

Storage Units: Metric

Geological Morning Report**Mar 16, 2008****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 <i>Formation</i> Member	Prognosed Top (TVD)	Sample Top (MD)	Sample Top (TVD)	Subsea Elevation	Thickness	Difference from Prognosis
Total Depth	830.00			-515.58		0.00

Lithology Summary

Sample Descriptions

Storage Units: Metric

25.00 to 30.00 (5.00)	40%	CEMENT
	30%	SHALE medium to dark gray, medium hard, silty, trace carbonaceous, trace micro pyrite, blocky.
	30%	SANDSTONE 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%	SANDSTONE 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%	SHALE medium to dark gray, medium hard, silty, as above.
	20%	CEMENT
35.00 to 40.00 (5.00)	80%	SANDSTONE 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%	SHALE medium to dark gray, medium hard, silty, as above.
40.00 to 45.00 (5.00)	70%	SANDSTONE clear, black, pink, quartz, chert, feldspar, unconsolidated, medium to very coarse grained, as above.
	30%	SHALE medium to dark gray, medium hard, silty, as above.
45.00 to 50.00 (5.00)	70%	SANDSTONE 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%	SHALE gray brown, red brown, medium gray, medium hard, silty, trace micro pyrite, blocky.
50.00 to 55.00 (5.00)	60%	SANDSTONE 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

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50.00 to 55.00 (5.00)	40%	SHALE medium gray, red brown, gray brown, medium hard, silty, trace micro pyrite, blocky.
55.00 to 60.00 (5.00)	80%	SANDSTONE 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%	SHALE medium gray, red brown, brown, medium hard, silty, as above.
60.00 to 65.00 (5.00)	90%	SANDSTONE clear, black, pink, quartz, chert, unconsolidated, very fine to medium grained, as above.
	10%	SHALE medium gray, red brown, brown, medium hard, silty, trace micro pyrite, blocky.
65.00 to 70.00 (5.00)	80%	SANDSTONE 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%	SHALE medium gray, red brown, brown, medium hard, as above.
70.00 to 75.00 (5.00)	80%	SANDSTONE clear, black, pink, quartz, chert, unconsolidated, very fine to coarse grained, as above.
	20%	SHALE medium gray, red brown, brown, medium hard, as above.
75.00 to 80.00 (5.00)	80%	SANDSTONE 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%	SHALE medium gray, red brown, brown medium hard, as above.
80.00 to 85.00 (5.00)	80%	SANDSTONE clear, black, pink, quartz, chert, unconsolidated, very fine to fine grained, with large floating grains, as above.
	20%	SHALE medium gray, red brown, brown, medium hard, as above.
85.00 to 90.00 (5.00)	70%	SANDSTONE clear, black, slightly pink, unconsolidated, very fine to fine grained, with large floating grains, as above.

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85.00 to 90.00 (5.00)	30%	SHALE medium gray, red brown, brown, medium hard, silty, sandy, blocky.
90.00 to 95.00 (5.00)	95%	SANDSTONE 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%	SHALE medium gray, red brown, brown, medium hard, as above.
95.00 to 100.00 (5.00)	80%	SANDSTONE clear, black, slightly pink, unconsolidated, very fine to fine grained, moderately sorted, as above.
	20%	SHALE medium gray, brown, medium hard, as above.
100.00 to 105.00 (5.00)	50%	SHALE medium gray, light brown, medium hard, very silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.
	50%	SANDSTONE 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%	SANDSTONE clear, light gray, quartz, chert, friable to unconsolidated, very fine to fine grained, occasionally lower floating grains, as above.
	40%	SHALE medium gray, light brown, medium hard, as above.
110.00 to 115.00 (5.00)	70%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, as above.
115.00 to 120.00 (5.00)	50%	SHALE medium gray, light brown, medium hard, as above.
	50%	SANDSTONE light gray, clear, friable to unconsolidated, fine to coarse grained, as above.
120.00 to 125.00 (5.00)	70%	SHALE light brown, light gray, medium hard, very silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.

Sample Descriptions

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120.00 to 125.00 (5.00)	30%	SANDSTONE 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%	SANDSTONE 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%	SHALE light to medium gray, medium hard, very silty, trace micro pyrite, trace carbonaceous matter, blocky.
130.00 to 135.00 (5.00)	70%	SHALE light to medium gray, medium hard, very silty, as above.
	30%	SANDSTONE 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%	SHALE light to medium gray, medium hard, very silty, as above.
	30%	SANDSTONE clear, black, light gray, quartz, chert, unconsolidated, as above.
140.00 to 145.00 (5.00)	70%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, silty, trace micro pyrite, trace carbonaceous matter, blocky.
145.00 to 150.00 (5.00)	70%	SANDSTONE light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	SHALE medium gray, light brown, medium hard, as above.
150.00 to 155.00 (5.00)	70%	SANDSTONE light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	SHALE medium gray, light brown, medium hard, silty, as above.

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155.00 to 160.00 (5.00)	70%	SANDSTONE light gray, clear, chert, friable to unconsolidated, fine to medium grained, with large floating grains,
	30%	SHALE medium gray, light brown, medium hard, silty, as above.
160.00 to 165.00 (5.00)	60%	SANDSTONE light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	40%	SHALE medium gray, light brown, medium hard, silty, as above.
165.00 to 170.00 (5.00)	60%	SANDSTONE light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grsw, as above.
	40%	SHALE medium gray, light brown, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
170.00 to 175.00 (5.00)	70%	SANDSTONE light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	SHALE medium gray, light brown, medium hard, very silty, as above.
175.00 to 180.00 (5.00)	70%	SANDSTONE clear, black, light gray, quartz, chert, friable to unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	SHALE medium gray, medium hard, silty, as above.
180.00 to 185.00 (5.00)	70%	SANDSTONE clear, black, light gray, quartz, chert, unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	SHALE medium gray, medium hard, silty, as above.
185.00 to 190.00 (5.00)	70%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, as above.
190.00 to 195.00 (5.00)	60%	SANDSTONE light gray, quartz, medium hard, very fine to fine grained, as above.

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190.00 to 195.00 (5.00)	40%	SHALE medium gray, medium hard, silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.
195.00 to 200.00 (5.00)	70%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, as above.
200.00 to 205.00 (5.00)	60%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, sandy, trace micro pyrite, trace carbonaceous matter, blocky.
205.00 to 210.00 (5.00)	60%	SANDSTONE light to medium gray, quartz, chert, medium hard, very fine to medium grained, with large floating grains, as above.
	40%	SHALE medium gray, medium hard, very silty, as above.
210.00 to 215.00 (5.00)	60%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
215.00 to 220.00 (5.00)	80%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, very silty, sandy, trace micro pyrite, blocky.
220.00 to 225.00 (5.00)	50%	SHALE medium gray, light brown, medium hard, as above.

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220.00 to 225.00 (5.00)	50%	SANDSTONE 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%	SANDSTONE light gray, quartz, chert, medium hard, fine to medium grained, with large floating grains, as above.
	30%	SHALE 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%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
235.00 to 240.00 (5.00)	70%	SANDSTONE light to medium gray, quartz, chert, medium hard unconsolidated, fine to medium grained, with large floating grains, as above.
	30%	SHALE medium gray, light brown, medium hard, as above.
240.00 to 245.00 (5.00)	70%	SANDSTONE light to medium gray, quartz, chert, medium hard unconsolidated, fine to medium grained, with floating grains, as above.
	30%	SHALE medium gray, light brown, medium hard, as above.
245.00 to 250.00 (5.00)	70%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, very silty, sandy, trace micro pyrite, blocky.
250.00 to 255.00 (5.00)	40%	CEMENT
	30%	SHALE medium gray, medium hard, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.

Sample Descriptions

Storage Units: Metric

250.00 to 255.00	30%	SANDSTONE 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	50%	SHALE medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	50%	SANDSTONE 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	60%	SANDSTONE light to medium gray, quartz, hard, very fine to fine grained, as above.
	40%	SHALE medium gray, medium hard, very silty, very sandy, as above.
265.00 to 270.00		No Sample
(5.00)		
270.00 to 275.00	70%	SHALE medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	30%	SANDSTONE 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	60%	SHALE medium gray, medium hard, very silty, as above.
(5.00)		
	40%	SANDSTONE light to medium gray, quartz, chert, hard, fine to medium grained, as above.
280.00 to 285.00	50%	SHALE medium gray, medium hard, very silty, very sandy, as above.
(5.00)		
	50%	SANDSTONE 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	60%	SANDSTONE gray brown, light gray, quartz, chert, hard, fine to medium grained, as above.
(5.00)		
	40%	SHALE medium gray, medium hard, very silty, sandy, as above.

Sample Descriptions

Storage Units: Metric

290.00 to 295.00	60%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, very silty, as above.
295.00 to 300.00	50%	SHALE medium gray medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	50%	SANDSTONE 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	50%	SANDSTONE gray brown, light to medium gray, quartz, chert, hard, fine to medium grained, as above.
	50%	SHALE medium gray, medium hard, very silty, very sandy, as above.
305.00 to 310.00	60%	SHALE medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	40%	SANDSTONE 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	50%	SANDSTONE gray brown, light to medium gray, quartz, chert, hard, fine to medium grained, as above.
	50%	SHALE medium gray, medium hard, very silty, very sandy, as above.
315.00 to 320.00	70%	SANDSTONE 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%	SHALE medium gray, gray brown, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky with SHALE gray green, soft, silty, waxy, smooth, blocky.

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320.00 to 325.00	70%	SANDSTONE 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%	SHALE 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	70%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, sandy, as above.
330.00 to 335.00	70%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, sandy, as above.
335.00 to 340.00	60%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, sandy, as above.
340.00 to 345.00	80%	SHALE medium gray, medium hard, very silty, very sandy, trace micro pyrite, trace carbonaceous matter, blocky.
	20%	SANDSTONE gray brown, quartz, chert, hard, fine to medium grained, as above.
345.00 to 350.00	70%	SHALE medium gray, medium hard, very silty, very sandy, as above.
	30%	SANDSTONE gray brown, light to medium gray, quartz, chert, hard, fine to medium grained, as above.
350.00 to 355.00	70%	SANDSTONE 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.

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350.00 to 355.00 (5.00)	30%	SHALE medium gray, medium hard, very silty, very sandy, trace micro pyrite, trace carbonaceous matter, blocky.
355.00 to 360.00 (5.00)	60%	SHALE medium gray, medium hard, very silty, very sandy, as above.
	40%	SANDSTONE light to medium gray, gray brown, quartz, chert, hard, fine to medium grained, as above.
360.00 to 365.00 (5.00)	60%	SHALE medium gray, gray brown, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky
	40%	SANDSTONE light to medium gray, quartz, chert, hard, fine to medium grained, as above.
365.00 to 370.00 (5.00)	70%	SHALE medium gray, gray brown, medium hard, very silty, very sandy, trace pyrite, trace carbonaceous matter, blocky.
	30%	SANDSTONE light to medium gray, quartz, chert, hard, fine to medium grained, as above.
370.00 to 375.00 (5.00)	70%	SANDSTONE light to medium gray, quartz, chert, hard, fine to medium grained, with large floating grains, as above.
	30%	SHALE medium gray, medium hard, very silty, very sandy, as above.
375.00 to 380.00 (5.00)	60%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, very sandy, as above.
380.00 to 385.00 (5.00)	70%	SHALE medium gray, medium hard, very silty, very sandy, as above.
	30%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, very sandy, as above.
	30%	SANDSTONE light to medium gray, quartz, chert, hard, fine to medium grained, as above.

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390.00 to 395.00 (5.00)	60%	SHALE medium gray, medium hard, very silty, very sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	40%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, very sandy, as above.
	30%	SANDSTONE light to medium gray, quartz, chert, hard, fine to medium grained, as above.
400.00 to 405.00 (5.00)	70%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, sandy, common large scattered carbonaceous grains, as above.
405.00 to 410.00 (5.00)	70%	SHALE medium gray, medium hard, very silty, very sandy, common scattered large carbonaceous grains, as above.
	30%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, very sandy, common large scattered carbonaceous grains, trace micro pyrite, blocky.
	40%	SANDSTONE 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%	SHALE medium gray, medium hard, very silty, very sandy, common large scattered carbonaceous grains, trace micro pyrite, blocky.
	20%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, sandy, common large scattered carbonaceous grains, trace micro pyrite, blocky.

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420.00 to 425.00 (5.00)	10%	SANDSTONE light to medium gray, quartz, chert, fine to medium grained, as above.
425.00 to 430.00 (5.00)	90%	SHALE medium gray, medium hard, silty, sandy, trace large scattered carbonaceous grains, trace micro pyrite, blocky.
	10%	SANDSTONE light to medium gray, quartz, chert, hard, as above.
430.00 to 435.00 (5.00)	80%	SHALE medium gray, medium hard, silty, sandy, common large scattered carbonaceous grains, trace pyrite blocky, with SHALE white, medium hard, silty, blocky.
	20%	SANDSTONE clear, light gray, quartz, chert, unconsolidated, medium grained, occasionally coarse, subangular, moodly sorted, siliceous cement, tight.
435.00 to 440.00 (5.00)	90%	SHALE medium to dark gray, medium hard, silty, sandy, as above with SHALE medium hard, silty, blocky.
	10%	SANDSTONE light gray, clear, quartz, chert, unconsolidated, medium grained, as above.
440.00 to 445.00 (5.00)	90%	SHALE medium to dark gray, medium hard, silty, sandy, common large scattered carbonaceous grains, trace pyrite, blocky, with SHALE white, silty, blocky.
	10%	SANDSTONE light gray, clear, quartz, chert, unconsolidated, medium grained, as above.
445.00 to 450.00 (5.00)	90%	SHALE medium gray, medium hard, silty, sandy, as above.
	10%	SANDSTONE light gray, clear, quartz, chert, unconsolidated, medium grained, as above.
450.00 to 455.00 (5.00)	90%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, sandy, as above.
455.00 to 460.00 (5.00)	70%	SANDSTONE 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%	SHALE medium gray, brown, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
460.00 to 465.00 (5.00)	60%	SANDSTONE light brown, light gray, clear, quartz, chert, hard to unconsolidated, fine to medium grained, subangular, moderately sorted, siliceous cement, tight to poor intergranular porosity (5%), trace carbonaceous matter, argillaceous, silty, trace pyrite.
	30%	CHERT varicolored white, black, light gray, brown, orange, hard, very coarse grained, angular, moderately sorted, tight, pyritic.
	10%	SHALE medium gray, light brown, medium hard, as above.
465.00 to 470.00 (5.00)	50%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	20%	CHERT varicolored, light gray, white, black, hard, very coarse grained, angular, moderately sorted, tight, pyritic.
470.00 to 475.00 (5.00)	80%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
	10%	CHERT varicolored, black, white, gray, hard, very coarse grained, as above.
475.00 to 480.00 (5.00)	80%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, as above.
	10%	CHERT varicolored, white, black, gray, hard, as above.

Sample Descriptions

Storage Units: Metric

480.00 to 485.00 (5.00)	80%	SANDSTONE light gray, quartz, chert, medium hard, fine to medium grained, as above.
	20%	SHALE medium gray, medium hard, silty, as above.
		CHERT Trace, as above.
485.00 to 490.00 (5.00)	50%	SANDSTONE light gray, quartz, chert, medium hard, fine to medium grained, as above.
	30%	CHERT varicolored, white, light gray, black, hard, very coarse grained, angular, moderately sorted, tight pyritic.
	20%	SHALE medium gray, medium hard, silty, as above.
490.00 to 495.00 (5.00)	90%	CONGLOMERATE 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%	SHALE medium gray, medium hard, silty, as above.
495.00 to 500.00 (5.00)	60%	CHERT white, light gray, black, hard, very coarse grained, angular, moderately sorted, tight, trace pyrite.
	30%	SANDSTONE 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%	SHALE medium gray, medium hard, as above.
500.00 to 505.00 (5.00)	60%	CHERT varicolored, white, light gray, black, hard, as above.
	40%	SANDSTONE light gray, clear, quartz, chert, fine to medium grained, as above.
505.00 to 510.00 (5.00)	50%	SANDSTONE light gray, clear, quartz, chert, friable to unconsolidated, fine to medium grained, as above.
	30%	SHALE medium gray, medium hard, silty, as above.

Sample Descriptions

Storage Units: Metric

505.00 to 510.00	20%	CHERT varicolored, white, light gray, black, hard, as above.
510.00 to 515.00	70%	SANDSTONE 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%	CHERT varicolored, white, light gray, black, hard, as above.
	10%	SHALE medium gray, light brown, medium hard, silty, as above.
515.00 to 520.00	50%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
520.00 to 525.00	60%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
525.00 to 530.00	70%	SANDSTONE 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%	SHALE medium gray, light brown, medium hard, as above.
530.00 to 531.00	80%	SANDSTONE 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%	SHALE medium gray, medium hard, as above.

Sample Descriptions

Storage Units: Metric

531.00 to 535.00	50%	SANDSTONE 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%	SHALE medium gray, medium hard, as above.
	20%	COAL
535.00 to 540.00	70%	SHALE medium gray, light brown, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
	30%	SANDSTONE 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	50%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
	50%	SANDSTONE 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	60%	SHALE medium gray, medium hard, silty, as above.
	40%	SANDSTONE 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	70%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, as above.
555.00 to 560.00	60%	SHALE medium gray, medium hard, silty, as above.

Sample Descriptions

Storage Units: Metric

555.00 to 560.00 (5.00)	40%	SANDSTONE 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%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
565.00 to 570.00 (5.00)	80%	SHALE medium gray, medium hard, silty, as above.
	20%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, as above.
	30%	SANDSTONE 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%	SANDSTONE light gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	30%	SHALE medium gray, light brown, medium hard, silty, as above.
580.00 to 585.00 (5.00)	90%	SANDSTONE light gray, light brown, salt and pepper, quartz, hard, very fine to fine grained, as above.
	10%	SHALE medium gray, medium hard, silty, as above.
585.00 to 590.00 (5.00)	90%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	10%	SHALE medium gray, medium hard, silty, as above.

Sample Descriptions

Storage Units: Metric

590.00 to 595.00 (5.00)	80%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	SHALE medium gray, medium hard, silty, as above.
595.00 to 600.00 (5.00)	80%	SHALE medium gray, medium hard, very silty, trace carbonaceous matter, trace micro pyrite, blocky.
	20%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
605.00 to 610.00 (5.00)	80%	SANDSTONE light gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	SHALE medium gray, light brown, medium hard, as above.
610.00 to 615.00 (5.00)	80%	SANDSTONE light gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	SHALE medium gray, light brown, medium hard, silty, as above.
615.00 to 620.00 (5.00)	70%	SHALE medium gray, medium hard, silty, as above.
	30%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
620.00 to 625.00 (5.00)	80%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	20%	SHALE medium gray, light brown, medium hard, silty, as above.
625.00 to 630.00 (5.00)	95%	SHALE medium gray, medium hard, very silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	5%	SANDSTONE light to medium gray, as above.

Sample Descriptions

Storage Units: Metric

630.00 to 635.00 (5.00)	90%	SHALE medium gray, medium hard, very silty, sandy, as above.
	10%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine, as above.
635.00 to 640.00 (5.00)	90%	SANDSTONE 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%	SHALE medium gray, medium hard, as above.
640.00 to 645.00 (5.00)	80%	SHALE medium gray, light brown, medium hard, silty, sandy, trace carbonaceous matter, trace micro pyrite, blocky.
	20%	SANDSTONE 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%	SANDSTONE light to medium gray, quartz, hard, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
	20%	SHALE medium gray, light brown, medium hard, silty, as above.
650.00 to 655.00 (5.00)	90%	SANDSTONE light to medium gray, quartz, hard, very fine to fine grained, as above.
	10%	SHALE medium gray, light brown, medium hard, as above.
655.00 to 660.00 (5.00)	60%	SANDSTONE light to medium gray, quartz, hard, very fine to fine grained, as above.
	40%	SHALE medium gray, light brown, medium hard, as above.
660.00 to 665.00 (5.00)	70%	SANDSTONE light to medium gray, quartz, medium hard, very fine to fine grained, as above.
	30%	SHALE medium gray, light brown, medium hard, silty, as above.
665.00 to 670.00 (5.00)	80%	SHALE medium gray, light brown, medium hard, silty, as above.
	20%	SANDSTONE 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%	SANDSTONE 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%	SHALE 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%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, dolomitic, as above.
	30%	SANDSTONE 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%	SANDSTONE 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%	SHALE 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%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, very sideritic, as above.
	20%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
690.00 to 695.00 (5.00)	80%	SANDSTONE 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%	SHALE medium gray, medium hard, silty, as above, SHALE light brown, medium hard, dolomitic, as above.
695.00 to 700.00 (5.00)	80%	SHALE medium gray, medium hard, silty, as above, minor SHALE light brown, as above.
	20%	SANDSTONE medium gray, gray brown, quartz, medium hard, very fine to fine grained, as above.

Sample Descriptions

Storage Units: Metric

700.00 to 705.00	70%	SHALE medium gray, medium hard, silty, as above, with minor SHALE light brown, as above.
	30%	SANDSTONE medium gray, medium hard, quartz, hard, very fine to fine grained, as above.
705.00 to 710.00	70%	SANDSTONE 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%	SHALE 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	80%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, very fine to fine grained, as above.
	20%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, as above.
715.00 to 720.00	70%	SHALE medium gray, medium hard, as above, with SHALE light brown, hard, as above.
	30%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
720.00 to 725.00	80%	SHALE medium gray, medium hard, as above, with SHALE light brown, hard, as above.
	20%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
725.00 to 730.00	70%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, as above.
	30%	SANDSTONE 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	95%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with minor SHALE light brown, as above.

Sample Descriptions

Storage Units: Metric

730.00 to 735.00	5%	SANDSTONE light to medium gray, quartz, hard, very fine grained, as above.
735.00 to 740.00	100%	SHALE medium gray, medium hard, as above, with trace SHALE light brown, hard, as above.
		SANDSTONE Trace, as above.
740.00 to 745.00	90%	SHALE medium gray, medium hard, as above, with minor SHALE light brown, hard, as above.
	10%	SANDSTONE light to medium gray, quartz, hard, as above.
745.00 to 750.00	95%	SHALE medium gray, hard, silty, as above, with minor SHALE light brown, hard, as above.
	5%	SANDSTONE light to medium gray, quartz, hard, as above.
750.00 to 755.00	100%	SHALE medium gray, medium hard, silty, as above, with minor SHALE light brown, hard, as above.
755.00 to 760.00	100%	SHALE medium gray, medium hard, silty, as above., with SHALE light brown, hard, as above.
760.00 to 765.00	100%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
765.00 to 770.00	100%	SHALE medium gray, medium hard, silty, as above.
770.00 to 775.00	100%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky.
775.00 to 780.00	100%	SHALE medium gray, medium hard, silty, as above.
780.00 to 785.00	60%	SANDSTONE 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	40%	SHALE medium gray, silty, as above, with SHALE light brown, hard, as above.
(5.00)		
785.00 to 790.00	70%	SANDSTONE 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.
(5.00)		
	30%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
790.00 to 795.00	70%	SANDSTONE 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.
(5.00)		
	30%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
795.00 to 800.00	70%	SANDSTONE 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.
(5.00)		
	30%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
800.00 to 805.00	70%	SANDSTONE light to medium gray, quartz, chert, very fine to medium grained, as above.
(5.00)		
	30%	SHALE medium gray, medium hard, silty, as above, with trace SHALE light brown, hard, as above.
805.00 to 810.00	70%	SANDSTONE light to medium gray, quartz, very fine to fine grained, subangular, moderately sorted, siliceous cement, tight, argillaceous, silty, trace pyrite.
(5.00)		
	30%	SHALE medium gray, medium hard, silty, as above, with trace SHALE light brown, hard, as above.
810.00 to 815.00	70%	SANDSTONE 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.
(5.00)		

Sample Descriptions

Storage Units: Metric

810.00 to 815.00	30%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, hard, as above.
815.00 to 820.00	70%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	30%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
820.00 to 825.00	70%	SANDSTONE light to medium gray, quartz, hard, very fine to fine grained, as above.
	30%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
825.00 to 830.00	60%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	40%	SHALE medium gray, medium hard, silty, as above., with SHALE light brown, hard, as above.
830.00 to 835.00	50%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, hard, silty, dolomitic, blocky.
	45%	SANDSTONE 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%	COAL
835.00 to 840.00	50%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
	40%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	10%	COAL
840.00 to 845.00	75%	SHALE 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	20%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
	5%	COAL
845.00 to 850.00	75%	SHALE medium gray, medium hard, silty, trace micro pyrite, trace carbonaceous matter, blocky, with SHALE light brown, hard, dolomitic, silty, blocky.
	20%	SANDSTONE 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%	COAL
850.00 to 855.00	90%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, dolomitic, as above.
	10%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
855.00 to 860.00	90%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, dolomitic, as above.
	10%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above.
		COAL Trace.
860.00 to 865.00	80%	SHALE medium gray, medium hard, silty, as above. with SHALE light brown, medium hard, as above.
	20%	SANDSTONE 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.
		COAL Trace.
865.00 to 870.00	85%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.

Sample Descriptions

Storage Units: Metric

865.00 to 870.00	10%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, as above.
	5%	COAL
870.00 to 875.00	85%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
	10%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
	5%	COAL Trace.
875.00 to 880.00	85%	SHALE medium gray, medium hard, silty, trace carbonaceous matter, trace micro pyrite, blocky, with SHALE light brown, hard, dolomitic, silty, blocky.
	15%	SANDSTONE light to medium gray, salt and pepper, qzt, hard, very fine to fine grained, as above, tight.
		COAL Trace.
880.00 to 885.00	85%	SHALE medium gray, medium hard, silty, as above, with SHALE light brown, hard, as above.
	10%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
	5%	COAL Trace.
885.00 to 890.00	95%	SHALE medium gray, medium hard, silty, as above, SHALE light brown, hard, as above.
	5%	SANDSTONE light to medium gray, salt and pepper, quartz, hard, very fine to fine grained, as above, tight.
		COAL Trace.
890.00 to 895.00	100%	SHALE 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: GroundGround: 310.17 m

Cut(-) / Fill(+): _____

Kelly Bushing: 314.42 mK.B. to Ground: 4.25 mCasing Flange: m
Total Depth
Measurement Type

Drillers TD (Tally)

Measured Depth

895 m

True Vertical Depth

894.96 m

Drillers TD (Strap or SLM)

m

m

Loggers TD

m

m

Surface Co - Ordinates
Well Type: Straight

N / S Co - Ordinates: _____

Longitude: 124 56' 07.3"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
Drilling Fluid Summary
TD Date: Mar 15, 2008 @ 01:30hrs
Fluid Type
From
To

Gel Chem

0 m

252 m

Gel Polymer

252 m

895 m

Rig Release Date: _____

Contractor: Akita Sahtu Drilling Ltd. #14
Casing Summary
Type **Hole Size** Casing Size **Landed**

Surface

311 mm

244.5 mm

252 m

Work Schedule
Contractor

McGrath Resource Consulting

Geologist

Clarence G. Kennedy, P.Geol.

Log Interval

0 m - 895 m

Dates Logged

Mar 3, 2008 -

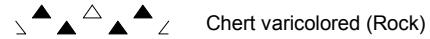
Remarks

AFE# US-28423

Legend



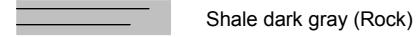
Conglomerate varicolored chert (Rock)



Chert varicolored (Rock)



Shale Brown (Rock)



Shale dark gray (Rock)



Shale medium gray (Rock)



Sandstone (Rock)



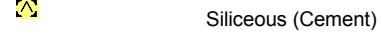
Sandstone (Stringers)



Calcareous (Cement)



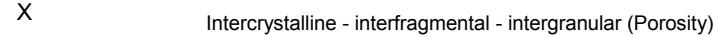
Siderite (Cement)



Siliceous (Cement)



Argillaceous (Matrix)



Intercrystalline - interfragmental - intergranular (Porosity)



Chert dark (Grain)



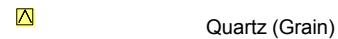
Chert light (Grain)



Coal (Grain)



Feldspar (Grain)



Quartz (Grain)



Argillaceous (Accessory)



Calcareous (Accessory)



Carbonaceous (Accessory)



Kaolinitic (Accessory)



Micaceous (Grain)



Pyritic (Accessory)



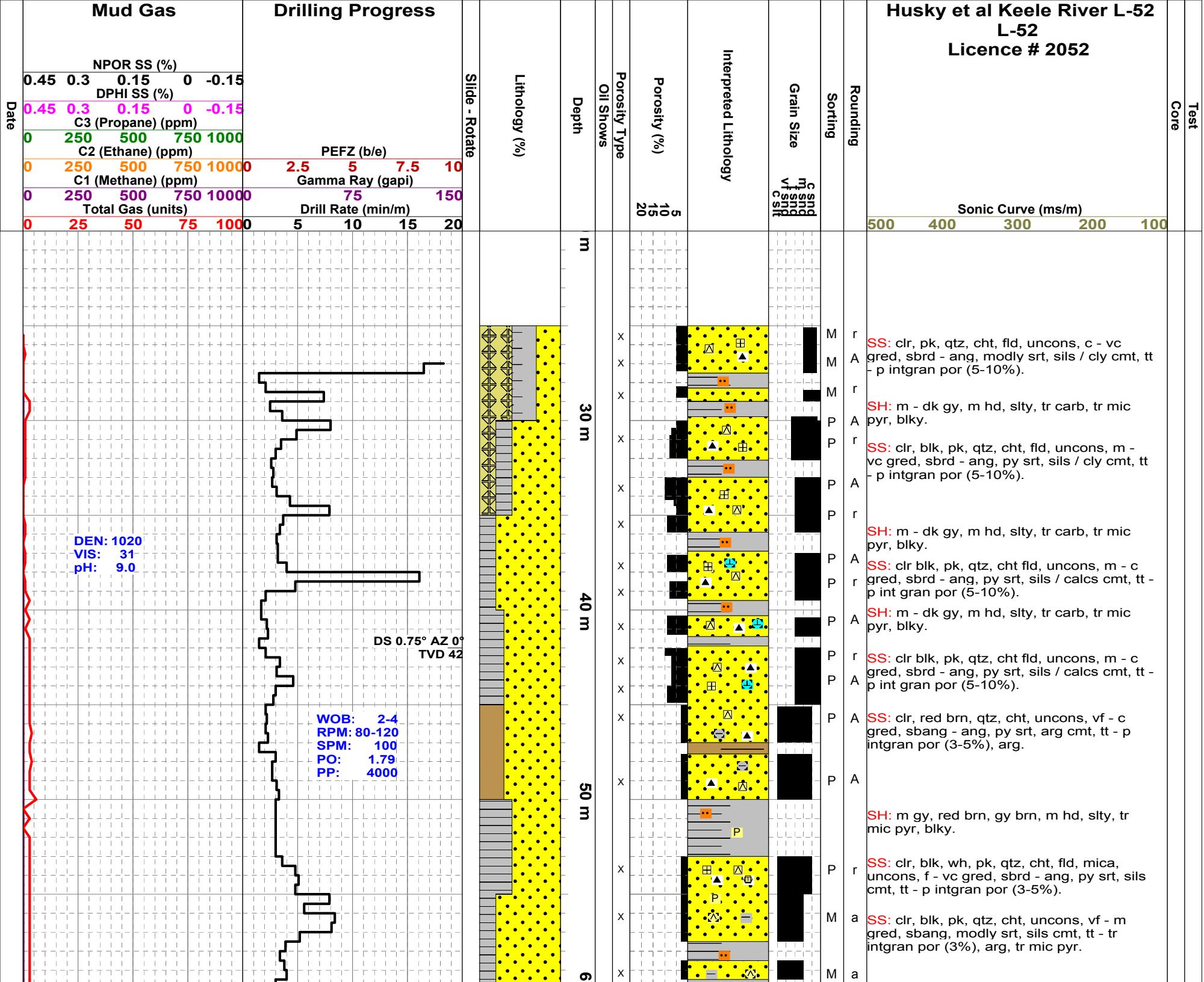
Sandy (Accessory)

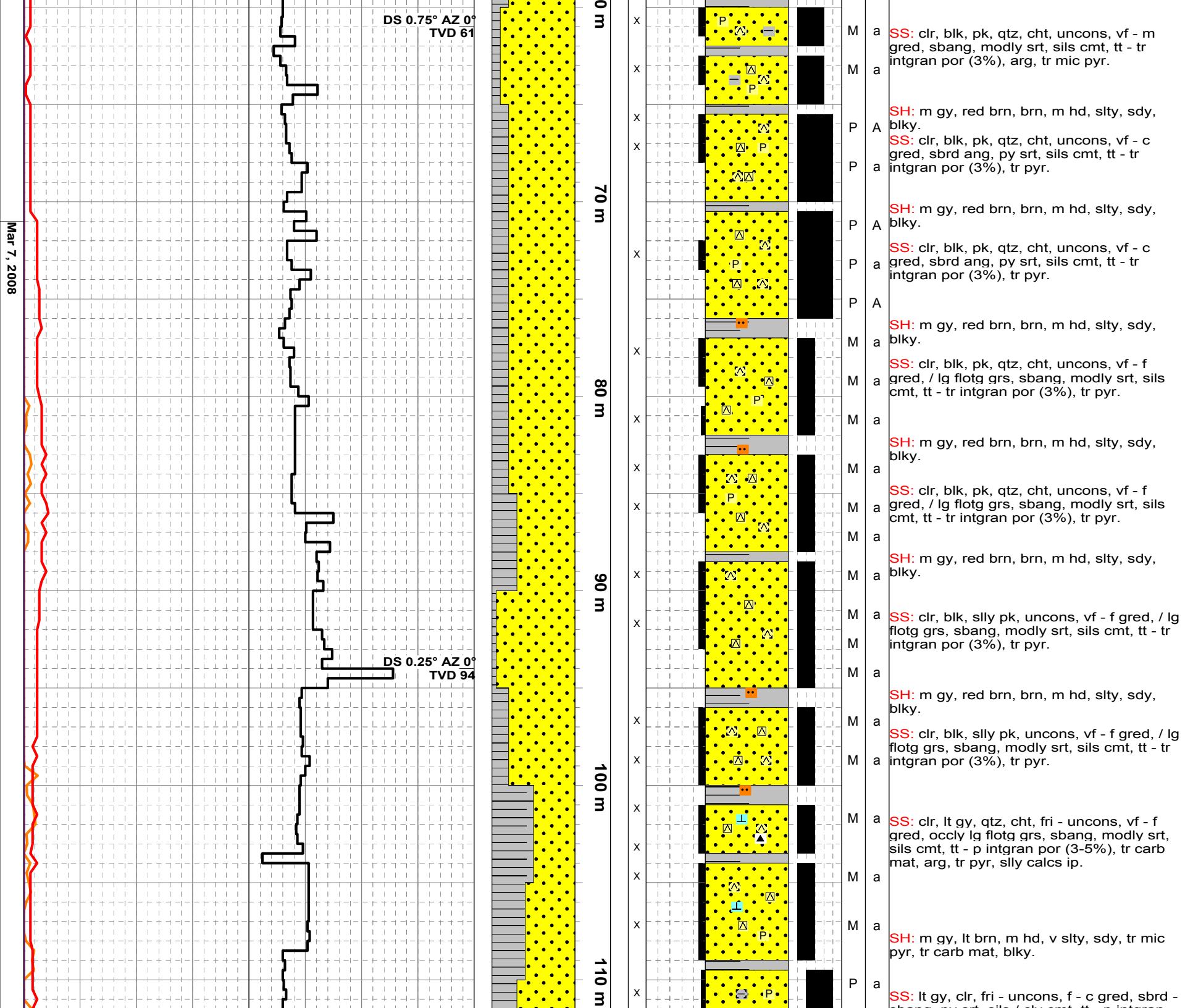


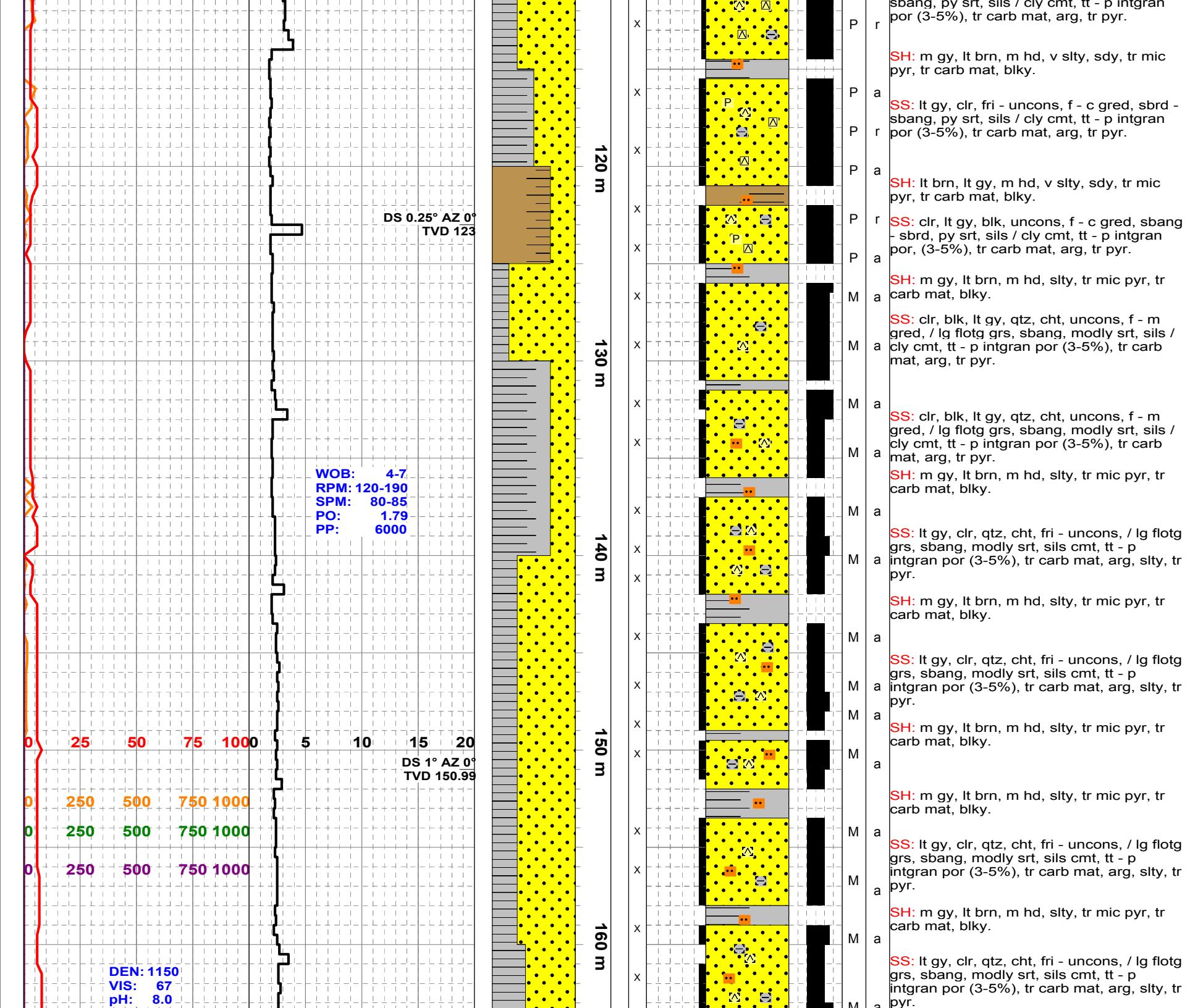
Silty (Accessory)

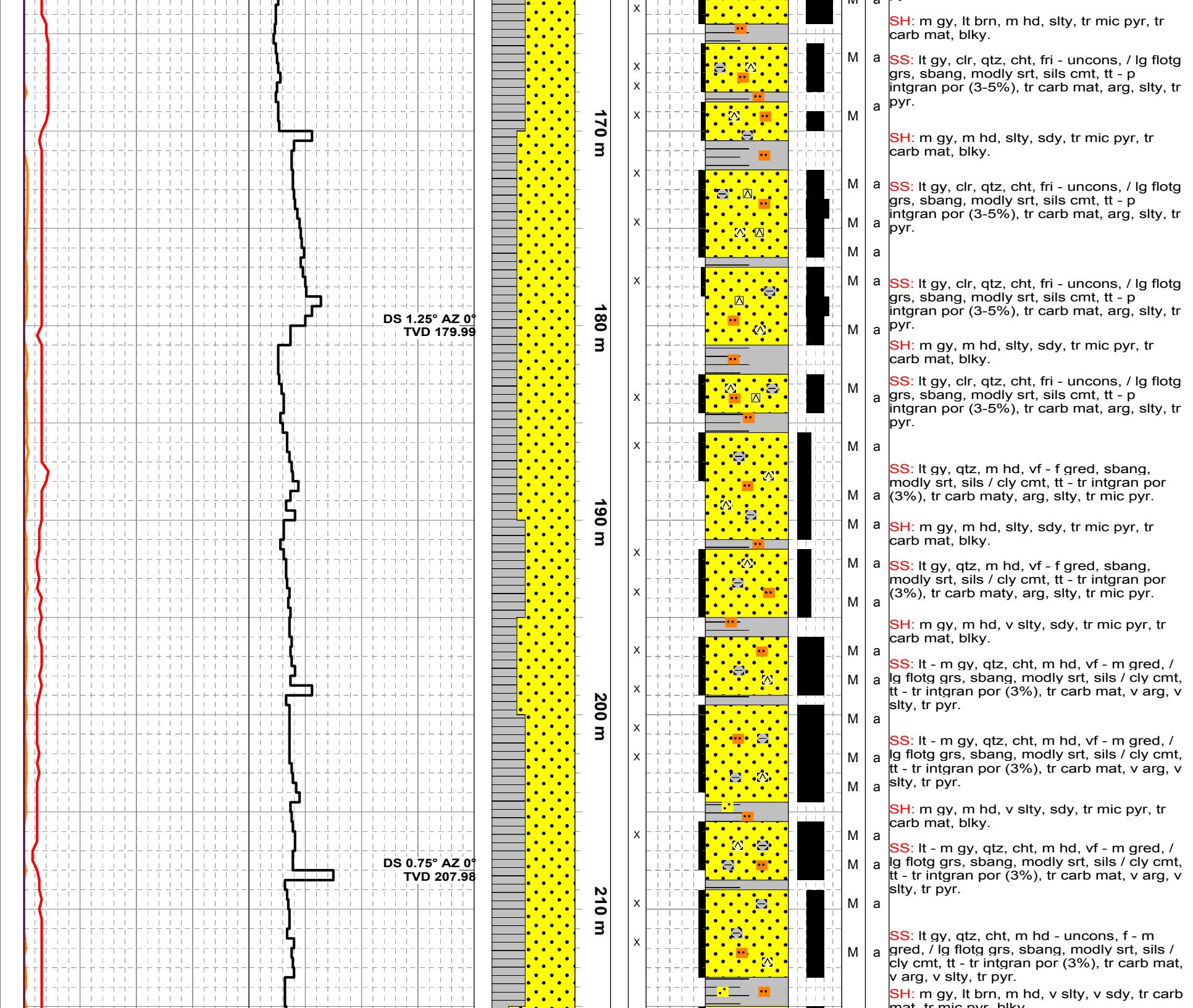


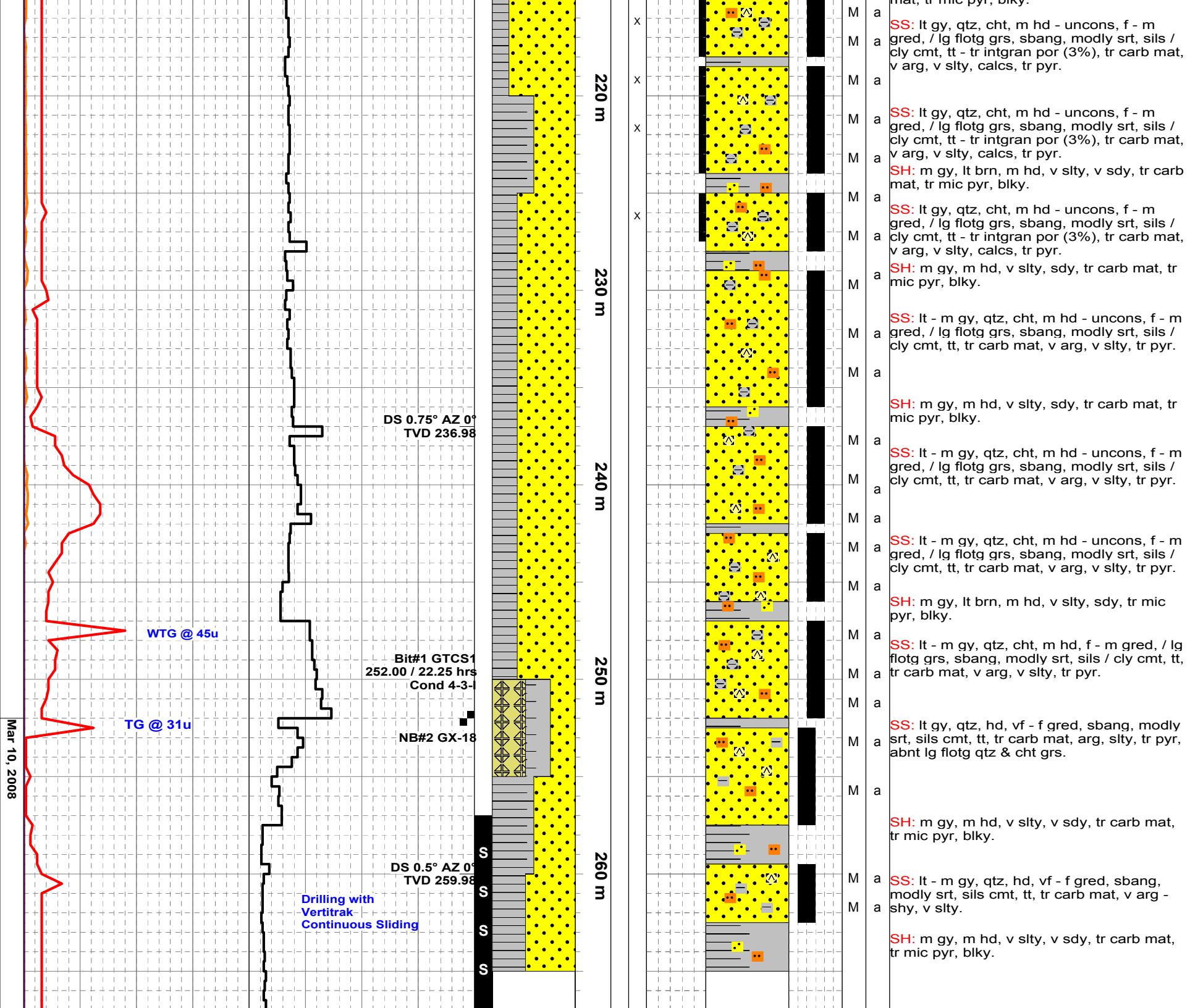
Slide (Slides)

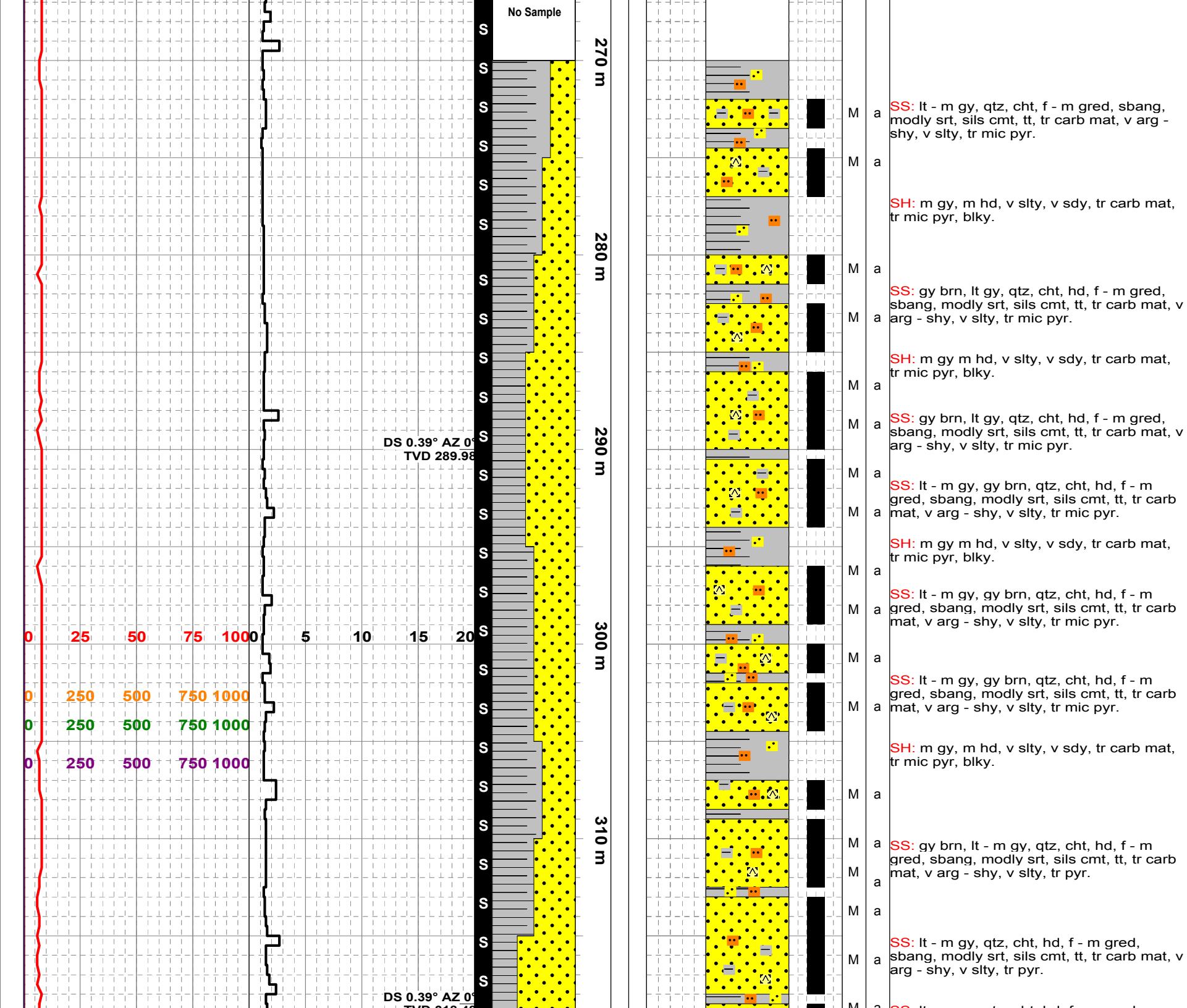












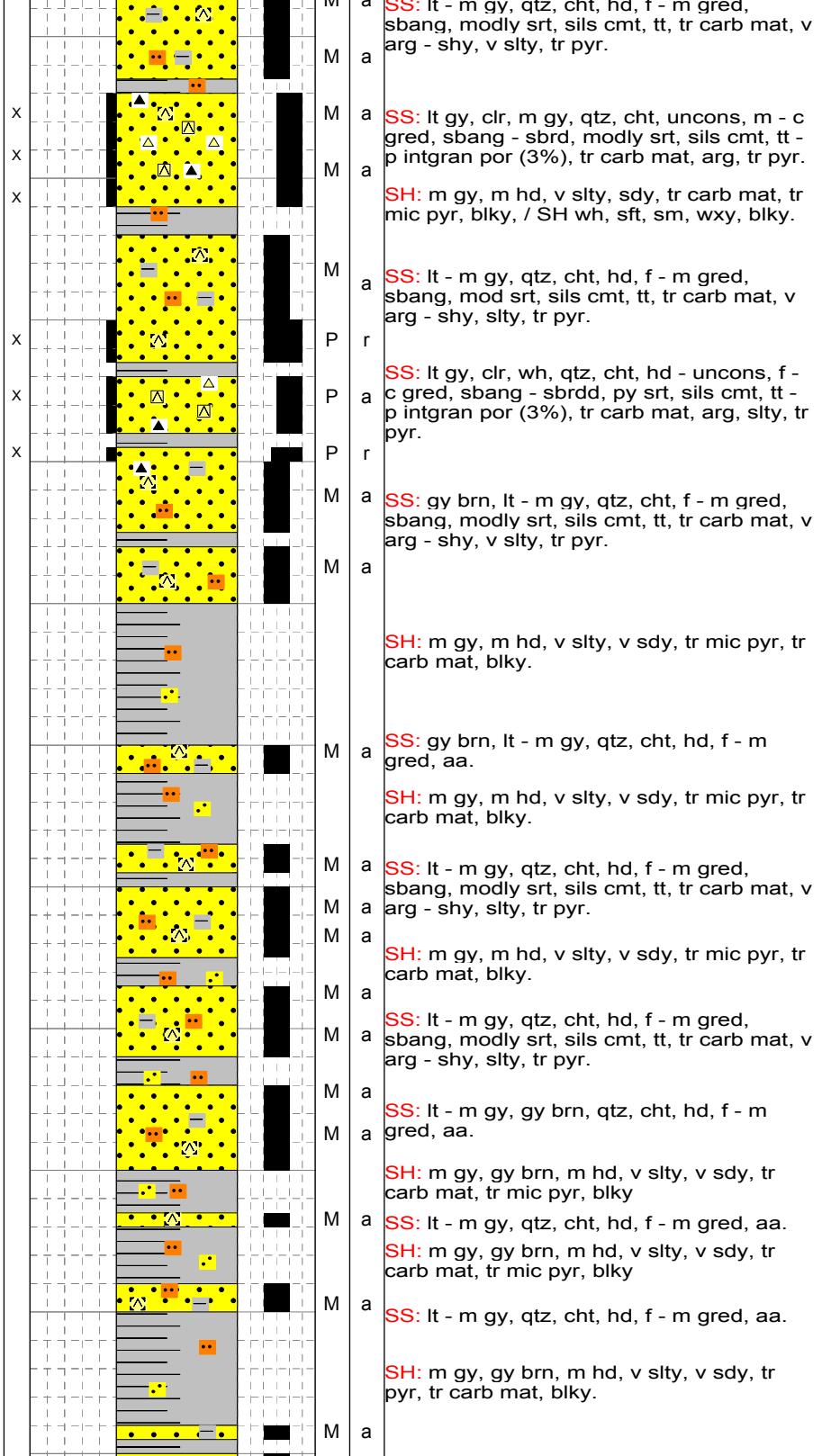
DEN 1020
VIS 48.0
FL 10.0
pH 8.0

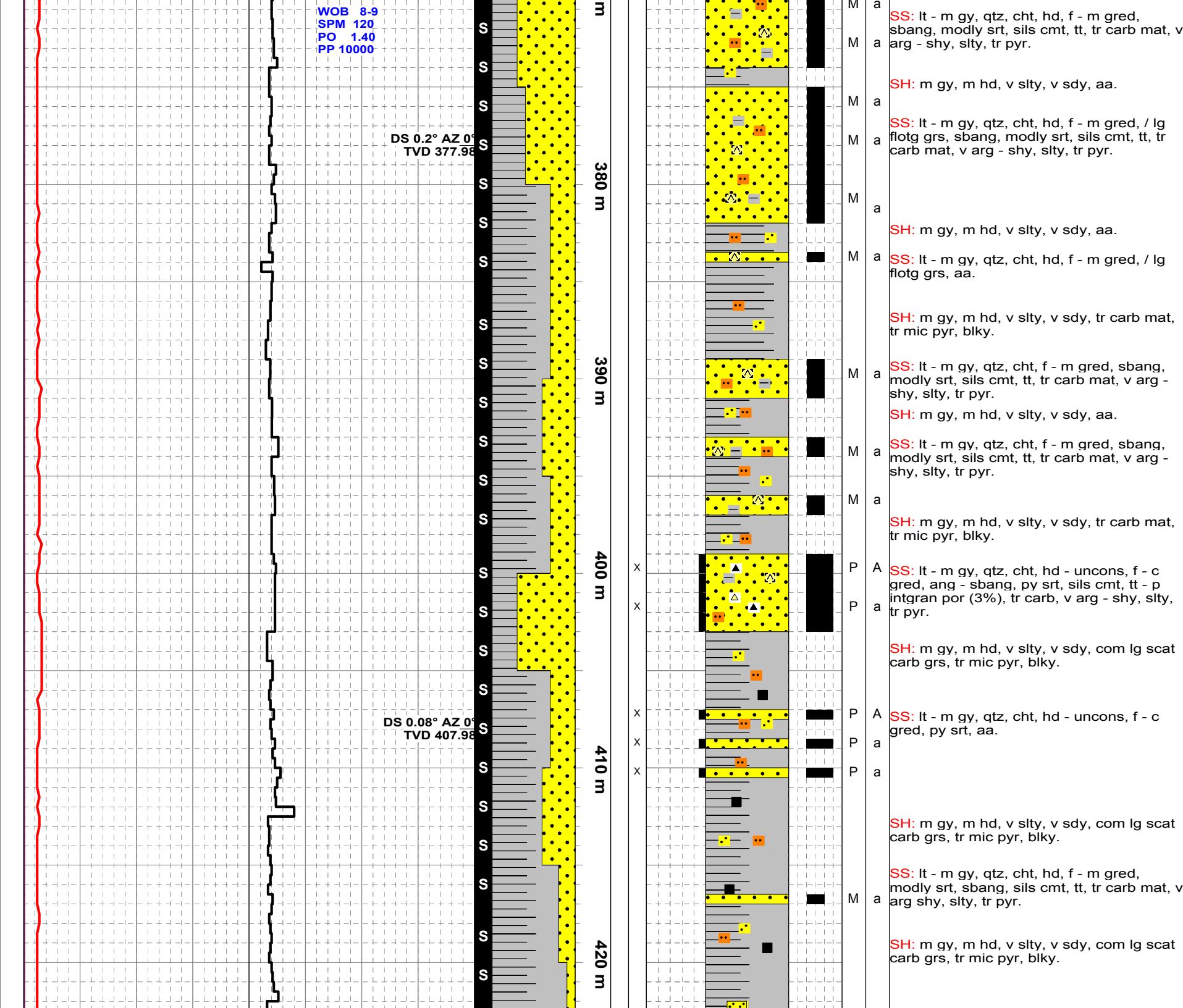
Drilling with Vertitrap
Continuous Sliding

DS 0.05° AZ 0°
TVD 347.98

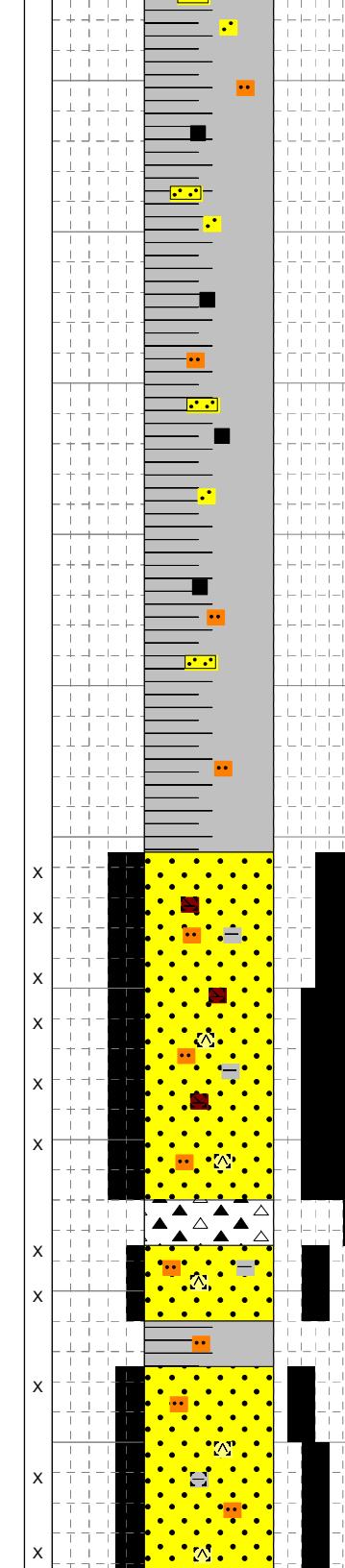
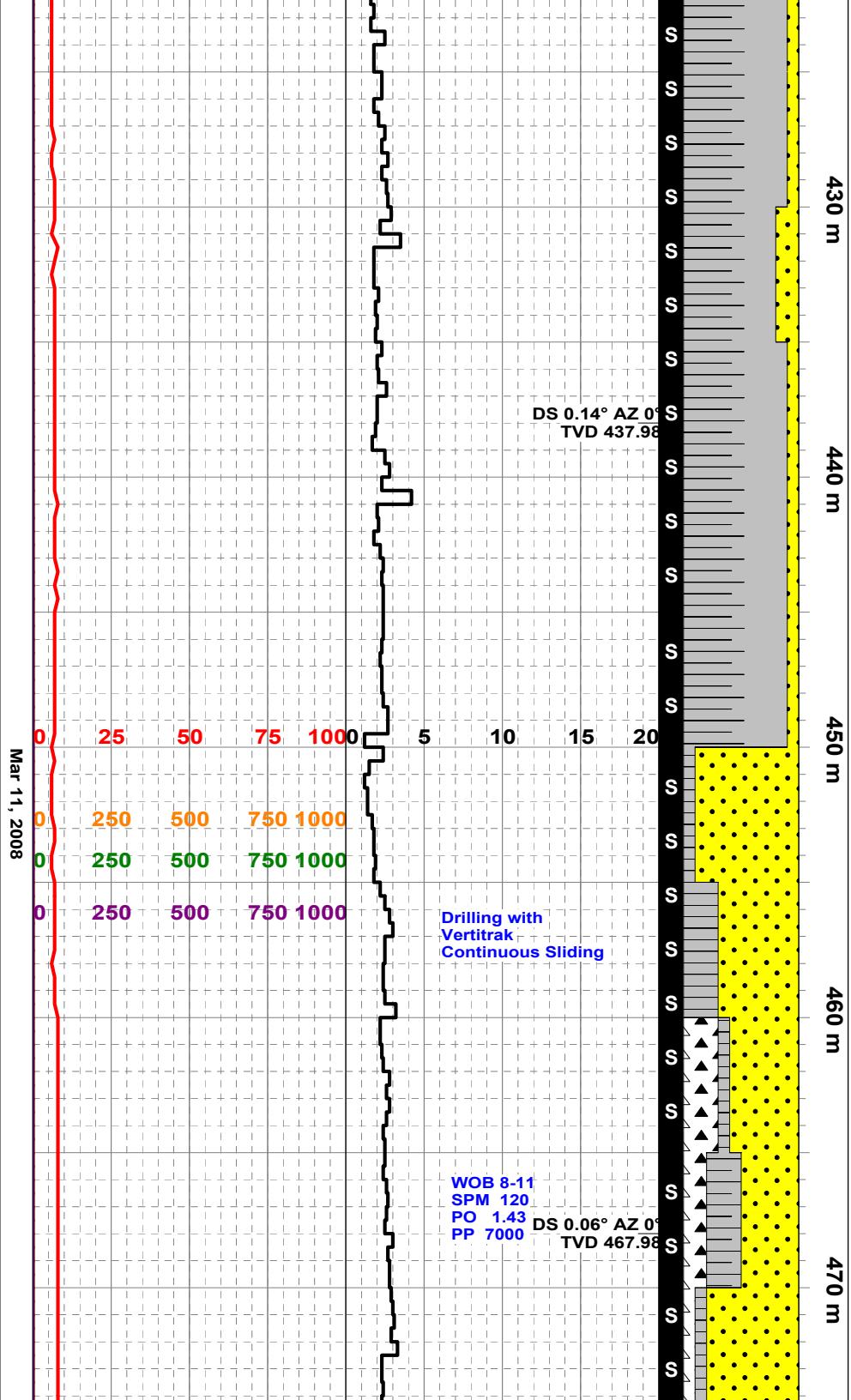
TVD 318.48

320 m 330 m 340 m 350 m 360 m 370 m





Mar 11, 2008



SH : m gy, m hd, silt, sdy, com lg scat carb grs, tr mic pyr, blky.

SH: m gy, m hd, silt, sdy, tr lg scat carb grs, tr pyr blky, / SH wh, m hd, silt, blky.

SH: m gy, m hd, silt, sdy, com lg scat carb grs, tr pyr blky, / SH wh, m hd, silt, blky.

SH: m - dk gy, m hd, silt, sdy, com lg scat carb grs, tr pyr, blky, / SH wh, silt, blky.

P A
SS: brn, clr, blk, lt gy, uncons - fri, qtz, cht, m - vc gred, ang - sbrdd, py srt, sid cmt, fr intgran por (10%), arg, silt.

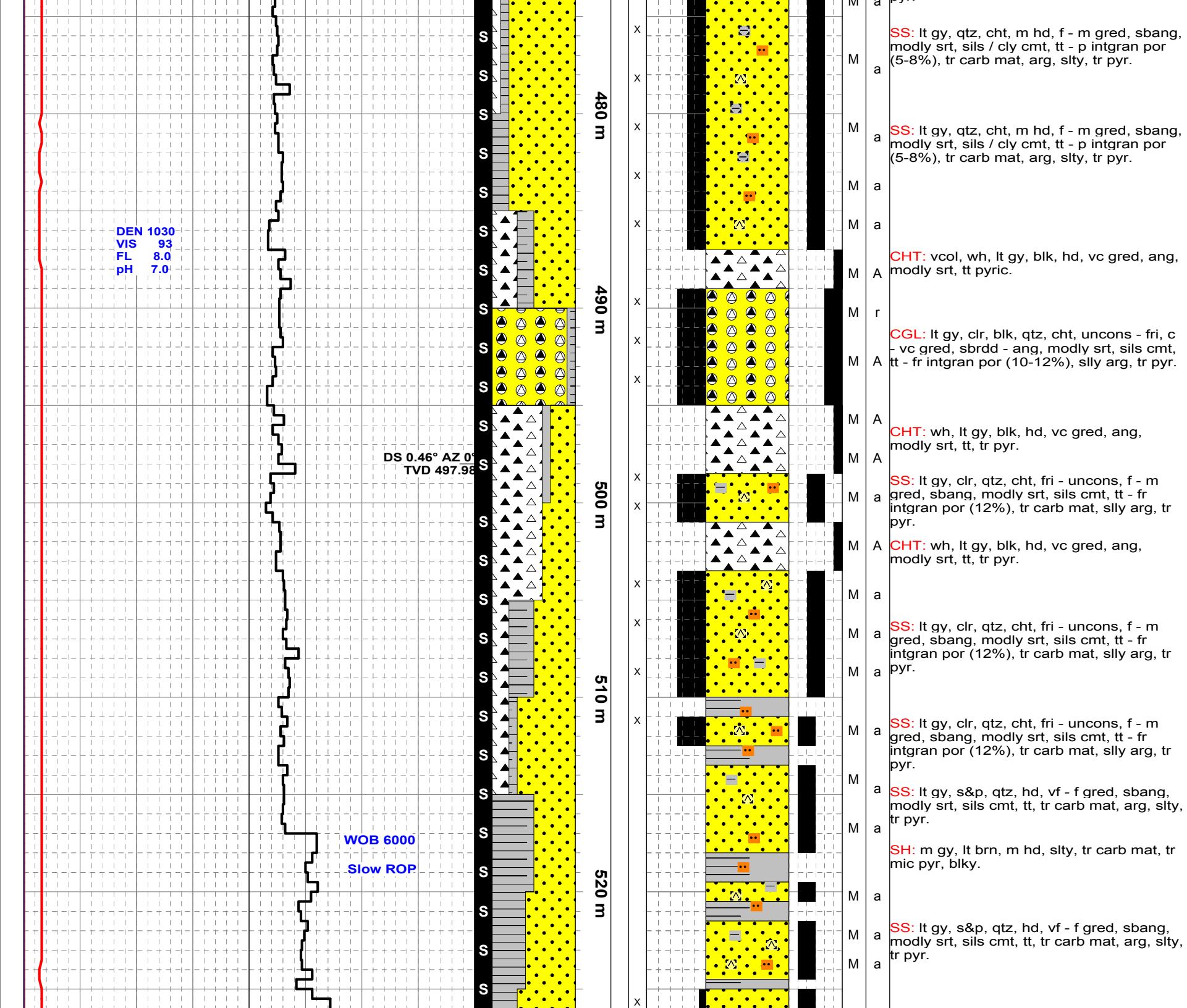
P A
SS: brn, lt gy, clr, hd - uncons, f - v c gred, ang - sbrdd, py srt, sid / sils cmt, fr intgran por (10%), arg, silt.

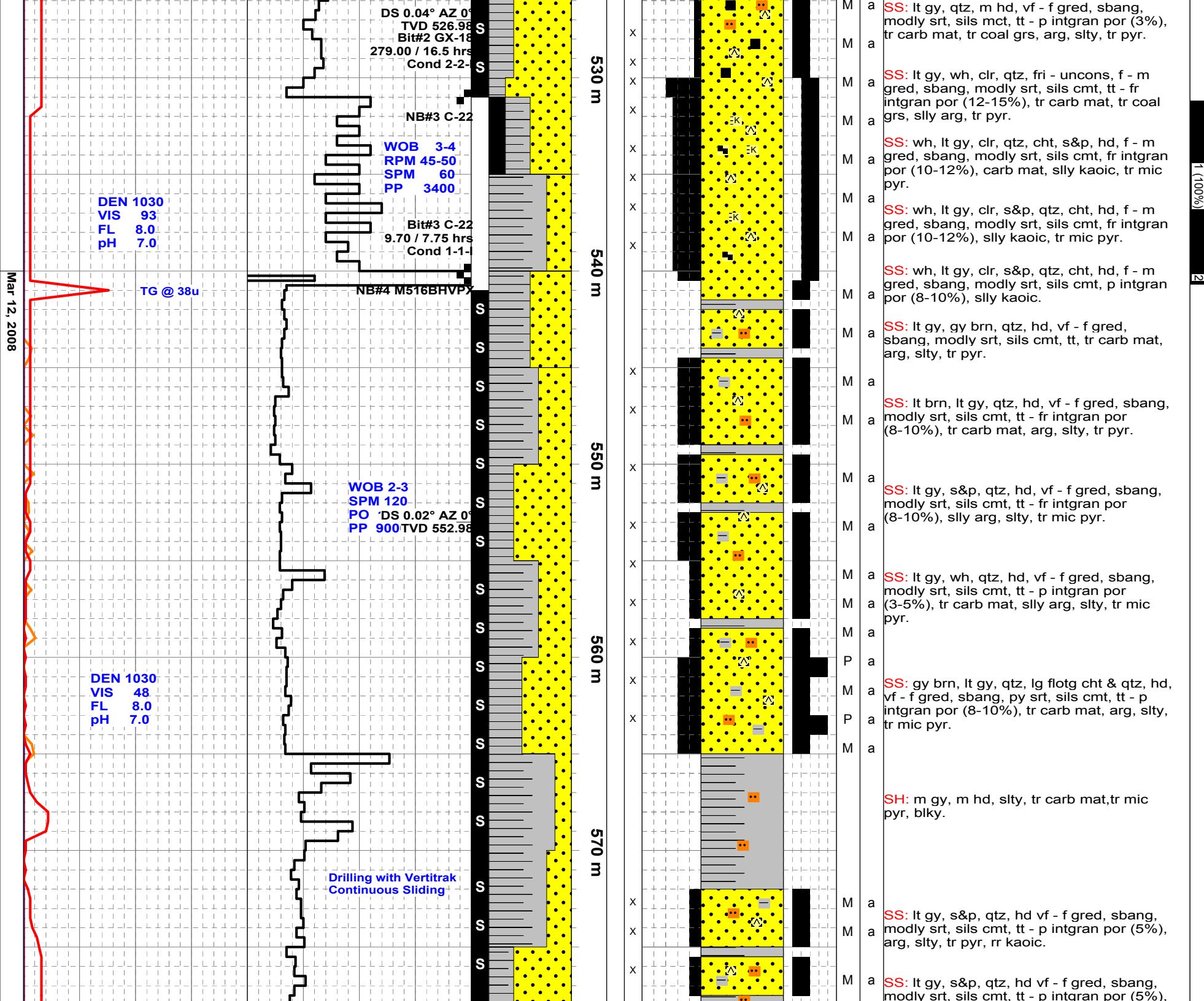
P A
M A CHT: vcol wh, blk, lt gy, brn, orng, hd, vc gred, ang, modly srt, tt, pyric.

M a SS: lt brn, lt gy, clr, qtz, cht, hd - uncons, f - m gred, sabng, modly srt, sils cmt, tt - p intgran por (5%), tr carb mat, arg, silt, tr pyr.

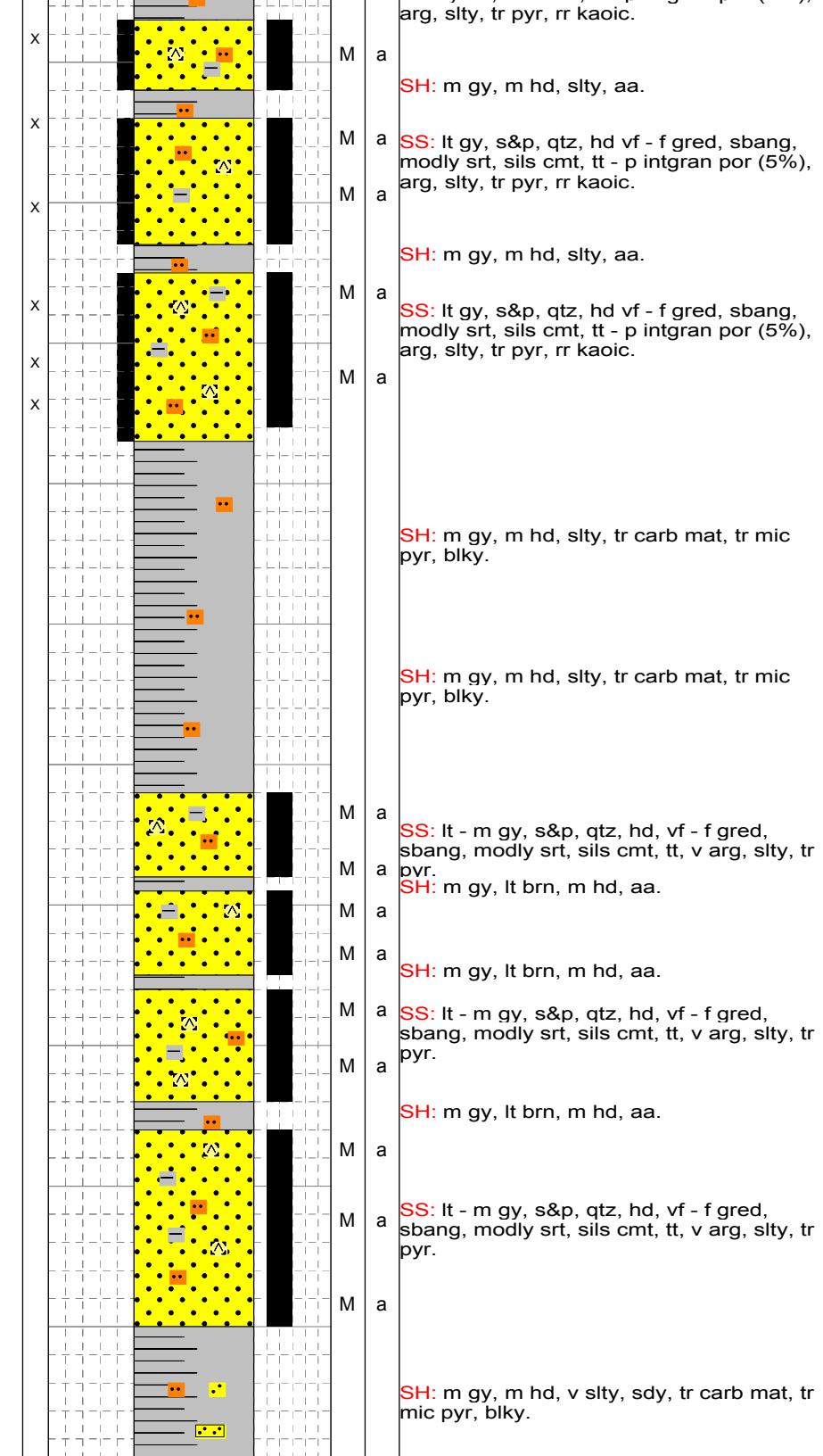
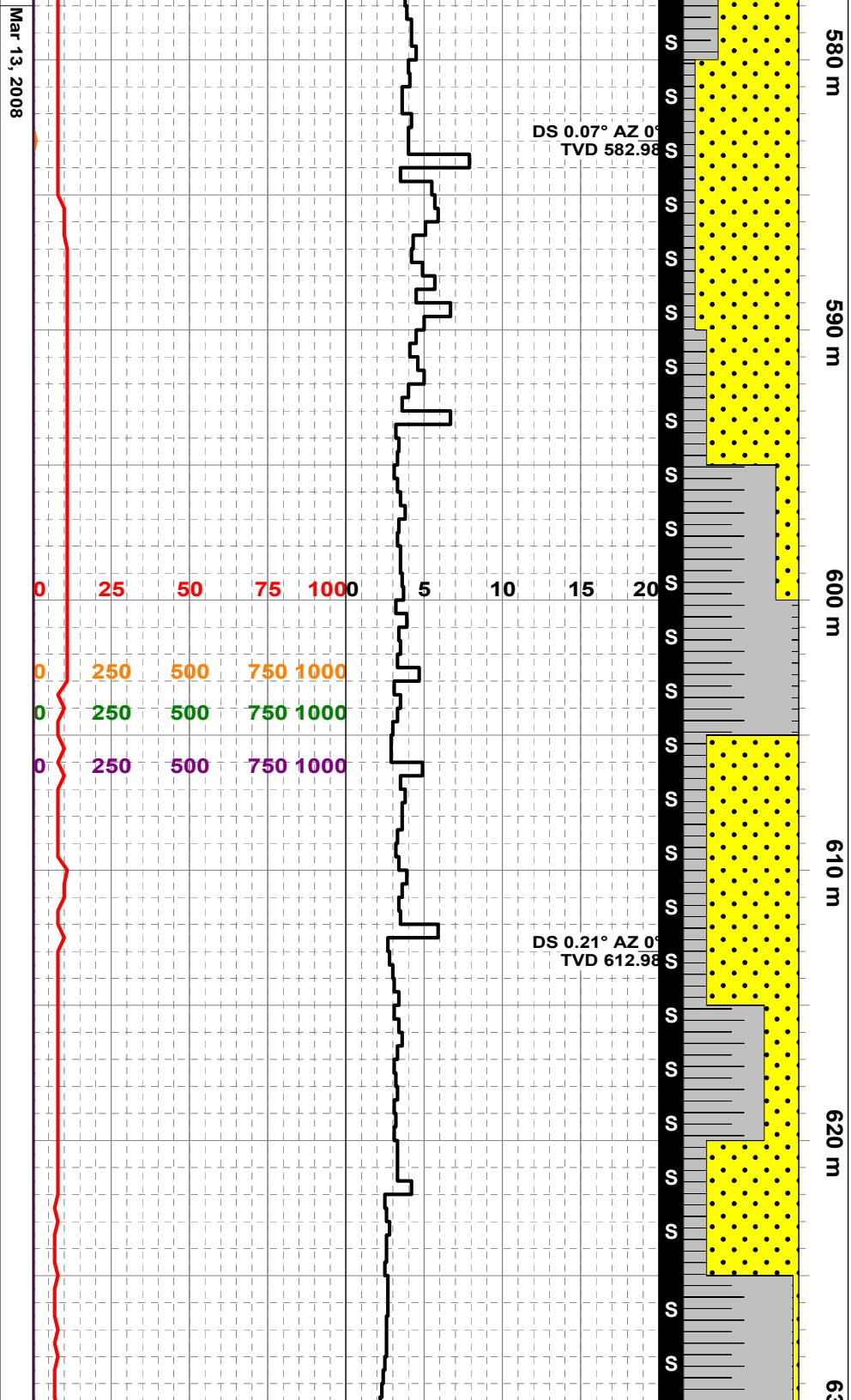
M a SS: lt gy, qtz, cht, m hd, vf - f gred, sbang, modly srt, sils cmt, tt - p intgran por (5-8%), tr carb mat, arg, silt.

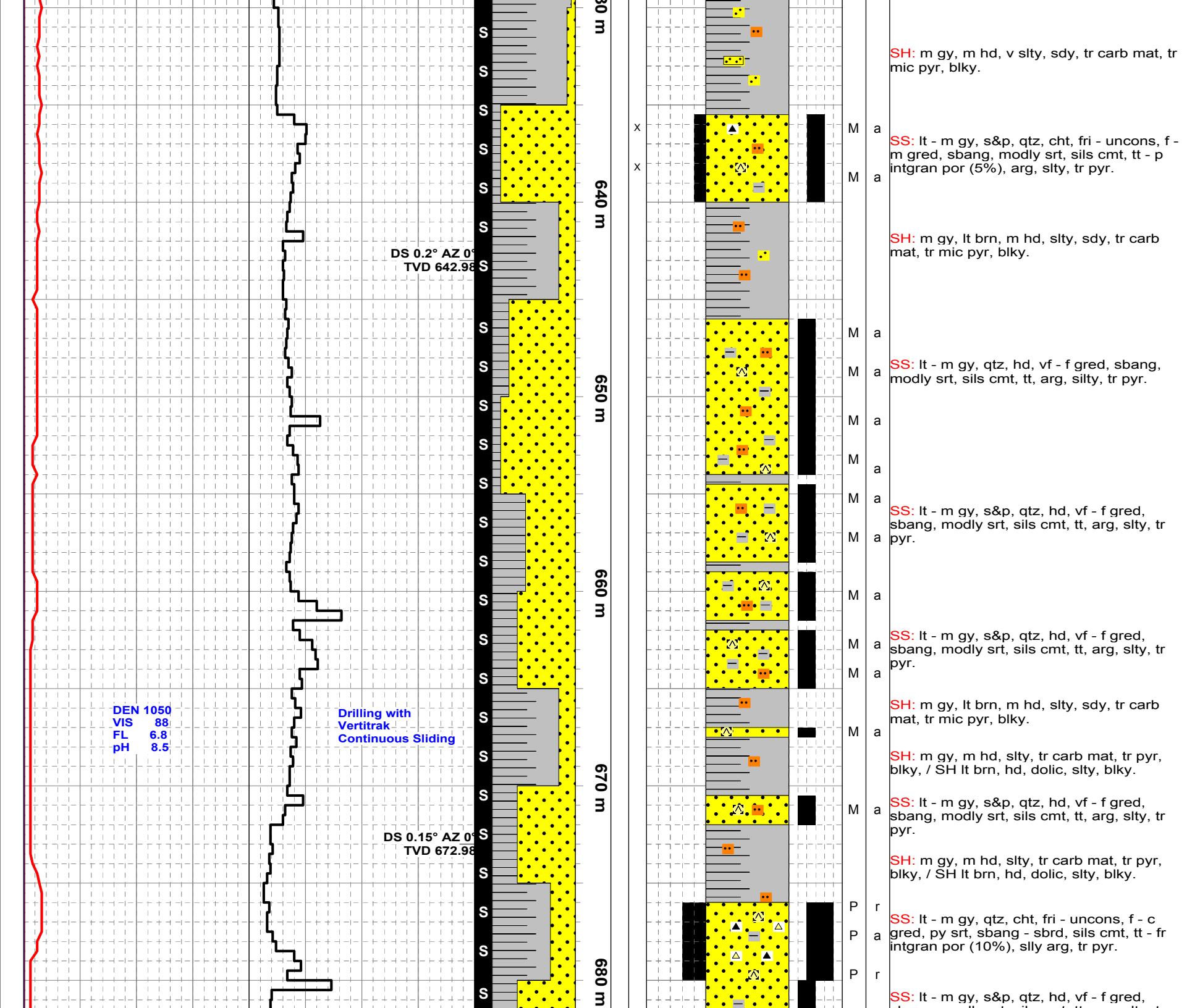
M a SS: lt gy, lt brn, qtz, cht, m hd, f - m gred, sbang, modly srt, sils / cly cmt, tt - p intgran por (5-8%), tr carb mat, arg, silt, tr pyr.

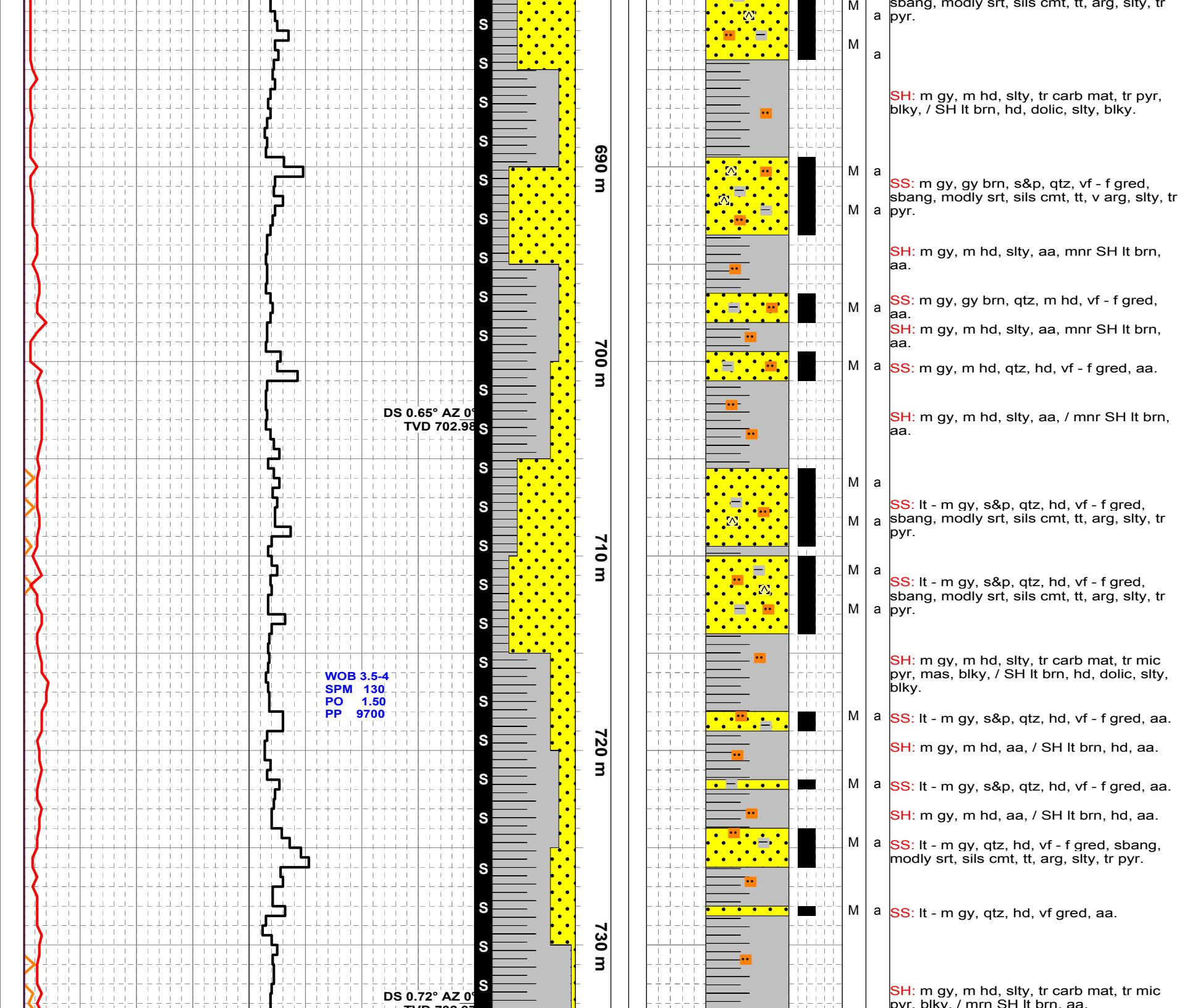


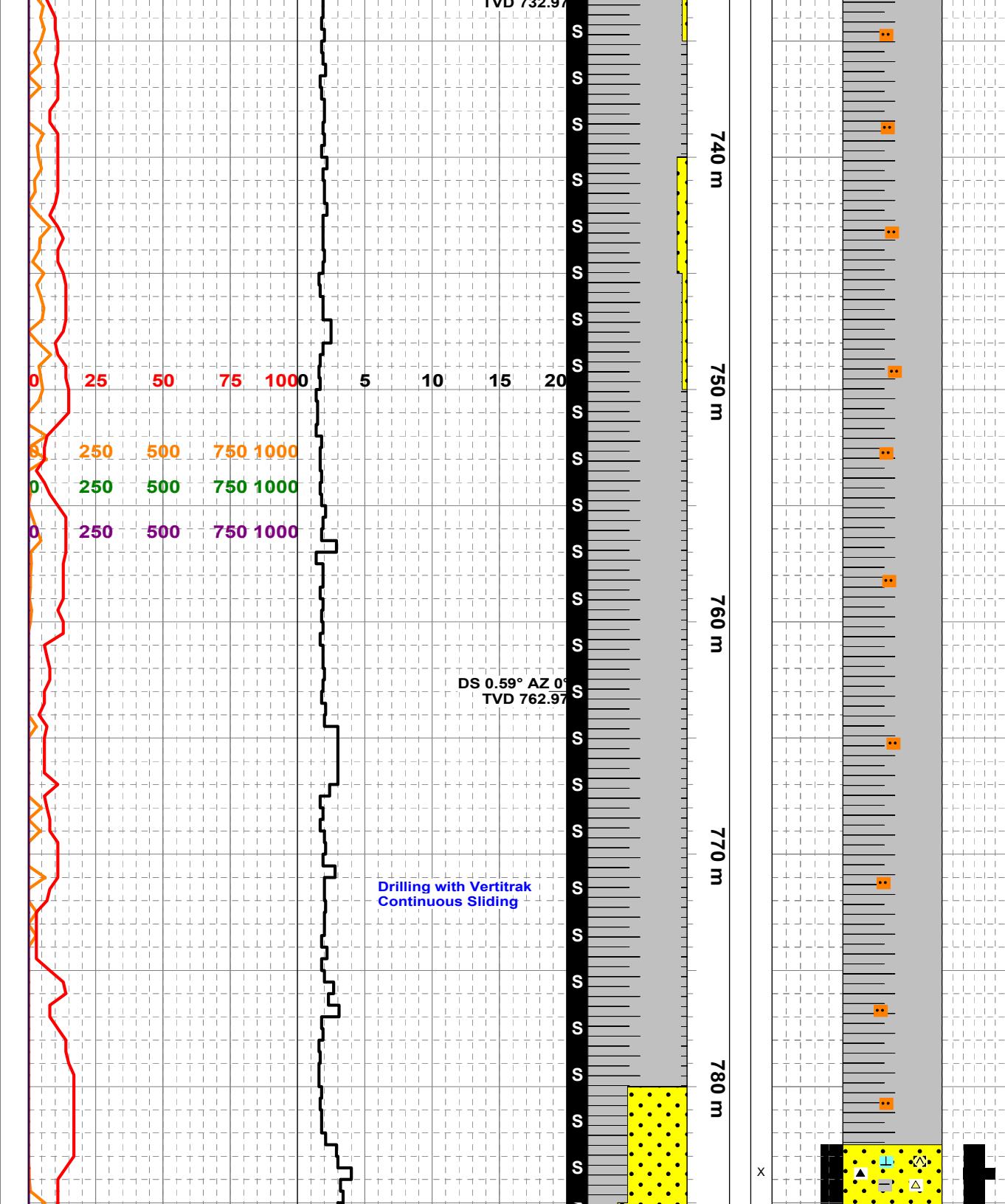


Mar 13, 2008









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

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

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

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

SS: It - m gy, qtz, cht, hd - silty uncons, f - m gred, occly c, modly srt, sbang, sils cmt, tt - p integran por (5-8%), arg, silty, sily calcs in tr pyr

