

APPENDIX 2

SAMPLE DESCRIPTIONS

200' - 230' --- MEREENIE SANDSTONE: orange, very fine to fine grained, moderately well sorted, sub-rounded, quartzose, siliceous cement, ferruginous staining.
POROSITY: fair.

230' - 260' --- 100% SANDSTONE: orange, medium grained, lightly frosted, sub-rounded to rounded, very well sorted, quartzose, siliceous cement, ferruginous staining, friable.
POROSITY: good.

260' - 300' --- 100% SANDSTONE: A/A.
POROSITY: good.

300' - 330' --- 100% SANDSTONE: A/A.
POROSITY: good.

330' - 360' --- 100% SANDSTONE: A/A, slightly more argillaceous
POROSITY: good.

360' - 390' --- 100% SANDSTONE: A/A.

390' - 420' --- 100% SANDSTONE: A/A.
POROSITY: good.

420' - 450' --- 100% SANDSTONE: A/A.
POROSITY: good.

450' - 490' --- 100% SANDSTONE: A/A.
POROSITY: good.

490' - 510' --- 100% SANDSTONE: orange, fine to medium grained, generally medium, moderately well sorted, sub-rounded, lightly frosted, quartzose, siliceous cement, ferruginous staining, few chips, red/brown.
POROSITY: good.

510' - 540' --- 100% SANDSTONE: A/A.
POROSITY: good.

540' - 570' --- 100% SANDSTONE: A/A.
POROSITY: good.

570' - 600' --- 100% SANDSTONE: orange, light pink/orange, red/brown, to mauve/brown, fine grained, some medium grained, moderately well sorted, sub-angular to sub-rounded, generally sub-rounded, cleaner grains lightly frosted, quartzose, siliceous cement, ferruginous staining.
POROSITY: good.

600' - 630' --- 100% SANDSTONE: A/A.
POROSITY: good.

630' - 660' --- 100% SANDSTONE: A/A.
POROSITY: good.

660' - 690' --- 100% SANDSTONE: orange, trace pink/orange and mauve,
fine to medium grained, generally medium,
moderately sorted, sub-rounded to rounded, some
grains lightly frosted, quartzose, siliceous
cement, ferruginous staining.
POROSITY: good.

690' - 720' --- 100% SANDSTONE: orange to pink/orange and mauve, fine
grained with silty cement, some medium grains,
well sorted, sub-angular to sub-rounded,
quartzose, siliceous cement, ferruginous
staining.
POROSITY: fair to good.

720' - 750' --- 100% SANDSTONE: A/A.
POROSITY: fair to good.

750' - 780' --- 100% SANDSTONE: orange, minor clear/white and pink,
fine to medium grained, mostly medium,
sub-rounded to rounded, generally rounded, well
sorted, quartzose, siliceous cement, ferruginous
staining.
POROSITY: good.

780' - 810' --- 100% SANDSTONE: clear to orange, minor pink/orange,
fine to medium grained, very well sorted,
sub-rounded to rounded, mostly rounded,
quartzose, siliceous cement, minor silty cement,
ferruginous staining.
POROSITY: good.

810' - 840' --- 100% SANDSTONE: A/A, some chips red/brown.
POROSITY: good.

840' - 870' --- 100% SANDSTONE: orange, clear, light pink/orange,
fine grained, well sorted, sub-angular,
quartzose, siliceous cement, minor silty cement,
ferruginous staining.
POROSITY: good.

870' - 900' --- 100% SANDSTONE: clear to light pink/orange, fine
grained, very well sorted, sub-angular,
quartzose, siliceous cement, minor ferruginous
staining.
POROSITY: good.

900' - 930' --- 100% SANDSTONE: orange, minor light pink/orange, fine grained, sub-angular to sub-rounded, well sorted, quartzose, siliceous cement, ferruginous staining.
POROSITY: good.

930' - 960' --- 100% SANDSTONE: orange, minor red/brown, fine to medium grained, sub-angular to rounded, moderate sorting, quartzose, siliceous cement, ferruginous staining, trace silty cement.
POROSITY: good.

960' - 990' --- 100% SANDSTONE: A/A.
POROSITY: good.

990' - 1020' --- 100% SANDSTONE: clear to light orange, minor red/brown, fine to medium grained, sub-angular to sub-rounded, moderately poorly sorted, quartzose, siliceous cement, ferruginous staining and rare silty matrix.
POROSITY: good.

1020' - 1050' --- 100% SANDSTONE: light orange, minor red/brown, fine to medium grained, sub-angular to rounded, poorly sorted, quartzose, siliceous cement, rare silty cement, ferruginous staining.
POROSITY: good.

1050' - 1080' --- 100% SANDSTONE: light orange to orange, fine grained, sub-angular, well sorted, quartzose, siliceous cement, ferruginous staining.
POROSITY: good.

1080' - 1110' --- 100% SANDSTONE: A/A.
POROSITY: good.

1110' - 1140' --- 100% SANDSTONE: orange, minor red/brown, fine grained, sub-angular, well sorted, quartzose, siliceous cement, ferruginous staining.
POROSITY: good.

1140' - 1170' --- 100% SANDSTONE: A/A.
POROSITY: good.

1170' - 1200' --- 100% SANDSTONE: orange, trace white, generally fine grained, sub-angular, scattered coarse rounded frosted clear quartz grains, poor sorting, quartzose, siliceous cement.
POROSITY: good.

1200' - 1230' --- 100% SANDSTONE: dominantly orange, minor clear to white and light orange, fine and coarse grained, 80% fine grained, sub-angular, coarse grains, rounded and frosted, poor sorting, quartzose, siliceous cement, ferruginous staining.
POROSITY: good.

1230' - 1260' --- 100% SANDSTONE: A/A, light orange, but coarse grains.
POROSITY: good.

1260' - 1290' --- 100% SANDSTONE: A/A.
POROSITY: good.

1290' - 1320' --- 100% SANDSTONE: light pink/orange, fine to coarse grained, sub-angular to rounded (coarse grained) very poor sorting, quartzose, siliceous cement.
POROSITY: good.
REMARK: producing 900 bbls/hr water.

1320' - 1350' --- 100% SANDSTONE: clear to light pink/orange, fine to coarse grained, sub-rounded to rounded, roundness increases with size, very poor sorting, quartzose, siliceous cement.
POROSITY: good.

1350' - 1380' --- 100% SANDSTONE: clear and white, fine to coarse grained, mostly fine and medium, angular to sub-angular, coarse grains rounded, very poor sorting, quartzose siliceous cement, very hard.
POROSITY: poor to fair.

1380' - 1410' --- 100% SANDSTONE: A/A, grains more angular.
POROSITY: poor.

1410' - 1440' --- 100% SANDSTONE: A/A.
POROSITY: poor.

1440' - 1470' --- 100% SANDSTONE: clear to light red/brown and orange, fine to medium grained, some coarse, sub-angular coarse grains to sub-rounded, poor sorting, quartzose, siliceous cement, light ferruginous staining.
POROSITY: poor.
REMARK: 10% rock flour.

1470' - 1500' --- 100% SANDSTONE: A/A, slightly more orange grains.
POROSITY: poor, 10-20% rock flour.

1500' - 1530' --- 100% SANDSTONE: A/A.
POROSITY: poor.
REMARK: 10-20% rock flour.

1530' - 1560' --- 100% SANDSTONE: clear to white, minor orange and red brown, fine to medium and coarse grained. Rounded, frosted in places, poorly sorted, quartzose, siliceous cement, light ferruginous staining, brittle to hard.
POROSITY: poor.
REMARK: 30% white rock flour.

1560' - 1590' --- 100% SANDSTONE: white to clear (40%), orange to mauve (60%), A/A, occasional mauve and red brown argillaceous matrix.
POROSITY: poor.

1590' - 1620' --- 100% SANDSTONE: white to clear, minor yellow staining, dominantly fine grained, 15% medium to coarse, sub-rounded to rounded, some frosted, moderately sorted, quartzose, siliceous cement, 40% loose grains, brittle.
POROSITY: poor.
REMARK: 20% rock flour.

1620' - 1650' --- 90% SANDSTONE: 70% white to clear with increased yellow mottling, 30% orange, red brown and mauve brown, fine with occasional medium and coarse grains, sub-rounded, moderately to poorly sorted, siliceous cement, ferruginous staining, red to mauve brown with argillaceous matrix.
10% SILTSTONE: mauve brown, sub-fissile, arenaceous, grades to sandstone.

1650' - 1680' --- 80% SANDSTONE: mauve brown, pale mauve, white/clear, mottled orange, light green, trace yellow, dominantly fine grained, occasionally medium to coarse, sub-rounded, moderately poorly sorted, quartzose, siliceous cement, ferruginous staining, silty/argillaceous matrix in places, hard.
20% SILTSTONE: bright orange (brick red), mauve brown, green, grades from argillaceous to arenaceous to sandstone, fissile to blocky, hard, well indurated.

1680' - 1710' --- 80% SANDSTONE: white to clear, green, mottled pink orange, mauve brown and brick red, fine grained, A/A, mauve brown and brick red have silty matrix, grading to siltstone.
POROSITY: poor to fair.
20% SILTSTONE: A/A.

1710' - 1740' --- 90% SANDSTONE: dominantly clear to white, also off white, mauve with brick red and mauve brown, fine grained with occasional medium to coarse, sub-rounded, moderately poorly sorted, siliceous cement, minor ferruginous staining, generally hard.
POROSITY: poor to fair.

10% SILTSTONE: bright orange, (brick red), mauve brown, green, occasional mottling, green/red, sub-blocky to fissile, argillaceous grading to arenaceous in places, hard, firm.

1740' - 1770' --- 90% SANDSTONE: dominantly orange/brick red, also green, mauve and off white, occasional green/red mottling, fine with occasional medium and coarse grains, sub-rounded to rounded, some frosted grains, moderately poorly sorted, ferruginous staining, siliceous cement, orange and brick red have silty matrix.
POROSITY: poor.

10% SILTSTONE: brick red, mauve brown, sub-blocky to sub-fissile, becoming more arenaceous and sandy, grades to sandstone.

1770' - 1800' --- 100% SANDSTONE: pale pink/mauve, off white, minor orange, brick red and green, fine with occasional medium and coarse grains, sub-angular to rounded grains, moderate sorting, siliceous cement, quartzose, slightly ferruginous staining, generally hard.
POROSITY: poor.

TR 1801' --- SILTSTONE: A/A.
REMARK: EST. TOP CARMICHAEL SANDSTONE @ 1801 FEET.

1800' - 1820' --- 100% SANDSTONE: orange to brick red, minor clear, mauve and off white, fine grained, sub-angular to subrounded grains, well sorted, siliceous cement, ferruginous argillaceous/silty matrix throughout.
POROSITY: poor.
REMARK: 10% rock flour.

1820' - 1850' --- 100% SANDSTONE: dominantly bright orange, also brick red, fine grained, sub-angular to sub-rounded, well sorted, siliceous cement, strong ferruginous staining throughout, brick red has silty argillaceous matrix and grades to siltstone, brittle to hard.
POROSITY: poor to fair.

TR SHALE: brick red to red brown, fissile, argillaceous, sandy in parts, firm, indurated.
REMARK: 5% rock flour.

1850' - 1860' --- 100% SANDSTONE: A/A, become slightly lighter orange, fewer brick red cuttings.
POROSITY: poor to fair.
REMARK: 10% rock flour.

1860' - 1890' --- 100% SANDSTONE: brick red to orange and clear, dominantly fine grained, occasionally medium and coarse rounded grains, moderately well sorted, siliceous cement, ferruginous staining, brick red with silty argillaceous matrix grading to siltstone, hard to brittle.
 POROSITY: poor to fair.
 TR SILTSTONE: brick red, sub-blocky, generally sandy, firm, indurated.

1890' - 1920' --- 100% SANDSTONE: orange to brick red, fine grained, well sorted, sub-angular to sub-rounded grains, siliceous cement, ferruginous staining, brick red has argillaceous matrix, brittle to hard.
 POROSITY: poor.
 TR SILTSTONE: A/A.

1920' - 1950' --- 100% SANDSTONE: A/A, also minor clear with mottled orange.
 POROSITY: poor.
 TR SILTSTONE: A/A.

1950' - 1980' --- 90% SANDSTONE: orange to pink orange, minor clear, fine grained, well sorted, sub-angular to sub-rounded, siliceous cement, ferruginous, trace silty matrix, brittle.
 POROSITY: poor.
 10% SILTSTONE: red brown, blocky to sub-fissile, arenaceous, very sandy, firm.

1980' - 2000' --- 100% SILTSTONE: red brown, mottled with green in places, sub-blocky to sub-fissile, sandy in parts, weakly dolomitic in parts, arenaceous, firm.
 TR SANDSTONE: orange to clear, fine to very fine grained, quartzose, siliceous cement.
 2005' --- REMARK: EST TOP UPPER STOKES @ 2005 FEET.

2000' - 2010' --- 100% SILTSTONE: A/A.
 TR SANDSTONE: A/A, also with green.

2010' - 2020' --- 10% SANDSTONE: pale orange to off white, clear and green, fine grained, occasional coarse, sub-angular to sub-rounded grains, well sorted, siliceous cement, slightly ferruginous staining, brittle.
 90% SILTSTONE: red brown with 10% green mottling, sub-fissile, arenaceous, sandy in parts, firm.

2020' - 2040' --- 40% SANDSTONE: pale orange to off white and green, fine grained, A/A.
 POROSITY: poor.
 60% SILTSTONE: A/A, grades to sandstone in places.

2040' - 2070' --- 100% SILTSTONE: red brown mottling with green in places, blocky to sub-fissile, sandy and arenaceous in parts, occasionally weakly dolomitic, firm, indurated.

TR SANDSTONE: pale orange, off white, green, fine to very fine grained, well sorted, siliceous cement.

2070' - 2100' --- 10% SANDSTONE: A/A.
90% SILTSTONE: A/A.

2100' - 2130' --- 10% SANDSTONE: off white, pale orange, green, very fine to medium grained, sub-angular to sub-rounded, moderately poorly sorted, siliceous/dolomitic cement, argillaceous matrix.
POROSITY: poor.

90% SILTSTONE: red brown, brick red, green to grey green, blocky to sub-fissile, micaceous in parts, becoming more argillaceous, firm.

2130' - 2160' --- 30% SANDSTONE: off white to pale orange, minor green, very fine to fine grained, sub-angular to sub-rounded, well sorted, quartzose, siliceous in part, dolomitic cement, brittle to hard, occasionally argillaceous matrix.
POROSITY: poor.

70% SILTSTONE: red brown, brick red, 10% green, blocky to sub-fissile, arenaceous, sandy in places, weakly dolomitic in parts, ferruginous, firm, indurated.

2160' - 2190' --- 10% SANDSTONE: A/A, becoming finer grained, coarsely micaceous in parts.
90% SILTSTONE: also with minor mauve grey.

2190' - 2220' --- 10% SANDSTONE: off white to dirty pale grey and grey green, dominantly very fine grained, grades from siltstone, medium to coarsely micaceous in places, siliceous/dolomitic cement, hard.
POROSITY: poor.

90% SILTSTONE: 80% red brown, 20% green, minor mauve brown, sub-blocky, arenaceous, grades to very fine sandstone, mauve and arenaceous grey green are dolomitic, red brown, weakly dolomitic in places, arenaceous grey green is micaceous, firm, indurated.

2220' - 2250' --- TR SANDSTONE: buff, grey green, orange, off white, very fine grained, micaceous, siliceous/dolomitic cement, very hard.
100% SILTSTONE: 80% red brown, 20% green to grey green, sub-fissile, grain sized and sorting becoming more uniform, weakly dolomitic - green more so than brown

2250' - 2280' --- 100% SILTSTONE: 70% red brown, 30% green, minor mauve brown, sub-fissile to fissile, homogeneous, dolomitic throughout - green more so than brown, firm, indurated.

2280' - 2310' --- TR SANDSTONE: off white to dirty grey and grey green, very fine grained, dolomitic, micaceous, occurs as stringers.
100% SILTSTONE: 60% red brown, 40% grey green, grey and off white, sub-blocky to fissile, uniform sorting, dolomitic, trace calcareous, grey more dolomitic, off white to grey, grades to very fine grained sandstone.

2310' - 2325' --- TR SANDSTONE: A/A.
100% SILTSTONE: 70% red brown to brick red, 30% green to grey green, A/A.

2322' --- TR GYPSUM: clear, coarsely crystalline, friable.
REMARK: 10-3/4" CASING POINT 2322 FEET.

2325' - 2350' --- 100% SILTSTONE: 90% red brown, 10% green, sub-blocky to sub-fissile, arenaceous, green is weakly dolomitic and occurs as mottling in red brown, firm, indurated.

2350' - 2380' --- TR SANDSTONE: clear to off white, fine to very fine grained.
100% SILTSTONE: 80:20 A/A.

2380' - 2410' --- 100% SILTSTONE: 90% red brown, 10% green, sub-blocky to sub-fissile, homogeneous, firm, trace very weakly dolomitic.

2410' - 2440' --- TR SANDSTONE: pale green to dirty off white, very fine grained.
100% SILTSTONE: A/A.

2440' - 2470' --- TR SANDSTONE: A/A.
100% SILTSTONE: A/A.

2470' - 2500' --- TR SANDSTONE: translucent green grey, very fine grained, grades to siltstone, micaceous in parts, occasionally weakly dolomitic.
100% SILTSTONE: 80% red brown, 20% green, grading to translucent off white, sub-blocky to sub-fissile, becoming more argillaceous in places, translucent, micaceous in parts, non-calcareous or dolomitic, firm.

2500' - 2530' --- 100% SILTSTONE: 40% red brown, 60% green to translucent grey green, sub-blocky to sub-fissile, dolomitic in parts - (mainly green cuttings), more arenaceous, translucent cuttings are micaceous.

2530' - 2560' --- 100% SILTSTONE: 80% red brown, 20% green to translucent, pale grey green, A/A.

2560' - 2590' --- 100% SILTSTONE: 90% red brown, 10% green to translucent, A/A.

2590' - 2620' --- 100% SILTSTONE: 80% red brown, 20% green to translucent grey green, sub-blocky to sub-fissile, arenaceous, very finely sandy in parts, dolomitic in parts, (mainly green) firm.

2620' - 2650' --- TR SANDSTONE: translucent to off white, very fine grained, siliceous dolomite cement, micaceous.
100% SILTSTONE: 90% red brown, 10% green to translucent, A/A, becoming more fissile and argillaceous in places.

2650' - 2680' --- TR SANDSTONE: A/A.
100% SILTSTONE: A/A.

2680' - 2710' --- 100% SILTSTONE: 95% red brown, 5% green to translucent, off white, generally sub-blocky and arenaceous, minor argillaceous and fissile, dolomitic in parts, occasional medium clear sand grains.

2710' - 2740' --- TR SANDSTONE: translucent green, very fine grained, micaceous.
100% SILTSTONE: 85% red brown, 15% green to translucent pale grey green, A/A, translucent grey green grades to very fine sandstone and is micaceous.

2740' - 2760' --- 90% SILTSTONE: 50% red brown, 50% green to translucent pale grey green, sub-blocky to fissile, translucent grey green is generally arenaceous grading to very fine sandstone with dolomitic cement, firm, green is generally more fissile and argillaceous.
10% DOLOMITE: white/translucent to off white and buff, coarsely crystalline, brittle to hard.

2760' - 2770' --- TR SANDSTONE: translucent grey green, very fine grained, dolomitic, micaceous, grades from siltstone.
90% SILTSTONE: 20% red brown, 80% green, red brown is arenaceous, sub-blocky, green is sub-fissile to fissile and argillaceous, both are weakly dolomitic.
10% DOLOMITE: A/A.
2760' --- REMARK: EST. TOP LOWER STOKES @ 2760 FEET.

2770' - 2780' --- TR SANDSTONE: A/A.
70% SILTSTONE: 95% green, 5% red brown, minor light to medium grey, green and grey are sub-fissile to fissile and generally argillaceous, red brown is sub-blocky and arenaceous, both colours are weakly dolomitic. Occasional disseminated pyrite in green and grey.
30% DOLOMITE: translucent to off white, buff and pale grey, crystalline, occasionally very finely sandy, occasional disseminated pyrite.

2780' - 2790' --- 90% SILTSTONE: 85% green, 10% light grey, 5% red brown (contamination), sub-fissile to fissile, argillaceous, generally non-dolomitic, firm, brittle.
10% DOLOMITE: A/A.

2790' - 2820' --- TR SANDSTONE: translucent pale grey green, very fine grained, dolomitic cement.
90% SILTSTONE: 70% green, 25% light grey, 5% red brown (contamination), generally sub-fissile, homogeneous tending to argillaceous, occasional finely disseminated pyrite generally non-dolomitic, firm.
10% DOLOMITE: translucent, off white to pale grey green, coarsely crystalline, finely arenaceous in places, blocky, hard, occasional disseminated of pyrite.

2820' - 2850' --- TR SANDSTONE: A/A.
90% SILTSTONE: A/A, becoming slightly more
arenaceous and sub-blocky to fissile.
10% DOLOMITE: A/A.

2850' - 2880' --- TR SANDSTONE: translucent pale grey green, very
fine grained, grades to siltstone, very
dolomitic, hard.
80 SILTSTONE: 70% green to grey green, 30% light
grey, sub-blocky to sub-fissile, arenaceous in
places, generally non-dolomitic or calcareous,
firm.
20% DOLOMITE: white, translucent, off white, light
grey, coarse to finely crystalline (grey),
blocky, very finely arenaceous in places.

2880' - 2910' --- TR SANDSTONE: A/A.
60% SILTSTONE: green to light grey, sub-blocky to
sub-fissile, generally non-dolomitic, firm.
40% DOLOMITE: translucent pale green grey, off
white, white, buff, fine to coarsely crystalline,
finely arenaceous in places.

2910' - 2940' --- 10% SILTSTONE: green to grey green and light grey,
sub-blocky to sub-fissile, generally
non-dolomitic, firm.
TR LIMESTONE: light grey, sucrosic texture, silty,
blocky.
90% DOLOMITE: light translucent grey to light grey,
off white and white, grey has a sucrosic texture,
silty, white is coarsely crystalline, blocky.

2940' - 2970' --- 10% SANDSTONE: translucent to clar, pale grey, very
finely grained, dolomitic cement.
20% SILTSTONE: A/A.
10% LIMESTONE: A/A.
60% DOLOMITE: A/A.

2970' - 3000' --- 20% SANDSTONE: clear to translucent pale grey green,
very fine to medium grained, medium grains are
clear and loose, sub-angular to sub-rounded,
poorly sorted, siliceous/dolomitic cement.
60% SILTSTONE: green to grey green, sub-blocky to
fissile, non-dolomitic or calcareous, generally
argillaceous, sandy in places.
TR LIMESTONE: A/A.
20% DOLOMITE: translucent light grey to light grey,
off white to white, grey has sucrosic texture,
silty, white is coarsely crystalline.

3010' --- REMARK: EST. TOP UPPER STAIRWAY @ 3010 FEET.

3000' - 3030' --- 30% SANDSTONE: clear to translucent, off white and pale grey, very fine to coarse grained, medium and coarse are loose, sub-rounded to well rounded, some coarse show very good sphericity and some frosting, very poorly sorted, occasional siltstone matrix grading to siltstone, siliceous weakly dolomitic cement, brittle to strong, hard.

60% SILTSTONE: generally green, occasionally grey green and light grey, sub-blocky to sub-fissile, argillaceous in places, occasionally sandy, grading to sandstone, firm.

10% DOLOMITE: A/A.

3030' - 3060' --- 50% SANDSTONE: clear to translucent, off white, buff, pale grey, very fine to fine grained, also loose medium to coarse grains, generally well rounded, frosted with fair to good sphericity, fine grained aggregates have sub-rounded to rounded grains and show medium sorting, moderate strong, hard, dolomitic cement.

POROSITY: poor.

FLUORESCENCE: Nil.

50% SILTSTONE: green with some light grey, also becoming medium to dark grey, blocky to sub-fissile, sandy in parts, grading to sandstone, non-dolomitic for the most part, firm, brittle.

TR DOLOMITE: A/A.

3060' - 3090' --- 60% SANDSTONE: dominantly clear to translucent, becoming cleaner, very fine to fine grained, occasional loose, coarse, sub-rounded grains, moderately well sorted, clear and translucent have siliceous cement, off white tec. are dolomitic, dark silt and finley disseminated pyrite forms a matrix in places, moderately strong, hard.

POROSITY: poor.

FLUORESCENCE: Nil.

40% SILTSTONE: green to light grey to medium and dark grey, green and light grey are generally sub-fissile and argillaceous while dark grey are blocky, arenaceous and finley pyritic.

3090' - 3120' --- 40% SANDSTONE: A/A.

POROSITY: poor.

FLUORESCENCE: Nil.

60% SILTSTONE: A/A, and red brown and green cavings.

TR DOLOMITE: off white to white, translucent grey, coarsely crystalline to sucrosic texture (grey) - uphole cavings.

REMARK: SAMPLE IS HEAVILY CONTAMINATED WITH UPHOLE UPPER AND LOWER STOKES CAVINGS.

3120' - 3150' --- 90% SANDSTONE: white to clear, fine grained, sub-rounded, well sorted, siliceous/dolomitic cement, friable.
 POROSITY: poor to fair.
 FLUORESCENCE: Nil.

10% SILTSTONE: green, minor grey, blocky to sub-fissile, generally argillaceous.

3150' - 3160' --- 40% SANDSTONE: pale grey, fine to very fine grained, sub-rounded, grains, very well sorted, siliceous/dolomitic cement, black angular shaley lithics siliceous cement, hard.
 POROSITY: poor.
 FLUORESCENCE: Nil.

60% SILTSTONE: dominantly green, also grey green and occasionally dark grey, sub-fissile to fissile, homogeneous, non-dolomitic, moderately soft to brittle.

3160' --- REMARK: 3 second gas flare on connection at 3160 feet.

3152' --- REMARK: EST. TOP MIDDLE STAIRWAY @ 3152 FEET.

3160' - 3170' --- 80% SANDSTONE: pale grey, fine to very fine grained, sub-rounded to rounded, very well sorted, siliceous cement, minor weak dolomitic cement, quartzose, black shale lithics, disseminated and aggregates of pyritic, interbedded in places with dark grey pyritic siltstone, brittle, hard.
 POROSITY: poor.
 FLUORESCENCE: Nil.

20% SILTSTONE: medium to light grey, some green, sub-fissile to fissile, grades from argillaceous to arenaceous, finely pyritic in parts, non-dolomitic.

3170' - 3200' --- 40% SANDSTONE: pale translucent grey, also clear and buff, fine grained, sub-rounded grains, well sorted, siliceous cement, very weakly dolomitic in parts, quartzose, minor lithics and disseminated pyrite, moderately friable to brittle, hard.
 POROSITY: poor.
 FLUORESCENCE: Nil.

60% SILTSTONE: medium grey, blocky to sub-fissile, arenaceous, finely pyritic, grades to sandstone in places, moderately soft.

3200' - 3230' --- 10% SANDSTONE: A/A.
POROSITY: poor.
FLUORESCENCE: Nil.
90% SILTSTONE: medium grey, sub-fissile to fissile,
homogeneous, occasionally finely pyritic,
moderately firm, non-dolomitic.

3230' - 3250' --- 10% SANDSTONE: pale translucent grey to buff and
dirty grey, fine to very fine grained, well
sorted, silty matrix in parts,
siliceous/dolomitic cement, very tight.
POROSITY: poor.
FLUORESCENCE: Nil.
90% SILTSTONE: A/A, grades between argillaceous and
arenaceous.

3250' - 3280' --- TR SANDSTONE: buff to translucent grey and clear,
A/A, finley pyritic in places.
POROSITY: poor.
FLUORESCENCE: Nil.
100% SILTSTONE: medium grey, sub-fissile to fissile,
grades between argillaceous and arenaceous,
finely pyritic in places, occasional pyrite
aggregates, moderately firm to brittle,
non-dolomitic.

3280' - 3310' --- 20% SANDSTONE: clear to pale grey and buff, fine to
very fine grained, sub-rounded to rounded, well
sorted, quartzose, siliceous/dolomitic cement,
occasional dark lithics, brittle to hard,
occasionally silty matrix, tight.
POROSITY: tight.
FLUORESCENCE: Nil.
80% SILTSTONE: A/A.

3310' - 3340' --- 40% SANDSTONE: pale grey to translucent, A/A.
FLUORESCENCE: Nil.
60% SILTSTONE: A/A.

3340' - 3370' --- 50% SANDSTONE: translucent pale grey to buff grey,
fine to very fine grained, sub-rounded to rounded
grains, well sorted, siliceous and dolomitic
cement, quartzose, strong, hard, secondary
silicified, minor pyrite and occasional dark
lithics.
POROSITY: poor.
FLUORESCENCE: Nil.
50% SILTSTONE: medium grey, sub-fissile to fissile,
arenaceous to argillaceous, non-dolomitic, finely
pyritic trace micromicaceous, moderately firm to
brittle.

3370' - 3400' --- 10% SANDSTONE: dirty pale grey, occasionally translucent to clear, A/A, occasional silty pyrite matrix.
90% SILTSTONE: medium grey, blocky to sub-fissile, generally arenaceous, finely pyritic and micaceous in part, occasionally grades to sandstone.

3400' - 3430' --- 20% SANDSTONE: A/A.
POROSITY: tight.
FLUORESCENCE: Nil.
80% SILTSTONE: A/A.

3430' - 3460' --- 20% SANDSTONE: dirty pale grey to buff, very fine to fine grained, sub-rounded to rounded, well sorted, siliceous weakly dolomitic cement, occasional dark lithics, minor disseminated pyrite disseminates in parts, moderately strong to brittle, grades to siltstone.
POROSITY: tight.
FLUORESCENCE: Nil.
80% SILTSTONE: medium grey, blocky to sub-fissile, arenaceous, finely pyritic in parts, grades into sandstone in places, firm.

3460' - 3490' --- 40% SANDSTONE: clear to translucent pale grey, very fine to fine grained, rare fractured or angular medium grains, fine are sub-angular to sub-rounded, well sorted, siliceous/dolomitic cement, silty matrix in part.
POROSITY: poor.
FLUORESCENCE: Nil.
60% SILTSTONE: medium grey, blocky to sub-fissile, arenaceous, grades to sandstone, finely pyritic, non-dolomitic.

3490' - 3520' --- 40% SANDSTONE: dirty pale grey, trace clear, fine to very fine grained, rare rounded medium grains, siliceous/dolomitic cement, quartzose, occasional dark lithics, silty matrix in part, strong, hard.
POROSITY: tight.
FLUORESCENCE: Nil.
60% SILTSTONE: A/A.

3520' - 3550' --- 30% SANDSTONE: A/A, with trace medium to coarse rounded grains.
POROSITY: tight.
FLUORESCENCE: Nil.
70% SILTSTONE: A/A.

3555'---

REMARK: EST. TOP LOWER STAIRWAY @ 3555 FEET

3550' - 3560' ---

40% SANDSTONE: dirty light grey to clear, fine to very fine grained, also minor medium to coarse rounded grains showing good sphericity, moderately well sorted, siliceous cement, weakly dolomitic in places, strong.

POROSITY: tight.

FLUORESCENCE: Nil.

60% SILTSTONE: medium grey, sub-blocky to sub-fissile, arenaceous grading to sandstone, finely pyritic and occasionally micromicaceous, firm, brittle.

3560' - 3570'

60% SANDSTONE: A/A.

POROSITY: tight.

FLUORESCENCE: Nil.

40% SILTSTONE: A/A.

3560'---

REMARK: 20% upper stokes cavings.

3570' - 3580' ---

90% SANDSTONE: clear to off white, translucent and pale grey, dominantly loose medium to coarse grained, also fine to very fine, medium and coarse are rounded and occasionally frosted, poorly sorted, quartzose, siliceous cement, occasionally weakly dolomitic, minor fine pyrite and pyritic aggregates.

POROSITY: poor.

FLUORESCENCE: Nil.

10% SILTSTONE: light to medium grey, blocky to sub-fissile, arenaceous grading to sandstone, pyritic and occasionally micaceous, firm, indurated.

3570' ---

REMARK: 20% red brown Stokes cavings.

3580' - 3610' ---

100% SANDSTONE: clear to white, minor grey, fine to coarse grained, medium and coarse grains are loose, sub-rounded to rounded, poorly sorted, quartzose, siliceous cement, clean, grey has silty matrix.

POROSITY: poor

FLUORESCENCE: Nil.

TR SILTSTONE: A/A.

3610' - 3640' ---

90% SANDSTONE: clear, milky, 95% loose medium grains, occasionally fine and coarse, sub-rounded, fractured, well sorted, quartzose.

POROSITY: poor to fair.

FLUORESCENCE: Nil.

10% SILTSTONE: dark grey, blocky, arenaceous, grades to fine sandstone, trace fine pyritic.

3610' ---

REMARK: 20% red brown Stokes caving.

3640' - 3670' --- 90% SANDSTONE: clear to white, fine and medium grained, occasionally coarse, medium grains loose, sub-angular to rounded (many fractured grains), poorly sorted, quartzose, siliceous cement.

POROSITY: poor.

FLUORESCENCE: Nil.

10% SILTSTONE: medium to dark grey, A/A, occasionally micaceous.

3670' - 3700' --- 60% SANDSTONE: clear to pale grey, fine to medium (loose) grained, occasionally coarse, many fractured grains, sub-rounded to rounded, moderately poorly sorted, quartzose, siliceous cement.

POROSITY: poor.

FLUORESCENCE: Nil.

40% SILTSTONE: dark grey, blocky to sub-fissile, arenaceous, occasional disseminated pyrite and mica, non-dolomitic.

3700' - 3730' --- 70% SANDSTONE: clear, occasionally milky, medium grained, occasionally coarse, sub-angular to rounded, moderately well sorted, quartzose, 100% loose grains.

POROSITY: poor to fair.

FLUORESCENCE:

30% SILTSTONE: dark grey, blocky to sub-fissile, arenaceous, finely pyritic in places.

3728' --- REMARK: OPEN HOLE FLOW TEST @ 3728 FEET FLOWED 300 MCFD GAS ON A ? ORIFICE.' AT PSI DEGREE C.

3730' - 3750' --- 60% SANDSTONE: A/A, many fractured grains, minor pyrite.

POROSITY: poor to fair.

FLUORESCENCE: Nil.

40% SILTSTONE: A/A

3755' --- REMARK: EST. TOP HORN VALLEY @ 3755 FEET.

3750' - 3760' --- 70% SANDSTONE: clear, occasionally milky, dominantly medium grained, sub-angular to rounded, moderately well sorted, quartzose, many fractured grains.

POROSITY: poor to fair.

FLUORESCENCE: Nil.

30% SILTSTONE: A/A.

REMARK: 40% CAVINGS.

3760' - 3770' --- 60% SANDSTONE: clear to off white and dirty grey, very fine to medium grained, medium grains A/A, fine to very fine grained aggregates have dark silty pyritic matrix, siliceous cement, quartzose, strong, hard.
POROSITY: poor.
FLUORESCENCE: Nil.

40% SILTSTONE: dark grey, blocky to sub-fissile, arenaceous, grades into sandstone, finely pyritic in parts, non-calcareous, dolomitic, firm.
REMARK: 80% red brown/green cavings from Stokes.

3770' - 3800' --- 20% SANDSTONE: clear to honey brown and dirty grey, fine to very grained, well sorted, dolomitic and calcareous cement, occasional loose medium grains.
POROSITY: tight.
FLUORESCENCE: Nil.

70% SILTSTONE: A/A, non-calcareous or dolomitic.

10% LIMESTONE: honey brown, sandy, grades from calcareous sandstone, blocky, hard, medium crystalline.

3800' - 3830' --- 10% SANDSTONE: A/A.
POROSITY: tight.
FLUORESCENCE: Nil.

70% SILTSTONE: medium to dark grey, blocky to sub-fissile, medium grey is more argillaceous, occasional aggregate and disseminated pyrite, non-calcareous or dolomitic, firm.

10% LIMESTONE: A/A.

10% DOLOMITE: off white/grey to honey brown, occasionally sandy, blocky, medium to coarsely crystalline.

3830' - 3860' --- 10% SANDSTONE: A/A.
POROSITY: tight.
FLUORESCENCE: Nil.

70% SILTSTONE: A/A.

10% LIMESTONE: dirty light grey to buff and honey brown, silty/sandy in parts, medium crystalline, blocky.

10% DOLOMITE: A/A.

3860' - 3890' --- 80% SILTSTONE: medium to dark grey, sub-blocky to sub-fissile, arenaceous, finely pyritic in parts and with occasional aggregates, non-calcareous or dolomitic.

10% LIMESTONE: A/A.

10% DOLOMITE: light grey to buff, trace white, medium to coarsely crystalline, occasionally silty.
FLUORESCENCE: Nil.

3890' - 3920' --- 80% SILTSTONE: medium to dark grey, sub-fissile to fissile, arenaceous, weakly calcareous in places, firm to brittle, minor disseminated and aggregate of pyrite.
 20% LIMESTONE: light grey to buff, medium crystalline, occasionally fine, silty/sandy in places, blocky.
 TR SANDSTONE: honey brown, light grey, fine grained, silty matrix, dolomitic/calcareous cement.
 FLUORESCENCE: Nil.

3920' - 3950' --- 70% SILTSTONE: A/A, becoming more argillaceous and calcareous, fossiliferous.
 30% LIMESTONE: A/A, more finely crystalline and silty.
 FLUORESCENCE: Nil.

3950' - 3980' --- 90% SILTSTONE: dominantly medium grey, fissile, occasionally sub-fissile, argillaceous, grades to shale, non-calcareous or dolomitic, occasional pyritic aggregates, brittle, very flakey.
 10% LIMESTONE: off white, buff, honey brown, dirty grey, fine to coarsely crystalline, blocky, very hard, sucrosic text in places, dolomitic.
 FLUORESCENCE: Nil.

3980' - 3990' --- 90% SILTSTONE: A/A, minor very light grey, occasionally weakly dolomitic.
 10% LIMESTONE: off white to buff, generally finely crystalline with sucrosic text, occasionally coarsely crystalline, blocky, hard, minor pyrite, dolomitic in places.
 FLUORESCENCE: Nil.

3992' --- REMARK: EST. TOP PACOOTTA P1 @ 3992 FEET.
 3990' - 4000' --- 30% SANDSTONE: brassy grey, very fine to fine grained, siliceous/dolomitic cement, silty/pyritic matrix, glauconitic, pyritic, brittle.
 30% SILTSTONE: A/A.
 10% LIMESTONE: A/A, glauconitic.
 30% DOLOMITE: light grey to buff and off white to white, coarsely crystalline, blocky, hard, minor pyrit, glauconitic.

4000' - 4012' --- NO SAMPLE.

4012' - 4020' --- 30% SANDSTONE: mottled, brassy grey, light grey, white, fine grained, sub-rounded, moderately well sorted, siliceous/dolomitic cement, silty pyritic matrix, glauconitic to 5%, brittle to strong.
POROSITY: tight.
FLUORESCENCE: Nil.

70% SILTSTONE: medium grey, sub-fissile splinter cuttings, argillaceous, calcareous and dolomitic in part, disseminated and aggregate pyrite.

TR DOLOMITE: off white to buff, coarsely to finely crystalline, blocky.

4020' - 4030' --- 70% SANDSTONE: A/A.
POROSITY: poor.
FLUORESCENCE: Single chip with pale yellow fluorescence, instant streaming blue white cut. The chip is fine grained, yellow/orange in colour.

30% SILTSTONE: A/A.

4030' - 4040' --- 90% SANDSTONE: dark brassy grey to off white, clear and white, fine grained, rare medium, sub-rounded to rounded, moderately well sorted, dark silty/pyritic matrix, siliceous/dolomitic cement, minor disseminated pyrite, glauconite to 7%, brittle to strong.
POROSITY: tight.
FLUORESCENCE: trace blue white fluorescence. No cut.

20% SILTSTONE: medium grey, blocky to sub-fissile, becoming more arenaceous, grades to sandstone in places, calcareous and dolomitic in part, disseminated pyrite, occasionally micromicaceous, moderately soft to brittle.

4040' - 4050' --- 90% SANDSTONE: pale grey to off white, fine grained, sub-rounded, well sorted, minor very light brown grey micaceous matrix, dominantly siliceous cement, rare glauconitic, occasional disseminated pyritic, brittle to strong.
POROSITY: tight.
FLUORESCENCE: Nil.

10% SILTSTONE: medium grey, occasionally light and dark grey, blocky to sub-fissile, micromicaceous and pyritic in places, occasionally calcareous, grades to shale, soft to firm.

4050' - 4060' --- 60% SANDSTONE: brassy grey to pale translucent grey, fine grained, well sorted, generally siliceous cement, occasionally dolomitic, 50% with dark pyritic silty matrix, micromicaceous in parts, minor disseminated pyrite, minor glauconite.
POROSITY: tight.
FLUORESCENCE: Nil.
40% SILTSTONE: A/A, trace glauconitic.

4060' - 4070' --- 80% SANDSTONE: off white/clear to mottled and dirty grey, fine grained, sub-rounded to rounded grains, moderately well sorted, siliceous cement, argillaceous and silty matrix in part, trace glauconitic, occasionally lithic with dark shale fragments, occasional disseminated pyrite, brittle.
POROSITY: tight.
FLUORESCENCE: Nil.
20% SILTSTONE: light to dark grey, sub-blocky to fissile, grades from arenaceous to argillaceous, finely pyritic and micaceous in places, occasionally calcareous and dolomitic.

4070' - 4080' --- 80% SANDSTONE: translucent honey brown, occasional milky grains, fine to coarse grained, sub-angular to rounded, poorly sorted, occasional milky grains, siliceous cement, no martrix, light honey brown stain, clear quartz grains, very friable.
POROSITY: fair.
FLUORESCENCE: Nil, trace dead oil.
20% SILTSTONE: A/A.

4080' - 4090' --- 90% SANDSTONE: off white to very light translucent honey brown, dominantly fine grained, sub-angular to sub-rounded grains, moderately well sorted, siliceous cement, minor argillaceous matrix, friable to brittle to strong.
POROSITY: poor to fair.
FLUORESCENCE: No fluorescence, trace dead oil.
10% SILTSTONE: light to dark grey, sub-blocky to fissile, argillaceous to arenaceous, occasional pyrite and mica.

4090' - 4100' --- 80% SANDSTONE: clear to off white and dirty grey, fine to coarse grained, sub-angular to rounded, poorly sorted, siliceous cement, quartzose, occasional dark shale, minor lithics and silty/pyritic/micaceous matrix, interbedded with and grades to siltstone in places, brittle to moderately friable.
POROSITY: tight.
FLUORESCENCE: Nil.
20% SILTSTONE: A/A.

4100' - 4110' --- NO SAMPLE.

4110' - 4120' --- 80% SANDSTONE: A/A.
 POROSITY: poor.
 FLUORESCENCE: Nil.
 20% SILTSTONE: A/A.
 TR DOLOMITE: off white to buff grey, coarsely crystalline, sandy, sub-blocky.

4120' - 4130' --- 70% SANDSTONE: off white to light brown grey, fine grained, occasionally rounded medium and coarse in fine grained matrix, generally sub-angular to sub-rounded grains, moderately well sorted, siliceous cement, light brown grey argillaceous/micaceous matrix in places, quartzose, occasional dark lithics, minor disseminated and aggregate pyrite, brittle to strong.
 POROSITY: tight.
 FLUORESCENCE: Nil.
 20% SILTSTONE: medium grey, occasionally light and dark grey, blocky to sub-fissile, becoming more arenaceous, grades to sandstone in parts, occasionally weakly calcareous and dolomitic, finely pyritic and some aggregates, firm.
 10% SHALE: light grey, argillaceous, micromicaceous, fissile.

4130' - 4140' --- 80% SANDSTONE: off white, white, pale grey, brassy grey, fine grained, sub-angular to sub-rounded, well sorted, siliceous/weakly dolomitic cement, light brown grey argillaceous matrix in part, occasionally pyrite aggregates, brittle to strong, occasionally friable.
 POROSITY: poor with trace fair.
 FLUORESCENCE: Nil.
 20% SILTSTONE: medium to dark grey, blocky to fissile, arenaceous, finely pyritic in part, weakly calcareous in part, firm.

4140' - 4150' --- 70% SANDSTONE: off white to brassy brown grey, fine grained, occasionally medium and coarse, moderately well sorted, siliceous cement, 40% with silty pyritic matrix, grades to siltstone in places, brittle to strong.
 POROSITY: tight.
 FLUORESCENCE: Nil.
 20% SILTSTONE: A/A.
 10% SHALE: light brown grey, micaceous, fissile pyritic in part.

4150' - 4160' --- 80% SANDSTONE: A/A, increase in medium and coarse rounded grains, becoming more poorly sorted.
POROSITY: poor.
FLUORESCENCE: Nil.
10% SILTSTONE: A/A.
10% SHALE: A/A.

4160' - 4170' --- 90% SANDSTONE: off white to light brassy grey, very fine to fine grained, sub-angular to sub-rounded, well sorted, siliceous cement, light brown grey matrix to 50%, matrix is silty to argillaceous pyritic and micaceous, occasionally pyrite aggregates, grades to siltstone in places, strong, hard.
POROSITY: tight.
FLUORESCENCE: Nil.
10% SHALE: light brown grey, fissile, finely micaceous and pyritic, soft.

4170' - 4180' --- 90% SANDSTONE: white to clear, minor off white to pale grey, fine to medium grained, sub-rounded to rounded, moderate sorting, siliceous cement, no matrix, minor disseminated and aggregates of pyrite, minor dark shale lithics, brittle.
POROSITY: poor.
FLUORESCENCE: Nil.
10% SHALE: light to dark brassy grey, sub-fissile to fissile, firm, non-calcareous or dolomitic.

4180' - 4190' --- 90% SANDSTONE: clear to white, fine to medium grained, occasionally coarse, sub-rounded to rounded, moderately sorted, siliceous cement, no matrix, occasional lithics and disseminated pyrite, brittle to strong, friable in places.
POROSITY: poor to fair.
FLUORESCENCE: 15% very pale dull blue yellow fluorescence. No cut.
10% SHALE: A/A, occasionally arenaceous, micaceous.

4190' - 4200' --- 100% SANDSTONE: white, off white and brassy grey, fine grained, sub-angular to sub-rounded, well sorted, siliceous cement, dark silty pyritic matrix in part, occasionally dark lithic fragments and disseminated pyritic, brittle, occasionally friable.
POROSITY: poor to fair.
FLUORESCENCE: poor to fair, trace blue white and dull blue yellow fluorescence. No cut.
TR SILTSTONE: medium to dark grey, brassy grey, arenaceous, finely pyritic in part, moderately firm to firm and indurated, blocky to sub-fissile.

4200' - 4210' --- 90% SANDSTONE: A/A, increased silty pyritic matrix, occasionally medium grained.
 POROSITY: poor.
 FLUORESCENCE: trace blue white fluorescence. No cut, trace dull yellow fluorescence with yellow streaming cut.
 10% SILTSTONE: A/A.

4210' - 4220' --- 90% SANDSTONE: Translucent honey brown, fine tending to medium grained, sub-angular to sub-rounded, well sorted, siliceous cement, minor silty matrix.
 10% SHALE: brassy brown grey, sub-blocky to fissile, argillaceous, finely pyritic, moderately soft to firm and indurated.
 POROSITY: poor to fair.
 FLUORESCENCE: 15% dull yellow fluorescence. Minor slow streaming yellow cut. Yellow white residual fluorescence. Trace interstitial dead oil. Honey brown stain probably due to live oil.

4220' - 4230' --- 100% SANDSTONE: A/A.
 POROSITY: poor to fair.
 FLUORESCENCE: 35% dull yellow fluorescence. Fair slow yellow white streaming cut. Yellow white residual fluorescence.
 TR SHALE: A/A.

4230' - 4240' --- 80% SANDSTONE: dark brassy grey (mottled appearance), minor translucent honey brown, fine grained, sub-angular to sub-rounded, well sorted, siliceous cement, silty pyritic matrix throughout, generally friable, occasional disseminated and aggregates of pyrite.
 FLOURESENCE: 5% dull yellow fluorescence, trace faint slow yellow white streaming cut. Yellow white residual fluorescence. Trace interstitial dead oil.
 10% SILTSTONE: medium to dark grey, brassy grey, blocky to sub-fissile, firm.
 10% SHALE: light brown grey, brassy grey, argillaceous, fissile to sub-fissile, finely pyritic and occasionally micromicaceous.

4240' - 4250' --- 90% SANDSTONE: translucent honey brown to brassy grey and pale grey, fine to medium grained, sub-angular to rounded, moderately well sorted, siliceous cement, 10% silty pyritic matrix, friable.
 POROSITY: fair to good.
 FLUORESCENCE: 5% dull yellow, speckled fluorescence. Good yellow white streaming cut. yellow white residual fluorescence.
 10% SHALE: A/A.

4250' - 4260' --- 80% SANDSTONE: honey brown to brassy grey, minor light grey, A/A, 50% with silty pyritic matrix, friable.
 POROSITY: poor to fair.
 FLUORESCENCE: trace dull yellow fluorescence. Fain slow yellow white streaming cut. 10% interstitial dead oil.
 20% SHALE: brown brassy grey, sub-blocky to fissile, micromicaceous and finely pyritic, non-calcareous or dolomitic, moderately soft to moderately firm.

4260' - 4270' --- 40% SANDSTONE: clear to off white, medium to coarse grained, occasionally fine, mostly loose grains, sub-angular to rounded, poorly sorted, siliceous cement, dark silty pyritic matrix in places, minor disseminated pyrite, quartzose.
 POROSITY: poor.
 FLUORESCENCE: trace speckled dull yellow fluorescence. No cut. Black interstitial dead oil.
 30% SILTSTONE: medium to dark and brassy grey, blocky to sub-fissile, grades to sandstone.
 30% SHALE: light brown grey, argillaceous, sub-fissile to fissile, finely pyritic and occasionally micaceous.

4270' - 4280' --- 90% SANDSTONE: speckled translucent honey to brassy grey, fine to medium grained, sub-angular to rounded, moderately sorted, siliceous cement, 50% with pyritic silty matrix friable.
 POROSITY: poor to fair.
 FLUORESCENCE: <10% dull specled yellow fluorescence. No cut. Brown staining is possible due to semi-live oil (from a lost circulation zone?)
 10% SHALE: A/A.

4280' - 4290' --- 70% SANDSTONE: clear to off white and honey brown, also brassy grey, moderate to coarse grained, occasionally fine, sub-angular to rounded, poorly sorted, siliceous cement, 30% with silty pyritic matrix, brittle to friable.

POROSITY: poor.

FLUORESCENCE: 5% speckled dull yellow fluorescence. Interstitial dead oil throughout sand.

30% SHALE: light to medium brassy brown grey, fissile to sub-fissile, argillaceous, finely pyritic and micaceous, moderately soft.

4290' - 4300' --- 90% SANDSTONE: clear to off white and pale brown grey, fine to medium, occasionally coarse grained, sub-angular to sub-rounded, poorly sorted, siliceous cement, generally friable, minor disseminated and aggregates of pyrite.

POROSITY: light.

FLUORESCENCE: 10% very pale dull yellow fluorescence. Faint slow streaming cut. Yellow white residual fluorescence. Trace of interstitial dead oil.

10% SHALE: light to medium brassy grey, sub-blocky to fissile, argillaceous, finely micaceous and pyritic in places, moderately soft.

4300' - 4310' --- 100% SANDSTONE: clear to pale grey to off white, fine to coarse grained, sub-angular to sub-rounded, poorly sorted, siliceous cement, occasionally pyritic aggregates and disseminates, friable.

POROSITY: poor to fair.

FLUORESCENCE: 10% pale dull yellow fluorescence. Faint slow yellow white streaming cut. Trace of interstitial dead oil.

TR SHALE: A/A.

4310' - 4320' --- 90% SANDSTONE: clear to white and pale grey, fine to coarse grained, sub-angular to sub-rounded, poorly sorted, siliceous cement, minor brassy grey silty matrix, brittle to friable.

POROSITY: poor.

FLUORESCENCE: 25% blue white to dull yellow fluorescence. Good white streaming cut. Trace of dead interstitial oil.

10% SILTSTONE: brassy grey, blocky to sub-fissile, finely pyritic and micaceous in parts.

4320' - 4330' --- 90% SANDSTONE: clear to white and light honey brown, fine to coarse grained, sub-angular to sub-rounded grains, poorly sorted, siliceous cement, minor silty matrix, occasional disseminated and aggregates of pyrite, friable, brittle in places.

TR POROSITY: poor.
FLUORESCENCE: trace, blue yellow fluorescence. No cut. 40% honey brown stained with oil.

10% SHALE: brassy grey, sub-fissile to fissile, arenaceous in places, finely pyritic and occasionally micromicaceous, firm to moderately soft, non-calcareous or dolomitic.

4330' - 4340' --- 90% SANDSTONE: light honey brown to brassy grey, fine grained, sub-angular to sub-rounded, well sorted, siliceous cement, silty pyritic matrix in parts, becoming stronger, more brittle, less friable.

POROSITY: poor.
FLUORESCENCE: trace dull yellow fluorescence. No cut. Traces of interstitial dead oil and honey brown staining throughout.

10% SILTSTONE: medium brassy, blocky to sub-fissile, finely pyritic in parts, grades to sandstone in places.

4334' --- REMARK: EST. TOP PACOOTTA P2 @ 4334 FEET.

4340' - 4350' --- 100% SANDSTONE: mottled brassy grey to pale brown (hydrocarbons), fine grained, sub-angular to sub-rounded, well sorted, siliceous cement, silty pyritic matrix in parts, brittle to strong, occasionally friable.

POROSITY: poor.
FLUORESCENCE: 35% dull yellow fluorescence. Brighter blue yellow in places. No cut. Common dead oil stain.

TR SILTSTONE: A/A.

4350' - 4360' --- 90% SANDSTONE: dominantly light to honey brown (hydrocarbon staining) A/A.

POROSITY: poor.
FLUORESCENCE: 35% dull yellow fluorescence, becoming slightly brighter. Slow streaming white cut.

10% SILTSTONE: medium grey, blocky to sub-fissile, grades to sandstone, minor micaceous/argillaceous and finely pyritic in parts.

4360' - 4370' --- 100% SANDSTONE: mottled pale brown (hydrocarbons) speckled grey, off white, clear, fine grained with 10% loose medium and coarse, sub-angular to sub-rounded, moderately sorted, siliceous cement, silty pyritic matrix in part, brittle to strong, disseminated and aggregates of pyrite.
 POROSITY: poor.
 FLUORESCENCE: 10% speckled yellow fluorescence. Faint white streaming cut. Dead oil stain throughout.
 TR SILTSTONE: A/A.

4370' - 4380' --- 90% SANDSTONE: pale brown, clear, speckled grey, A/A, medium and coarse fraction increasing.
 POROSITY: poor.
 FLUORESCENCE: trace, dull yellow fluorescence. No cut.
 10% SILTSTONE: medium to brassy grey, sub-fissile to fissile, occasionally finely pyritic and micaceous, grades to sandstone in places.

4380' - 4390' --- 90% SANDSTONE: light mottled brassy brown, speckled, dominantly fine grained, occasionally medium and coarse, moderately well sorted, siliceous cement, common silty pyritic matrix, minor disseminated and aggregates of pyrite, cuttings appear to be stained with semi-live oil staining.
 POROSITY: poor.
 FLUORESCENCE: 5% very dull yellow speckled fluorescence. Strong white cut. Traces of dead oil throughout.
 10% SILTSTONE: A/A.

4390' - 4400' --- 100% SANDSTONE: clear to mottled and speckled brown, fine to coarse grained, sub-angular to rounded and frosted, poorly sorted, siliceous cement, silty matrix in places, brittle to strong.
 POROSITY: poor.
 FLUORESCENCE: 10% very dull yellow fluorescence with occasional bright blue yellow. Faint gradual streaming white cut. Dead oil stain throughout.
 TR SILTSTONE: A/A.

4400' - 4410' --- 100% SANDSTONE: A/A.
 POROSITY: poor.
 FLUORESCENCE: 15% dull yellow fluorescence speckled with brighter yellow fluorescence. White/yellow streaming cut.
 TR SILTSTONE: medium brassy grey, sub-blocky to fissile, minor disseminated pyrite.

4410' - 4420' --- 90% SANDSTONE: white to off white, fine grained, well sorted, siliceous cement, no matrix, minor dark lithics and pyrite aggregates, hard.
POROSITY: tight.
FLUORESCENCE: Nil. Distinct change in this sample - no brown hydrocarbon staining - clean sandstone.

10% SILTSTONE: light to medium and dark grey, generally brassy, light grey is finely micaceous and pyritic, overall sub-fissile to fissile, firm, indurated.

4420' - 4440' --- 80% SANDSTONE: white to off white and light grey, fine to medium grained, generally fine, occasionally coarse, poorly sorted, sub-angular to sub-rounded, dark lithics and pyrite aggregates, some brownish staining, quartzose.
POROSITY: poor.
FLUORESCENCE: 5% bright blue white fluorescence. Pipe choke contamination from bit trip at 4440'.

20% SILTSTONE: grey to dark grey, fissile, some finely pyritic.

4440' - 4450' --- 100% SANDSTONE: white to off white, fine to coarse grained, poorly sorted, sub-angular to sub-rounded, conglomeratic in part, minor dark lithics and pyrite aggregates, quartzose.
POROSITY: tight.
FLUORESCENCE: Nil.

TR SILTSTONE: grey to brassy, fissile, finely pyritic.

4450' - 4460' --- 100% SANDSTONE: clear to very light grey, minor off white, fine to medium grained, some coarse sub-rounded, common quartz overgrowths, poor sorting, quartzose, siliceous cement, minor pyrite aggregates and rare silty pyrite.
POROSITY: tight.
FLOURESCENCE: Nil.

TR SILTSTONE: A/A.

4460' - 4470' --- 100% SANDSTONE: light grey, minor brassy grey, clear and translucent, fine to coarse grained, sub-rounded, poorly sorted, common quartz overgrowths, quartzose, very well cemented, 5% fine disseminated and aggregates of pyrite, some dark grey lithics
POROSITY: tight.
FLUORESCENCE: 5% dull yellow, slow streaming blue white cut. Dead oil stain common.
TR SILTSTONE: brassy grey, blocky to sub-fissile, finely pyritic.

4470' - 4480' --- 90% SANDSTONE: light grey to grey, some clear, fine grained, well sorted, sub-angular, quartzose, high degree of quartz overgrowths, siliceous cement, very hard, some silty pyritic cement and dark lithics, trace pyrite aggregates.
POROSITY: tight.
FLUORESCENCE: <1% dull yellow fluorescence, slow streaming blue/white cut.
10% SILTSTONE: A/A, also arenaceous in parts.

4480' - 4490' --- 70% SANDSTONE: grey, minor light grey and off white, fine grained and well sorted, sub-angular, silty pyritic cement, quartzose, grey lithics, rare specks GLAUCONITE, siliceous cement, very hard, some pyrite aggregates.
POROSITY: tight.
FLOURESCENCE: Nil.
30% SILTSTONE: grey to dark grey and brassy, sub-fissile to blocky, arenaceous and pyritic.

4490' - 4500' --- 80% SANDSTONE: grey to light grey, minor clear to white, fine grained, sub-angular, well sorted, quartzose, 60% silty pyritic cement and pyrite aggregates.
POROSITY: tight.
FLUORESCENCE: few chips with dull yellow fluorescence. No cut.
20% SILTSTONE: A/A.

4500' - 4510' --- 80% SANDSTONE: grey and dark grey, minor clear to light grey, fine grained rare medium, sub-angular, (medium grains sub-rounded), moderately sorted, quartzose, strong silty and pyritic cement, also large pyrite aggregates, 5-10% glauconite.
POROSITY: tight.
FLUORESCENCE: few chips with dull yellow fluorescence. No cut.
20% SILTSTONE: grey and brassy, blocky to sub-fissile, occasionally fissile, arenaceous and pyritic in parts.

4510' - 4520' --- 90% SANDSTONE: grey and brassy, fine grained, occasionally medium, sub-angular, moderately sorted, quartzose, silty pyritic cement, minor pyrite aggregates, strongly glauconitic.
POROSITY: tight.
FLUORESCENCE: few chips with dull yellow fluorescence. No cut.
10% SILTSTONE: A/A.

4520' - 4530' --- 100% SANDSTONE: light grey, some white to off white, fine grained, sub-angular, well sorted, quartzose, siliceous cement much cleaner looking than before and less silicified, glauconitic, 5-10% some silty pyritic cement, occasional pyrite aggregates.
POROSITY: poor.
FLUORESCENCE: Nil. Trace dead interstitial oil.
TR SILTSTONE: A/A.

4530' - 4540' --- 100% SANDSTONE: clear to light grey, some light brown/grey, fine grained sub-angular to sub-rounded, well sorted, quartzose, mostly siliceous cement, some chips with silty/pyritic cement, 5-10% glauconitic, occasional dark lithics.
POROSITY: tight.
FLUORESCENCE: Nil.
TR SILTSTONE: grey, sub-fissile, occasionally fissile, finely pyritic, well indurated.

4540' - 4550' --- 100% SANDSTONE: white to clear and light grey, medium grained, occasionally coarse (rounded), sub-angular to sub-rounded, moderately poorly sorted, quartzose, siliceous cement, some dark lithics and pyrite aggregates, glauconite <5%. Trace calcareous cement.
POROSITY: poor to fair.
FLUORESCENCE: yellow/white fluorescence to 20%. No cut. Rare brown hydrocarbons stain, trace dead oil stain.
TR SILTSTONE: A/A.
REMARK: P2-200 sand.

4550' - 4560' --- 100% SANDSTONE: light grey, minor blue and brassy grey, fine to medium grained, dominantly medium, occasional coarse rounded grains, sub-angular to sub-rounded, poorly sorted, quartzose, 50% silty pyritic cement, glauconitic to 1%.
POROSITY: tight.
FLUORESCENCE: <5%, dull yellow fluorescence. NO cut. Common dead interstitial oil stain.
TR SILTSTONE: A/A.

4560' - 4565' --- 100% SANDSTONE: 50% clear to white medium grained, sub-rounded, moderately sorted clean, 50% light grey and minor brown, fine to medium grained, occasionally coarse grained, sub-angular to sub-rounded, moderately sorted, quartzose, some silty pyritic cement, very rare glauconite.
 POROSITY: poor.
 SHOWS: good blue/white fluorescence to 40%. No cut. Light brown oil stain trace dead oil.

TR
 4562' --- SILTSTONE: A/A.
 REMARK: EST. TOP PACOOTTA P3 @ 4562 FEET.

4565' - 4570' --- 100% SANDSTONE: clear to white, minor off white and brownish, fine to coarse grained, mostly medium, poorly sorted, sub-angular to sub-rounded, quartzose, siliceous cement, occasional dark lithics.
 POROSITY: poor.
 SHOWS: Dull to good blue/white fluorescence to 20%. No cut. Brown oil stain and common interstitial dead oil.

TR
 SILTSTONE: A/A.

4570' - 4575' --- 100% SANDSTONE: A/A.
 POROSITY: poor.
 SHOWS: good blue/white fluorescence to 50%. No cut.

TR
 SILTSTONE: A/A.

4575' - 4585' --- 100% SANDSTONE: A/A, but moderately sorted.
 POROSITY: poor.
 SHOWS: good blue/white fluorescence to 70%.

4585'-4600' --- 100% SANDSTONE: clear-white, more light grey, fine to coarse grained, mostly fine and medium, sub-rounded-round, coarse grains round, occasional pyrite aggregates and black interstitial dead oil less than 1%, quartzose, highly silicified, fine grains less well cemented.
 POROSITY: very poor.
 SHOWS: fluorescence from oil based mud.

4600' - 4610' --- 100% SANDSTONE: A/A.

4610' - 4620' --- 100% SANDSTONE: A/A.

4620' - 4630' --- 100% SANDSTONE: A/A.

4630' - 4640' --- 100% SANDSTONE: A/A, mostly fine grained.

4640' - 4650' --- 100% SANDSTONE: clear to white, trace light grey, fine grained, occasionally medium and coarse, sub-rounded to angular, fine grains, sub-rounded, well sorted, quartzose, siliceous, very well cemented, very hard, trace pyrite.
 POROSITY: very poor.
 SHOWS: trace interstitial dead oil.
 TR SILTSTONE: trace light grey, sub-fissile, soft, thin interbeds in sandstone, trace black lithics.
 REMARK: 5% rock flour. Fluorescence due to oil base mud.

4650' - 4660' --- 100% SANDSTONE: clear to translucent to white, trace light grey, fine to medium grained, trace coarse, predominantly sub-rounded, well sorted, siliceous cement, very hard, trace pyritic aggregates, trace quartz overgrowths.
 POROSITY: very poor.
 SHOWS: common dead black interstitial oil, occasional live oil stain.
 TR SILTSTONE: trace light grey, sub-fissile to fissile, firm, trace black lithics.

4660' - 4670' --- 100% SANDSTONE: A/A.
 TR SILTSTONE: A/A.

4670' - 4680' --- 100% SANDSTONE: clear to off white, minor light grey, fine to medium grained, occasionally coarse, sub-angular, minor sub-rounded, (coarse grains, sub-rounded to round), moderately well sorted, quartzose, siliceous cement, hard, trace disseminated and nodular pyrite.
 POROSITY: nil to poor.
 SHOWS: minor light brown oil staining, occasional dead interstitial oil.

4680' - 4685' --- 100% SANDSTONE: 70% clear to honey brown, 30% white to off white, fine to medium grained, predominantly medium, (sub-rounded) other sub-angular to sub-rounded, moderately well sorted, quartzose, siliceous cement, soft to medium.
 POROSITY: fair.
 SHOWS: minor fluorescence, light brown oil stain common, rare dead oil.

4685' - 4690' --- 100% SANDSTONE: 90% honey brown, 10% clear to white, off white, fine to medium grained, trace coarse, sub-angular to sub-rounded, moderate to well sorted, quartzose, siliceous cement, soft to moderately hard.
 POROSITY: Nil.
 SHOWS: common live oil stain, trace dead interstitial oil.

4690' - 4695' --- 100% SANDSTONE: 90% honey buff, 10% white to clear, fine to coarse grained, mainly fine to medium grained, sub-angular to sub-rounded, poor to moderately sorted, brittle to moderately hard, siliceous cement.
 POROSITY: fair.
 SHOWS: light brown oil staining, occasional dead oil.

4695' - 4700' --- 100% SANDSTONE: 60% clear to occasionally white, fine to medium grained, occasionally coarse grained, (sub-angular), mainly sub-rounded, moderately sorted, firm, siliceous cement.
 POROSITY: fair to good.
 SHOWS: light brown oil staining, common dead oil.

4700' - 4705' --- 100% SANDSTONE: 50% buff/honey, 50% clear, fine grained to occasionally medium grained (buff), medium to occasionally coarse grained, (clear) sub-rounded, moderately sorted, clear is siliceous cement (overgrowths).
 POROSITY: fair.
 SHOWS: dead interstitial oil in clear faction.

4705' - 4710' --- 100% SANDSTONE: 80% honey/buff, 20% clear: buff fine to medium grained, clear medium to coarse grained, sub-angular to sub-rounded, buff, moderate to well sorted, clear poor to medium sorted, brittle to hard, siliceous cement, (overgrowths).
 POROSITY: tight.
 SHOWS: frequent dead oil inclusions.

4710' - 4715' --- 100% SANDSTONE: 70% honey/buff, 30% clear, trace pale grey, buff fine to medium grained, clear and grey fine to coarse grained, sub-rounded to sub-angular, buff moderately sorted, clear, poor to moderately sorted, brittle to hard, siliceous cement.
 POROSITY: tight.
 SHOWS: numerous dead oil in clear sandstone.
 TR SILTSTONE: pale grey, firm, possible laminations.

4715' - 4720' --- 95% SANDSTONE: off white to white, fine to medium grained, sub-rounded, moderate to well sorted, hard siliceous cement, trace pyrite.
 POROSITY: tight to occasionally intergranular.
 SHOWS: dead oil inclusions.
 5% SILTSTONE: light to medium grey, soft to firm, micromicaceous, trace pyrite.

4720' - 4725' --- 90% SANDSTONE: light grey to white, very fine to fine, occasionally medium grained, sub-angular, moderate to well sorted friable to hard, siliceous cement, occasionally grades to silty sandstone, trace intergranular pyrite.
POROSITY: tight.
10% SHOWS: dead oil inclusions.

4725' - 4730' --- 95% SANDSTONE: light grey, clear, fine to medium grained, clear, coarse to very coarse grained (5%), sub-angular to sub-rounded, coarse to very coarse, sub-rounded to rounded, moderately to poorly sorted, friable to brittle, occasionally hard, siliceous cement, occasional silty inclusions, trace pyrite cubic and amorphous.
POROSITY: tight.
SHOWS: occasional dead oil
5% SILTSTONE: A/A.

4730' - 4735' --- 90% SANDSTONE: off white, fine grained, occasionally medium grained, rarely coarse grained, sub-angular to sub-rounded, well sorted, hard, siliceous cement, occasional argillaceous inclusions, intergranular pyrite.
POROSITY: tight.
SHOWS: Nil.
10% SILTSTONE: light to medium grey, soft, finely pyritic, non-fissile.

4735' --- TD