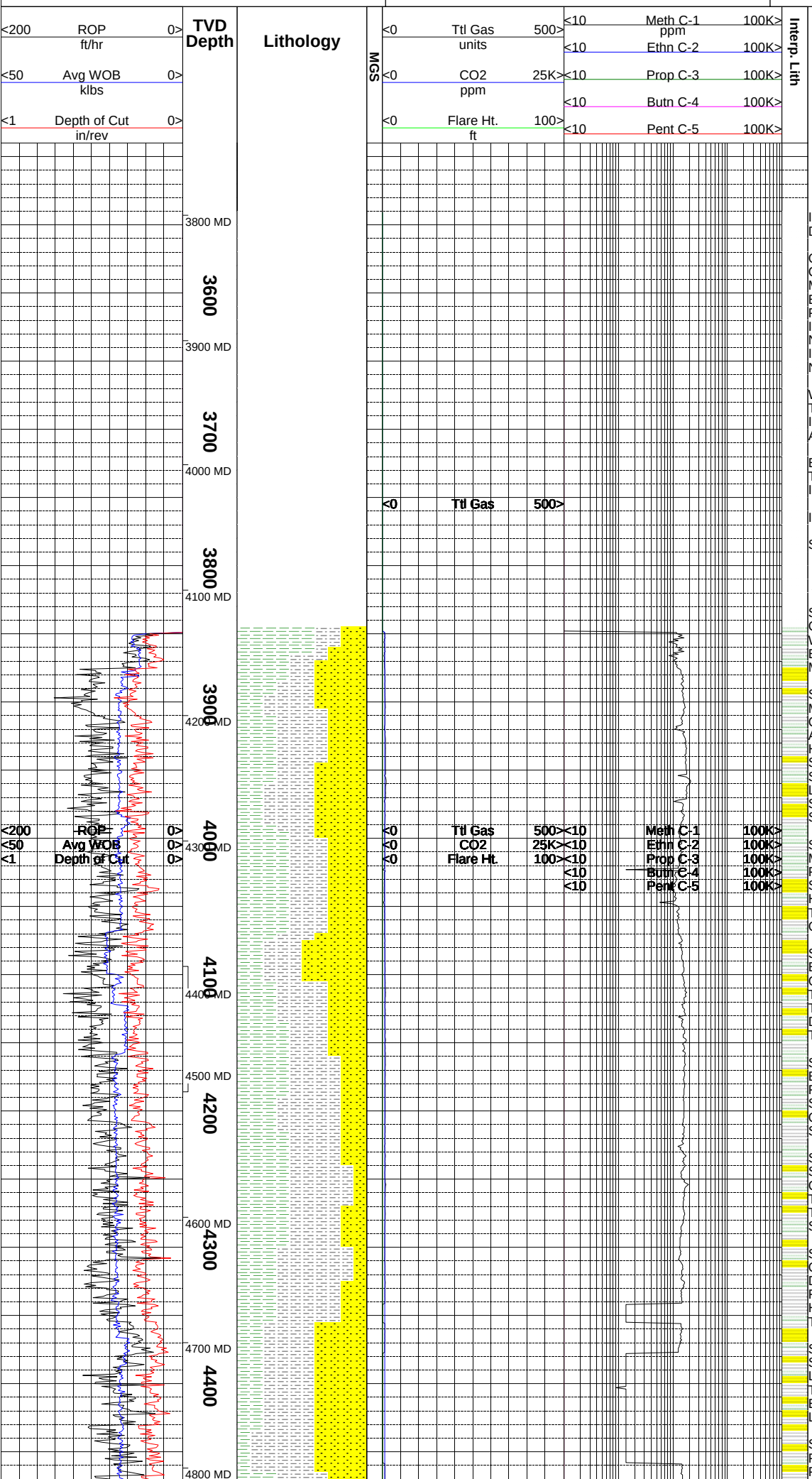


Remarks

Survey Data, Mud Reports, Other Info.

INTERVALS BLEEDING GAS INTO THE BOREHOLE DURING CONNECTIONS.

GAS CHROMATOGRAPHY EQUIPMENT IS CALIBRATED TO A TEST GAS COMPOSED OF
METHANE = 10040 PPM
ETHANE = 990 PPM
PROPANE = 1000 PPM
I-BUTANE = 1010 PPM
N-BUTANE = 1000 PPM
I-PENTANE = 1000 PPM
N-PENTANE = 1000 PPM

WHEN THE MUD IS CIRCULATED THROUGH THE GAS BUSTER, THE INTERVAL IS MARKED IN THE MGS COLUMN AND SIZE OF FLARES ARE NOTED.

EVIDENCE OF FRACTURE FILL IS NOTED ON THE MUD LOG. KAOLIN PERCENTAGE IN SS INTERVALS IS ALSO NOTED ON THE MUD LOG.

I UNIT OF GAS = 200 PPM METHANE

SET 10 3/4" SURFACE CASING AT 4118'

EPOCH COMMENCED LOGGING ON 6/03/2009 AT 4133' MD.

SHALE = MODERATE YELLOWISH BROWN; CRUMBLY, TENACITY; SUBBLOCKY FRACTURE; WEDGELIKE , TABULAR CUTTINGS HABIT; DULL EARTHY LUSTER, SILTY, CLAYEY TEXURE; MASSIVE TO THICK STRUCTURE.

SILTSTONE = PURPLISH BROWN, LIGHT TO MEDIUM GRAY; FIRM TO MODERATELY HARD; CRUMBLY TO OCCASIONALLY TOUGH; IRREG AND SUBBLOCKY OR WEDGELIKE CUTTINGS HABIT; MATTE LUSTER WITH SCATTERED SPARKLES; MODERATELY CALCAREOUS; SCATTERED CARBONACEOUS SPECKS; LOCALLY COMMON VERY FINE SAND, OCC SANDY, GRADES IN PART TO VERY FINE SANDSTONE.

SILTSTONE = LIGHT YELLOWISH BROWN, MODERATE PALE YELLOWISH BROWN; PULVERULENT, CRUNCHY TENACITY; EARTHY SUBBLOCKY FRACTURE; WEDGELIKE CUTTINGS HABIT; DULL SEMI EARTHY LUSTER; GRITTY TO GRANULAR TEXTURE; THIN STRUCTURE; GRADING TO SANDSTONE.

SHALE = MEDIUM GRAY, LIGHT BLUISH GRAY, BROWNISH YELLOW ORANGE, SOME SLIGHT GRAYISH RED; CRUMBLY TO PULVERULENT TENACITY; IRREGULAR EARTHY FRACTURE; TABULAR TO WEDGELIKE CUTTINGS HABIT; DULL EARTHY LUSTER; CLAYEY TO SILTY TEXTURE; THIN STRUCTURE.

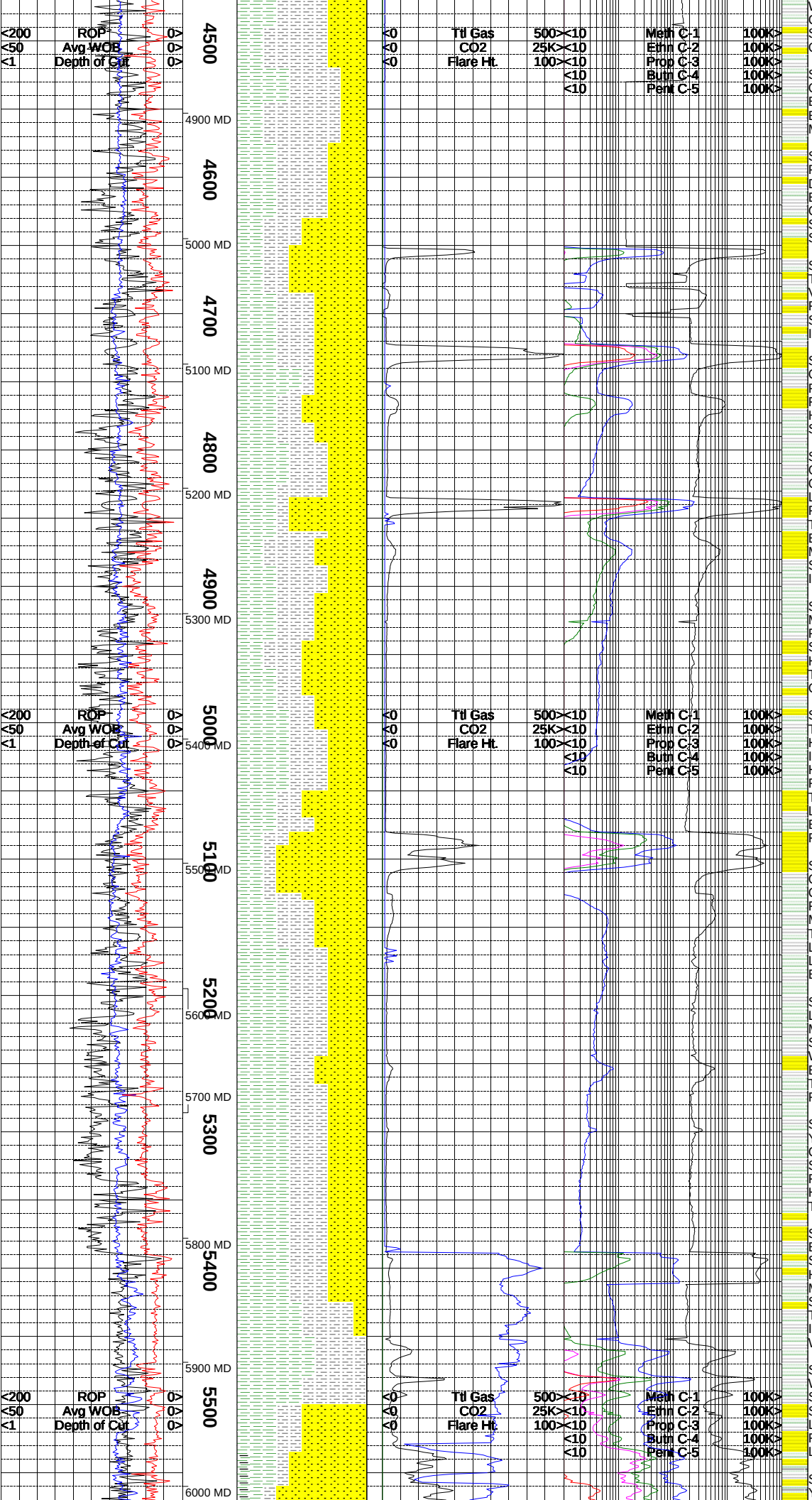
SANDSTONE = WHITE, TRANSLUCENT, PALE BROWN WITH DARK LITHICS; VERY FINE TO FINE GRAINS; WELL SORTED; EASILY FRIABLE SUBANGULAR TO ANGULAR; LOW SPHERICITY; QUARTZ FRAMEWORK; CALCITE CEMENT; STRONG REACTION TO DILUTE HCL.

SILTSTONE = YELLOWISH BROWN, LIGHT GRAY, SOME WITH PURPLISH HUES, LIGHT OLIVR GRAY; FIRM TO FRIABLE; BRITTLE CRUNCHY TENACITY; EARTHY LUSTER SOME SPARKLING; THIN STRUCTURE, SOME GRADING TO SAND-STONE.

SHALE = MEDIUM GRAY, DARK YELLOWISH ORANGE, HUES OF DARK REDDISH GRAY; DENSE CRUNCHY TENACITY; EARTHY, HACKLY FRACTURE; TABULAR WEDGELIKE CUTTINGS HABIT; WAXY, EARTHY LUSTER; SILTY TEXTURE; THIN STRUCTURE.

SANDSTONE = WHITE TO LIGHT GRAY WITH SALT PEPPER APPERANCE; VERY FINE TO LOWER FINE GRAINS; WELL SORTED; SUBROUND TO SUBANGULAR; MODERATE SPHERICITY; EASILY FRIABLE; QUARTZ FRAMEWORK, LIGHT CALCITE CEMENT.

SHALE = MEDIUM GRAY, YELLOWISH ORANGE, PALE BROWN, GRAYISH RED; CRUMBLY, PULVERULENT TENACITY; EARTHY FRACTURE;



WEDGELIKE, TABULAR SOME ELONGATED CUTTINGS HABIT; WAXY, EARTHY LUSTER; SMOOTH TO SLIGHTLY SILTY TEXTURE; SOME GRADING TO SILTSTONE.

SILTSTONE = LIGHT GRAY TO GRAY WITH HUES OF BROWN; FIRM TO CRUMBLY TENACITY; BLOCKY FRACTURE; MASSIVE CUTTINGS HABIT; EARTHY, SPARKLING LUSTER; SILTY TEXTURE; MASSIVE STRUCTURE; CALCITE CEMENT.

SHALE = LIGHT TO MEDIUM GRAY, SOME WITH PURPLISH HUES, DARK YELLOWISH ORANGE; DENSE, CRUMBLY TENACITY; IRREGULAR , EARTHY FRACTURE; PLATY, WEDGELIKE CUTTINGS HABIT; WAXY, DULL LUSTER; SMOOTH WITH SLIGHT SILTY TEXTURE; THIN STRUCTURE.

SANDSTONE = LIGHT BROWNISH GRAY, WHITE, TRANSLUCENT AND CLEAR GRAINS; UPPER VERY FINE TO LOWER MEDIUM GRAIN SIZE; FAIR SORTING; FIRM TO EASILY FRIABLE; SUBROUND TO SUBANGULAR; MODERAT SPHER-ICITY; QUARTZ FRAMEWORK, GRAIN SUPPORT.

SHALE = LIGHT TO MEDIUM GRAY, YELLOWISH ORANGE, REDDISH GRAY; CRUMBLY TO PULVERULENT TENACITY; IRREGULAR, EARTHY FRACTURE; PLATY, WEDGELIKE CUTTINGS HABIT; EARTHY, SOME SPARKLING LUSTER; SMOOTH TO SILTY TEXTURE.

SANDSTONE = LIGHT PALE BROWN, VERY LIGHT GRAY, OFF WHITE WITH SLIGHT TRANSLUCENT GRAINS; PREDOMINATELY QUARTZ FRAMEWORK; LOWER FINE TO SOME UPPER FINE GRAIN; POOR SORTING; SUBANGULAR TO SUBROUND; TRACES FROSTED SURFACE FEATURES; EASILY FRIABLE TO SOME FRIABLE; CLAY MATRIX CEMENT, TRACE CARCAREOUS CEMENT; SOME GRAIN SUPPORTED; TRACE SILTSTONE INTERBEDDED.

SILTSTONE = LIGHT YELLOWISH BROWN, MODERATE PALE YELLOWISH BROWN; PULVERULENT, CRUNCHY TENACITY; EARTHY SUBBLOCKY FRACTURE; WEDGELIKE CUTTINGS HABIT; DULL SEMI EARTHY LUSTER; GRITTY TO GRANULAR TEXTURE; THIN STRUCTURE; GRADING TO SANDSTONE.

SHALE = DARK YELLOWISH BROWN, MEDIUM TO DARK OLIVE GRAY; FIRM TO MODERATELY HARD; CRUMBLY TO MODERATELY TOUGH; IRREGULAR, PLANER AND WEDGELIKE CUTTINGS HABIT; MATTE TO OCCASIONALLY SLIGHTLY RESINOUS LUSTER DOMINANTLY SMOOTH TEXTURE; SLIGHTLY TO VERY CALCAREOUS; LOCALLY SILTY, GRADING IN PART AND INTER BEDDED WITH SILTSTONE; POOR TO MODERATE FISSILITY.

SANDSTONE = VERY LIGHT GRAY TO WHITE; OCC WITH SLIGHT BROWNISH HUES; FIRM CLASTS RANGE FROM VERY FINE LOWER TO FINE LOWER; SUBANGULAR TO SUBROUND; MODERATELY SORTED; QUARTZ RICH, SCAT-TERED TO COMMON DARK GRAY TO BLACK LITHICS; CLAY MATRIX; LIGHT CALC CEMENT; LOCALLY SILTY, GRADES TO AND INTER-BEDDED WITH SILTSTONE.

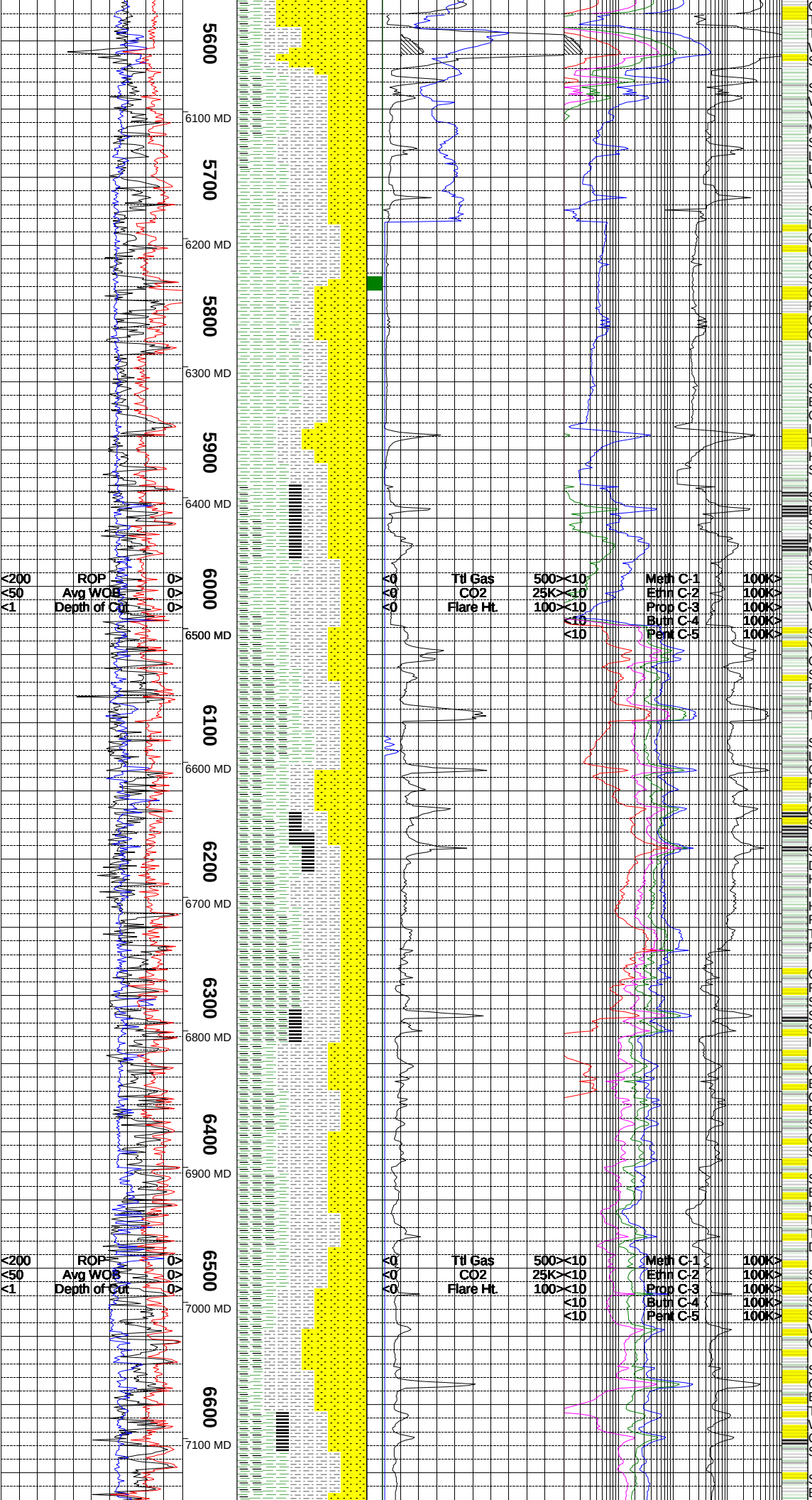
SILTSTONE = MODERATE YELLOWISH BROWN, LIGHT GRAYISH BROWN; SLIGHTLY FRIM TO MODERATELY HARD, SEMI CRUMBLY TENACITY; SUBBLOCKY TO SLIGHT IRREGULAR FRACTURE; WEDGELIKE MASSIVE CUTTINGS HABIT; DULL EARTHY RESINOUS LUSTER; GRITTY T CLAYEY TEXTURE; MASSIVE STURCTURE, NO HCL REACTION.

SHALE = GRAYISH ORANGE, MODERATE YELLOWISH BROWN; PALE GRAYISH BROWN; CRUNCHY TO SEMI CRUMBLY TENACITY; SUBBLOCKY, BLOCKY TO SLIGHTLY IRRECULAR FRACTURE; IRREGULAR WEDGELIKE CUTTINGS HABITS; DULL WAXY LUSTER; SILTY, CLAYEY TEXTURE; THICK STRUCTURE.

SILTSTONE = MODERATE TO DARK YELLOWISH BROWN, LIGHT GRAY, OCCASIONAL SLIGHTLY OLIVE HUES; FIRM TO MODERATELY HARD; CRUMBLY TO OCCASIONALLY MODERATELY TOUGH; EARTHY LUSTER WITH SCATTERED SPARKLES; ABRASIVE, GRITTY TEXTURE; MODERATELY CALCAREOUS; INTERBEDDED WITH AND INTERGRADATIONAL WITH SHALES.

SANDSTONE = WHITE TO LIGHT GRAY,SOME WITH PALE YELLOW BROWN HUES , SOME SLIGHT PURPLE HUES; FIRM TO FRIABLE; SUBANGULAR TO SUBROUND; VERY FINE TO LOWER FINE GRAINS; WELL SORTED; QUARTZ FRAMEWORK, DARK LITHICS; CLAY MATRIX, LIGHT CALCITE CEMENT.

SHALE = LIGHT TO MEDIUM DARK GRAY, PALE YELLOWISH ORANGE, REDDISH GRAY, SOME



OLIVE BLACK; CRUMBLY TO PULVERULENT TENACITY; IRREGULAR , EARTHY FRACTURE; TABULARE TO WEDGELIKE CUTTINGS HABIT; WAXY, EARTHY, SLIGHT SPARKLING LUSTER; SMOOTH TO SILTY TEXTURE; THIN STRUCTURE.

SANDSTONE = WHITE TO LIGHT GRAY SOME WITH GREENISH HUES; HARD TO FRIABLE; VERY FINE TO LOWER MEDIUM GRAIN SIZE; MODERATELY SORTED; SUBANGULAR TO SUBROUND; QUARTZ FRAMEWORK WITH DARK LITHICS; DOMINATELY GRAIN SUPPORTED WITH LIGHT CALCITE CEMENT; SOME INTERBEDDING WITH SILTSTONE.

SANDSTONE = PALE TANISH STAIN OFF WHITE; LIGHT YELLOWISH PALE BROWN; SOME CLEAR TRANSLUCENT QUARTZ FRAMEWORK; UPPER VERY FINE, PREDOMINATELY FINE GRAIN; POOR SORTING; TRACES SUBROUND, SUBANGULAR IN ANGULARITY; LOW SPHERICITY; SLIGHT SEMI FROSTED SURFACE FEATURES; FRIABLE TO SEMI FIRM FRIABLE; CLAY MATRIX CEMENT, VERY MINOR CALCAREOUS CEMENT; DARK GRAY TO GRAYISH BLACK LITHICS AND SOME DARK BROWISH SILTS INTERBEDDED.

SHALE = LIGHT TO MEDIUM GRAY, BROWNISH BLACK, YELLOWISH ORANGE, REDDISH GRAY; CRUMBLY TO PULVERULENT TENACITY; IRREGULAR, EARTHY FRACTURE; WEDGELIKE, TABULAR WITH SOME EQUANT CUTTINGS HABIT; DULL EARTHY LUSTER; SMOOTH TO SLIGHTLY SILTY TEXTURE; THIN STRUCTURE.

SILTSTONE = MODERATE TO DARK YELLOWISH BROWN, LIGHT GRAY, OCCASIONAL SLIGHTLY OLIVE HUES; FIRM TO MODERATELY HARD; CRUMBLY TO OCCASIONALLY MODERATELY TOUGH; EARTHY LUSTER WITH SCATTERED SPARKLES; ABRASIVE, GRITTY TEXTURE; MODERATELY CALCAREOUS; INTERBEDDED WITH AND INTERGRADATIONAL WITH SHALES.

SHALE = GRAYISH ORANGE, MODERATE YELLOWISH BROWN; PALE GRAYISH BROWN; CRUNCHY TO SEMI CRUMBLY TENACITY; SUBBLOCKY, BLOCKY TO SLIGHTLY IRRECULAR FRACTURE; IRREGULAR WEDGELIKE CUTTINGS HABITS; DULL WAXY LUSTER; SILTY, CLAYEY TEXTURE; THIN COAL BEDS.

SILTSTONE = LIGHT BROWNISH ORANGE, LIGHT GRAYISH BROWN; SLIGHTLY FIRM, CRUMBLY TENACITY; SUBBLOCKY, IRREGULAR, FRACTURE; BLOCKY WEDGELIKE CUTTINGS HABIT; DULL WAXY RESINOUS LUSTER; GRITTY, CLAYEY TEXTURE; THICK MASSIVE STURCTURE.

SHALE = DARK YELLOWISH BROWN, COM REDDISH HUES, OCC LIGHT GREENISH GRAY; MOD HARD; CRUMBLY TO MODERATELY TOUGH; IRREGULAR, PLANER AND WEDGELIKE CUTTINGS HABIT; MATTE TO OCCASIONALLY SLIGHTLY RESINOUS LUSTER DOMINANTLY SMOOTH TEXTURE; SLIGHTLY TO NON CALCAREOUS; POOR TO MODERATELY FISSILE.

COAL = BLACK TO DUSKY YELLOWISH BROWN; FIRM; BRITTLE; IRREGULAR CUTTINGS WITH SHARP EDGES; RESINOUS LUSTER; SMOOTH SURFACE TEXTURE; OCCASIONAL THIN STREAKS CARBONACEOUS SHALE; THINLY INTERBEDDED WITH SHALE AND SILTSTONE

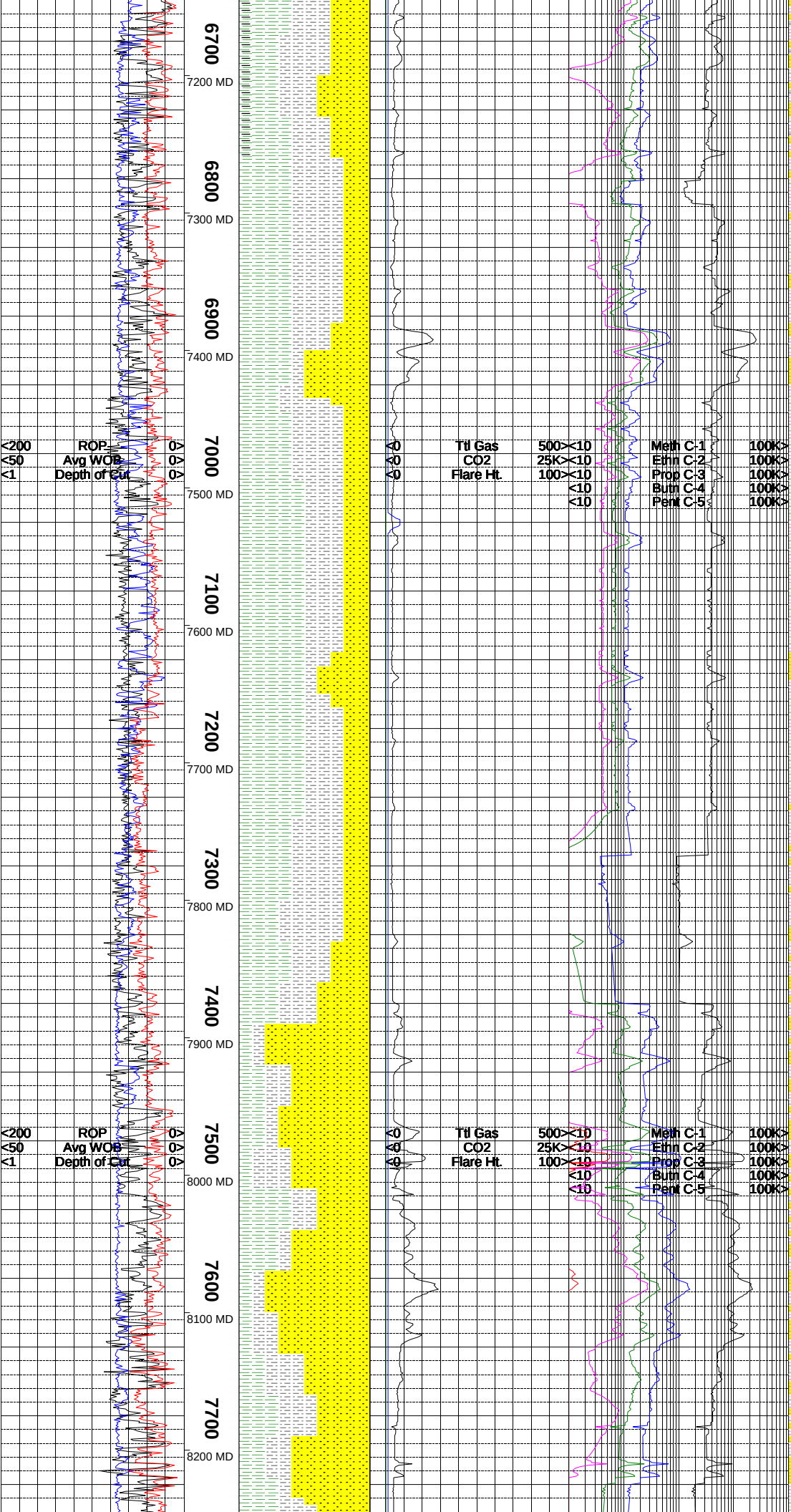
CARBONACEOUS SHALE = DUSKEY REDDISH BROWN, DARK GRAYISH BROWN; FIRM TO CRUMBLY TENACITY; EARTHY, SUBBLOCKY BLOCKY SLIGHT IRREGULAR FRACTURE; SUBBLOCKY, WEDGELIKE, SEMI MASSIVE CUTTINGS HABIT; DULL, EARTHY LUSTER; SEMI MASSIVE STRUCTURE.

SANDSTONE = WHITE TO LIGHT GRAY WITH BLACK LITHS, SOME CLASTS WITH GREENISH HUES; FIRM TO EASILY FRIABLE; VERY FINE TO FINE GRAINS; WELL SORTED; SUBROUND TO SUBANGULAR; MODERATE SPHERICITY; DOMINATE QUARTZ, LIGHT CALCITE CEMENT.

SILTSTONE = LIGHT GRAY TO BLUISH GRAY, GRAYISH RED, PALE BROWN; HARD TO FRIABLE SILTY TO GRITTY TEXTURE; EARTHY WITH SPARKLING LUSTER; SOME BANDED STRUCTURE WITH CARBONACEOUS MATERIAL; INTERGRADING WITH VERY FINE SANDSTONE.

SHALE = LIGHT TO MEDIUM GRAY, BROWNISH GRAY; DENSE, BRITTLE, CRUNCHY TENACITY; EARTHY TO BLOCKY FRACTURE; WEDGELIKE TABULAR SOME ELONGATED CUTTINGS HABIT; WAXY, EARTHY LUSTER WITH SOME SPARKLES; CLAYEY TO SILTY TEXTURE; THIN, WITH SOME SLIGHT FISSILE STRUCTURE.

SANDSTONE = WHITE TO LIGHT GRAY, PALE BROWN, OLIVE HUES, DARK LITHICS THROUGH-



OUT, EASILY FRIABLE; VERY FINE TO FINE GRAIN SIZE; WELL SORTED; SUBROUND TO SUBANGULAR; MODERATE SPHERICITY; QUARTZ DOMINATED, LIGHT CALCITE CEMENT.

CARBONACEOUS SHALE = DARK GRAY, OLIVE BLACK, GRAYISH BLACK; TOUGH, DENSE BRITTLE TENACITY; IRREGULAR, BLOCKY FRACTURE; MASSIVE WEDGELIKE, EQUANT CUTTINGS HABIT; WAXY, EARTHY LUSTER; SMOOTH TO SILTY TEXTURE; MASSIVE STRUCTURE. TRACE COAL IN SAMPLE.

NOTE: NB # 4 IN AT 7123' - GEO DIAMOND M1616 - JETS 4 X 13 / 2 X 12 SN JY9468
NB # 3 OUT AT 7123' - MADE 2990' IN 52.25 HRS.

SANDSTONE WHITE TO LIGHT GRAY WITH DARK LITHICS; QUARTZ FRAMEWORK; VERY FINE TO FINE GRAIN SIZE; WELL SORTED; SU ANGULAR TO SUB ROUND; MODERATE SPHERICITY; CARBONACEOUS MATERIAL THROUGHOUT; LIGHT CALCITE CEMENT.

SHALE = MODERATE TO DARK YELLOWISH BROWN, BROWNISH YELLOW ORANGE, OCCASIONALLY MEDIUM GRAY WITH SLIGHT GREENISH HUES; FIRM; CRUMBLY TO OCCASIONALLY MODERATELY TOUGH; IRREGULAR, SUBBLOCKY, RARELY WEDGE-LIKE CUTTINGS HABIT; MATTE TO RARELY SLIGHTLY RESINOUS LUSTER; DOMINANTLY SMOOTH TEXTURE; MODERATELY CALCAREOUS; LOCALLY SILTY, GRADING IN PART TO AND AND INTERBEDDED WITH SILTSTONE.

SHALE = BROWNISH YELLOW ORANGE, PALE YELLOWISH BROWN; PULVERULENT BRITTLE TENACITY; SUBBLOCKY MASSIVE CUTTINGS HABIT; DULL EARTHY LUSTER; GRITTY CLAYEY TEXTURE; MASSIVE THICK STRUCTURE.

SILTSTONE = LIGHT TO DARK YELLOWISH BROWN, LITH GRAY YELLOWISH BROWN; PULVERULENT TO CRUNCHY TENACITY; SUBBLOCKY, IRREGULAR FRACTURE; BLOCKY, WEDGELIKE CUTTINGS HABIT; DULLWAXY LUSTER; GRITTY, SILTY TEXTURE; THICK STRUCTURE.

SANDSTONE = WHITE TO VERY LIGHT GRAY, OCC WITH SLIGHT BROWNISH HUES; FIRM CLASTS RANGE FROM VERY FINE LOWER TO FINE LOWER; SUBANGULAR TO SUBROUND; MODERATELY SORTED; QUARTZ RICH, SCAT-TERED TO COMMON DARK GRAY TO BLACK LITHICS; CLAY MATRIX; LIGHT CALC CEMENT; LOCALLY SILTY, GRADES TO AND IS INTER-BEDDED WITH SILTSTONE.

SHALE = LIGHT TO MEDIUM LIGHT GRAY, LIGHT BROWNISH BLACK, LIGHT BLUISH GRAY; CRUMBLY TO PULVERULENT TENACITY; BLOCKLY, HACKLY SOME SLIGHTLY EARTHY FRACTURE; TABULAR, WEDGELIKE CUTTINGS HABIT; DULL, EARTHY LUSTER; CLAYEY TO SILTY TEXTURE; FISSILE STRUCTURE.

SILTSTONE = MEDIUM TO DARK, LIGHT GRAY, OLIVE BLACK; HARD TO FRIABLE; CRUNCHY, SOME CRUMBLY; EARTHY LUSTER WITH OCCASIONAL SPARKLES; SILTY TO GRITTY TEXTURE; MODERATELY CALCAREOUS; SCATTERED CARBONACEOUS MATERIAL; INTER BEDDED WITH SANDSTONE AND SHALE.

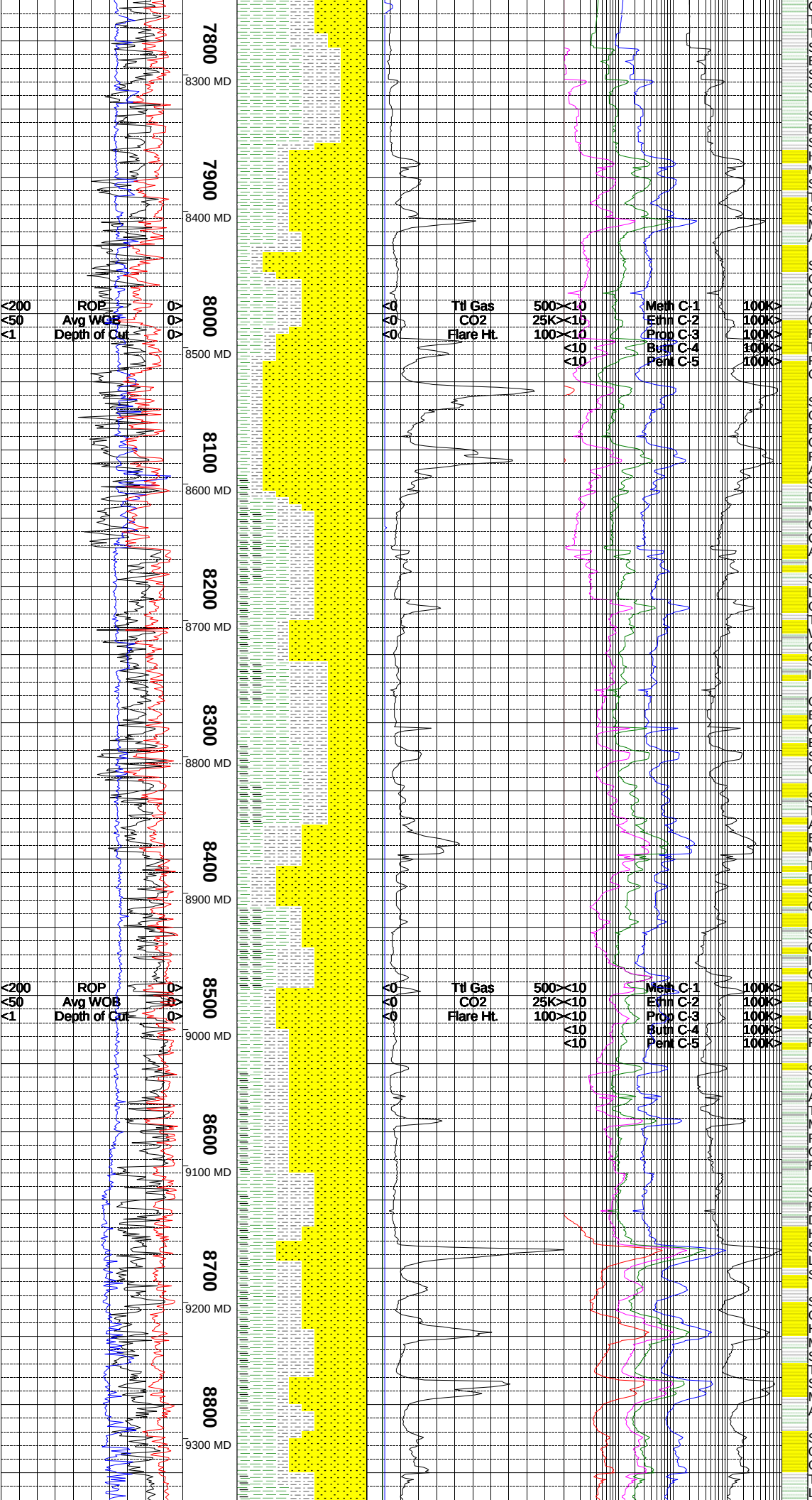
SANDSTONE = WHITE, LIGHT GRAY, PALE BROWN, LIGHT GREENISH GRAY, OCCASIONAL GRAYISH RED HUES; FIRM TO FRIABLE; VERY FINE TO FINE GRAINS; WELL SORTED; SUB ANGULAR TO SUB ROUND; MODERATE SPHER ICITY; QUARTZ FRAMEWORK WITH DARK LITHICS THROUGHOUT; CLAY MATRIX, LIGHT CALCITE CEMENT.

SANDSTONE = WHITE, VERY LIGHT GRAY, VERY LIGHT GRAYISH GREEN, DOMINATE QUARTZ ABUNDANT UNCONSOLIDATED GRAINS; CLASTS EASILY FRIABLE; FINE TO MEDIUM GRAIN SIZE; MODERATELY WELL SORTED; SUBROUND TO SUB ANGULAR, MODERATE SPHERICITY; CARBONACEOUS MATERIAL THROUGHOUT SAMPLE; GRAIN SUPPORT.

SHALE = MEDIUM LIGHT GRAY, PALE BROWN, GRAYISH RED; CRUNCHY TO CRUMBLY TENACITY EARTHY TO HACKLY FRACTURE; WEDGELIKE TO EQUANT CUTTINGS HABIT; DULL EARTHY LUSTER; CLAYEY TO SLIGHTLY SILTY TEXTURE FISSILE STRUCTURE.

SANDSTONE = WHITE, LIGHT GRAY, PALE PALE GREENISH HUES, DARK LITHICS THROUGH OUT; FINE TO UPPER MEDIUM GRAIN SIZE; SUBANGULAR TO SUBROUND; MODERATE SORTING QUARTZ FRAMEWORK, LIGHT CALCITE CEMENT.

SHALE = LIGHT BLUISH GRAY, MEDIUM LIGHT



GRAY, PALE BROWN, GRAYISH RED; CRUNCHY TO CRUMBLY TENACITY; IRREGULAR, EARTHY TO HACKLY FRACTURE; TABULAR, WEDGELIKE SOME BLOCKLY CUTTINGS HABIT; WAXY EARTHY WITH OCCASIONAL SPARKLING LUSTER; SMOOTH TO SILTY TEXTURE; THIN, FISSILE STRUCTURE.

SILTSTONE = MEDIUM TO DARK GRAY, DARK BROWN, LIGHT GRAY, OCCASIONALLY WITH SLIGHTLY OLIVE HUES; FIRM TO MODERATELY HARD; CRUMBLY TO OCCASIONALLY MODERATELY TOUGH; DULL LUSTER WITH SCATTERED SPARKLES; GRITTY, ABRASIVE TEXTURE; MODERATELY CALCAREOUS; SCATTERED BLACK PINPOINT CARBONACEOUS MATERIAL; INTERBEDDED WITH SANDSTONE AND SHALE.

SANDSTONE = WHITE, LIGHT GRAY, LIGHT GRAYISH BROWN WITH DARK LITHICS, SOME CLAST WHITE WITH PALE GREEN HUES, ABUNDANT TRANSLUCENT UNCONSOLIDATED CALCITE; EASILY FRIABLE TO FRIABLE; UPPE FINE TO UPPER VERY FINE GRAINS; SUBROUND TO SUBANGULAR; LOW SPHERICITY; QUARTZ FRAMEWORK; GRAIN SUPPORT WITH SOME CALCITE CEMENT.

SANDSTONE = LIGHT GRAY, LIGHT GREENISH GRAY; COMMON "PEPPERED" APPEARANCE; EASILY FRIABLE TO OCCASIONALLY HARD; CLASTS RANGE FROM VERY FINE LOWER TO FINE LOWER, RARE MEDIUM LOWER GRAINS; ANGULAR TO SUBROUND; MODERATELY SORTED; DOMINANTLY QUARTZ; SCATTERED DARK GRAY LITHICS AND CARBONACEOUS MATTER; WHITE CLAY MATRIX; VARIABLE GRAIN/MATRIX SUPPORTED; LIGHTLY CALCITE CEMENTED; INTERBEDDED WITH SILTSTONE AND SHALE.

SHALE = LIGHT - MEDIUM GRAY, DARK BROWN, LIGHT BLUISH GRAY, OCCASIONAL LIGHT GREENISH HUES; CRUMBLY TO BRITTLE TENACITY; IRREGULAR TO EARTHY FRACTURE; WEDGELIKE TO TABULAR, OCCASIONAL PLATY CUTTINGS HABIT; WAXY EARTHY LUSTER SOME SLIGHTLY SPARKLY; SILTY TEXTURE; THINLY INTERBEDED WITH SILTSTONE AND SANDSTONE.

CARBONACEOUS SHALE = DUSKEY REDDISH BROWN, DARK GRAYISH BROWN; FIRM TO CRUMBLY TENACITY; EARTHY, SUBBLOCKY BLOCKY SLIGHT IRREGULAR FRACTURE; SUBBLOCKY, WEDGELIKE, SEMI MASSIVE CUTTINGS HABIT; DULL, EARTHY LUSTER.

SANDSTONE = WHITE WITH BLACK LITHICS, TRANSPARENT AND TRANSLUCENT GRAINS; ABUNDANT UNCONSOLIDATED GRAINS; CLASTS EASILY FRIABLE; FINE TO MEDIUM IN SIZE; MODERATELY WELL SORTED; SUBANGULAR TO SUBROUND; LOW SPHERICITY; QUARTZ DOMINATE; CARBONACEOUS MATERIAL SCATTERED THROUGHOUT SAMPLE; LIGHT CALCITE CEMENT.

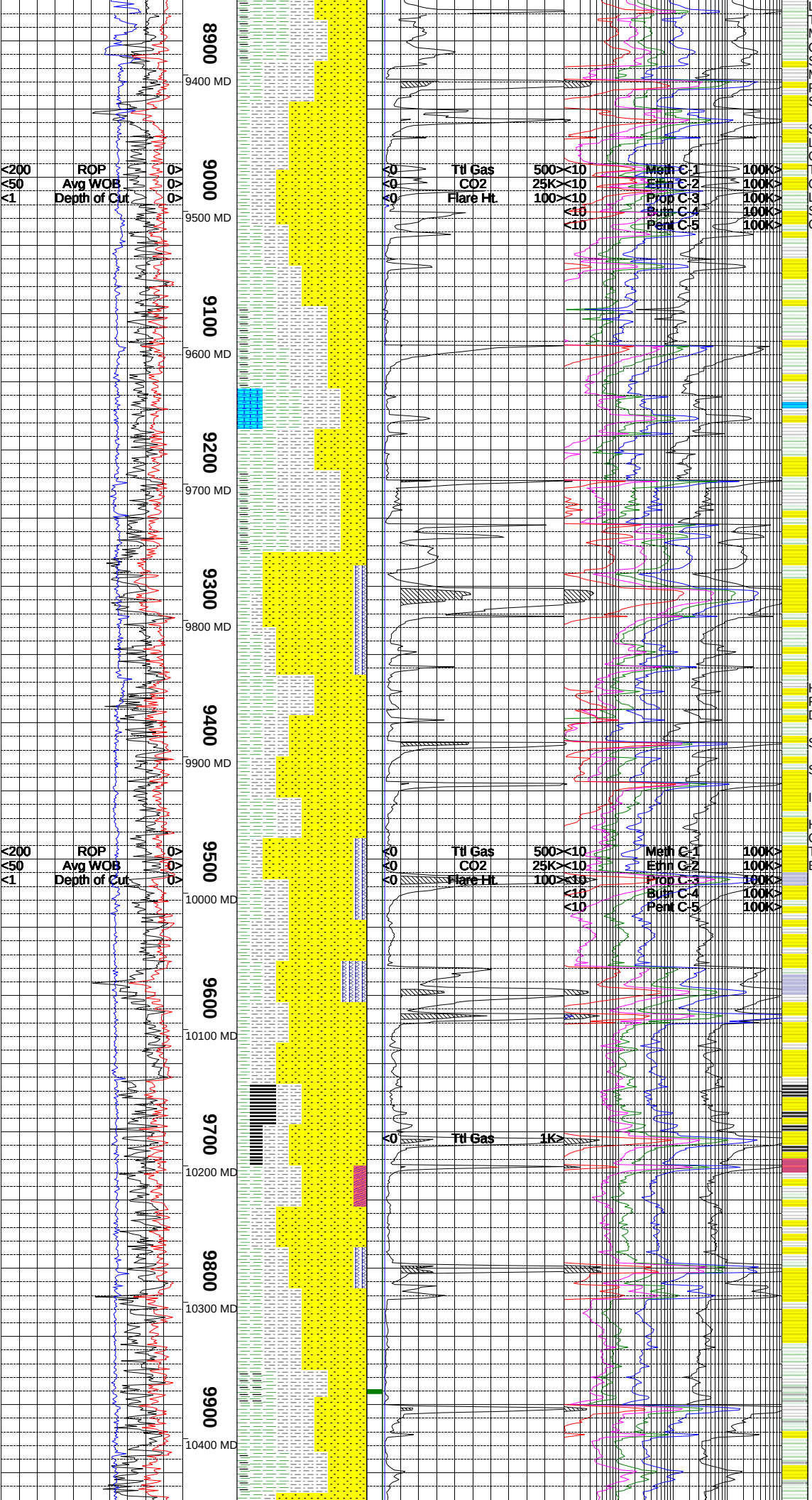
SHALE = MEDIUM LIGHT GRAY, LIGHT BLUISH GRAY, PALE BROWN, BROWNISH BLACK, GRAY ISH RED; BRITTLE TO PULVERULENT AND CRUMBLY; IRREGULAR TO BLOCKY FRACTURE; TABULAR TO WEDGELIKE WITH OCCASIONAL ELONGATED CUTTINGS HABIT; WAXY, EARTHY LUSTER WITH SOME SPARKLES; SMOOTH TO SILTY TEXTURE; THICK WITH SOME SLIGHT FISSILE STRUCTURE.

SANDSTONE = WHITE, LIGHT GRAY, PALE GREENISH HUES, SALT AND PEPPER APPEAR ANCE; CARBONACEOUS MATERIAL ABUNDANT, TRACE COAL IN SAMPLE; VERY FINE TO MEDIUM GRAIN SIZE, FAIR SORTING; SUB-ROUND TO SUBANGULAR; MODERATE SPHERICITY QUARTZ DOMINATED, CALCITE CEMENT; MILD REACTION TO DILUTE HCL.

SHALE = MEDIUM GRAY, LIGHT BLUISH GRAY, PALE BROWN; DARK YELLOWISH ORANGE; DENSE, BRITTLE TENACITY; SUB BLOCKY, HACKLY FRACTURE; TABULAR, WEDGELIKE, SOME EQUANT CUTTINGS HABIT; WAXY, EARTHY LUSTER WITH SLIGHT SPARKLES; CLAYEY, SILTY TEXTURE.

SILTSTONE = MEDIUM TO DARK GRAY, LIGHT GRAY, DARK BROWN, FIRM TO MODERATELY HARD; CRUMBLY TO COMMONLY MODERATELY TOUGH; DULL LUSTER WITH SCATTERED SPARKLES; GRITTY, ABRASIVE TEXTURE; MODERATELY CALCAREOUS; SCATTERED BLACK PINPOINT CARBONACEOUS MATERIAL; INTERBEDDED WITH SANDSTONE AND SHALE.

SANDSTONE = WHITE TO VERY LIGHT GRAY, OCCASIONALLY LIGHT GREENISH GRAY; COMMON "PEPPERED" APPEARANCE; FRIABLE TO HARD; CLASTS RANGE FROM VERY FINE LOWER TO FINE UPPER, RARELY MEDIUM



LOWER; MODERATELY SORTED; SUBANGULAR TO SUBROUND; DOMINANTLY QUARTZ WITH MINOR LITHICS; A FEW PIECES WITH COMMON CARBONACEOUS MATTER; MOSTLY GRAIN SUPPORTED; CLAY MATRIX; LIGHT TO MODERATE CALCITE CEMENT; GRADES IN PART TO AND IS INTERBEDDED WITH SILTSTONE.

SHALE = DARK TO DUSKY YELLOWISH BROWN, LIGHT TO MEDIUM GRAY, OCCASIONAL LIGHT GREENISH GRAY; FIRM TO HARD; CRUMBLY TO TOUGH; TABULAR, BLOCKY AND PLATY CUTTINGS; MATTE TO SLIGHTLY SHINY LUSTER SMOOTH TO SILTY TEXTURE; NON TO SLIGHTLY CALCAREOUS; RARELY WITH SOME CARBONACEOUS CONTENT.

NOTE: DRILL TO 9390'. RUNNING CASING.

COMMENCED DRILLING PRODUCTION HOLE ON 11/05/2009 @ 15:00:00.

SANDSTONE = LIGHT TO MEDIUM GRAY WITH OCCASIONAL BLACK LITHICS; MEDIUM GRAINS FAIR SORTING; SUBANGULAR TO SUBROUNDED; MODERATE SPHERICITY; FRIABLE; SILICA AND CALCITE CEMENT; QUARTZ GRAINS PRESENT; MODERATE GAS IN SANDSTONES.

SILTSTONE = LIGHT GRAYISH WHITE TO BROWNISH GRAY; HARD TO FIRM; BLOCKY IRREGULAR FRACTURES; MASSIVE TO PLATY CUTTINGS; DULL TO WAXY LUSTER; VERY GRITTY TEXTURE GRADING TO VERY FINE WHITE MODERATELY HARD TO FRIABLE SS; HIGH GAS IN SANDSTONES.

SANDSTONE = OFF WHITE TO BROWNISH WHITE GRAY; MODERATELY HARD TO FRIABLE; SUBROUNDED TO SUBANGULAR; WELL SORTED CALCITE WITH SILICA CEMENT; GRAIN SUPPORTED; MODERATE SPHERICITY; TRACES OF BLACK LITHIC FRAGMENTS; TRACES OF KAOLINITIC SANDS INTERBEDDED IN SHALES AND SILTSTONES; LIGHT BROWNISH AND MODERATELY HARD TO DENSE CLAYEY LIME STONE; MODERATE GAS IN SANDS.

SHALE= LIGHT TO DARK GRAY; MODERATELY HARD TO FIRM; IRREGULAR BLOCKY FRACTURE; MASSIVE PLATY CUTTINGS; DULL WAXY EARTHY LUSTER; CLAYEY SMOOTH SILTY TEXTURE;INTERBEDDED WITH SANDS SOME CARBONACEOUS SHALES.

SANDSTONE=CLEAR WHITE POORLY CEMENTED WITH LOOSE CLEAR UNCONSOLIDATED QUARTZ IN SAMPLE; VERY FINE GRAIN; WELL SORTED SUBANGULAR TO SUBROUNDED; MODERATE TO HIGH SPHERICITY; SILICA WITH SOME CALCITE CEMENT IN MATRIX; REACTION TO HCL; GRAIN SUPPORTED; TRACE OF BLACK LITHICS; KAOLINITE PRESENT HIGH GAS IN SAND.

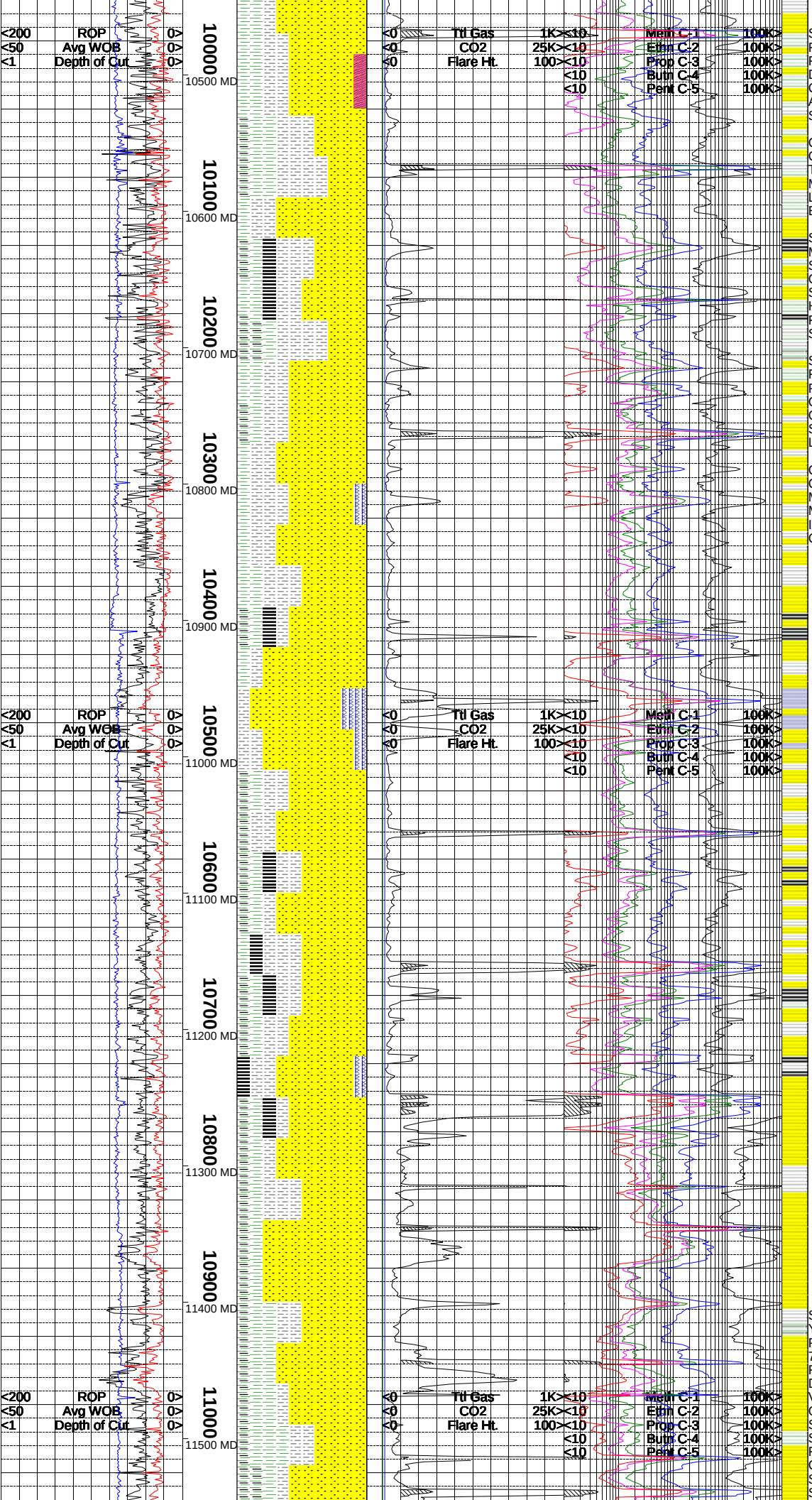
SILTSTONE = LIGHT TO MEDIUM GRAY WITH BROWNISH GRAY HUES; BRITTLE TO CRUMBLY; IRREGULAR FRACTURES; PLATY TO WEDGELIKE CUTTINGS; DULL TO SLIGHTLY POLISHED LUSTER; ABRASIVE TO SILTY TEXTURE; SANDSTONES APPEAR GRADING TO ABRASIVE SILTSTONES; THINY INTERBEDDED SHALES OBSERVED WITH HIGH NET SANDS; MODERATE TO LOW GAS VALUES IN SILTSTONES.

SANDSTONE = LIGHT GRAY TO WHITE WITH UNCONSOLIDATED BROWNISH WHITE KAOLINITIC SANDS; MEDIUM TO FINE GRAINS FAIR SORTING; SUBANGULAR TO SUBROUNDED; MODERATE SPHERICITY; INDIVIDUAL QUARTZ GRAINS PRESENT; TRACES OF PYRITE AND COAL; THIN INTERBEDDED LAYERS OF SILTSTONE AND SHALE; APPEARS GRADING TO SILTSTONE; MODERATE GAS VALUES.

SHALE = LIGHT TO MEDIUM GRAY; CRUMBLY TO CRUNCHY; IRREGULAR TO CONCHOIDAL FRACTURES; PLATY TO NODULAR CUTTINGS; DULL TO SLIGHTLY WAXY LUSTER; SILTY TO CLAYEY TEXTURE; THINLY INTERBEDDED IN SANDSTONES; LOWER GAS VALUES ASSOCIATED WITH SHALES.

COAL = BLACK WITH A SLIGHT GLOSSY APPEARANCE; BRITTLE TO PULVERULENT; IRREGULAR TO CONCHOIDAL FRACTURES; MASSIVE TO TABULAR CUTTINGS; WAXY TO SLIGHT POLISHED LUSTER; SMOOTH TEXTURE; MODERATELY THICK COAL SEAM OBSERVED; HIGHER GAS VALUES WITH COAL SEAM.

SANDSTONE = LIGHT GRAYISH WHITE TO LIGHT BROWNISH WHITE; MEDIUM TO FINE GRAINS; FAIR TO WELL SORTING; SUBANGULAR TO SUBROUNDED; MODERATE SPHERICITY; FRIABLE TO MODERATELY HARD; LOW PERCENT CALCITE CEMENT WITH SILICA GRAINS; APPEARS GRADING TO ABRASIVE SILTSTONE; UNCONSOLIDATED KAOLINITIC



SANDS OBSERVED WITH HIGHER GAS VALUES.

SHALE=LIGHT MEDIUM GRAY; MOD HARD FIRM; IRREGULAR BLOCKY TO PLANAAR FRACTURE; MASSIVE PLATY CUTTINGS HABIT; DULL EARTHY TO WAXY LUSTER; SLI SILTY CLAYEY TEXTURE; INTERBEDED WITH SANDS AND CARBONACEOUS SHALES; LOW GAS IN SHALES

CARBONACEOUS SHALE=LIGHT GRAYISH BROWN OCC DARK GRAY BLACK; BRITTLE CRUMBLY TENACITY; IRREGULAR BLOCKY FRACTURE; MASSIVE PLATY CUTINGS HABIT; DULL EARTHY LUSTER; SMOOTHSLI GRITTY TEXTURE; OCC EMBEDED IN SHALES; LOW GAS READINGS

SANDSTONE=WHITE; PRDOM UNCONSOLIDATED MEDIUM QUARTZ GRAINS; EASILY FRIABLE; SILICA CEMENT W/SME CALCITE CEMENT; PRED GRAIN SUPPORTED; SUBROUNDED TO ROUNDED SUBANGULAR; MOD WELL SORTED; MOD HIGH SPHERICITY; TRACE BLACK LITHICS FRAGS; TRACE CALCITE FILL FRACTURE IN SAMPLE

SILTSTONE=LIGHT BROWNISH GRAY; MOD HARD FIRM; IRREGULAR BLOCKY FRACTURE; MASSIVE PLATY CUTTINGS HABIT; DULL EARTHY LUSTER GRITTY TEXTURE; GRADING INTO VERY FINE GRAIN WHITE SANDSTONE; INTERBED WITH SHALES AND SOME CARBONACEOUS SHALES; LOW GAS READINGS

COAL=BLACK SEMI-GLASSY; BRITTLE TO CRUMBLY; BLOCKY IRREGULAR FRACTURE; MASSIVE WEDGELIKE CUTTINGS HABIT; METALLIC LUSTER; SMOOTH TEXTURE; EMBEDED IN SANDS AND INTERBEDED WITH SHALES CARBONACEOUS SHALES; HIGH GAS IN COAL.

CARBONACEOUS SHALE = GRAYISH BLACK TO BLACK; BRITTLE TO CRUMBLY; IRREGULAR TO PLANAR FRACTURES; PLATY TO TABULAR CUTTINGS; DULL TO SLIGHT SPARKLY LUSTER CLAYEY TO SILTY TEXTURE; APPEARS THINLY BEDDED IN SANDSTONES; MODERATE TO LOWER GAS VALUES.

SANDSTONE = LIGHT GRAYISH WHITE TO WHITE WITH BROWNISH WHITE HUES; <5% KAOLINITIC SANDS PRESENT WITH GRAYISH WHITE TO BROWN HUES; COARSE TO MEDIUM -FINE GRAINS; FAIR SORTING; SUBANGULAR TO SUBROUNDED; MODERATE SPHERICITY; FRIABLE; CALCITE CEMENT WITH SILICA GRAINS; TRACES OF CARBONACEOUS SHALES; INCREASE IN KAOLINITIC SANDS WITH GAS.

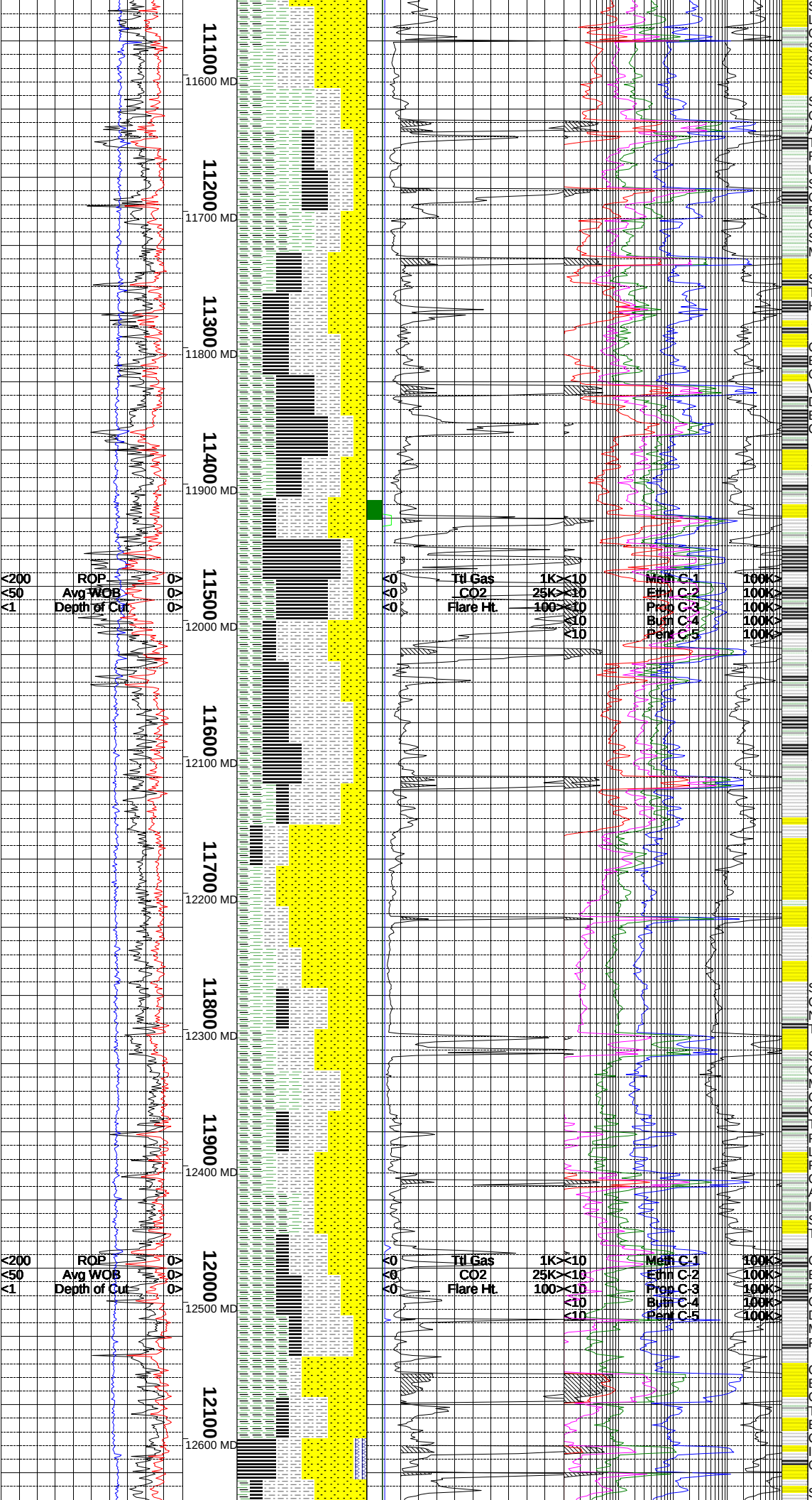
SILTSTONE = LIGHT TO MEDIUM GRAY WITH OCCASIONAL BLUISH GRAY HUES; BRITTLE TO CRUMBLY; IRREGULAR TO PLANAR FRACTURE; PLATY TO TABULAR CUTTINGS; WAXY TO DULL-EARTHY LUSTER; SILTY TO SLIGHT ABRASIVE TEXTURE; APPEARS GRADING FROM SANDSTONE INTO ABRASIVE SANDY SILTSTONE TRACES OF KAOLINITIC SANDS; MODERATE GAS VALUES.

SANDSTONE = LIGHT GRAYISH WHITE TO WHITE WITH BROWNISH WHITE KAOLINITIC SANDS; MEDIUM TO FINE GRAINS; FAIR TO WELL SORTING; SUBANGULAR TO SUBROUNDED MODERATE TO HIGH SPHERICITY; FRIABLE TO MODERATELY HARD; CALCITE AND SILICA CEMENT; QUARTZ GRAINS OBSERVED; <5% BLACK LITHIC FRAGMENTS; APPEARS GRADING TO ABRASIVE SILTSTONES; TRACES OF PYRITE OBSERVED; HIGHER GAS VALUES WITH SANDSTONES.

SHALE = LIGHT TO MEDIUM GRAY; TOUGH TO BRITTLE; IRREGULAR TO PLANAR FRACTURES; OCCASIONAL MASSIVE TO TABULAR CUTTINGS; SLIGHTLY WAXY TO DULL LUSTER; SMOOTH TO SLIGHT SILTY TEXTURE WHEN GRADING FROM SILTSTONE; TRACES OF KAOLINITIC SANDS AND PYRITE; LOW TO MODERATE GAS.

COAL = DARK GRAY TO BLACK; CRUMBLY TO PULVERULENT; IRREGULAR TO HACKLY FRACTURES; PLATY TO WEDGELIKE CUTTINGS; WAXY LUSTER; SMOOTH TEXTURE; THINLY INTERBEDDED IN SANDSTONE AND SILTSTONE; MODERATE TO HIGH GAS VALUES WITH COALS.

SANDSTONE = VERY PALE ORANGE TO YELLOWISH GRAY, FREQUENTLY SALT AND PEPPER DUE TO DARK LITHIC CLASTS; 100 TO 70% QUARTZ CLASTS WITH UP TO 30% LITHIC FRAGMENTS, MOST COMMON BEING BLACK TO DARK GRAY SHALE WITH MINOR ORGANICS; VERY FINE TO MEDIUM GRAINED WITH FINE GRAINED THE MOST COMMON; FAIR TO WELL SORTED; ROUNDED TO SUBANGULAR LARGER SAND GRAINS; FROSTED GRAINS; EASILY FRIABLE TO FRIABLE, MINOR SOFT; PREDOM. CALCITE CEMENT; PREDOMINATELY GRAIN SUPPORTED; OCCASIONALLY GRADING INTO SILTSTONE AND VERY RARELY INTO ORGANIC



SILTSTONE OR SANDSTONE; INTERBEDDED LIGHT GRAY TO MEDIUM GRAY SHALE AND OCCASIONAL CARBOANCEOUS SHALE; GAS SHOWS SEEN IN POROUS SANDSTONE OR ORGAINC SANDSTONE; NO LUMINESCENCE OR OIL STAINING SEEN.

SANDSTONE = YELLOWISH GRAY TO BROWNISH GRAY, FREQUENTLY WITH A SALT AND PEPPER APPEARANCE; MEDIUM TO FINE GRAIN; FAIR TO WELL SORTED; SUBANGULAR TO SUB-ROUNDED; 100 TO 80 % QUARTZ GRAINS WITH UP TO 20% LITHIC FRAGMENT INCLUDING DARK SHALE; GRAINS FROSTED WITH VERY MINOR OCCURANCE OF ORGANIC STAINING; INTER-BEDDED SHALE AND CARBONACEOUS SHALES AND GRADES INOT AND INTERBEDDED WITH SILT-STONE; GAS SEEN IN SANDSTONE WITH MODERATE VISIBLE POROSITY.

SILTSTONE = BROWNISH GRAY; CRUMBLY TO CRUNCHY TENACITY; NODULAR CUTTING HABIT; INTERBEDDED CARBONACEOUS SHALE AND SANDSTONE.

CARBONACEOUS SHALE = GRAYISH BLACK TO BLACK, SOME BROWNISH BLACK; TOUGH TO CRUMBLY TENACITY; PLANAR FRACTURE; WEDGELIKE TO TABULAR CUTTINGS; EARTHY TO DULL, WITH OCCASIONAL WAXY LUSTER; INTER BEDDED ORGANIC SILTSTONE AND COAL SEAMS; GAS SEEN IN COAL SEAMS.

SANDSTONE = LIGHT GRAYISH WHITE TO WHITE; MEDIUM TO FINE GRAINS; FAIR SORTING; SUBANGULAR TO SUBROUNDED; MODERATE SPHERICITY; FRIABLE TO HARD; SLIGHT SILICA CEMENT AND GRAIN SUPPORTED; <5% BLACK LITHICS; MODERATE GAS VALUES.

COAL = BLACK; BRITTLE TO PULVERULENT; IRREGULAR TO CONCHOIDAL FRACTURES; MASSIVE TO WEDGELIKE CUTTINGS; VITREOUS TO WAXY LUSTER; SMOOTH TEXTURE; THINLY INTERBEDDED BECOMING MORE PROMINENT; SANDSTONE BECOMING DARKER GRAY AND A HIGHER PERCENT OF CARBONACEOUS SHALES OBSERVED; HIGHER GAS VALUES WITH COALS.

SILTSTONE = DARK TO MEDIUM GRAY WITH OCCASIONAL GRAYISH BLACK HUES; SLIGHTLY DENSE TO BRITTLE; IRREGULAR FRACTURES; PLATY TO WEDGELIKE CUTTINGS; SLIGHT POLISHED TO DULL LUSTER; SILTY TO ABRASIVE TEXTURE; SANDSTONES APPEAR GRADING TO ABRASIVE SILTSTONES; BLACK ORGANIC SILTSTONES APPEAR GRADING TO SHALES; ABUNDANT COAL OBSERVED; TRACES PYRITE IN SANDSTONE LAYERS; HIGH GAS IN COALS.

CARBONACEOUS SHALE = MEDIUM TO DARK GRAYISH BLACK; BRITTLE TO CRUNCHY; IRREGULAR TO SPLINTERY FRACTURES; PLATY TO ELONGATED CUTTINGS; SLIGHT GREASY DULL LUSTER; SLIGHTLY SILTY TO SMOOTH TEXTURE; TRACES OF KAOLINITIC SANDS; ALTERNATING COAL SEAMS WITH VARYING THICKNESSES; MODERATE TO HIGHER GAS VALUES.

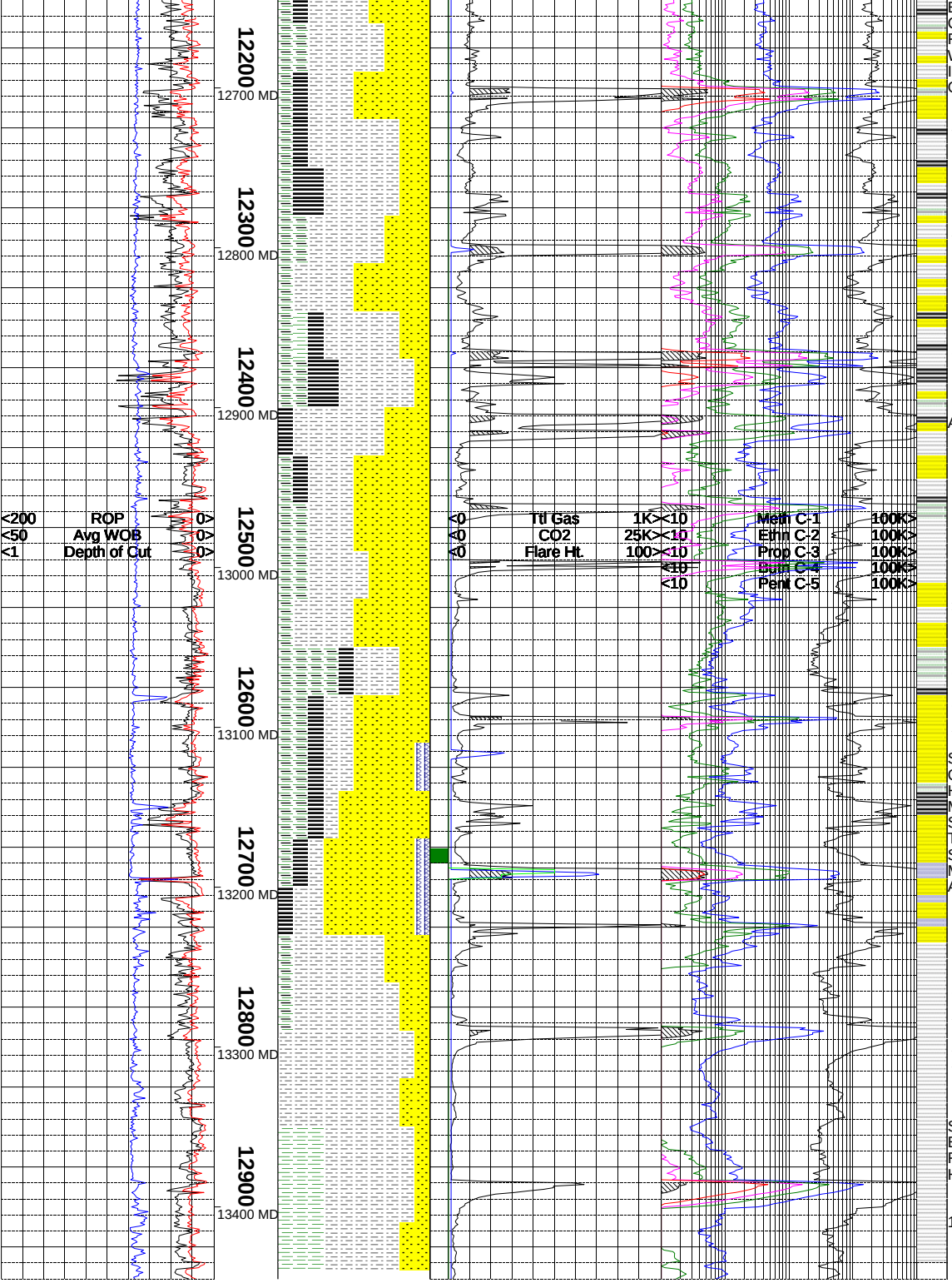
SILTSTONE = LIGHT GRAYTO BROWNISH GRAY; CRUMBLY TO CRUNCHY, MINOR BRITTLE; NODULAR TO WEDGELIKE CUTTINGS; SUCROSIC TO SILTY TEXTURE.

SANDSTONE = BROWNISH GRAY TO LIGHT GRAY; OFTEN APPEARS AS WITH SALT AND PEPPER OR MOTTLED APPEARNCE; 80 TO 60% QUARTZ CLASTS WITH 20 TO 40% LITHIC FRAGMENTS OF REDDISH BROWN AND BLACK; MEDIUM UPPER TO VERY FINE UPPER GRAIN SIZE; FAIR TO POOR SORTING; SUBANGULAR TO SUBROUNDED; LOW TO MODERATE SPHERICITY; QUARTZ OFTEN FROSTED, MODERATE TRANSLUCENT GRAINS; GRADES INTO SILSTONE AND OFTEN SITSTONE AND SANDSTONE STAINED BROWN BY ORGANICS; INTERBEDDED SHALE AND MINOR CARBONACEOUS SHALE; LOW BACKGROUND GAS SEEN THROUGHOUT.

CARBONACEOUS SHALE = GRAYISH BLACK TO BLACK; BRITTLE TO CRUNCHY TENACITY; PLANAR FRACTURE; TABULAR TO WEDGELIKE CUTTINGS HABIT; GRITTY TO CLAYEY TEXTURE DULL OR EARTH, RARE WAXY LUSTER, VERY MINOR SPARKLING; INTERBEDDED ORGANIC RICH SILTSTONE AND MINOR SANDSTONE.

CARBONACEOUS SHALE = GRAYISH BLACK TO BLACK, OCCASIONALLY BROWNSIH BLACK; CRUMBLY TO BRITTLE TENACITY; WEDGELIKE TO NODULAR CUTTINGS HABITL DULL TO EARTHY, RARE SPARKLING; GRANULAR TO CLAYEY; GRADES INTO ORGANIC SILTSTONE; INTERBEDDED COAL SEAMS AND SANDSTONE; GAS SEEN IN COAL SEAMS.

SILTSTONE = BROWNISH GRAY WITH MOTTLED



BROWNISH BLACK TO LIGHT GRAY; BRITTLE TO CRUNCHY; NODULAR TO ELONGATED CUTTINGS; FROSTED TO DULL LUSTER; GRANULAR TO SILT WITH SOME SUCROSIC; ORGAINC STAINING; INTERBEDDED COAL AND CARBONACEOUS SHALE; GAS SEEN IN COAL SEAMS.

SANDSTONE = LIGHT GRAYISH WHITE TO WHITE WITH UNCONSOLIDATED WHITE TO LIGHT GRAY KAOLINITIC SANDS; FINE GRAINS; WELL SORTED; SUBROUNDED TO ROUNDED; MODERATE TO HIGH SPHERICITY; FRIABLE TO HARD; SILICA CEMENT WITH QUARTZ GRAINS OBSERVED; SILTSTONE APPEARS GRADING FROM SANDSTONE; SILICIC DOMINATED SILTSTONES; COAL SEAMS INTERBEDDED IN SANDSTONES AND SILTSTONES ALONG WITH THIN LAYERS OF CARBONACEOUS SHALES; MODERATE TO HIGH GAS IN SANDSTONES AND COAL SEAMS.

SILTSTONE = MEDIUM TO DARK GRAY; DENSE TO CRUMBLY; IRREGULAR TO MOTTLED FRACTURES; PLATY TO NODULAR CUTTINGS; SLIGHT WAXY TO POLISHED LUSTER; SILTY TO ABRASIVE TEXTURE; THIN COAL SEAMS AND CARBONACEOUS SHALES INTERBEDDED; LOWER GAS VALUES OBSERVED.

SANDSTONE = LIGHT TO MEDIUM GRAY WITH GRAYISH WHITE HUES; FINE GRAINS; WELL SORTED; SUBROUNDED TO ROUNDED; HIGH SPHERICITY; <5% UNCONSOLIDATED KAOLINITIC SANDS; FIRMLY FRIABLE TO HARD; SILICA CEMENT WITH QUARTZ GRAINS OBSERVED; TRACES OF COAL OBSERVED; SANDSTONE APPEARS GRADING TO VERY ABRASIVE SILICIC SILSTONES; HIGHER GAS VALUES IN SANDSTONES AND COALS.

COAL = BLACK; CRUMBLY TO PULVERUENT; IRREGULAR TO MOTTLED FRACTURES; PLATY TO NODULAR CUTTINGS; RESINOUS TO WAXY LUSTER; SMOOTH TEXTURE; APPEARS AS THINLY INTERBEDDED SEAMS IN SILTSTONES AND SANDSTONES; <5% KAOLINITIC SANDS.

SILTSTONE = MEDIUM TO DARK GRAY, LIGHT GRAY, DARK BROWN, FIRM TO MODERATELY HARD; CRUMBLY TO COMMONLY MODERATELY TOUGH; DULL LUSTER WITH SCATTERED SPARKLES; GRITTY, ABRASIVE TEXTURE; MODERATELY CALCAREOUS; SCATTERED BLACK PINPOINT CARBONACEOUS MATERIAL; INTERBEDDED WITH SANDSTONE AND SHALE.

SILTSTONE = MEDIUM TO DARK GRAY WITH GRAYISH BLACK HUES; SLIGHTLY DENSE TO BRITTLE; IRREGULAR TO CONCHOIDAL FRACTURES; SLIGHTLY EARTHY POLISHED TO SPARKLY LUSTER; ABRASIVE TO SILTY TEXTURE; SANDSTONE IS VERY FINE GRAINED AND APPEARS GRADING TO SANDY ABRASIVE SILTSTONES; CARBONACEOUS SHALES AND DARK GRAYISH BLACK SHADES OF SHALES ARE OBSERVED; GRAYISH BLACK HUES IN SILTSTONES ARE MORE ABUNDANT; LOWER GAS VALUES OBSERVED.

SILSTSTONE = MEDIUM TO DARK GRAY; BRITTLE TO CRUNCHY TENACITY; BLOCKY FRACTURE; FLAKY TO TABULAR CUTTINGS HABIT; DULL TO EARTHY LUSTER; FISSILE.

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