# Lithology - Middle Velkerri Member

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| **Depth Interval (mMDRT)** | **Lithology** | **Description** |
| 2104.5-2164 | SILTSTONE WITH OCCASIONAL INTERBEDED CLAYSTONE AND RARE SANDSTONE | CLAYSTONE: (5-40%) dark brown grey, occasionally dark grey, commonly silty, minor micro mica, hard to occasionally moderately hard, sub fissile, minor fissile to sub blocky.  SILTSTONE: (60-95%) dark to occasionally very dark grey, minor dark grey brown, argillaceous to minor arenaceous, commonly micro micaceous, minor lithics, occasional disseminated pyrite, hard, minor firm to very hard, sub blocky to dominantly sub fissile, minor fissile.  SANDSTONE: (Trace-10%) light grey, occasionally off white, very fine, very well sorted, sub angular to sub rounded, moderately siliceous cement, abundant to common off white argillaceous matrix, moderately hard, tight visual porosity, no fluorescence. |
| 2164 -2181 | SILTSTONE WITH MINOR CLAYSTONE AND SANDSTONE INTERBEDS | CLAYSTONE: (10-30%) dark grey to dark brownish grey, very dark grey in part, commonly silty, trace micro micaceous, rare disseminated pyrite, firm to moderately hard, dominantly sub fissile occasionally fissile to sub blocky.  SILTSTONE: (70-80%) dark to very dark grey, minor dark grey brown, argillaceous, occasionally arenaceous, commonly micro micaceous, trace lithics, rare to trace disseminated pyrite, hard to very hard, occasionally moderately hard, sub blocky to sub fissile.  SANDSTONE: (Trace-10%) off white to light grey, very fine, well sorted, sub rounded to dominantly sub angular, strong to moderately siliceous cement, common medium grey silty matrix, common dark lithics, very hard, tight visual porosity, no fluorescence. |
| 2181-2219 | SILTSTONE WITH INTERBEDDED CLAYSTONE | CLAYSTONE: (10-100%) medium grey to grey brown, dark grey in part, occasionally dark grey brown, commonly silty, trace micro micaceous, occasionally disseminated pyrite, firm to moderately hard, dominantly sub fissile occasionally sub blocky.  SILTSTONE: (Trace-90%) dark to very dark grey, dark grey brown, argillaceous to commonly arenaceous, locally common micro micaceous, occasional localised lithics, minor disseminated pyrite, hard to very hard, occasionally moderately hard, sub blocky to sub fissile. |
| 2219-2237 | MASSIVE CLAYSTONE WITH RARE SILTSTONE | CLAYSTONE: (90-100%) very dark grey, very dark to dark grey brown, dark grey black, minor silty, occasionally micro micaceous, minor disseminated pyrite, rare nodular pyrite, hard to moderately hard, minor very hard, dominantly sub fissile to sub blocky.  SILTSTONE: (Trace-10%) medium to dark grey, very dark grey in part, argillaceous, minor arenaceous, commonly micro micaceous, hard, occasionally moderately hard, sub blocky to sub fissile. |
| 2237-2319 | MASSIVE CLAYSTONE | CLAYSTONE: (100%) very dark grey, dark grey black, minor very dark brown grey, rare silty, minor to occasionally micro micaceous, occasional disseminated and rare nodular pyrite, rare lithics, hard to very hard in part, minor moderately hard, sub blocky, occasionally sub fissile to blocky in part. |
| 2319-2331.5 | CLAYSTONE WITH MINOR SILTSTONE INTERBEDS | CLAYSTONE: (95-100%) very dark grey, dark grey black, occasionally dark brown grey, minor light to medium brown, rare silty, occasionally micro micaceous, occasional disseminated pyrite, rare lithics, hard to soft, sub blocky, occasionally sub fissile to blocky in part.  SILTSTONE: (Trace-5%) light to medium brown, medium grey, argillaceous, grading to CLAYSTONE in part, trace lithics, firm to soft, sub blocky. |
| 2331.5-2354 | CLAYSTONE WITH OCCASIONAL SILTSTONE INTERBEDS | CLAYSTONE: (70-90%) very dark grey to dark grey, minor dark greyish black, occasionally dark brown grey, minor light to medium brown, minor silty, occasionally micro micaceous, trace disseminated pyrite, rare nodular pyrite, rare lithics, moderately hard to soft, hard in part, sub blocky to minor sub fissile.  SILTSTONE: (10-30%) medium to medium dark grey, light to medium brown, argillaceous, minor to locally commonly arenaceous, trace lithics, trace micro mica, moderately hard to hard, firm in part, sub blocky. |
| 2354-2373 | CLAYSTONE WITH MINOR SILTSTONE INTERBEDS | CLAYSTONE: (70-80%) medium grey to dark grey, minor dark to very dark grey, minor medium to light brown grey, minor silty, minor micro micaceous, minor disseminated pyrite, trace nodular pyrite, firm to moderately hard, soft to firm in part, sub blocky to sub fissile.  SILTSTONE: (20-30%) medium to dark grey, minor dark grey brown, minor light to medium grey, argillaceous, minor to locally common arenaceous, trace micro mica, rare disseminated pyrite, moderately hard to hard, sub blocky. |
| 2373-2451 | INTERBEDDED CLAYSTONE AND SILTSTONE | CLAYSTONE: (30-70%) medium to occasionally light brown, dark to occasionally medium grey, medium grey brown in part, silty in part, occasionally grading to argillaceous SILTSTONE, micro micaceous, rare disseminated pyrite, moderately hard to hard, sub blocky to sub fissile, minor fissile.  SILTSTONE: (30-70%) medium to occasionally dark grey brown, medium grey, minor light brown, argillaceous to occasionally arenaceous, minor siliceous, micro micaceous, minor disseminated and nodular pyrite, trace lithics, hard to very hard, occasionally moderately hard, sub blocky, minor blocky. |
| 2451-2591.1 | CLAYSTONE WITH MINOR SILTSTONE INTERBEDS | CLAYSTONE: (70-95%) light to medium brown, dark grey, medium grey brown in part, minor silty, micro micaceous, minor disseminated pyrite laminations, moderately hard to minor hard, firm in part, sub blocky to dominantly sub fissile.  SILTSTONE: (5-30%) dark grey, medium to dark grey brown, argillaceous to occasionally arenaceous, siliceous in part, micro micaceous, trace lithics, rare nodular pyrite, firm to hard, occasionally moderately hard, sub blocky to occasionally sub fissile, minor blocky. |
| 2591.1-2798 | MASSIVE CLAYSTONE | CLAYSTONE: (100%) dark to very dark grey, dark grey brown, rare medium brown, minor silty, minor to locally common micro micaceous, occasional disseminated pyrite, moderately hard to dominantly hard, sub blocky to minor sub fissile, occasionally blocky. |
| 2798-2961 | MASSIVE CLAYSTONE | CLAYSTONE: (100%) very dark grey to dark grey black, occasionally slightly silty, trace to minor micro mica, occasionally with trace to minor disseminated and nodular pyrite, hard to very hard, sub blocky to sub fissile, locally trace fissile. |
| 2961-3015 | CLAYSTONE WITH TRACE INTERBEDDED FINE GRAINED SANDSTONE and SILTSTONE | CLAYSTONE: (90-100%) dark grey black, very dark grey, trace silty, rare micro mica, trace nodular pyrite, hard to very hard, sub blocky to sub fissile.  SILTSTONE: (0-10%) medium grey, argillaceous in part grading to CLAYSTONE, moderately calcareous, rare micro mica, hard, sub blocky  SANDSTONE: (trace) white, very light grey, very fine grained, well sorted, sub angular to occasionally sub rounded, strong calcareous cement / matrix, moderately hard, tight visual porosity, no fluorescence. |
| 3015-3040 | MASSIVE CLAYSTONE | CLAYSTONE: (100%) grey black, very dark grey, silty in part, slight to common micro mica in part, trace nodular pyrite, hard to very hard, sub blocky to sub fissile |
| 3040-3250 | CLAYSTONE WITH TRACE INTERBEDDED SILTSTONE AND VERY FINE SANDSTONE | CLAYSTONE: (100%) very dark grey black, very dark grey, silty in part, trace micro mica, trace nodular and disseminated pyrite, occasional trace crystalline calcite, hard to very hard, sub blocky to sub fissile, trace fissile.  SILTSTONE: (trace) medium dark grey, trace micro mica, moderately hard to hard, blocky to sub blocky.  SANDSTONE: (trace) white, very light grey, very fine to fine grained, sub angular, well sorted, moderately strong calcareous cement/matrix, moderately hard to hard, tight visual porosity, no fluorescence |
| 3250-3646 | CLAYSTONE | CLAYSTONE: (100%) very dark grey, very dark grey black, occasionally silty in part grading to SILTSTONE, trace micro mica, trace to minor nodular and disseminated pyrite, trace loose clear quartz grains, hard to very hard, sub blocky to sub fissile, trace fissile. |
| 3646-3808 | CLAYSTONE | CLAYSTONE: (100%) very dark grey, very dark grey black, locally silty, trace micro mica, trace to minor nodular and disseminated pyrite, trace thin calcite veining, hard to very hard, sub blocky to sub fissile. |