTONE</b> gray brown, light gray, quartz, chert, hard, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty, trace micro pyrite.
	40%	<b>SHALE</b> medium gray, medium hard, very silty, very silty, as above.
295.00 to 300.00 (5.00)	50%	<b>SHALE</b> medium gray medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	50%	<b>SANDSTONE</b> light to medium gray, gray brown, quartz, chert, hard, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty, trace micro pyrite.
300.00 to 305.00 (5.00)	50%	<b>SANDSTONE</b> gray brown, light to medium gray, quartz, chert, hard, fine to medium grained, as above.
	50%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
305.00 to 310.00 (5.00)	60%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	40%	<b>SANDSTONE</b> gray brown, light to medium gray, quartz, chert, hard, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty, trace pyrite.
310.00 to 315.00 (5.00)	50%	<b>SANDSTONE</b> gray brown, light to medium gray, quartz, chert, hard, fine to medium grained, as above.
	50%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
315.00 to 320.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, gray brown, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky with SHALE gray green, soft, silty, waxy, smooth, blocky.

## Sample Descriptions

Storage Units:    Metric

320.00 to 325.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, medium gray, quartz, chert, unconsolidated, medium to coarse grained, subangular to subround, moderately sorted, siliceous cement, tight to poor intergranular porosity (3%), trace carbonaceous matter, argillaceous, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE white, soft, smooth, waxy, blocky.
325.00 to 330.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, subangular, moderate sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, as above.
330.00 to 335.00 (5.00)	70%	<b>SANDSTONE</b> light gray, clear, white, quartz, chert, hard to unconsolidated, fine to coarse grained, subangular to subrounded, poorly sorted, siliceous cement, tight to poor intergranular porosity (3%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, as above.
335.00 to 340.00 (5.00)	60%	<b>SANDSTONE</b> gray brown, light to medium gray, quartz, chert, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, very silty, trace pyrite.
	40%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, as above.
340.00 to 345.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, trace micro pyrite, trace carbonaceous matter, blocky.
	20%	<b>SANDSTONE</b> gray brown, quartz, chert, hard, fine to medium grained, as above.
345.00 to 350.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
	30%	<b>SANDSTONE</b> gray brown, light to medium gray, quartz, chert, hard, fine to medium grained, as above.
350.00 to 355.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, silty, trace pyrite.

## Sample Descriptions

Storage Units:    Metric

350.00 to 355.00 (5.00)	30%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, trace micro pyrite, trace carbonaceous matter, blocky.
355.00 to 360.00 (5.00)	60%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
	40%	<b>SANDSTONE</b> light to medium gray, gray brown, quartz, chert, hard, fine to medium grained, as above.
360.00 to 365.00 (5.00)	60%	<b>SHALE</b> medium gray, gray brown, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky
	40%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, as above.
365.00 to 370.00 (5.00)	70%	<b>SHALE</b> medium gray, gray brown, medium hard, very silty, very sandy, trace pyrite, trace carbonaceous matter, blocky.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, as above.
370.00 to 375.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, with large floating grains, as above.
	30%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
375.00 to 380.00 (5.00)	60%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, with large floating grains, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, silty, trace pyrite.
	40%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
380.00 to 385.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, with large floating grains, as above.
385.00 to 390.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, as above.

## Sample Descriptions

Storage Units:    Metric

390.00 to 395.00 (5.00)	60%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	40%	<b>SANDSTONE</b> light to medium gray, quartz, chert, fine to medium grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous to shaly, silty, trace pyrite.
395.00 to 400.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, as above.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, as above.
400.00 to 405.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard to unconsolidated, fine to coarse grained, angular to subangular, poorly sorted, siliceous cement, tight to poor intergranular porosity (3%), trace carbonaceous, very argillaceous to shaly, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, common large scattered carbonaceous grains, as above.
405.00 to 410.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, common scattered large carbonaceous grains, as above.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard to unconsolidated, fine to coarse grained, poorly sorted, as above.
410.00 to 415.00 (5.00)	60%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, common large scattered carbonaceous grains, trace micro pyrite, blocky.
	40%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to coarse grained, angular to subangular, poorly sorted, as above.
415.00 to 420.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, very silty, very sandy, common large scattered carbonaceous grains, trace micro pyrite, blocky.
	20%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, moderately sorted, subangular, siliceous cement, tight, trace carbonaceous matter, very argillaceous shaly, silty, trace pyrite.
420.00 to 425.00 (5.00)	90%	<b>SHALE</b> medium gray, medium hard, silty, sandy, common large scattered carbonaceous grains, trace micro pyrite, blocky.

## Sample Descriptions

Storage Units:    Metric

420.00 to 425.00 (5.00)	10%	<b>SANDSTONE</b> light to medium gray, quartz, chert, fine to medium grained, as above.
425.00 to 430.00 (5.00)	90%	<b>SHALE</b> medium gray, medium hard, silty, sandy, trace large scattered carbonaceous grains, trace micro pyrite, blocky.
	10%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, as above.
430.00 to 435.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, silty, sandy, common large scattered carbonaceous grains, trace pyrite blocky, with SHALE white, medium hard, silty, blocky.
	20%	<b>SANDSTONE</b> clear, light gray, quartz, chert, unconsolidated, medium grained, occasionally coarse, subangular, moodly sorted, siliceous cement, tight.
435.00 to 440.00 (5.00)	90%	<b>SHALE</b> medium to dark gray, medium hard, silty, sandy, as above with SHALE medium hard, silty, blocky.
	10%	<b>SANDSTONE</b> light gray, clear, quartz, chert, unconsolidated, medium grained, as above.
440.00 to 445.00 (5.00)	90%	<b>SHALE</b> medium to dark gray, medium hard, silty, sandy, common large scattered carbonaceous grains, trace pyrite, blocky, with SHALE white, silty, blocky.
	10%	<b>SANDSTONE</b> light gray, clear, quartz, chert, unconsolidated, medium grained, as above.
445.00 to 450.00 (5.00)	90%	<b>SHALE</b> medium gray, medium hard, silty, sandy, as above.
	10%	<b>SANDSTONE</b> light gray, clear, quartz, chert, unconsolidated, medium grained, as above.
450.00 to 455.00 (5.00)	90%	<b>SANDSTONE</b> brown, clear, black, light gray, unconsolidated to friable, quartz, chert, medium to very coarse grained, angular to subrounded, poorly sorted, siderite cement, fair intergranular porosity, (10%), argillaceous, silty.
	10%	<b>SHALE</b> medium gray, medium hard, silty, sandy, as above.
455.00 to 460.00 (5.00)	70%	<b>SANDSTONE</b> brown, light gray, clear, hard to unconsolidated, fine to very coarse grained, angular to subrounded, poorly sorted, siderite with siliceous cement, fair intergranular porosity, (10%), argillaceous, silty.

## Sample Descriptions

Storage Units:    Metric

455.00 to 460.00 (5.00)	30%	<b>SHALE</b> medium gray, brown, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
460.00 to 465.00 (5.00)	60%	<b>SANDSTONE</b> light brown, light gray, clear, quartz, chert, hard to unconsolidated, fine to medium grained, sabng, moderately sorted, siliceous cement, tight to poor intergranular porosity (5%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	30%	<b>CHERT</b> varicolored white, black, light gray, brown, orange, hard, very coarse grained, angular, moderately sorted, tight, pyritic.
	10%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
465.00 to 470.00 (5.00)	50%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (5-8%), trace carbonaceous matter, argillaceous, silty.
	30%	<b>SHALE</b> medium gray, medium hard, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	20%	<b>CHERT</b> varicolored, light gray, white, black, hard, very coarse grained, angular, moderately sorted, tight, pyritic.
470.00 to 475.00 (5.00)	80%	<b>SANDSTONE</b> light gray, light brown, quartz, chert, medium hard, fine to medium grained, subangular, moderately sorted, siliceous with clay cement, tight to poor intergranular porosity (5-8%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	10%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
	10%	<b>CHERT</b> varicolored, black, white, gray, hard, very coarse grained, as above.
475.00 to 480.00 (5.00)	80%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard, fine to medium grained, subangular, moderately sorted, siliceous with clay cement, tight to poor intergranular porosity (5-8%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	10%	<b>SHALE</b> medium gray, medium hard, silty, as above.
	10%	<b>CHERT</b> varicolored, white, black, gray, hard, as above.

## Sample Descriptions

Storage Units:    Metric

480.00 to 485.00 (5.00)	80%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard, fine to medium grained, as above.
	20%	<b>SHALE</b> medium gray, medium hard, silty, as above.
		<b>CHERT</b> Trace, as above.
485.00 to 490.00 (5.00)	50%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard, fine to medium grained, as above.
	30%	<b>CHERT</b> varicolored, white, light gray, black, hard, very coarse grained, angular, moderately sorted, tight pyritic.
	20%	<b>SHALE</b> medium gray, medium hard, silty, as above.
490.00 to 495.00 (5.00)	90%	<b>CONGLOMERATE</b> light gray, clear, black, quartz, chert, unconsolidated to friable, coarse to very coarse grained, subrounded to angular, moderately sorted, siliceous cement, tight to fair intergranular porosity (10-12%), slightly argillaceous, trace pyrite.
	10%	<b>SHALE</b> medium gray, medium hard, silty, as above.
495.00 to 500.00 (5.00)	60%	<b>CHERT</b> white, light gray, black, hard, very coarse grained, angular, moderately sorted, tight, trace pyrite.
	30%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, subangular, moderately sorted, siliceous cement, tight to fair intergranular porosity (12%), trace carbonaceous matter, slightly argillaceous, trace pyrite.
	10%	<b>SHALE</b> medium gray, medium hard, as above.
500.00 to 505.00 (5.00)	60%	<b>CHERT</b> varicolored, white, light gray, black, hard, as above.
	40%	<b>SANDSTONE</b> light gray, clear, quartz, chert, fine to medium grained, as above.
505.00 to 510.00 (5.00)	50%	<b>SANDSTONE</b> light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, as above.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above.



## Sample Descriptions

Storage Units:    Metric

505.00 to 510.00 (5.00)	20%	<b>CHERT</b> varicolored, white, light gray, black, hard, as above.
510.00 to 515.00 (5.00)	70%	<b>SANDSTONE</b> light gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, argillaceous, silty, trace pyrite.
	20%	<b>CHERT</b> varicolored, white, light gray, black, hard, as above.
	10%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
515.00 to 520.00 (5.00)	50%	<b>SANDSTONE</b> light gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous, very silty, trace pyrite.
	50%	<b>SHALE</b> medium gray, light brown, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
520.00 to 525.00 (5.00)	60%	<b>SANDSTONE</b> light gray, light brown, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, very argillaceous, very silty, trace pyrite.
	40%	<b>SHALE</b> medium gray, light brown, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
525.00 to 530.00 (5.00)	70%	<b>SANDSTONE</b> light gray, quartz, medium hard, very fine to fine grained, subangular, moderately sorted, siliceous mct, tight to poor intergranular porosity (3%), trace carbonaceous matter, trace coal grains, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
530.00 to 531.00 (1.00)	80%	<b>SANDSTONE</b> light gray, white, clear, quartz, friable to unconsolidated, fine to medium grained, subangular, moderately sorted, siliceous cement, tight to fair intergranular porosity (12-15%), trace carbonaceous matter, trace coal grains, slightly argillaceous, trace pyrite.
	20%	<b>SHALE</b> medium gray, medium hard, as above.

## Sample Descriptions

Storage Units:    Metric

531.00 to 535.00 (4.00)	50%	<b>SANDSTONE</b> light gray, white, clear, quartz, chert, friable to unconsolidated, fine to medium grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (5-8%), trace carbonaceous matter, slightly argillaceous, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, as above.
	20%	<b>COAL</b>
535.00 to 540.00 (5.00)	70%	<b>SHALE</b> medium gray, light brown, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard, fine to medium grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (5-10%), trace carbonaceous matter, slightly argillaceous, slightly silty, trace pyrite.
540.00 to 545.00 (5.00)	50%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
	50%	<b>SANDSTONE</b> light gray, gray brown, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, argillaceous, silty, trace pyrite.
545.00 to 550.00 (5.00)	60%	<b>SHALE</b> medium gray, medium hard, silty, as above.
	40%	<b>SANDSTONE</b> light brown, light gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight to fair intergranular porosity (8-10%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
550.00 to 555.00 (5.00)	70%	<b>SANDSTONE</b> light gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight to fair intergranular porosity (8-10%), slightly argillaceous, silty, trace micro pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above.
555.00 to 560.00 (5.00)	60%	<b>SHALE</b> medium gray, medium hard, silty, as above.

## Sample Descriptions

Storage Units:    Metric

555.00 to 560.00 (5.00)	40%	<b>SANDSTONE</b> light gray, white, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (3-5%), trace carbonaceous matter, slightly argillaceous, silty, trace micro pyrite.
560.00 to 565.00 (5.00)	60%	<b>SANDSTONE</b> gray brown, light gray, quartz, large floating chert & quartz, hard, very fine to fine grained, subangular, poorly sorted, siliceous cement, tight to poor intergranular porosity (8-10%), trace carbonaceous matter, argillaceous, silty, trace micro pyrite.
	40%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
565.00 to 570.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, silty, as above.
	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, medium hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, very argillaceous, silty, trace micro pyrite.
570.00 to 575.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, silty, as above.
	30%	<b>SANDSTONE</b> light gray, salt and pepper, quartz, hard very fine to fine grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (5%), argillaceous, silty, trace pyrite, rare kaolinitic.
575.00 to 580.00 (5.00)	70%	<b>SANDSTONE</b> light gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
580.00 to 585.00 (5.00)	90%	<b>SANDSTONE</b> light gray, light brown, salt and pepper, quartz, hard, very fine to fine grained, as above.
	10%	<b>SHALE</b> medium gray, medium hard, silty, as above.
585.00 to 590.00 (5.00)	90%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	10%	<b>SHALE</b> medium gray, medium hard, silty, as above.

## Sample Descriptions

Storage Units:    Metric

590.00 to 595.00 (5.00)	80%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	<b>SHALE</b> medium gray, medium hard, silty, as above.
595.00 to 600.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, very silty, trace carbonaceous matter, trace micro pyrite, blocky.
	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, very argillaceous, silty, trace pyrite.
600.00 to 605.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
605.00 to 610.00 (5.00)	80%	<b>SANDSTONE</b> light gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
610.00 to 615.00 (5.00)	80%	<b>SANDSTONE</b> light gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
615.00 to 620.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, silty, as above.
	30%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
620.00 to 625.00 (5.00)	80%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
625.00 to 630.00 (5.00)	95%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	5%	<b>SANDSTONE</b> light to medium gray, as above.

## Sample Descriptions

Storage Units:    Metric

630.00 to 635.00 (5.00)	90%	<b>SHALE</b> medium gray, medium hard, very silty, sandy, as above.
	10%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine, as above.
635.00 to 640.00 (5.00)	90%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, chert, friable to unconsolidated, fine to medium grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (5%), argillaceous, silty, trace pyrite.
	10%	<b>SHALE</b> medium gray, medium hard, as above.
640.00 to 645.00 (5.00)	80%	<b>SHALE</b> medium gray, light brown, medium hard, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
645.00 to 650.00 (5.00)	80%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
	20%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
650.00 to 655.00 (5.00)	90%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, as above.
	10%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
655.00 to 660.00 (5.00)	60%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, as above.
	40%	<b>SHALE</b> medium gray, light brown, medium hard, as above.
660.00 to 665.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, medium hard, very fine to fine grained, as above.
	30%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
665.00 to 670.00 (5.00)	80%	<b>SHALE</b> medium gray, light brown, medium hard, silty, as above.
	20%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, as above.

## Sample Descriptions

Storage Units:    Metric

670.00 to 675.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace pyrite, blocky, with SHALE light brown, hard, dolomitic, silty, blocky.
675.00 to 680.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, dolomitic, as above.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, chert, friable to unconsolidated, fine to coarse grained, poorly sorted, subangular to subround, siliceous cement, tight to fair intergranular porosity (10%), slightly argillaceous, trace pyrite.
680.00 to 685.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, trace micro pyrite, trace carbonaceous matter, blocky with SHALE light brown, hard, dolomitic, silty, trace micro pyrite, blocky.
685.00 to 690.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, very sideritic, as above.
	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
690.00 to 695.00 (5.00)	80%	<b>SANDSTONE</b> medium gray, gray brown, salt and pepper, quartz, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, very argillaceous, silty, trace pyrite.
	20%	<b>SHALE</b> medium gray, medium hard, silty, as above, SHALE light brown, medium hard, dolomitic, as above.
695.00 to 700.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, silty, as above, minor SHALE light brown, as above.
	20%	<b>SANDSTONE</b> medium gray, gray brown, quartz, medium hard, very fine to fine grained, as above.

## Sample Descriptions

Storage Units:    Metric

700.00 to 705.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, silty, as above, with minor SHALE light brown, as above.
	30%	<b>SANDSTONE</b> medium gray, medium hard, quartz, hard, very fine to fine grained, as above.
705.00 to 710.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, massive, blocky, with SHALE light brown, hard, very sideritic, silty, blocky.
710.00 to 715.00 (5.00)	80%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, very fine to fine grained, as above.
	20%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, as above.
715.00 to 720.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, as above, with SHALE light brown, hard, as above.
	30%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
720.00 to 725.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, as above, with SHALE light brown, hard, as above.
	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
725.00 to 730.00 (5.00)	70%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, as above.
	30%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
730.00 to 735.00 (5.00)	95%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with mrn SHALE light brown, as above.

## Sample Descriptions

Storage Units:    Metric

730.00 to 735.00 (5.00)	5%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine grained, as above.
735.00 to 740.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, as above, with trace SHALE light brown, hard, as above.
		<b>SANDSTONE</b> Trace, as above.
740.00 to 745.00 (5.00)	90%	<b>SHALE</b> medium gray, medium hard, as above, with minor SHALE light brown, hard, as above.
	10%	<b>SANDSTONE</b> light to medium gray, quartz, hard, as above.
745.00 to 750.00 (5.00)	95%	<b>SHALE</b> medium gray, hard, silty, as above, with minor SHALE light brown, hard, as above.
	5%	<b>SANDSTONE</b> light to medium gray, quartz, hard, as above.
750.00 to 755.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, as above, with minor SHALE light brown, hard, as above.
755.00 to 760.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, as above., with SHALE light brown, hard, as above.
760.00 to 765.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
765.00 to 770.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, as above.
770.00 to 775.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
775.00 to 780.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, as above.
780.00 to 785.00 (5.00)	60%	<b>SANDSTONE</b> light to medium gray, quartz, chert, hard to slightly unconsolidated, fine to medium grained, occasionally coarse, moderately sorted, subangular, siliceous cement, tight to poor intergranular porosity ( 5-8%), argillaceous, silty, slightly calcareous in part, trace pyrite.



## Sample Descriptions

Storage Units:    Metric

780.00 to 785.00 (5.00)	40%	<b>SHALE</b> medium gray, silty, as above, with SHALE light brown, hard, as above.
785.00 to 790.00 (5.00)	70%	<b>SANDSTONE</b> light gray, quartz, chert, medium hard to unconsolidated, fine to medium grained, occasionally coarse, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (8%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
790.00 to 795.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (3%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
795.00 to 800.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, very fine to medium grained, subangular, poorly sorted, siliceous cement, tight to trace intergranular porosity (3%), argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
800.00 to 805.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, chert, very fine to medium grained, as above.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above, with trace SHALE light brown, hard, as above.
805.00 to 810.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above, with trace SHALE light brown, hard, as above.
810.00 to 815.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, argillaceous, silty, trace pyrite.

## Sample Descriptions

Storage Units:    Metric

810.00 to 815.00 (5.00)	30%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, hard, as above.
815.00 to 820.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
820.00 to 825.00 (5.00)	70%	<b>SANDSTONE</b> light to medium gray, quartz, hard, very fine to fine grained, as above.
	30%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
825.00 to 830.00 (5.00)	60%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	40%	<b>SHALE</b> medium gray, medium hard, silty, as above., with SHALE light brown, hard, as above.
830.00 to 835.00 (5.00)	50%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, hard, silty, dolomitic, blocky.
	45%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, trace carbonaceous matter, argillaceous, silty, trace pyrite.
	5%	<b>COAL</b>
835.00 to 840.00 (5.00)	50%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
	40%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	10%	<b>COAL</b>
840.00 to 845.00 (5.00)	75%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, dolomitic, as above.

## Sample Descriptions

Storage Units:    Metric

840.00 to 845.00 (5.00)	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	5%	<b>COAL</b>
845.00 to 850.00 (5.00)	75%	<b>SHALE</b> medium gray, medium hard, silty, trace micro pyrite, trace carbonaceous matter, blocky, with SHALE light brown, hard, dolomitic, silty, blocky.
	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, rare glauconite, tight to poor intergranular porosity (3%).
	5%	<b>COAL</b>
850.00 to 855.00 (5.00)	90%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, dolomitic, as above.
	10%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
855.00 to 860.00 (5.00)	90%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, dolomitic, as above.
	10%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
		<b>COAL</b> Trace.
860.00 to 865.00 (5.00)	80%	<b>SHALE</b> medium gray, medium hard, silty, as above. with SHALE light brown, medium hard, as above.
	20%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (3%), trace carbonaceous matter, silty, argillaceous, very pyritic.
		<b>COAL</b> Trace.
865.00 to 870.00 (5.00)	85%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.

## Sample Descriptions

Storage Units:    Metric

865.00 to 870.00 (5.00)	10%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, as above.
	5%	<b>COAL</b>
870.00 to 875.00 (5.00)	85%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
	10%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
	5%	<b>COAL</b> Trace.
875.00 to 880.00 (5.00)	85%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, hard, dolomitic, silty, blocky.
	15%	<b>SANDSTONE</b> light to medium gray, salt and pepper, qzt, hard, very fine to fine grained, as above, tight.
		<b>COAL</b> Trace.
880.00 to 885.00 (5.00)	85%	<b>SHALE</b> medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
	10%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
	5%	<b>COAL</b> Trace.
885.00 to 890.00 (5.00)	95%	<b>SHALE</b> medium gray, medium hard, silty, as above, SHALE light brown, hard, as above.
	5%	<b>SANDSTONE</b> light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
		<b>COAL</b> Trace.
890.00 to 895.00 (5.00)	100%	<b>SHALE</b> medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with trace SHALE light brown, hard, as above.


**Husky Energy**
**Well Information**

**Operator:** Husky Energy Inc.  
**Well Name:** Husky et al Keele River L-52  
**Location:** L-52  
**UWI:** Keele River L-52  
**Pool:** Little Bear  
**Field:** North Cloverleaf  
**Province / State:** Northwest Territories  
**Country:** Canada

**Elevations**

**Reference:** Ground **Ground:** 310.17 m  
**Cut(-) / Fill(+):**  **Kelly Bushing:** 314.42 m  
**K.B. to Ground:** 4.25 m **Casing Flange:** m

**Total Depth**

Measurement Type	Measured Depth	True Vertical Depth
Drillers TD (Tally)	895 m	894.96 m
Drillers TD (Strap or SLM)	m	m
Loggers TD	m	m

**Surface Co - Ordinates**

**Well Type:** Straight  
**Longitude:** 124 56' 07.3" **N / S Co - Ordinates:**   
**Latitude:** 64 01' 30.2" **E / W Co - Ordinates:**

**Bottom Hole Co - Ordinates**

**Longitude:**  **N / S Co - Ordinates:**   
**Latitude:**  **E / W Co - Ordinates:**

**Well Summary**

**Spud Date:** Mar 6, 2008 @ 16:00hrs  
**TD Date:** Mar 15, 2008 @ 01:30hrs  
**Rig Release Date:**   
**Contractor:** Akita Sahtu Drilling Ltd. #14

**Drilling Fluid Summary**

Fluid Type	From	To
Gel Chem	0 m	252 m
Gel Polymerl	252 m	895 m

**Casing Summary**

Type	Hole Size	Casing Size	Landed
Surface	311 mm	244.5 mm	252 m



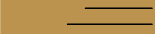
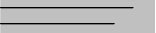
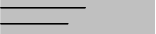





















**Work Schedule**

Contractor	Geologist	Log Interval	Dates Logged
McGrath Resource Consulting	Clarence G. Kennedy, P.Geol.	0 m - 895 m	Mar 3, 2008 -

**Remarks**

AFE# US-28423

# Legend

	Conglomerate varicolored chert (Rock)
	Chert varicolored (Rock)
	Shale Brown (Rock)
	Shale dark gray (Rock)
	Shale medium gray (Rock)
	Sandstone (Rock)
	Sandstone (Stringers)
	Calcareous (Cement)
	Siderite (Cement)
	Siliceous (Cement)
	Argillaceous (Matrix)
	Intercrystalline - interfragmental - intergranular (Porosity)
	Chert dark (Grain)
	Chert light (Grain)
	Coal (Grain)
	Feldspar (Grain)
	Quartz (Grain)
	Argillaceous (Accessory)
	Calcareous (Accessory)
	Carbonaceous (Accessory)
	Kaolinitic (Accessory)
	Micaceous (Grain)
	Pyritic (Accessory)
	Sandy (Accessory)
	Silty (Accessory)
	Slide ( Slides )

\* Abundance: Trace  Occasional  Common  Abundant  No Indication 

[illegible]

Mar 7, 2008

DS 0.75° AZ 0°  
TVD 61

DS 0.25° AZ 0°  
TVD 94

0 m

70 m

80 m

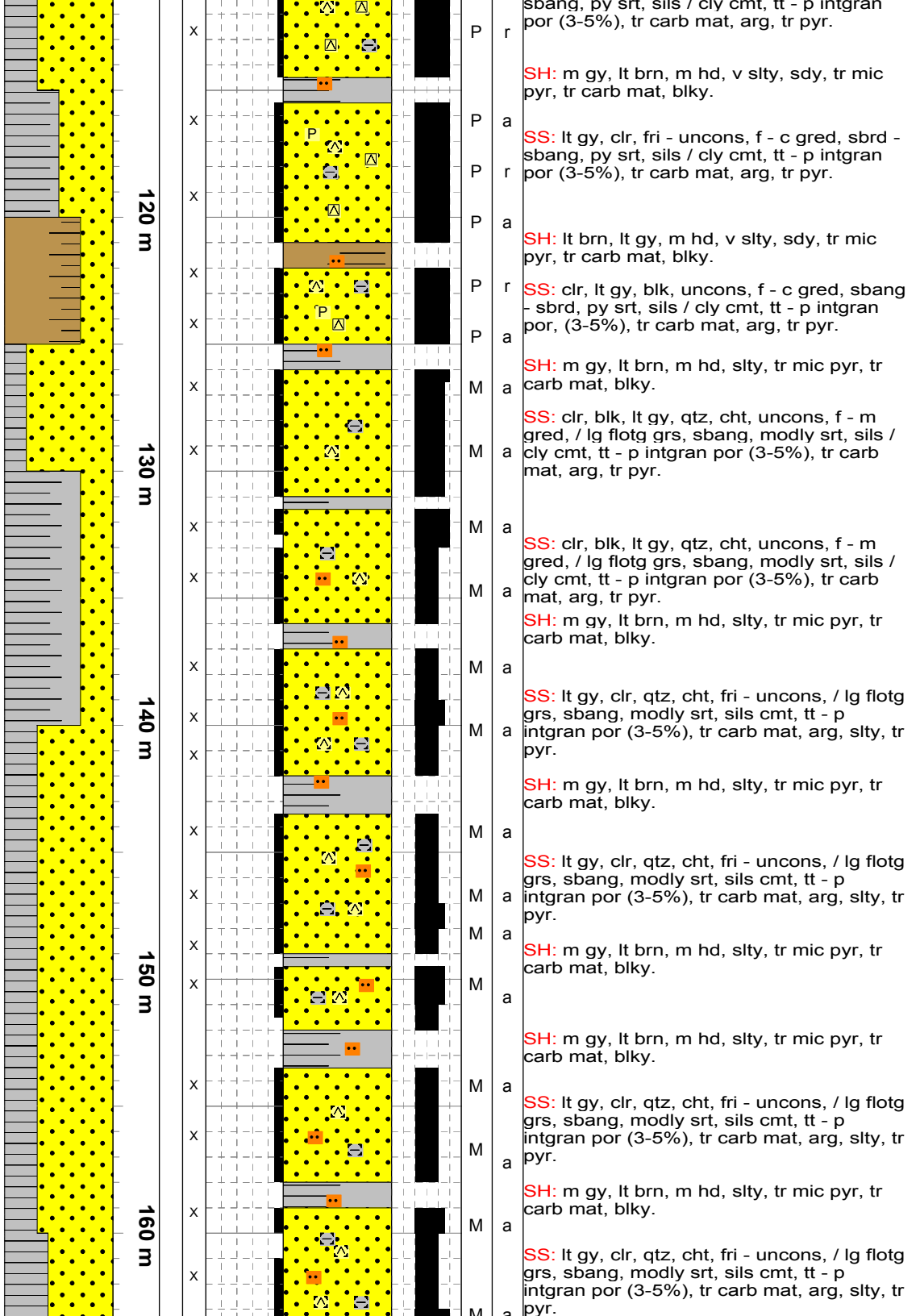
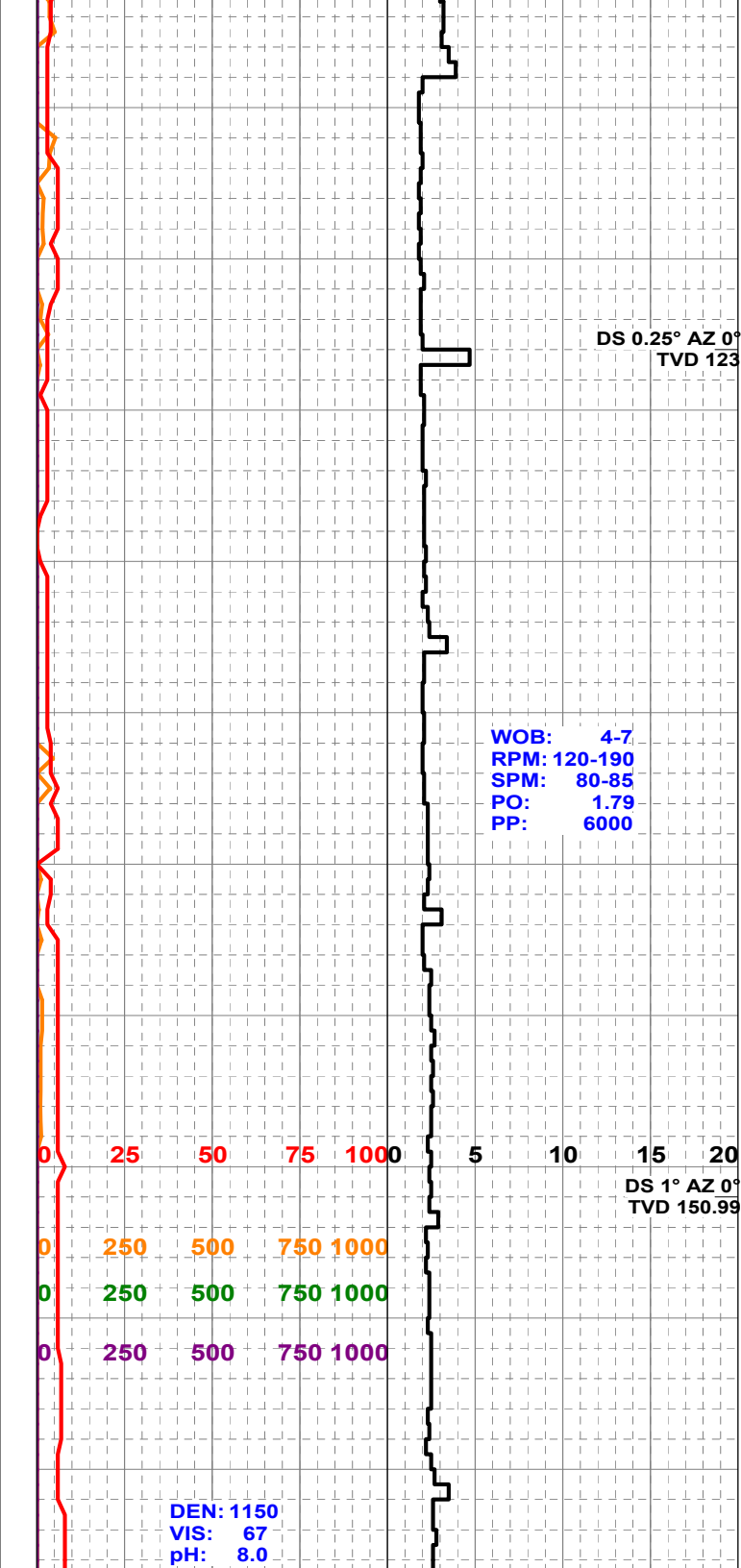
90 m

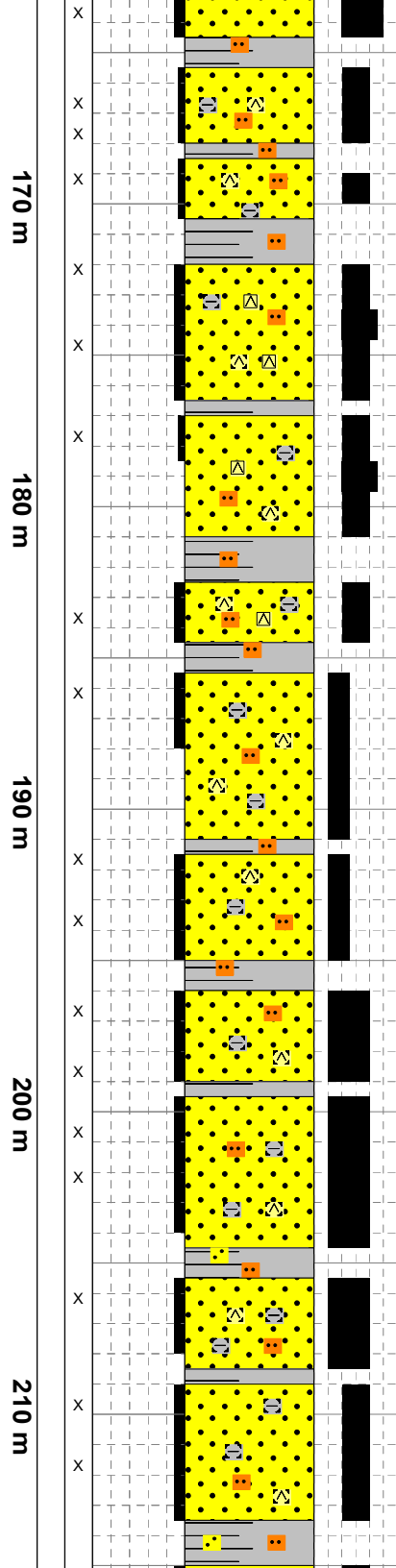
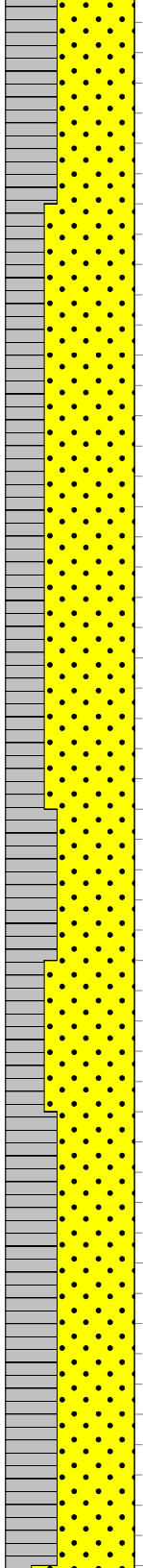
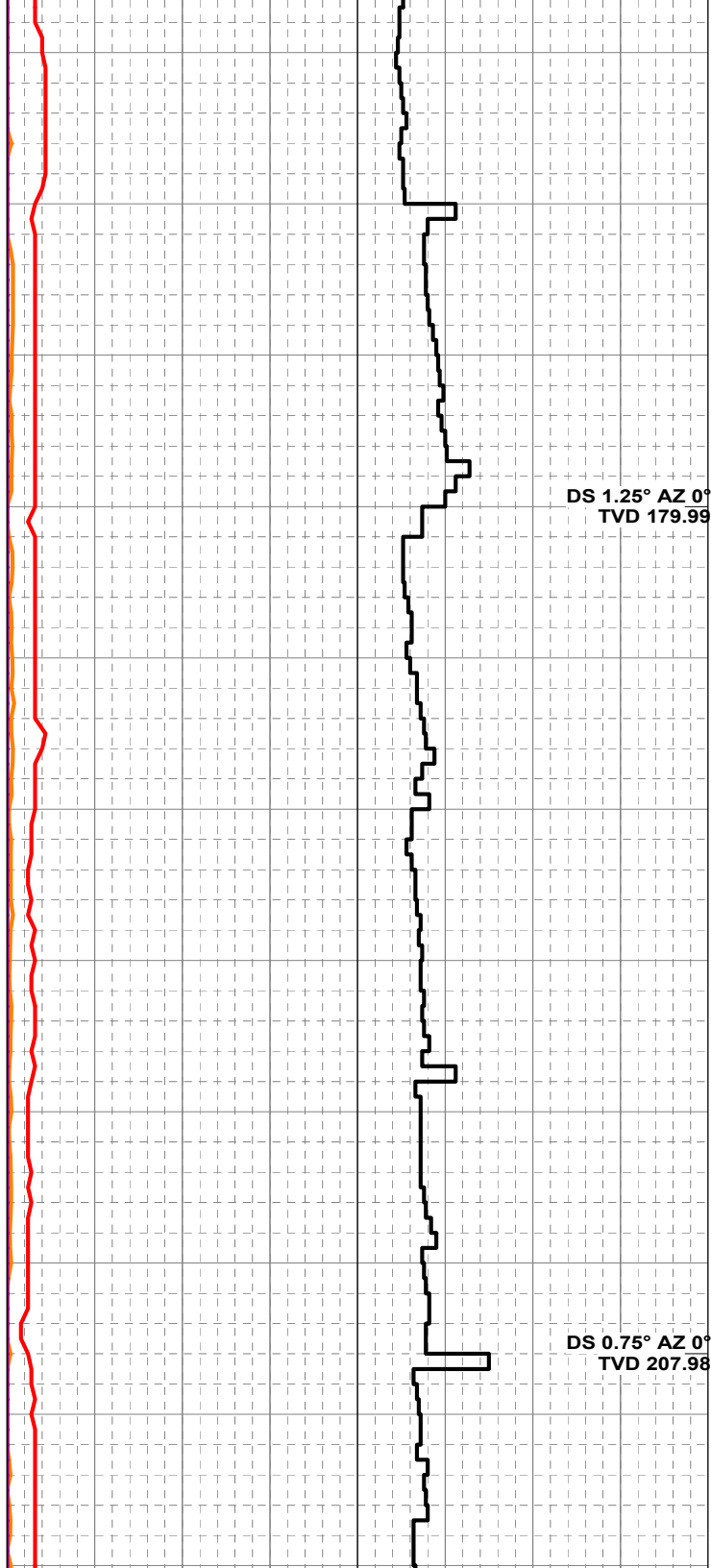
100 m

110 m

x			P		M	a	SS: clr, blk, pk, qtz, cht, uncon, vf - m gred, sbang, modly srt, sils cmt, tt - tr intgran por (3%), arg, tr mic pyr.
x			P		M	a	
x			P		P	A	SH: m gy, red brn, brn, m hd, slty, sdy, blk.
x			P		P	a	SS: clr, blk, pk, qtz, cht, uncon, vf - c gred, sbrd ang, py srt, sils cmt, tt - tr intgran por (3%), tr pyr.
x			P		P	A	SH: m gy, red brn, brn, m hd, slty, sdy, blk.
x			P		P	a	SS: clr, blk, pk, qtz, cht, uncon, vf - c gred, sbrd ang, py srt, sils cmt, tt - tr intgran por (3%), tr pyr.
x			P		M	a	SH: m gy, red brn, brn, m hd, slty, sdy, blk.
x			P		M	a	SS: clr, blk, pk, qtz, cht, uncon, vf - f gred, / lg flotg grs, sbang, modly srt, sils cmt, tt - tr intgran por (3%), tr pyr.
x			P		M	a	SH: m gy, red brn, brn, m hd, slty, sdy, blk.
x			P		M	a	SS: clr, blk, pk, qtz, cht, uncon, vf - f gred, / lg flotg grs, sbang, modly srt, sils cmt, tt - tr intgran por (3%), tr pyr.
x			P		M	a	SH: m gy, red brn, brn, m hd, slty, sdy, blk.
x			P		M	a	SS: clr, blk, silly pk, uncon, vf - f gred, / lg flotg grs, sbang, modly srt, sils cmt, tt - tr intgran por (3%), tr pyr.
x			P		M	a	SH: m gy, red brn, brn, m hd, slty, sdy, blk.
x			P		M	a	SS: clr, blk, silly pk, uncon, vf - f gred, / lg flotg grs, sbang, modly srt, sils cmt, tt - tr intgran por (3%), tr pyr.
x			P		M	a	SS: clr, lt gy, qtz, cht, fri - uncon, vf - f gred, occly lg flotg grs, sbang, modly srt, sils cmt, tt - p intgran por (3-5%), tr carb mat, arg, tr pyr, silly calcs ip.
x			P		M	a	
x			P		M	a	SH: m gy, lt brn, m hd, v slty, sdy, tr mic pyr, tr carb mat, blk.
x			P		P	a	SS: lt gy, clr, fri - uncon, f - c gred, sbrd -







SH: m gy, lt brn, m hd, slty, tr mic pyr, tr carb mat, blk.

SS: lt gy, clr, qtz, cht, fri - uncon, / lg flotg grs, sbang, modly srt, sils cmt, tt - p intgran por (3-5%), tr carb mat, arg, slty, tr pyr.

SH: m gy, m hd, slty, sdy, tr mic pyr, tr carb mat, blk.

SS: lt gy, clr, qtz, cht, fri - uncon, / lg flotg grs, sbang, modly srt, sils cmt, tt - p intgran por (3-5%), tr carb mat, arg, slty, tr pyr.

SS: lt gy, clr, qtz, cht, fri - uncon, / lg flotg grs, sbang, modly srt, sils cmt, tt - p intgran por (3-5%), tr carb mat, arg, slty, tr pyr.

SH: m gy, m hd, slty, sdy, tr mic pyr, tr carb mat, blk.

SS: lt gy, clr, qtz, cht, fri - uncon, / lg flotg grs, sbang, modly srt, sils cmt, tt - p intgran por (3-5%), tr carb mat, arg, slty, tr pyr.

SS: lt gy, qtz, m hd, vf - f gred, sbang, modly srt, sils / cly cmt, tt - tr intgran por (3%), tr carb mat, arg, slty, tr mic pyr.

SH: m gy, m hd, slty, sdy, tr mic pyr, tr carb mat, blk.

SS: lt gy, qtz, m hd, vf - f gred, sbang, modly srt, sils / cly cmt, tt - tr intgran por (3%), tr carb mat, arg, slty, tr mic pyr.

SH: m gy, m hd, v slty, sdy, tr mic pyr, tr carb mat, blk.

SS: lt - m gy, qtz, cht, m hd, vf - m gred, / lg flotg grs, sbang, modly srt, sils / cly cmt, tt - tr intgran por (3%), tr carb mat, v arg, v slty, tr pyr.

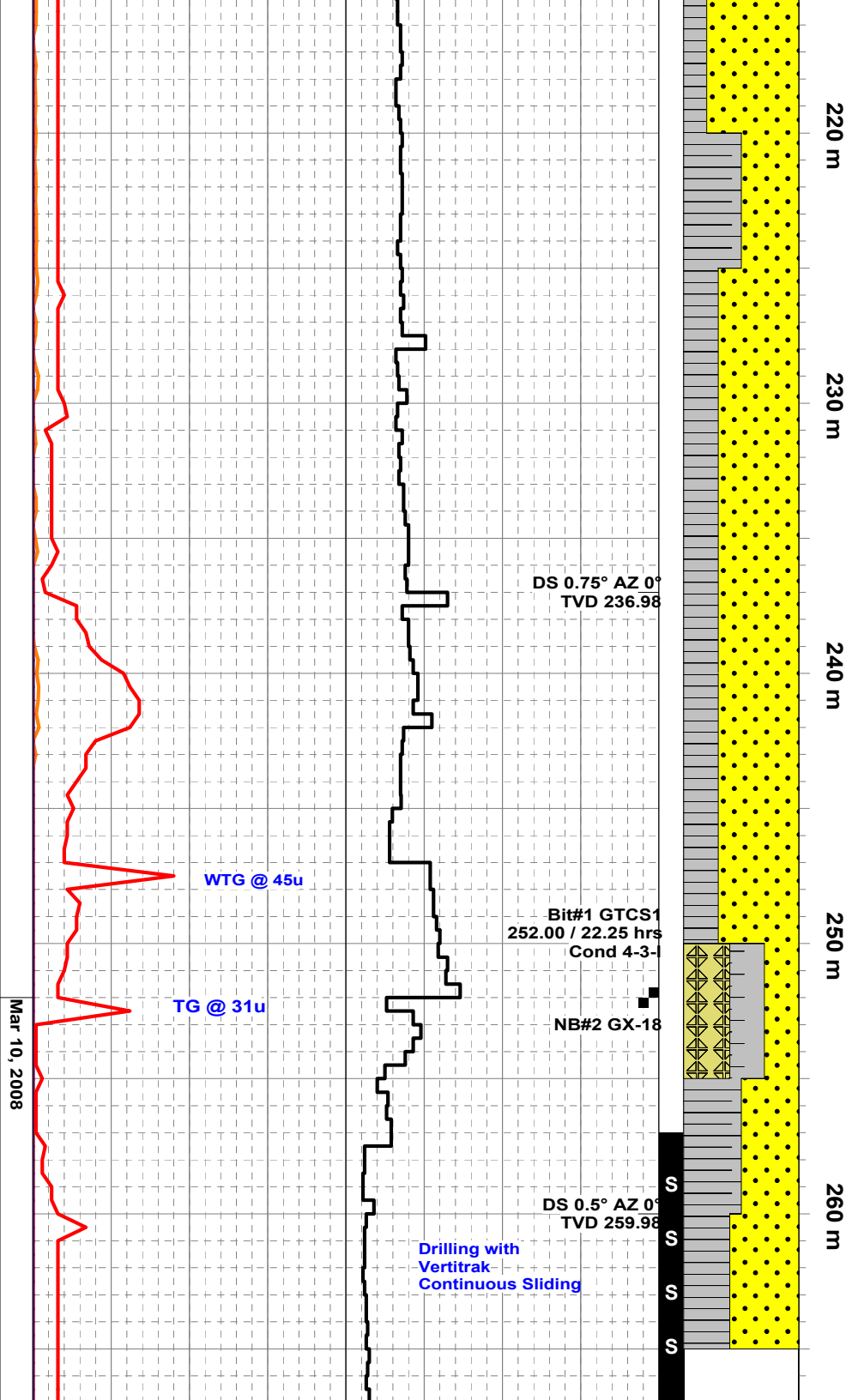
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SH: m gy, m hd, v slty, sdy, tr mic pyr, tr carb mat, blk.

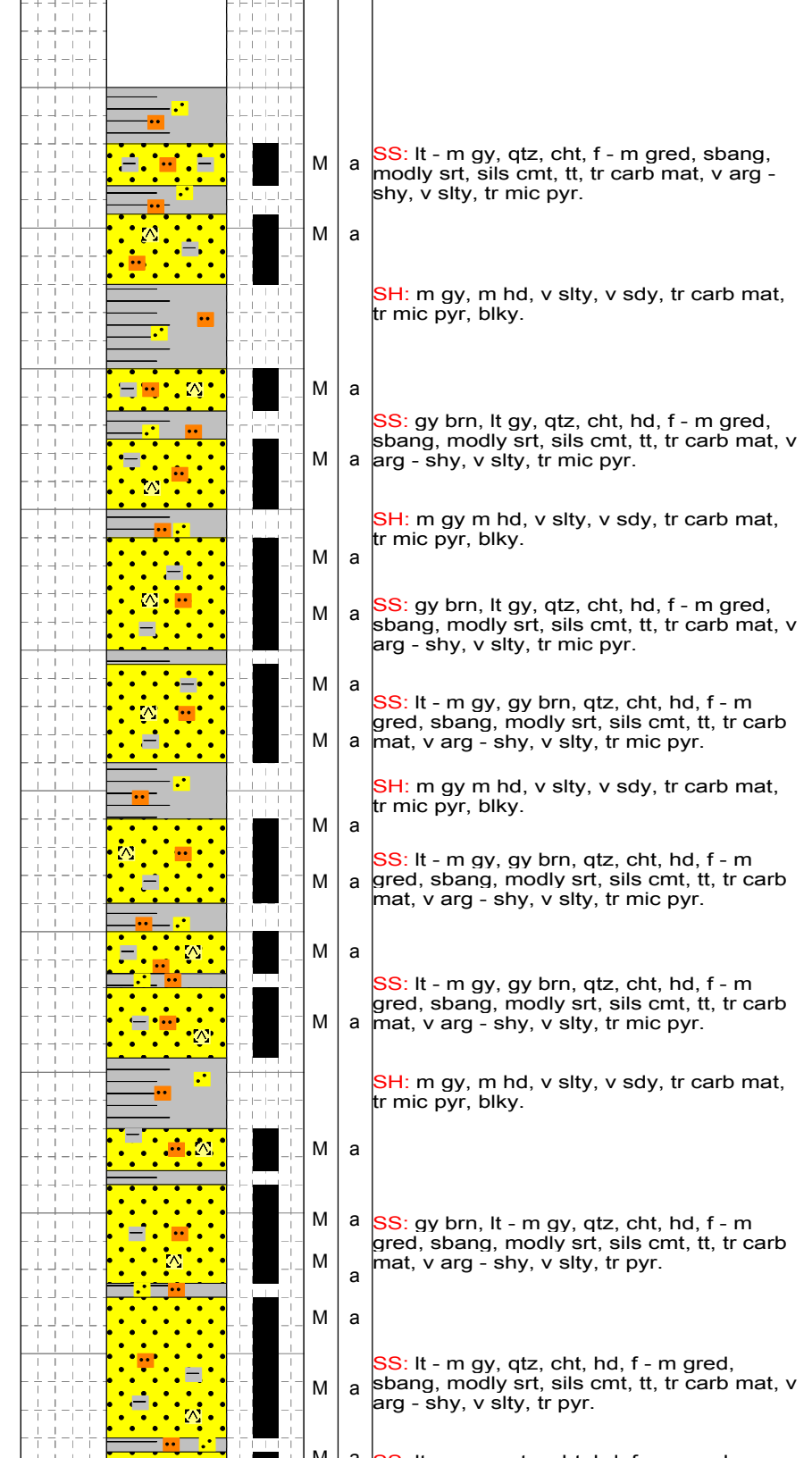
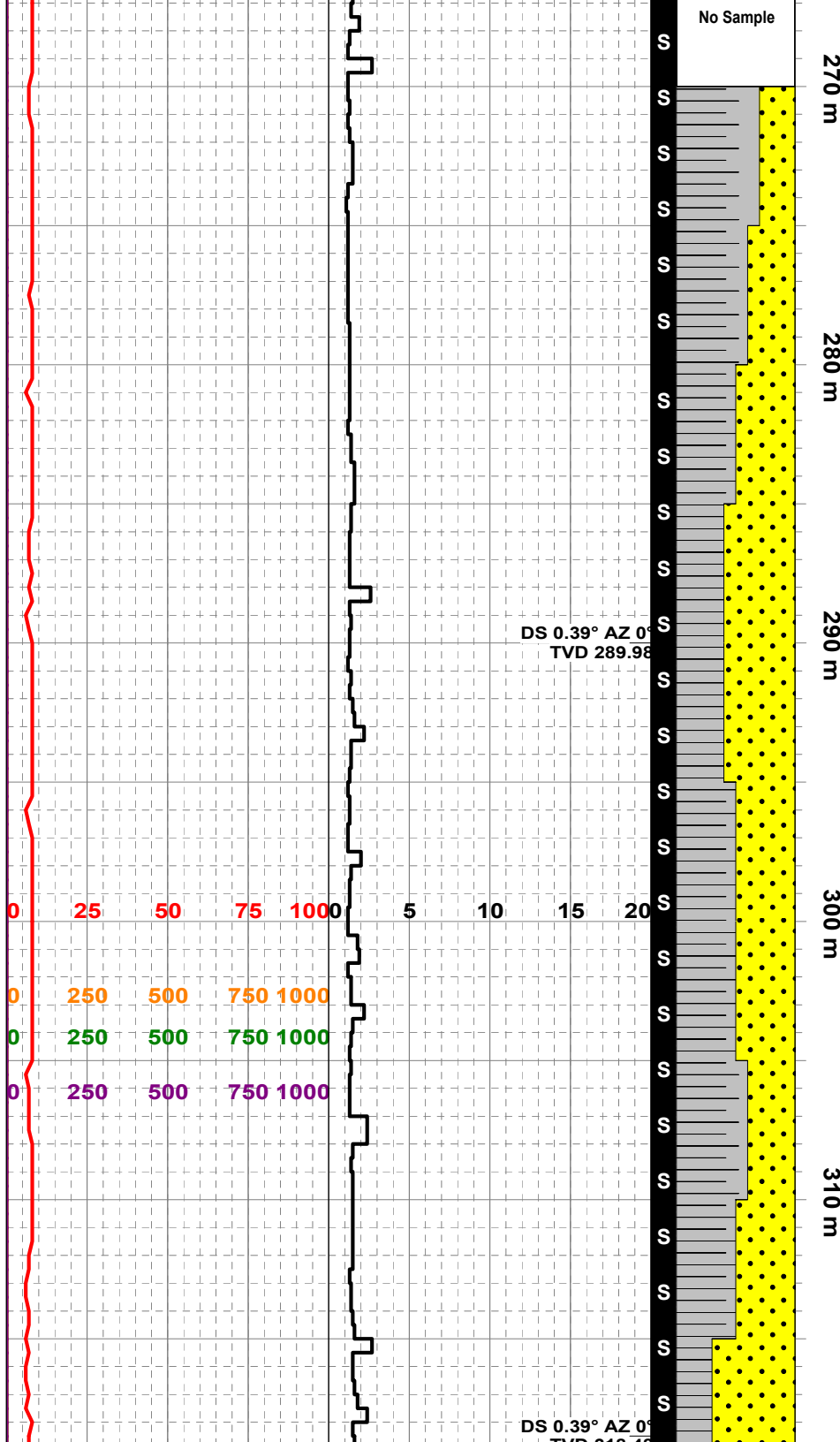
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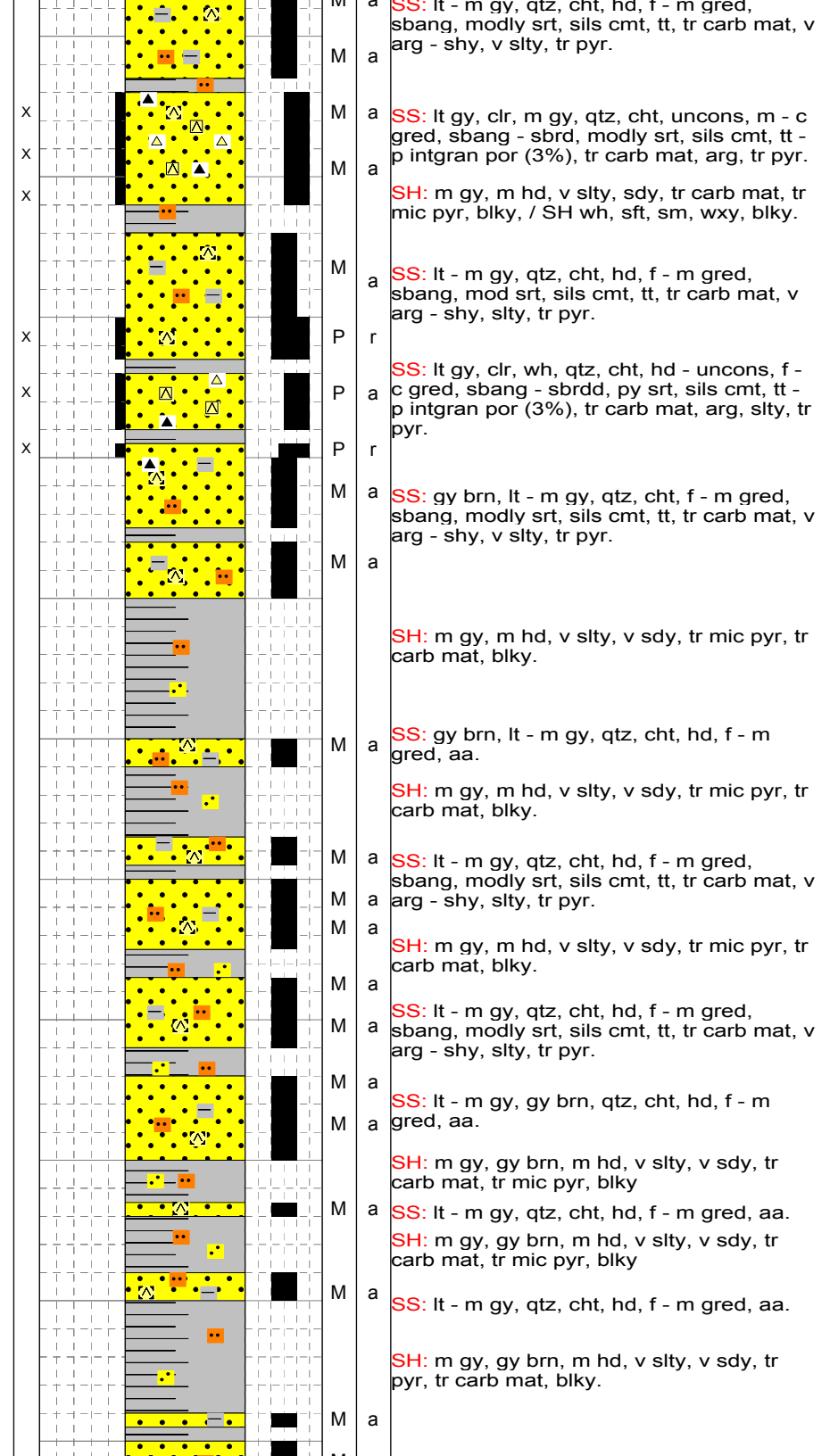
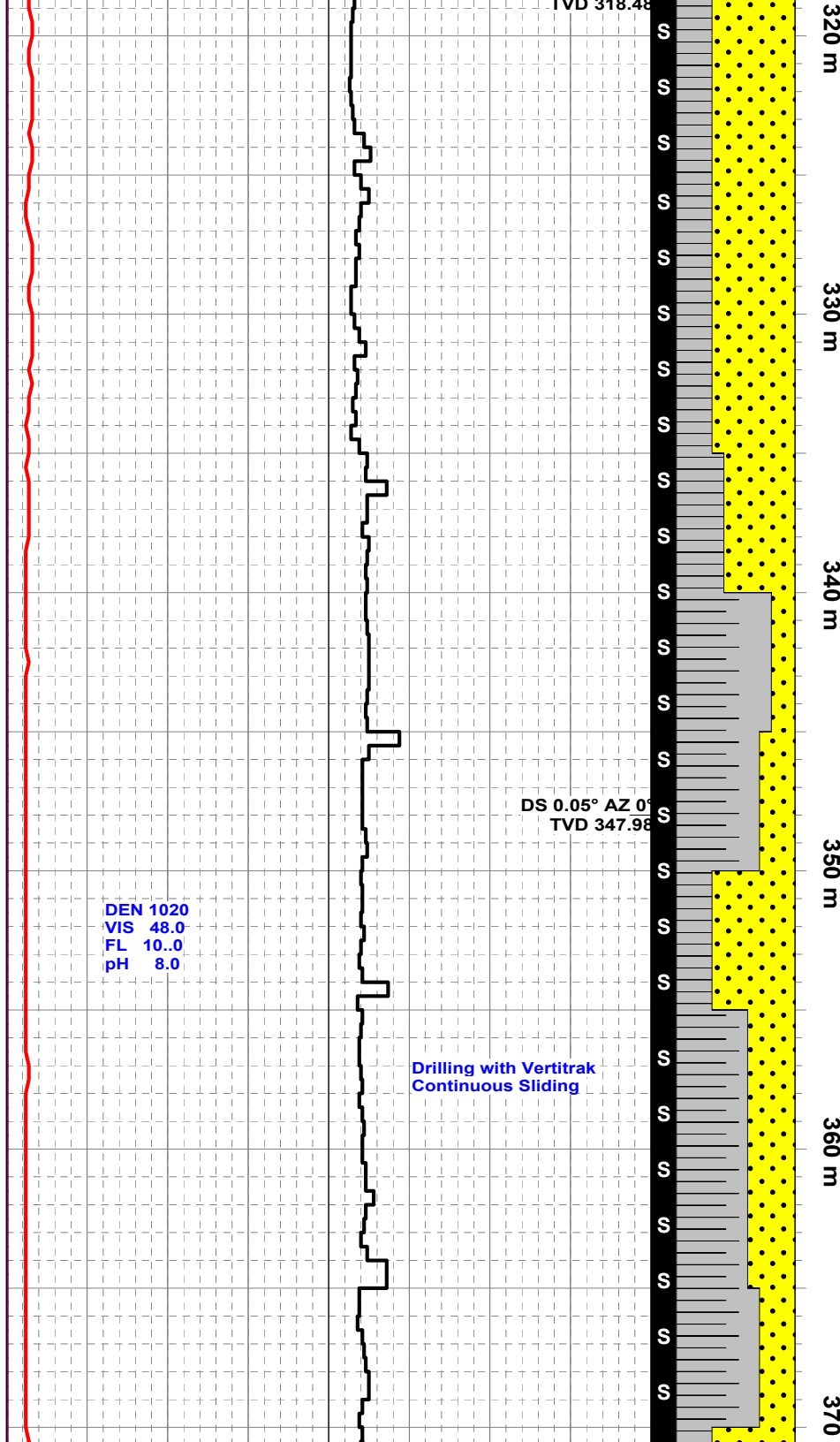
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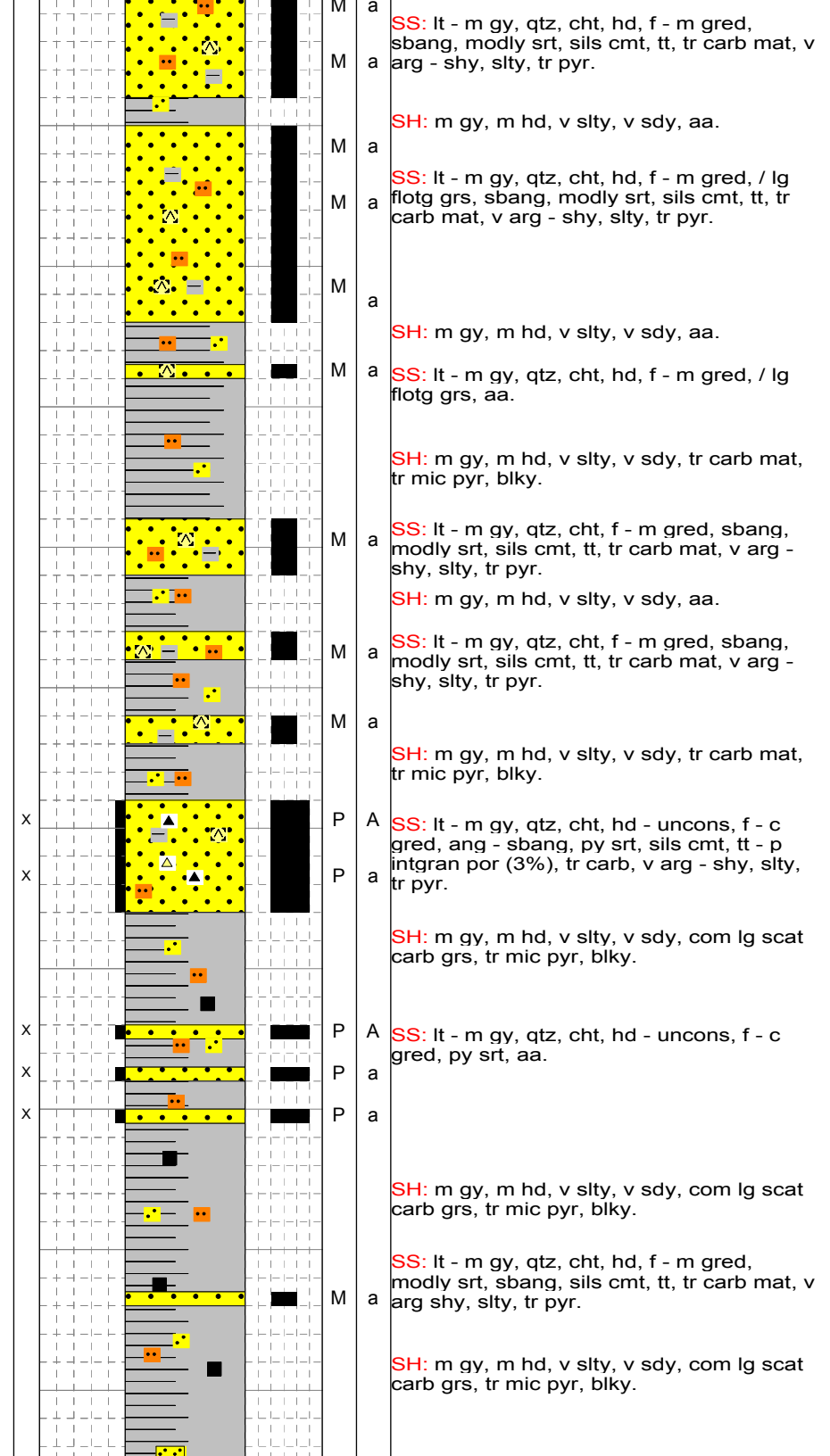
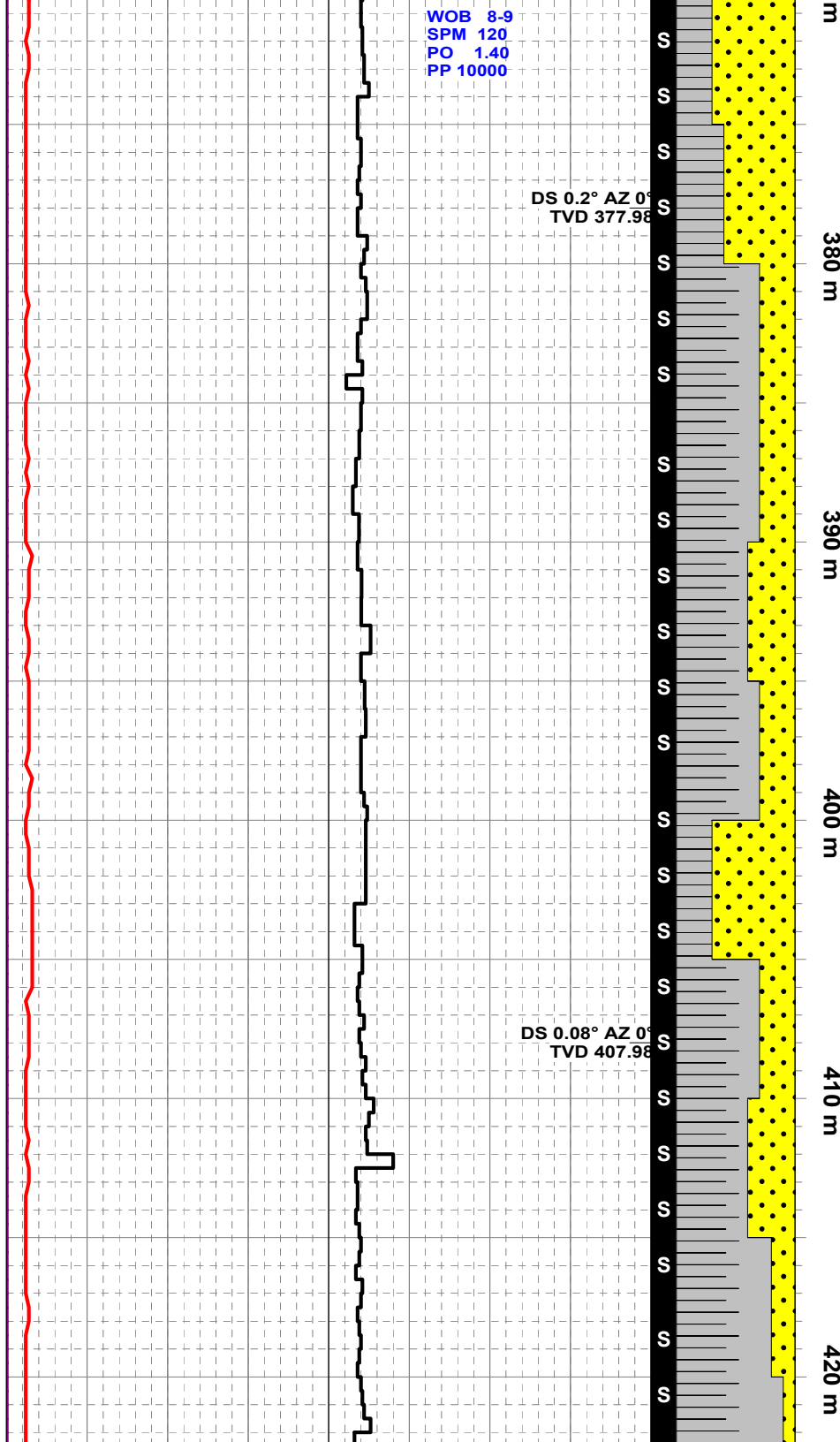
Mar 10, 2008



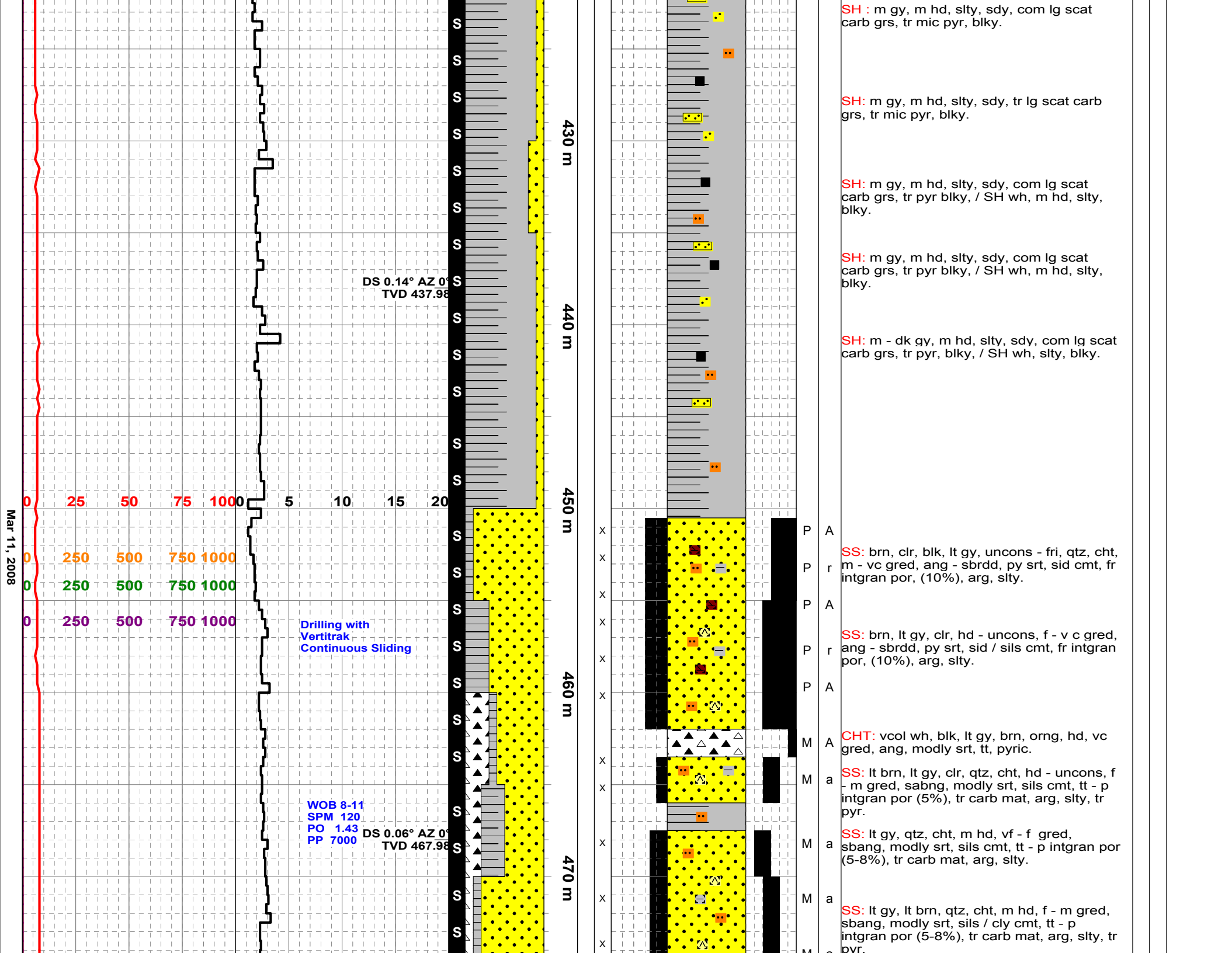
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x	M a	
x	M a	SS: lt gy, qtz, cht, m hd - uncon, f - m gred, / lg flotg grs, sbang, modly srt, sils / cly cmt, tt - tr intgran por (3%), tr carb mat, v arg, v slty, calcs, tr pyr.
x	M a	SH: m gy, lt brn, m hd, v slty, v sdy, tr carb mat, tr mic pyr, blk.
x	M a	SS: lt gy, qtz, cht, m hd - uncon, f - m gred, / lg flotg grs, sbang, modly srt, sils / cly cmt, tt - tr intgran por (3%), tr carb mat, v arg, v slty, calcs, tr pyr.
	M a	SH: m gy, m hd, v slty, sdy, tr carb mat, tr mic pyr, blk.
	M a	SS: lt - m gy, qtz, cht, m hd - uncon, f - m gred, / lg flotg grs, sbang, modly srt, sils / cly cmt, tt, tr carb mat, v arg, v slty, tr pyr.
	M a	
	M a	SH: m gy, m hd, v slty, sdy, tr carb mat, tr mic pyr, blk.
	M a	SS: lt - m gy, qtz, cht, m hd - uncon, f - m gred, / lg flotg grs, sbang, modly srt, sils / cly cmt, tt, tr carb mat, v arg, v slty, tr pyr.
	M a	
	M a	SS: lt - m gy, qtz, cht, m hd - uncon, f - m gred, / lg flotg grs, sbang, modly srt, sils / cly cmt, tt, tr carb mat, v arg, v slty, tr pyr.
	M a	SH: m gy, lt brn, m hd, v slty, sdy, tr mic pyr, blk.
	M a	SS: lt - m gy, qtz, cht, m hd, f - m gred, / lg flotg grs, sbang, modly srt, sils / cly cmt, tt, tr carb mat, v arg, v slty, tr pyr.
	M a	
	M a	SS: lt gy, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, tr carb mat, arg, slty, tr pyr, abnt lg flotg qtz & cht grs.
	M a	
	M a	SH: m gy, m hd, v slty, v sdy, tr carb mat, tr mic pyr, blk.
	M a	SS: lt - m gy, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, tr carb mat, v arg - shy, v slty.
	M a	
		SH: m gy, m hd, v slty, v sdy, tr carb mat, tr mic pyr, blk.

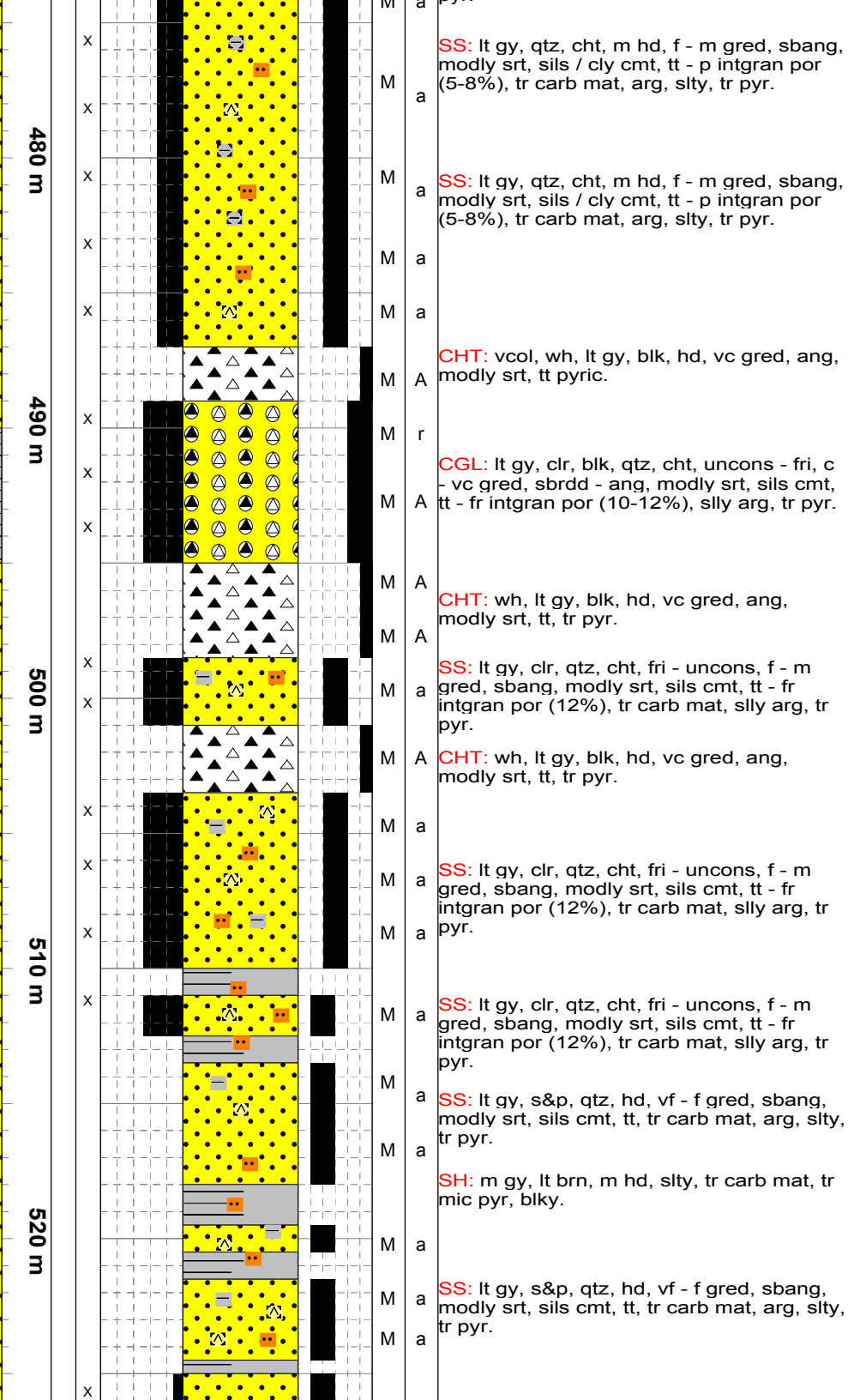
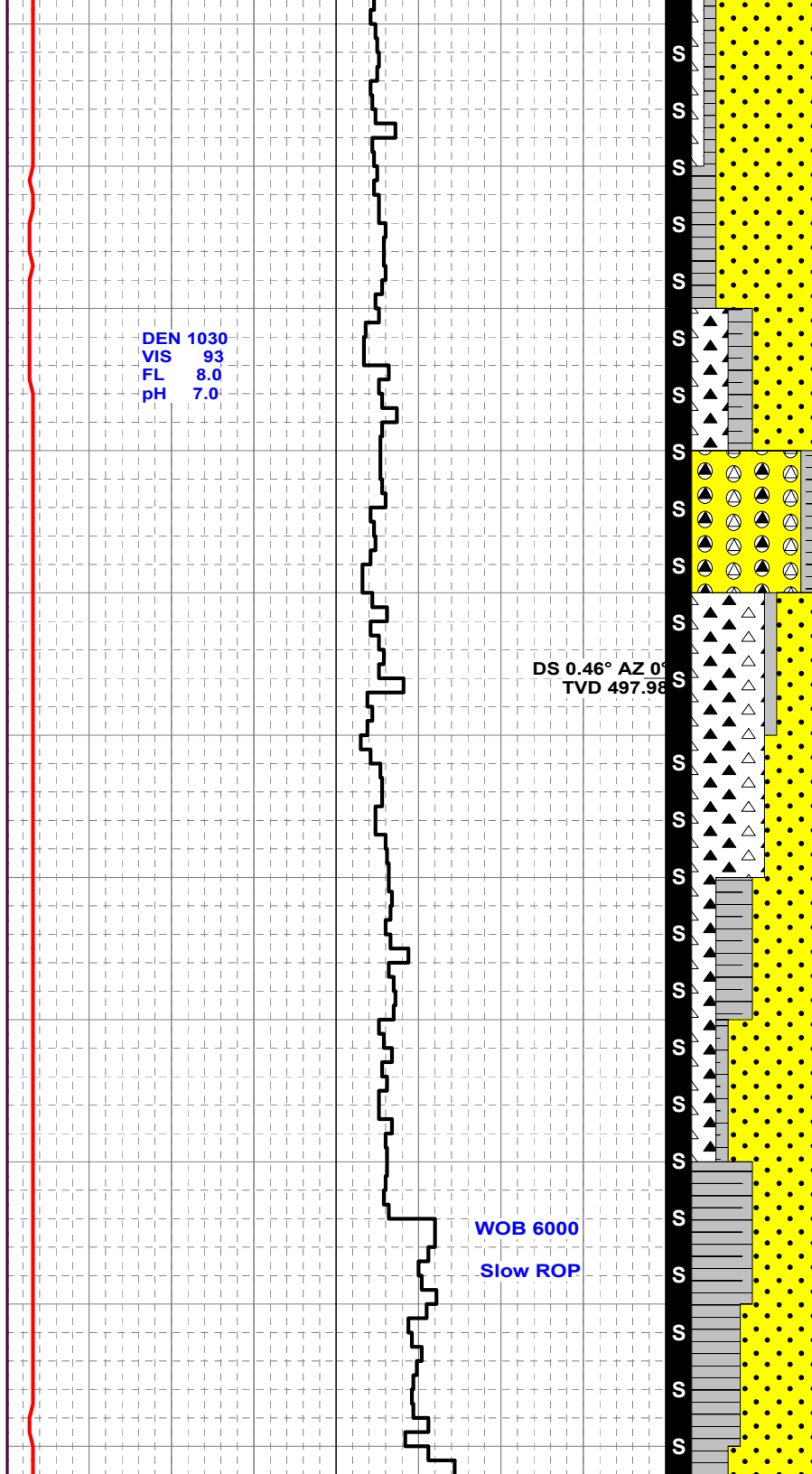












SS: lt gy, qtz, cht, m hd, f - m gred, sbang, modly srt, sils / cly cmt, tt - p intgran por (5-8%), tr carb mat, arg, slty, tr pyr.

SS: lt gy, qtz, cht, m hd, f - m gred, sbang, modly srt, sils / cly cmt, tt - p intgran por (5-8%), tr carb mat, arg, slty, tr pyr.

CHT: vcol, wh, lt gy, blk, hd, vc gred, ang, modly srt, tt pyric.

CGL: lt gy, clr, blk, qtz, cht, unconcs - fri, c - vc gred, sbrdd - ang, modly srt, sils cmt, tt - fr intgran por (10-12%), slly arg, tr pyr.

CHT: wh, lt gy, blk, hd, vc gred, ang, modly srt, tt, tr pyr.

SS: lt gy, clr, qtz, cht, fri - unconcs, f - m gred, sbang, modly srt, sils cmt, tt - fr intgran por (12%), tr carb mat, slly arg, tr pyr.

CHT: wh, lt gy, blk, hd, vc gred, ang, modly srt, tt, tr pyr.

SS: lt gy, clr, qtz, cht, fri - unconcs, f - m gred, sbang, modly srt, sils cmt, tt - fr intgran por (12%), tr carb mat, slly arg, tr pyr.

SS: lt gy, clr, qtz, cht, fri - unconcs, f - m gred, sbang, modly srt, sils cmt, tt - fr intgran por (12%), tr carb mat, slly arg, tr pyr.

SS: lt gy, s&p, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, tr carb mat, arg, slty, tr pyr.

SH: m gy, lt brn, m hd, slty, tr carb mat, tr mic pyr, blkly.

SS: lt gy, s&p, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, tr carb mat, arg, slty, tr pyr.



Mar 12, 2008

DEN 1030  
VIS 93  
FL 8.0  
pH 7.0

TG @ 38u

DEN 1030  
VIS 48  
FL 8.0  
pH 7.0

DS 0.04° AZ 0°  
TVD 526.98  
Bit#2 GX-18  
279.00 / 16.5 hrs  
Cond 2-2-

NB#3 C-22

WOB 3-4  
RPM 45-50  
SPM 60  
PP 3400

Bit#3 C-22  
9.70 / 7.75 hrs  
Cond 1-1-

NB#4 M516BHVPX

WOB 2-3  
SPM 120  
PO DS 0.02° AZ 0°  
PP 900 TVD 552.98

Drilling with Verttrak  
Continuous Sliding

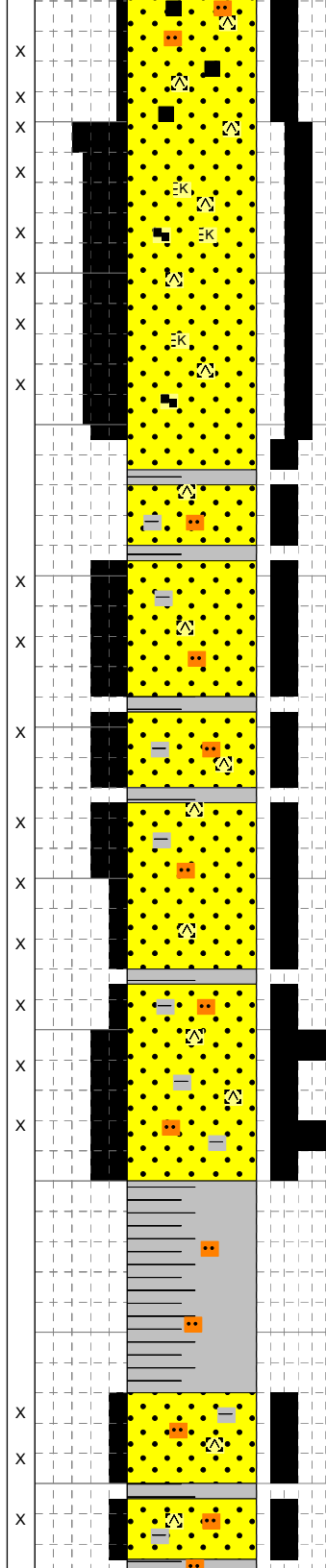
530 m

540 m

550 m

560 m

570 m



M a SS: lt gy, qtz, m hd, vf - f gred, sbang, modly srt, sils cmt, tt - p intgran por (3%), tr carb mat, tr coal grs, arg, slty, tr pyr.

M a SS: lt gy, wh, clr, qtz, fri - uncons, f - m gred, sbang, modly srt, sils cmt, tt - fr intgran por (12-15%), tr carb mat, tr coal grs, slly arg, tr pyr.

M a SS: wh, lt gy, clr, qtz, cht, s&p, hd, f - m gred, sbang, modly srt, sils cmt, fr intgran por (10-12%), carb mat, slly kaoic, tr mic pyr.

M a SS: wh, lt gy, clr, s&p, qtz, cht, hd, f - m gred, sbang, modly srt, sils cmt, fr intgran por (10-12%), slly kaoic, tr mic pyr.

M a SS: wh, lt gy, clr, s&p, qtz, cht, hd, f - m gred, sbang, modly srt, sils cmt, p intgran por (8-10%), slly kaoic.

M a SS: lt gy, gy brn, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, tr carb mat, arg, slty, tr pyr.

M a SS: lt brn, lt gy, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt - fr intgran por (8-10%), tr carb mat, arg, slty, tr pyr.

M a SS: lt gy, s&p, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt - fr intgran por (8-10%), slly arg, slty, tr mic pyr.

M a SS: lt gy, wh, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt - p intgran por (3-5%), tr carb mat, slly arg, slty, tr mic pyr.

M a SS: gy brn, lt gy, qtz, lg flotg cht & qtz, hd, vf - f gred, sbang, py srt, sils cmt, tt - p intgran por (8-10%), tr carb mat, arg, slty, tr mic pyr.

M a SH: m gy, m hd, slty, tr carb mat, tr mic pyr, blkty.

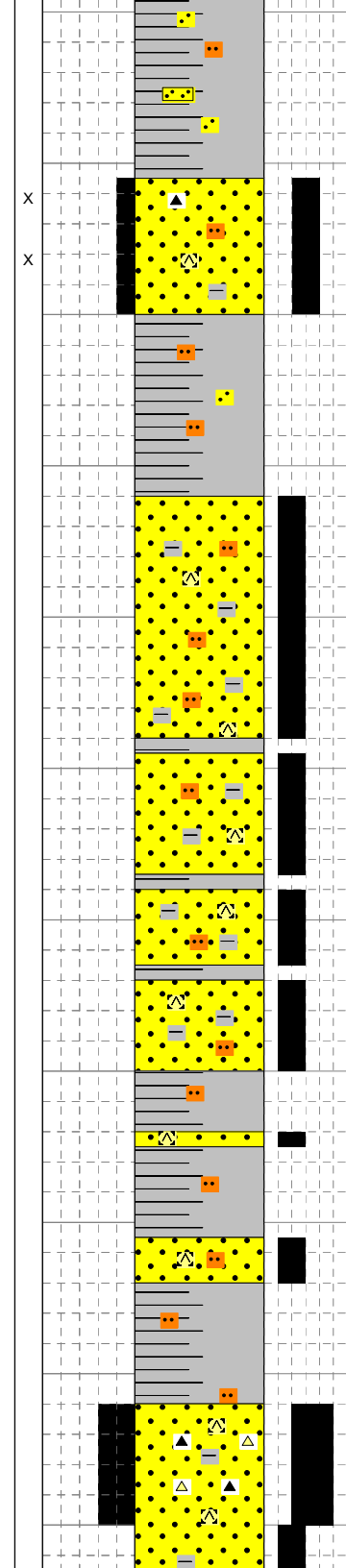
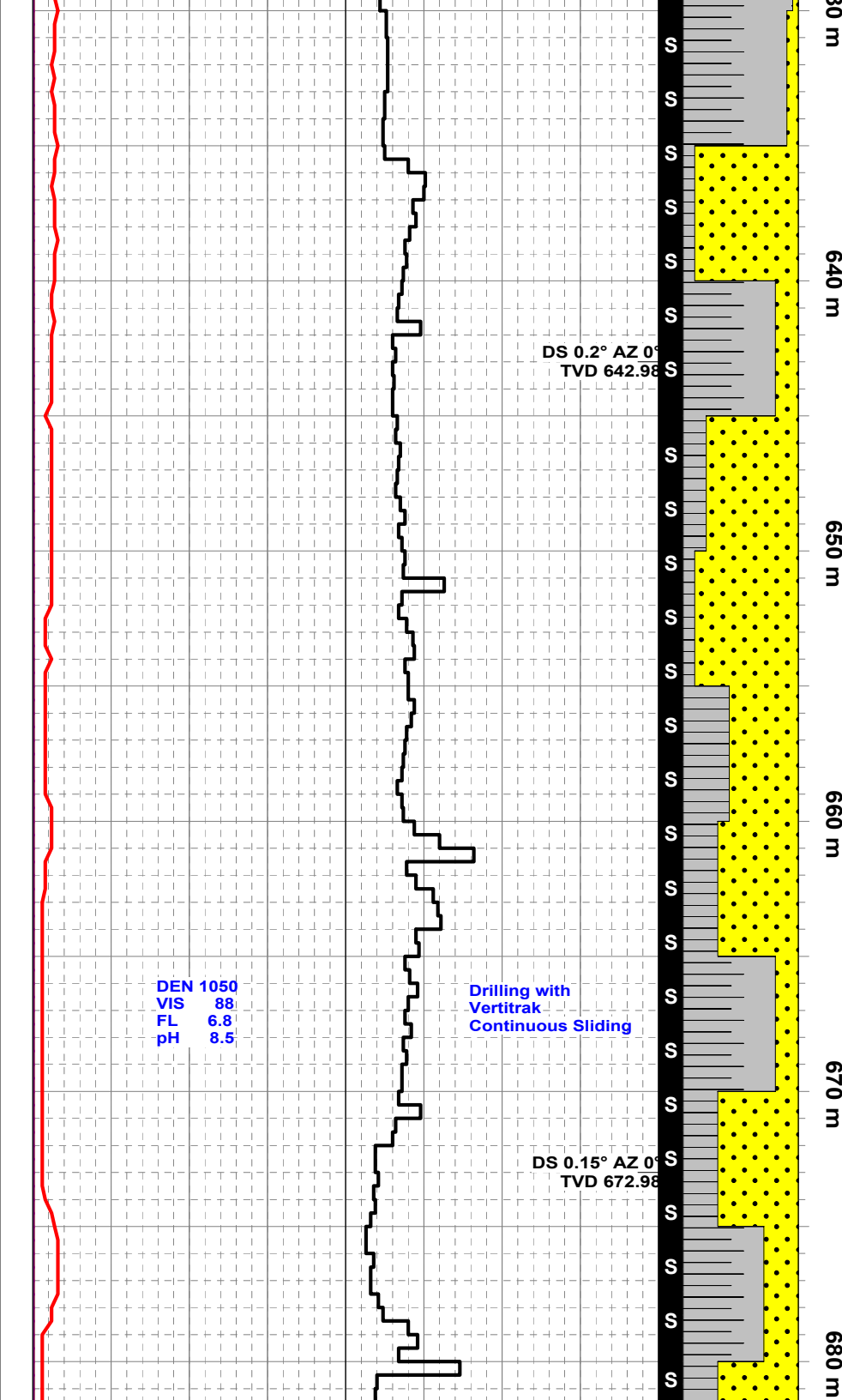
M a SS: lt gy, s&p, qtz, hd vf - f gred, sbang, modly srt, sils cmt, tt - p intgran por (5%), arg, slty, tr pyr, rr kaoic.

M a SS: lt gy, s&p, qtz, hd vf - f gred, sbang, modly srt, sils cmt, tt - p intgran por (5%).

1 (100%)

2





SH: m gy, m hd, v slty, sdy, tr carb mat, tr mic pyr, blk.

SS: lt - m gy, s&p, qtz, cht, fri - uncon, f - m gred, sbang, modly srt, sils cmt, tt - p intgran por (5%), arg, slty, tr pyr.

SH: m gy, lt brn, m hd, slty, sdy, tr carb mat, tr mic pyr, blk.

SS: lt - m gy, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, arg, silty, tr pyr.

SS: lt - m gy, s&p, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, arg, slty, tr pyr.

SS: lt - m gy, s&p, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, arg, slty, tr pyr.

SH: m gy, lt brn, m hd, slty, sdy, tr carb mat, tr mic pyr, blk.

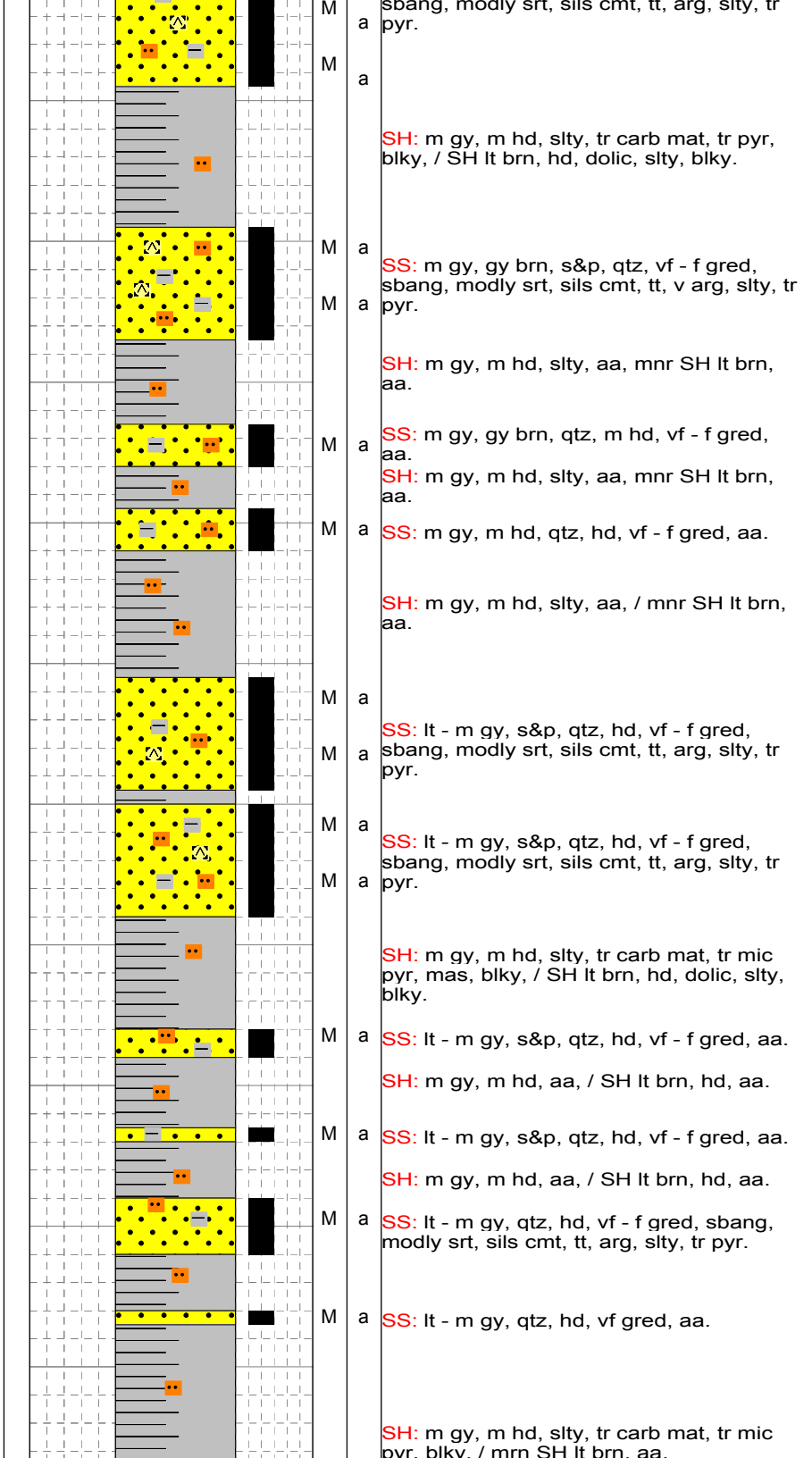
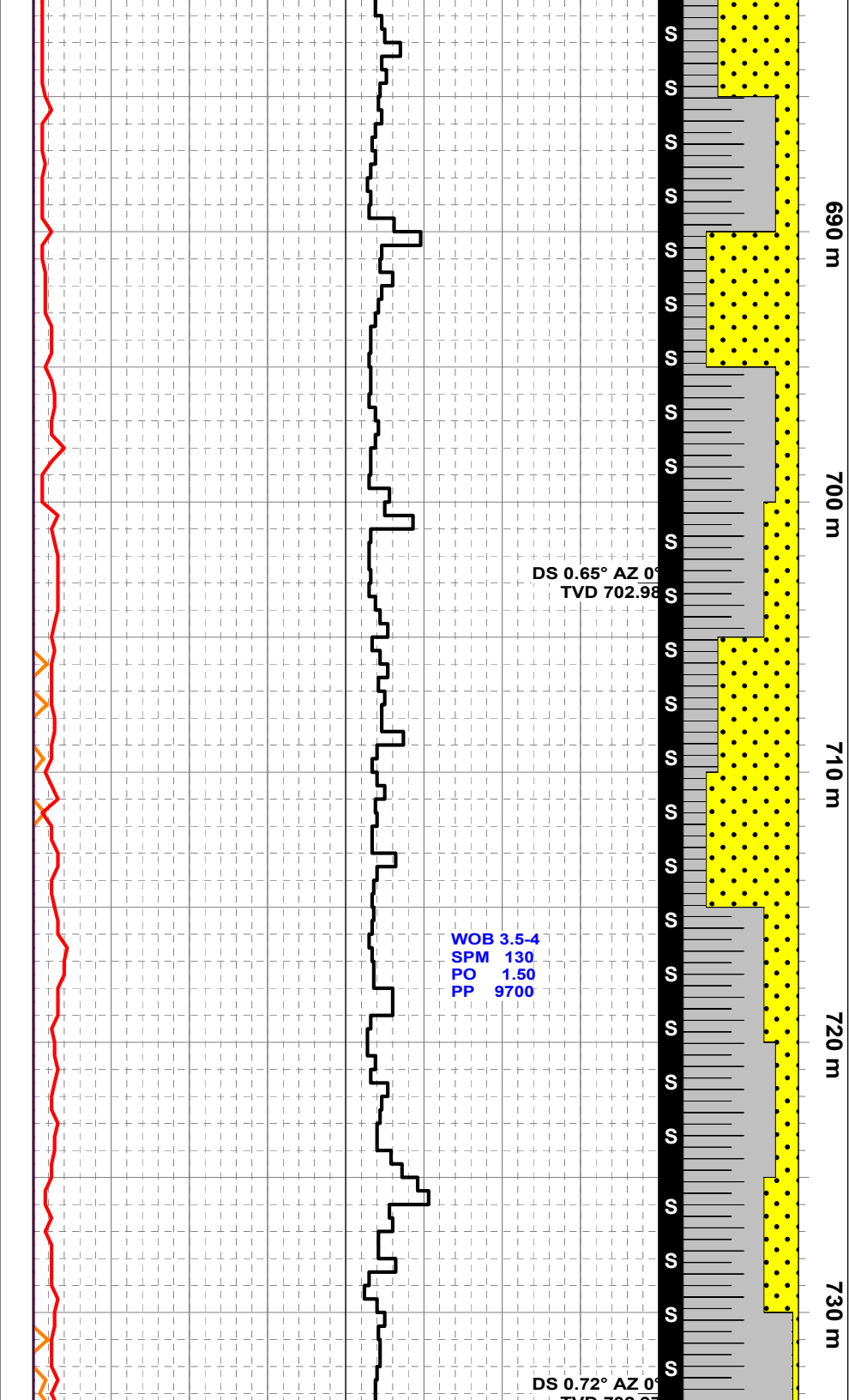
SH: m gy, m hd, slty, tr carb mat, tr pyr, blk, / SH lt brn, hd, dolc, slty, blk.

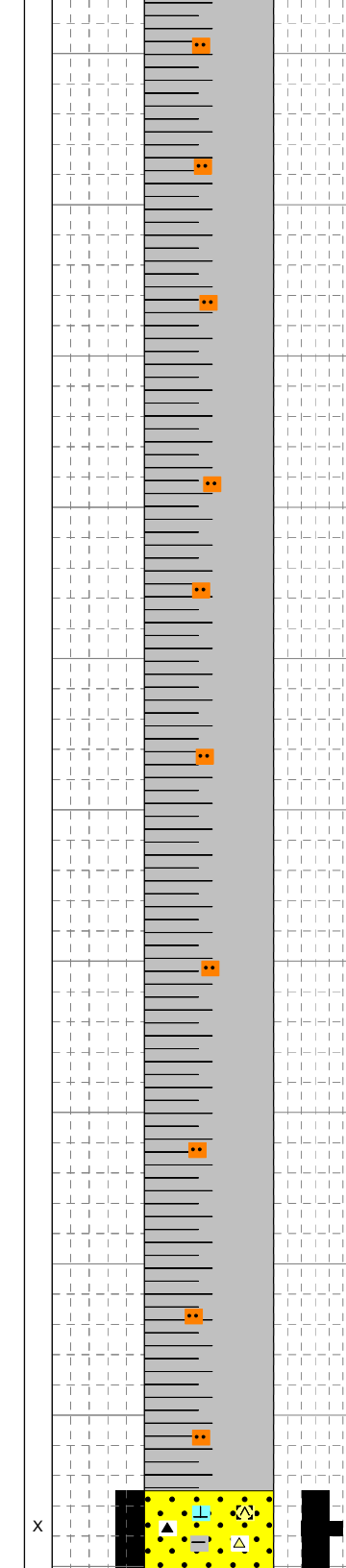
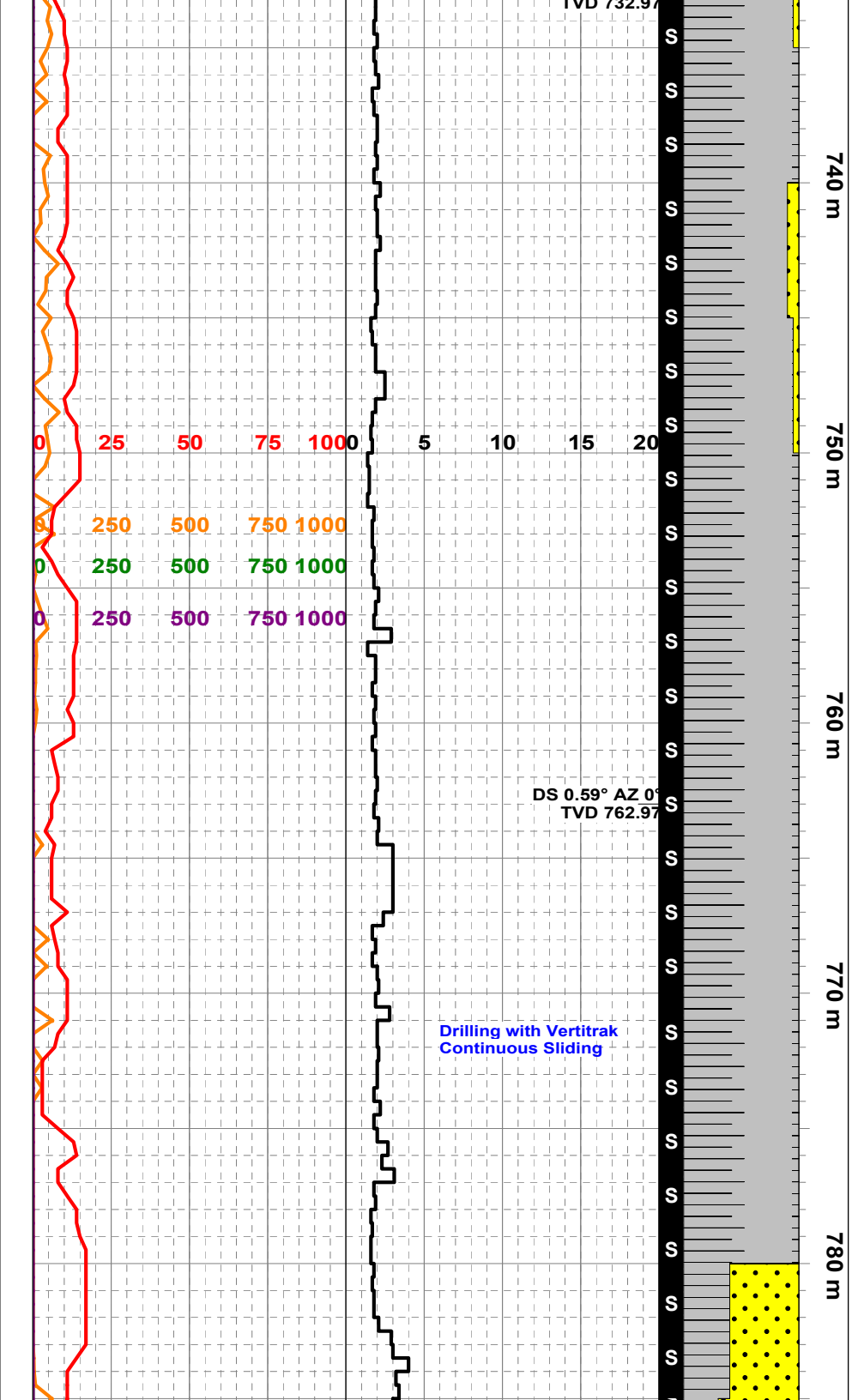
SS: lt - m gy, s&p, qtz, hd, vf - f gred, sbang, modly srt, sils cmt, tt, arg, slty, tr pyr.

SH: m gy, m hd, slty, tr carb mat, tr pyr, blk, / SH lt brn, hd, dolc, slty, blk.

SS: lt - m gy, qtz, cht, fri - uncon, f - c gred, py srt, sbang - sbrd, sils cmt, tt - fr intgran por (10%), silly arg, tr pyr.

SS: lt - m gy, s&p, qtz, hd, vf - f gred,





SH: m gy, m hd, slty, tr carb mat, tr mic  
pyr, blkly, / mrn SH lt brn, aa.

SH: m gy, m hd, slty, tr carb mat, tr mic  
pyr, blkly, / mrn SH lt brn, aa.

SH: m gy, m hd, slty, tr carb mat, tr mic  
pyr, blkly.

SH: m gy, m hd, slty, tr carb mat, tr mic  
pyr, blkly.

SS: lt - m gy, qtz, cht, hd - slly uncons, f -  
m gred, occlly c, modly srt, sbang, sils cmt,  
tt - p intgran por ( 5-8%), arg, slty, slly  
calcs in, tr pyr

