No sample.

Sandstone light orange and red, unconsolidated, calcareous to dolomitic, very fine to fine grained, well sorted, angular to subrounded, silty (sample very fine, powdery).

Sandstone orange and reddish brown, unconsolidated, very fine to fine grained, angular to subrounded, well sorted, silty, dolomitic to calcareous, minor green feldspar? grains.

Sandstone as above very fine to medium grained, medium sorted, trace white clay and dark reddish brown shaly partings.

Sandstone dark orange and reddish brown, unconsolidated, angular to subrounded, very fine to medium grained, occasional coarse grained quartz grains, medium sorted, silty, dolomitic to calcareous, some light to dark green mineral grains, minor white clay.

Sandstone dark reddish-brown, unconsolidated, very fine to fine grained, angular to subrounded, well sorted, silty, dolomitic to calcareous, some green feldspar? grains, some dark reddish brown shaly partings.

Sandstone as above, very fine to coarse grained, angular to subrounded, poorly sorted, unconsolidated, dark red brown shaly partings.

Sandstone orange to light reddish brown, unconsolidated, very fine to medium grained, medium sorted, angular to subrounded, silty, dolomitic to calcareous, some green feldspar? grains, minor white clay.

Shale (70%) dark reddish brown, platy, micaceous, silty in part. Sandstone (30%) as above.

Sandstone orange to light reddish brown, unconsolidated, angular to subrounded, very fine to medium grained, medium sorted, silty, dolomitic to calcareous, some green mineral grains, minor white clay and dark red shaly partings.

Sandstone light orange to light reddish brown, unconsolidated as trace dark red shaly partings.

Sandstone aa, very silty.
200-220  Sandstone orange-red, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, silty, dolomitic to calcareous, minor white clay and green feldspar? grains.

220-250  Sandstone light orange to reddish brown, unconsolidated, angular to subrounded, very fine to medium grained, medium sorted, silty, dolomitic to calcareous, minor dark red shaly partings and green mineral grains, trace white clay.

250-290  Sandstone light orange-red unconsolidated aa? samples fine powdery.

290-310  Sandstone aa trace minor dark red shaly partings.

310-340  Sandstone light orange to light red, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, dolomitic to calcareous, silty, some green mineral grains, trace white clay.

340-350  Sandstone orange to light red, unconsolidated, angular to subrounded, fine to medium grained, well sorted, occasional coarse quartz grain, slightly silty in part, dolomitic to calcareous, some green feldspar? some pink feldspar? grains.

350-370  Sandstone light orange to light red unconsolidated, angular to subrounded, very fine to fine grained, occasional medium grained quartz grains, well sorted, dolomitic to calcareous, silty, some green mineral grains.

370-380  Sandstone aa trace large angular white quartz fragments.

380-390  Sandstone light orange to light red, unconsolidated, as above.

390-400  Sandstone aa trace clear to white large angular quartz fragments.

400-410  Sandstone light orange to light red, unconsolidated, very fine to medium grained, medium sorted, silty, dolomitic to calcareous, occasional scattered coarse quartz grains, some light to dark green grains, (feldspar?), minor white clay partings.

410-420  Sandstone light reddish brown and orange, unconsolidated, very fine to medium grained, occasional scattered coarse quartz grains, silty, medium sorted, dolomitic to calcareous, green feldspar? grains, minor dark red shaly partings.
420-460  Sandstone a.a. minor medium grey to green silty sand, minor dark reddish brown micaceous shaly partings.

460-470  Siltstone (90%) dark reddish brown, dolomitic, sandy and shaly in part, slightly micaceous. Sandstone (10%) aa.

470-480  Sandstone reddish brown and orange, well consolidated, siliceous in part, very fine to fine grained, well sorted, silty, dolomitic to calcareous, abundant green feldspar? grains, some dark red shaly partings and grey to green silty sand.

480-500  Sandstone (60%) aa. Siltstone (40%) dark reddish brown, micaceous in part, dolomitic, sandy and shaly in part.

500-520  Sandstone (60%) reddish brown and orange, poorly to well consolidated, siliceous in part, very fine to fine grained, occasional medium to coarse quartz grains, well sorted, silty, dolomitic to calcareous, some green feldspar? grains, Shale (30%) dark reddish brown, blocky to platy, dolomitic in part, micaceous, silty in part. Siltstone (10%) aa.

520-530  Sandstone (70%) reddish brown and orange, poorly to well consolidated, siliceous in part, very fine to medium grained, medium sorted, silty dolomitic to calcareous, green feldspar? grains. Shale (30%) dark reddish brown, micaceous, blocky to platy, silty in part.

530-550  Sandstone orange to light brownish red, poorly to well consolidated, siliceous in part, very fine to medium grained, medium sorted, angular to subrounded, silty, green feldspar? grains, some light grey to greyish green silty sand. Trace of coarsely crystalline vei calcite, some white clay.

550-560  Sandstone (80%) orange to dark reddish brown, well consolidated, siliceous in part, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous, abundant green mineral grains, some white clay, minor greyish green silty sand, silty. Siltstone (20%) dark reddish brown, dolomitic, micaceous in part, sandy to shaly in part.
560-570 Sandstone (80%) as above, occasional coarse grained quartz grains, silty. Shale (20%) dark reddish brown, blocky to platy, micaceous, silty in part.

570-580 Shale (60%) as above, grading in part to a dolomitic siltstone. Sandstone (40%) orange to dark reddish brown, well consolidated, siliceous in part, angular to subrounded, fine to coarse grained, poorly sorted, dolomitic to calcareous, silty, green feldspar? grain some white clay.

580-590 Sandstone orange, well consolidated, siliceous in part, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous, silty in part, green mineral grains, trace coarsely crystalline calcite probably vein calcite. Minor dark reddish brown shaly partings. Some white clay or gypsum?

590-600 Sandstone (70%) as. Shale (30%) dark reddish brown, blocky to platy, micaceous, grading in part to a dolomitic siltstone. Trace of vein calcite.

600-610 Sandstone (70%) as above trace light grey to green silty sand, much white clay (Gypsum or barite?) Shale (30%) as above.

610-620 Shale (80%) dark reddish brown, blocky to platy, micaceous, grading in part to dolomitic siltstone. Sandstone (20%) orange, poorly to well consolidated, siliceous in part, angular to subrounded, fine to medium grained, medium sorted, occasional coarse quartz grains, green mineral grains, white clay, dolomitic to calcareous, silty in part.

620-630 Shale (70%) as above.
Sandstone (30%) as above.
Trace grey to green silty sandstone.

630-640 Shale (70%) as above, very micaceous in part.
Sandstone (30%) as above, unconsolidated to well consolidated.
660-670  Sandstone light orange to light reddish brown, poorly to well consolidated, friable in part, some poor to fair intergranular and pin point porosity (5-8%) fine to medium grained, well sorted, angular to subrounded, dolomitic to calcareous, green mineral grains, minor white clay, slightly silty in part. Trace dark red shaly partings.

670-680  Sandstone light orange, unconsolidated, angular to subrounded, very fine to medium grained, medium sorted, dolomitic to calcareous, slightly silty in part, some green mineral grains (feldspar?) minor white clay and dark red shaly partings.

680-693  Sandstone orange to light reddish brown, poorly to well consolidated, siliceous in part, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous, green feldspar? grains, some white clay (or gypsum?) silty in part.

693-702  Core No. 1 Cored 9' recovered 8'2"

90% recovered.
702-710 Sandstone (70%) orange, poorly to well consolidated, siliceous in part, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous, some green feldspar grains, silty, minor white clay, trace of white to light orange soft gypsum. Shale (30%) dark reddish brown, blocky, dolomitic, silty, micaceous.

710-730 Sandstone (70%) orange, unconsolidated as above, trace gypsum. Shale (30%) as above.

730-740 Sandstone (60%) orange to reddish brown, unconsolidated, angular to subrounded, very fine to medium grained, medium sorted, dolomitic to calcareous, silty in part, green mineral grains, some white clay, trace clear to white soft anhydrite. Shale (40%) dark reddish brown platy, micaceous, silty.

740-750 Sandstone as above with dark reddish brown shaly partings.

750-760 No sample.

760-770 Sandstone (50%) orange to reddish brown, unconsolidate, angular to subrounded, very fine to fine grained, well sorted, dolomitic to calcareous, green mineral grains, minor white clay, silty, Shale (50%) dark reddish brown, platy, micaceous, silty.

770-780 Shale (60%) as above. Sandstone (40%) orange, poorly to well consolidated, angular to subrounded, very fine to medium grained, medium sorted, dolomitic to calcareous, green mineral grains, white clay.

780-790 Sandstone (60%) as above. Shale (40%) as above.

790-800 Shale (70%) as above grading in part to siltstone Sandstone (30%) as above Trace clear to white long thin laths of anhydrite.

800-810 Sandstone (60%) orange, unconsolidated, angular to subrounded very fine to fine grained, well sorted, dolomitic to calcareous, silty in part, green mineral grains, some white clay. Shale (40%) dark reddish brown, blocky to platy, micaceous, silty.
810-820  Shale (90%) as above.
      Sandstone (10%) as above.

820-830  Sandstone (80%) as above.
      Shale (20%) as above.

830-840  Sandstone (60%) as above.
      Shale (40%) as above.
      Trace clear to white anhydrite.

840-860  Sandstone (80%) orange to reddish brown,
      unconsolidated, angular to subrounded, very
      fine to medium grained, medium sorted, dolomitic
      to calcareous, green feldspar grains, silty in
      part.
      Shale (20%) dark reddish brown, blocky to platy,
      micaceous, silty, minor green shale and siltstone.

860-870  Sandstone (90%) as above.
      Shale (10%) as above.

870-880  Sandstone (70%) as above.
      Shale (30%) as above.

**TOP PERTNJARA SHALE 880' (+1065)**

880-890  Shale (90%) dark reddish brown, blocky to platy,
      micaceous, dolomitic in part, silty in part,
      minor inclusions and flecks of white to light
      orange anhydrite.
      Sandstone (10%) as above.

890-900  Shale (80%) as above.
      Sandstone (20%) as above.

900-910  Shale dark reddish brown, blocky to platy,
      micaceous, silty in part, slightly dolomitic
      in part, trace of anhydrite and sandstone.

910-920  Shale (50%) dark reddish brown, blocky to platy,
      dolomitic in part, micaceous, trace of flecks
      and inclusions of white anhydrite, silty.
      Siltstone (50%) orange to dark reddish brown,
      dolomitic, grading to sandstone in part.
920-930  Siltstone (50%) as above.  
    Shale (30%) as above.  
    Sandstone (20%) light orange, unconsolidated,  
    angular to subrounded, very fine to fine grained,  
    well sorted, dolomitic to calcareous, silty.  

930-950  Shale (60%) dark reddish brown, blocky to platy,  
    dolomitic in part, micaceous, silty.  
    Siltstone (40%) orange-red to reddish brown,  
    dolomitic, sandy. Trace sandstone and anhydrite.  

950-970  Shale (80%) as above.  
    Siltstone (20%) as above.  
    Trace sandstone and clear to white anhydrite.  

970-990  Shale (60%) as above.  
    Siltstone (40%) orange red to dark reddish brown,  
    dolomitic, grading in part to sandstone.  

990-1000  Siltstone (50%) as above.  
    Shale (30%) as above.  
    Sandstone (20%) orange to reddish brown, poorly to  
    well consolidated, angular to subrounded, very fine  
    to fine grained, well sorted, silty, dolomitic to  
    calcareous, some green mineral grains.  

1000-1010  Shale (40%) dark reddish brown, blocky to platy,  
    micaceous, slightly dolomitic in part, silty.  
    Siltstone (30%) orange-red to dark reddish brown,  
    dolomitic, sandy.  
    Sandstone (30%) light orange, unconsolidated,  
    angular to subrounded, very fine to medium grained,  
    medium sorted, dolomitic to calcareous, silty in part.  

TOP MEREENIE 1010' (+935)  

1010-1020  Sandstone (70%) as above.  
    Shale (30%) as above.  

1020-1040  Sandstone (80%) light orange to orange, angular to  
    subrounded, fine to medium grained, well sorted,  
    unconsolidated to well consolidated, dolomitic to  
    calcareous, light green mineral grains, slightly  
    silty.  
    Shale (20%) dark reddish brown, platy, micaceous,  
    dolomitic in part, silty.
1040-70 Sandstone light orange, unconsolidated, angular to subrounded, fine grained, well sorted, dolomitic to calcareous, light green mineral grains and dark reddish brown shaly partings.

1070-80 Sandstone light orange to orange red, unconsolidated, angular to subrounded, fine to medium grained, well sorted, dolomitic in part, light to dark green mineral grains, occasional black mineral grains, some dark reddish brown shaly partings.

1080-90 Sandstone as above very fine to medium grained, medium sorted.

1090-1100 Sandstone very light orange, unconsolidated, angular to subrounded, very fine grained, well sorted, very silty, slightly dolomitic in part, dark reddish brown shaly partings. (Sample very fine powdery).

1100-1120 Sandstone light orange and orange, unconsolidated, angular to subrounded, very fine to fine grained, some medium grained sand, medium to well sorted, slightly silty in part, dolomitic in part, dark reddish brown shaly partings.

1120-1162 Sandstone light orange, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, very silty, slightly dolomitic, minor dark brown shaly parting, occasional dark reddish brown to green silty partings. (Sample very fine powdery).

CORE NO. 2 1162-1167 CORED 5' RECOVERED 5' 100% REC.

1167-70 Sandstone light orange, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, dolomitic, minor white clay and dark reddish brown shaly parting, light green mineral grains with occasional black mineral grains.

1170-90 Sandstone orange to reddish orange, unconsolidated, angular to subrounded, fine to medium grained, well sorted, dolomitic, green mineral grains, minor dark reddish brown shaly partings.

1190-1200 Sandstone deep orange to reddish orange, unconsolidated as above.
1200-1210 Sandstone as above, very fine to fine grained, well sorted.

1210-1220 Sandstone bright orange, unconsolidated, angular to subrounded very fine to medium grained, medium to well sorted, dolomitic, greyish green and green mineral grains, minor white clay, dark reddish brown shaly partings.

1220-1230 Sandstone as above unconsolidated, reddish orange.

1230-1240 Sandstone bright orange, unconsolidated, angular to subrounded very fine to fine grained, occasional medium grained sand, well sorted, dolomitic, dark reddish brown shaly partings.

1240-1260 Sandstone as above, minor greyish green silty parting and white clay.

1260-1270 Sandstone (95%) as above, Shale (5%) dark reddish brown, blocky to platy, micaceous.

1270- Sandstone bright orange, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, dolomitic, green mineral grains, minor white clay and dark reddish brown shaly partings.

1300-1320 Sandstone light to bright orange, unconsolidated to poorly consolidated, angular to subrounded, fine to medium grained, medium to well sorted, dolomitic, green mineral grains, minor white clay, minor dark reddish brown shaly partings.

1320-1360 Sandstone white to light orange-red, unconsolidated, angular to subrounded, very fine to fine grained well sorted, slightly dolomitic in part, minor light green mineral grains and dark reddish brown shaly parting.

1360-1390 Sandstone light orange, minor white sand, unconsolidated, angular to subrounded, fine to medium grained, well sorted, slightly dolomitic, some green mineral grains, minor white clay and dark reddish brown shaly partings.

1390-1420 Sandstone orange-red, minor white sand, unconsolidated angular to subrounded, very fine to medium grained, medium sorted, dolomitic in part, green mineral grains, dark reddish brown shaly partings, minor white clay, minor white to green silty sand, trace of coarse quartz grains.
1420-30  Missing. No sample.

1430-40  Sandstone white to light orange-red, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, slightly dolomitic in part, green mineral grains, minor white clay and dark reddish brown shaly partings.

1440-50  Sandstone as above, very fine to medium grained, medium sorted.

1450-80  Sandstone orange-red, minor white sand, unconsolidated to well consolidated, siliceous in part, angular to subrounded, very fine to fine grained, well sorted, dolomitic in part, green to black mineral grains, minor whitish green silty sand, white clay and dark reddish brown shaly partings.

1480-1520 Sandstone white to light orange-red, unconsolidated, angular to subrounded, very fine to fine grained, minor medium grained sand, well sorted, dolomitic in part, minor green mineral grains, minor white clay and dark reddish brown shaly partings.

1520-40  Sandstone as above some cream to greyish-green and green silty sand.

1540-60  Sandstone (95%) as above, occasional medium to coarse quartz grains.
          Shale (5%) dark reddish brown, platy to blocky, micaceous.

1560-70  Sandstone white to light orange, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, minor green mineral grains, white clay and dark reddish brown shaly partings.

1570-90  Sandstone light orange, unconsolidated, as above.

1590-1600 Sandstone orange minor white sand, unconsolidated to well consolidated, angular to rounded, very fine to medium grained, medium sorted, dolomitic in part, dark reddish brown shaly partings, minor green mineral grains and white clay, silty in part.

1600-21  Sandstone white to very light orange, unconsolidated, subangular to rounded, very fine to fine grained, well sorted, some white clay, minor green mineral grains.

CORE NO. 3  1621 to 1624  Cored 3'  Rec. 2'9"  91% Rec.
1630-40 Sandstone white to orange red, unconsolidated, subangular to rounded quartz grains, very fine to fine grained, well sorted, dolomitic in part, green and black mineral grains, dark reddish brown shaly partings, minor white clay.

1640-50 Sandstone light orange, unconsolidated, subangular, to rounded quartz grains, clear to frosted, fine to medium grained, well sorted, minor white clay and dark red shaly partings.

1650-60 Sandstone white to light orange-red, unconsolidated, subangular to subrounded quartz grains, clear to frosted, very fine to fine grained, well sorted, minor dark red shaly partings and white clay.

1660-70 Sandstone orange-red, minor white sand, unconsolidated, as above.

1670-80 Sandstone (90%) as above. Shale (10%) dark reddish brown, blocky to platy, micaceous, silty in part.

1680-1700 Sandstone light orange, some whitesand, unconsolidated, as above, some dark red shaly partings.

1700-1720 Sandstone (90%) white to light orange red, unconsolidated, angular to rounded, clear to frosted quartz grains, very fine to medium grained, medium sorted, minor white clay. Shale (10%) dark reddish brown, blocky, micaceous, silty in part.

1720-40 Sandstone very light orange, unconsolidated, subangular to rounded, very fine to fine grained, well sorted, minor white clay and reddish brown shaly partings.

1740-60 Sandstone white to light orange-red, unconsolidated, as above.

1760-70 Sandstone white to orange, unconsolidated, subangular to rounded clear to frosted quartz grains, fine to medium grained, well sorted, minor white clay, black mineral grains and dark red shaly partings.

1770-80 Sandstone white to very light orange, unconsolidated, as above.

1780-1800 Sandstone white to light orange-red, unconsolidated, as above.
1800-10 Sandstone white to bright orange-red, unconsolidated, subangular to rounded clear to frosted quartz grains, fine to medium grained, minor white clay and dark red shaly partings.

1810-30 Sandstone very light orange, unconsolidated, as above.

1830-40 Sandstone white to light orange-red, unconsolidated, subangular to rounded, clear to frosted quartz grains, fine to medium grained, well sorted, minor white clay and some dark red shaly partings.

1840-90 Sandstone very light orange, unconsolidated as above.

1890-1910 Sandstone white to light orange, unconsolidated, subangular to rounded clear to frosted quartz grains, very fine to fine grained, occasionally medium grained, medium to well sorted, some white clay, trace dark red shaly partings.

1910-20 Sandstone (90%) light orange-red, unconsolidated, as above.
Shale (10%) dark reddish brown, micaceous.

1920-30 Sandstone white to bright orange, unconsolidated, subangular to rounded clear to frosted quartz grains, very fine to fine grained, well sorted, some white clay, minor dark red shaly partings.

1930-40 Sandstone as above very fine to medium grained, medium sorted.

1940-60 Sandstone white to very light orange, unconsolidated, subangular to rounded clear to frosted quartz grains, very fine to medium grained, medium sorted, some white clay.

1960-70 Sandstone white to light red, unconsolidated, subangular to rounded, clear to frosted quartz grains, very fine to medium grained, medium sorted, some bright red silty to sandy shaly partings, minor white clay.

1970-80 Sandstone (60%) as above, silty in part, dolomitic in part.
Shale (40%) bright red to dark red, blocky to platy, stiffly silty to sandy in part, slightly dolomitic in part.
<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-2000</td>
<td>Sandstone (80%) white, pink and light red, unconsolidate, subangular to rounded, clear to frosted quartz grains, very fine to medium grained, medium sorted, silty in part. Shale (20%) bright red, blocky, silty to sandy in part.</td>
</tr>
<tr>
<td>2000-10</td>
<td>Sandstone white, pink and light red, unconsolidated, subangular to rounded, clear to frosted quartz grains, very fine to fine grained, well sorted, minor white clay and red shaly partings.</td>
</tr>
<tr>
<td>2010-30</td>
<td>Sandstone white and orange-red, as above.</td>
</tr>
<tr>
<td>2030-40</td>
<td>Sandstone white and light orange, unconsolidated, subangular to rounded, clear to frosted quartz grains, fine to medium grained, well sorted, some white clay.</td>
</tr>
<tr>
<td>2040-60</td>
<td>Sandstone bright orange, minor white sand all as above.</td>
</tr>
<tr>
<td>2060-70</td>
<td>Sandstone orange to orange-red, minor white sand, unconsolidated subangular to rounded, clear to frosted quartz grains, medium grained, well sorted, minor white clay and red shaly partings.</td>
</tr>
<tr>
<td>2070-80</td>
<td>Sandstone white and light orange, unconsolidated, subangular to rounded, clear to frosted quartz grains, fine to medium grained, well sorted, minor white clay and red shaly partings.</td>
</tr>
<tr>
<td>2080-90</td>
<td>Sandstone light orange, as above.</td>
</tr>
<tr>
<td>2090-2180</td>
<td>Sandstone light bright orange, minor light red sand, unconsolidated, subangular to rounded, fine to medium grained, well sorted, minor white clay.</td>
</tr>
<tr>
<td>2180-90</td>
<td>Sandstone light orange and light orange red, as above.</td>
</tr>
<tr>
<td>2190-2200</td>
<td>Sandstone light orange and light orange red, unconsolidated to well consolidated, siliceous in part, subangular to rounded, fine to medium grained well sorted, minor black mineral flecks and inclusions, minor white clay, trace of poor intergranular porosity.</td>
</tr>
<tr>
<td>2200-2219</td>
<td>Sandstone light orange, unconsolidated, subangular to rounded, fine to medium grained, well sorted, minor white clay, minor chips of friable sand trace of intergranular porosity.</td>
</tr>
</tbody>
</table>

CORE NO. 4  2219 to 2234  Cored 15'  Rec. 15'  100% Rec.
Palm Valley No. 1  K.B. 1945

2234-40  Sandstone very light orange, unconsolidated, subangular to rounded, fine to medium grained, well sorted, minor white clay.

2240-50  Sandstone as above, occasional coarse quartz grains.

2250-60  Sandstone light to bright orange-red, unconsolidated, subangular to rounded, fine to medium grained, well sorted, some white clay.

2260-90  Sandstone as above, silty in part, occasional coarse quartz grains.

2290-2300  Sandstone very light orange, unconsolidated, subangular to rounded, medium grained, minor fine grained sand, well sorted, minor white clay.

2300-10  Sandstone white, minor light orange sand, as above.

2310-20  Sandstone white and light orange, unconsolidated, subangular to rounded, fine to medium grained, occasional coarse quartz grains, well sorted, minor white clay.

2320-30  Sandstone very light orange-red, as above.

2330-60  Sandstone white and light pink to orange, unconsolidated, subangular to subrounded, fine to medium grained, occasional coarse quartz grains, well sorted, minor white clay.

2360-70  Sandstone light bright orange, unconsolidated, as above.

2370-2400  Sandstone light bright orange, unconsolidated, angular to subrounded, very fine to medium grained, medium sorted, occasional coarse quartz grains, minor white clay, silty in part.

2400-10  Sandstone light bright orange, unconsolidated, angular to subrounded, very fine to fine grained, occasional medium quartz grains, well sorted, minor white clay.
2410-20  Sandstone bright orange, unconsolidated, angular to subrounded, fine grained, well sorted, minor white clay.

2420-70  Sandstone as above, very fine to fine grained, occasional medium grained quartz grains, well sorted, slightly silty in part.

2470-80  Sandstone light orange, unconsolidated, angular to subrounded, very fine to medium grained, medium sorted, minor white clay, slightly silty.

2480-2500 Sandstone bright orange, unconsolidated, sub-angular to rounded, fine to medium grained, well sorted, minor white clay.

2500-50  Sandstone light to bright orange, unconsolidated, angular to subrounded, very fine to medium grained, medium sorted, minor white clay.

2550-60  Sandstone bright orange-red, unconsolidated, angular to subrounded, fine to medium grained, well sorted, minor white clay.

2560-70  Sandstone bright orange, unconsolidated, sub-angular to rounded, fine to medium grained, well sorted, occasional coarse quartz grains, minor white clay.

2570-80  Sandstone bright orange and orange red, mostly unconsolidated sand a few minor chips, subangular to rounded, fine to coarse grained, medium sorted, dolomitic in part, minor white clay, trace intergranular porosity.

2580-90  Sandstone bright orange, unconsolidated, subangular to rounded, medium grained, well sorted, trace white clay.

2590-2620 Sandstone as above, fine to medium grained, well sorted, occasional coarse quartz grains.

2620-40  Sandstone bright orange and orange red, subangular to subrounded very fine to medium grained, medium sorted, minor white clay.

2640-60  Sandstone as above occasional coarse grained quartz grains.

2660-70  Sandstone orange red, unconsolidated, subangular to subrounded, fine to medium grained, well sorted, minor white clay, occasional dark mineral grains.
2670-80  Sandstone Orange-red, minor white sand, unconsolidated, very fine to medium grained, medium sorted, subangular to subrounded, minor white clay.

2680-2710  Sandstone bright orange-red, unconsolidated, subangular to rounded, fine to medium grained, occasional coarse quartz grains, well sorted, minor white clay.

2710-30  Sandstone bright orange-red, unconsolidated, subangular to rounded, fine to coarse grained, medium sorted minor white clay.

2730-40  Sandstone reddish orange and rusty red, unconsolidated, subangular to round, very fine to medium grained, medium sorted, occasional coarse quartz grains, minor white clay.

2740-60  Sandstone bright orange-red, unconsolidated, as above.

2760-70  Sandstone bright orange-red, unconsolidated, subangular to rounded, medium to coarse grained, well sorted, minor white clay.

2770-80  Sandstone as above, medium grained, well sorted occasional coarse quartz grain.

2780-2789  Sandstone as above, medium to coarse grained, well sorted, minor white clay.
CORE NO. 5  2789 to 2799  Cut 10'. Rec. 9'2"  92% Rec.

2800-10  Sandstone white, whitish pink and light purple, minor orange, sand, unconsolidated, angular to subrounded, fine to medium grained, occasional coarse quartz grains, well sorted, some white clay.

2810-20  Sandstone as above, medium to coarse grained, well sorted.

2820-30  Sandstone white and light reddish pink, unconsolidated, angular to rounded, medium to coarse grained, well sorted, minor white clay.

2830-50  Sandstone as above, fine to coarse grained, medium sorted.

2850-60  Sandstone white and cream, unconsolidated, angular to rounded, fine to medium grained, occasional coarse quartz grains, well sorted, minor white clay, trace dark red shale.

2860-70  Sandstone white and light pink, minor orange sand, unconsolidated, angular to rounded, fine to coarse grained, medium sorted, some white clay.

2870-80  Sandstone white, minor orange sand, unconsolidated, angular to subrounded, occasional rounded quartz grains, fine to medium grained, well sorted, some white clay.

2880-90  Sandstone white and very light pink, unconsolidated, angular to subrounded, fine to coarse grained, medium sorted, minor white and trace dark red shale, some orange sand (cavings?)

2890-2900  Sandstone white, minor light pink and some light orange sand, unconsolidated, fine to coarse grained, medium sorted, angular to subrounded, occasional well rounded quartz grains.
2900-20 Sandstone white, minor light pink and orange sand, unconsolidated, angular to subrounded, fine to coarse grained, medium sorted, minor white clay.

2920-30 Sandstone white and light pink, minor orange sand, unconsolidated, angular to subrounded, fine to medium grained, occasional coarse quartz grains, well sorted, minor white clay.

2930-40 Sandstone white and light orange-pink, unconsolidated, angular to subrounded, fine grained, well sorted, some white clay.

2940-60 Sandstone white to light rusty red, as above, occasional medium grained quartz grains, slightly argillaceous in part.

2960-70 Sandstone white to orange and rusty red, unconsolidated, angular to subrounded, fine grained, occasional medium to coarse quartz grains, well sorted, trace green silty sand, some white clay.

2970-80 Sandstone as above, silty to shaly in part, some green silty sand and some dark red shaly to silty partings.

2980-90 Shale (80%) reddish brown, blocky, silty, micaceous, some inclusion and flecks of green silty shale. Sandstone (20%) white, orange and red, fine grained, occasional medium to coarse quartz grains, well sorted, silty in part, minor white clay.

2990-3000 Shale (70%) red to reddish brown, blocky to platy, silty, micaceous, flecks and spots of green silty shale. Sandstone (30%) as above.

3000-10 Sandstone (50%) white, orange and red, angular to subrounded, fine grained well sorted, occasional medium to coarse quartz grains, silty, some green silty sand. Shale (50%) as above grading to siltstone.

3010-20 Sandstone (80%) white to orange and red, unconsolidated, angular to subrounded, fine grained, silty. Siltstone (20%) red and dark red, minor green sandy and shaly partings.

3020-50 Sandstone white and rusty red, unconsolidated to poorly consolidated, angular to subrounded, fine to medium grained, occasional coarse quartz grains, medium to well sorted, silty in part, some white clay, dark red silty and shaly partings, trace green silty and shaly partings.
TOP STOKES FORMATION 3050 (-1105)

3050-60  Shale (60%) red to dark red, blocky to platy, micaceous, silty, some green shale, silty, some medium to coarse, subangular to rounded floating quartz grains, trace of gypsum? Siltstone (40%) red with some green siltstone, micaceous in part, sandy in part. Trace white and rusty red sandstone as above.

3060-80  Siltstone (60%) as above. Shale (40%) as above, some white to light red fine grained sandstone.

3080-90  Shale (70%) red to dark red, some flecks inclusions and patches of green shale, blocky to platy, silty, micaceous, dolomitic to calcareous in part. Trace of medium to coarse subrounded to rounded floating quartz grains. Siltstone (30%) red and green, sandy in part.

3090-3100 Shale (50%) as above. Siltstone (50%) as above, grading in part to a white and light red fine grained, silty sandstone.

3100-20  Shale (80%) light to dark red, blocky to platy, micaceous, dolomitic to calcareous in part, silty, minor green shale. Siltstone (20%) red with minor green siltstone, sandy in part.

3120-40  Shale (80%) light to dark red, blocky to platy, micaceous, dolomitic to calcareous in part, silty, some minor patches and inclusions of green shale. Siltstone (20%) red and green, sandy in part.

3140-50  Shale (60%) aa. Siltstone (40%) aa. Trace sandstone and gypsum?

3150-70  Shale (80%) light to dark red, some green shale, micaceous, blocky to platy, dolomitic to calcareous in part, silty. Siltstone (20%) red, green and whitish grey, sandy in part. Trace white to light red fine grained silty sandstone.
Palm Valley No. 1  K.B. 1945

3170-80  Shale (50%) aa.
Sandstone (30%) white to orange-red, fine grained, silty, well sorted, angular to subrounded.
Siltstone (20%) red and green sandy in part.

Core No. 6, 3181' to 3181 8" cut 8", no recovery. Used 8 3/4" Hughes hard formation core bit Type J. Pulled out of hole after attempting to cut a core. Core bit came out of hole minus the cones. Ran back in the hole with a 12 1/2" rerun bit, milled up the cones and made 8 feet of new hole. Pulled out of hole to run a new 12 3/4" drilling bit and on the way back in the hole the drill pipe backed off. Dropped 24 drill collars and 54 joints of 4 3/4" drill pipe in the hole. Fishing.

3180-90  Shale (70%) light to dark red and green, blocky to platy, micaceous dolomitic to calcareous in part, silty.
Siltstone (30%) red, green and white, sandy in part. Minor white to light red fine silty sandstone.
3190 - 3200  No sample, 99% cement. Set 9½" casing at 3192' with 600 sacks of construction cement. Drilled out cement and drying up hole.

3200 - 3210  Sandstone (50%) white, light pink, rusty red, unconsolidated, very fine to fine grained, angular to subrounded, well sorted, silty. Shale (50%) red to dark red, minor green, blocky to platy, micaceous, slightly dolomitic, silty to sandy in part.

3210 - 3220  Sandstone (90%) cream to light rusty red, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, silty, minor green silty sand and white clay. Shale (10%) aa.

3220 - 3230  Sandstone (50%) rusty red, unconsolidated, angular to subrounded very fine to fine grained, very silty. Siltstone (50%) red to dark red, minor green, sandy in part, grading to dark red, shale in part. Trace gypsum?

3230 - 3240  Sandstone (80%) rusty red, minor white and pink sand, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, very silty. Siltstone (20%) red to dark red, shaly and sandy in part, minor green to grey siltstone.

3240 - 3250  Sandstone (40%) as above. Siltstone (40%) as above. Shale (20%) red to dark reddish brown, blocky to platy, micaceous, silty. Trace green siltstone and shale.

3250 - 3260  Sandstone (80%) white, light orange red, unconsolidated to well consolidated, siliceous in part, angular to subrounded, fine grained, occasional medium grained sand, silty. Shale (20%) dark reddish brown, minor green, blocky, silty in part, micaceous in part. Trace gypsum?

3260 - 3270  Shale (70%) red to dark reddish brown, blocky, silty. Siltstone (30%) red to dark red, sandy in part. Minor green siltstone and shale, trace sandstone.
3270 - 3293 Shale (80%) light to dark reddish brown, some green shale, blocky to platy, silty. Siltstone (20%) red to green, sandy in part. Trace sandstone, trace medium grained floating sand grains in the shale and siltstone.

CORE NO. 7 3293 - 3298 cut 5' Rec. 4'7" 92% Rec.

3300 - 3330 Shale (70%) red to dark reddish brown and green, mottled, blocky to platy, micaceous, silty and slightly dolomitic in part. Siltstone (30%) white, red and green, sandy dolomitic in part, minor grey siltstone and shale.

3330 - 3360 Shale (80%) as above, minor grey to greyish purple shale. Siltstone (20%) as above. Trace sandstone.

3360 - 3370 Siltstone (60%) red to reddish brown, minor white, sandy in part, dolomitic in part. Shale (40%) dark reddish brown, minor green shale, dolomitic and micaceous in part. Sample very fine.

3370 - 3380 Shale (70%) red, dark reddish brown, green, minor light to dark grey shale, blocky to platy, micaceous, slightly dolomitic, silty in part. Siltstone (30%) white, red, green, grey, sandy and dolomitic in part.

3380 - 3390 Shale (80%) as above. Siltstone (20%) as above. Trace sandstone.

3390 - 3410 Shale (90%) as above. Siltstone (10%) as above.

3410 - 3420 Shale (80%) dark reddish brown and green, minor dark grey to purple shale, blocky to platy, micaceous, dolomitic in part, silty in part. Siltstone (20%) red and green, minor white and light grey siltstone, sandy and dolomitic in part. (Sample very fine).

3420 - 3450 Siltstone (50%) as above. Shale (50%) as above. (Samples very fine).
3450 - 3470  Shale (80%) red to dark reddish brown and green, mottled, blocky to platy, micaceous, silty and dolomitic in part.
Siltstone (20%) red and green, minor white, light pink and light grey siltstone, sandy and dolomitic in part.
Trace floating quartz grains in the shale and siltstone.

3470 - 3490  Shale (80%) red to dark reddish brown, grey to greyish green and green, blocky to platy, dolomitic in part, silty in part, micaceous.
Siltstone (20%) red, grey and green, minor white and light pink, dolomitic and micaceous in part, sandy in part. Trace sandstone, gypsum?
(note from 3450 to 3570' large cuttings in samples, cavings).

3490 - 3500  Shale (90%) as above.
Siltstone (10%) as above.

3500 - 3520  Shale (80%) as above.
Siltstone (20%) as above.
Trace sandstone.

3520 - 3530  Shale (90%) as above slightly gypsiferous.
Siltstone (10%) as above.

3530 - 3580  Shale (80%) red to dark reddish brown, grey, green and greyish green, blocky to platy, slightly dolomitic and silty.
Siltstone (20%) red, grey, green, minor white to light pink, slightly dolomitic, sandy in part.
Trace gypsum.

3580 - 3620  Shale (90%) brick red, minor greyish green and green shale blocky to platy, micaceous, slightly dolomitic and silty.
Siltstone (10%) red, grey and green, minor white and light pink, dolomitic in part, slightly sandy in part. Trace gypsum.

CORE NO. 8  3622 - 3632 cut 10'  Rec. 8'  80% Rec.

3632 - 3640  Shale (90%) brick red, minor greyish green and green shale, blocky to platy, micaceous, slightly dolomitic and silty in part, trace gypsum.
Siltstone (10%) green, red, minor white, slightly sandy in part.
3640 - 3680  Shale (80%) brick red, greyish green and grey, gypsiferous as.
Siltstone (20%) red, greyish green and green, slightly sandy in part.

3680 - 3710  Shale (80%) brick red to dark reddish brown, greyish green, green, blocky to platy, dolomitic in part, micaceous, slightly silty, trace gypsum.
Siltstone (20%) green, red, grey, minor white, slightly sandy in part.
(Samples very fine).

3710 - 3760  Shale (90%) as above gypsiferous in part.
Siltstone (10%) aa.

3760 - 3830  Shale (90%) brick red to dark reddish brown, minor greyish green and green shale, blocky to platy, micaceous, slightly dolomitic in part, silty in part.
Siltstone (10%) red and green, slightly sandy in part. Trace gypsum.

3830 - 3860  Shale (90%) dark reddish brown, minor green and greyish green shale, blocky to platy, micaceous, slightly dolomitic in part, slightly gypsiferous, occasionally silty.
Siltstone (10%) red, green, minor whitish grey, slightly dolomitic.

3860 - 3899  Shale (90%) brick red to dark reddish brown, minor green shale as above.
Siltstone (10%) as above.
Trace white to light pink gypsum.

3899 - 3909  CORE NO. 9  CORED 10'  REC. 8'4"  83% REC.

√3909 - 3920  Shale (100%) dark reddish brown and green, blocky to platy, dolomitic in part silty in part.
Trace gypsum.

√3920 - 3940  Shale (100%) brick red to dark reddish brown and green as above.

√3940" - 3980  Shale (100%) brick red to dark reddish brown, minor green shale, all as above, trace gypsum.
3980 - 4010  Shale (100%) reddish brown, some green, blucky to platy, micaceous, slightly dolomitic in part, silty in part. Trace gypsum.

LOWER STOKES 4015 (-2070)

4010 - 4020  Shale (95%) dark reddish brown and green, minor grey, greyish green and purple shale, blocky to platy, slightly dolomitic to calcareous and silty. Limestone (5%) white, cream, light red, greyish green and green, crypto-x, slightly argillaceous in part, dolomitic in part.

4020 - 4040  Shale (100%) as above with some partings of white, cream, whitish brown, red, greyish green and green, crypto-x, slightly silty in part, dolomitic limestone.

4040 - 4050  Shale (80%) as above.
Limestone (20%) as above.

4050 - 4130  Shale (100%) dark reddish brown, minor green and greyish green shale, blocky to platy, micaceous, dolomitic to calcareous in part, some white, red, greyish green and green shaly to silty limestone partings.

TOP LOWER STOKES ON COLOUR CHANGE 4130 (-2185).

4130 - 4160  Shale (100%) dark grey, minor red and green shale, blocky to platy, micaceous, dolomitic to calcareous in part, some white to dark grey limy partings.

4150 - 4180  Shale (95%) as above.
Limestone (5%) white, light grey and dark grey, crypto to very finely crystalline, argillaceous, slightly dolomitic in part.

4180 - 4200  Shale (90%) dark grey, minor red shale, blocky to platy, micaceous, dolomitic to calcareous in part.
Limestone (10%) whitish grey to dark grey, crypto to finely crystalline, argillaceous in part, fossiliferous.
4200 - 4230  Shale (90%) dark grey, minor red shale, blocky to platy, micaceous, dolomitic to calcareous, slightly silty in part.
Limestone (10%) whitish grey to dark grey, crypto to finely crystalline, dolomitic in part, argillaceous in part, micaceous in part, trace of fossil fragments.

4230 - 4240  Shale (80%) as above.
Limestone (20%) as above.

4240 - 4250  Shale (90%) as above silty
Dolomite (10%) white to greyish brown, calcareous in part, silty in part.

TOP TRANSITION ZONE STOKES TO STAIRWAY 4255 (-2310)

4250 - 4265  Shale (60%) dark grey, blocky to platy, micaceous, dolomitic, silty in part.
Siltstone (40%) light to dark grey, dolomitic, slightly sandy in part.

4265 - 4275  CORE NO. 10  CUT 10'  REC. 9'  90% REC.

4275 - 4280  Shale (50%) dark grey, some red shale, blocky to platy, micaceous, dolomitic,
Siltstone (50%) white to dark grey and greyish brown, dolomitic, slightly sandy in part.

4280 - 4290  Shale (60%) brick red to dark reddish brown and dark grey, blocky to platy, dolomitic, silty in part.
Siltstone (40%) white to greyish brown and grey, dolomitic, grading in part to a very fine grained sandstone.

TOP STAIRWAY 4298 (-2353)

4290 - 4300  Siltstone (50%) as above.
Shale (30%) brick red, dark reddish brown, grey, dark grey, blocky to platy, dolomitic, silty.
Sandstone (20%) white to light grey or greyish brown, very fine to medium grained, well sorted, angular to subrounded, dolomitic and silty in part.
4300 - 4310 Shale (40%) dark grey, green, dark reddish brown and purple, blocky to platy, dolomitic in part silty.
Sandstone (40%) white, minor light grey and greenish grey, unconsolidated to well consolidated, siliceous, hard, angular to subrounded, occasional well rounded quartz grains, very fine to coarse grained, poorly sorted, silty in part.
Siltstone (20%) white to grey and greyish green, dolomitic in part, sandy in part.

4310 - 4320 Shale (90%) dark reddish brown and green, blocky to platy, red shale slightly dolomitic, green shale dolomitic to calcareous, silty in part.
Sandstone (10%) white, siliceous in part, angular to subrounded, very fine grained, well sorted, trace medium to coarse grained well rounded quartz grains.
(Note trip for bit at 4315, shale mostly cavings?)

4320 - 4330 Shale (60%) dark grey, black, some red and green shale, blocky to platy, dolomitic, silty in part.
Sandstone (40%) white, unconsolidated, angular to subrounded, very fine to fine grained, well sorted, occasional medium grained quartz grains, silty in part. Trace of pyrite.

4330 - 4340 Shale (60%) as above.
Sandstone (40%) white, poorly to well consolidated, siliceous in part, angular to subrounded, very fine to fine grained, with scattered medium to coarse subrounded to rounded quartz grains in the fine grained sand, dolomitic, minor dark grey and greyish green silty sand.

4340 - 4350 Sandstone (50%) white, minor greyish brown and whitish green sand, poorly to well consolidated, dolomitic to calcareous, as above.
Shale (30%) red, minor green and dark grey shale.

4350 - 4360 Sandstone (70%) as above minor whitish pink sand.
Shale (30%) red and light reddish brown and light to dark green.

4360 - 4370 Shale (70%) red to dark reddish brown, light to dark green, blocky to platy, dolomitic, green shale calcareous in part, silty in part.
Sandstone (30%) as above, minor white clay.
4370 - 4380  Shale (60%) as above.
Sandstone (40%) white, minor whitish pink sand, poorly to well consolidated, angular to subrounded, very fine to fine grained, well sorted, dolomitic to calcareous, some white to pink calcareous clay.

4380 - 4390  Sandstone (70%) white to light grey, minor dark grey, poorly to well consolidated, siliceous in part, angular to subrounded, very fine to fine grained, well sorted, silty in part, dolomitic to calcareous in part, minor white clay.
Shale (30%) as above.

4390 - 4400  Sandstone (70%) white, light to dark grey, poorly to well consolidated, siliceous, angular to subrounded, very fine to fine grained, well sorted, scattered black mineral grains and shaly partings, slightly dolomitic in part, argillaceous in part.
Shale (30%) red, dark reddish brown, minor grey and green, some dark grey to black silty shale.

4400 - 4420  Shale (60%) as above.
Sandstone (40%) as above.

4420 - 4430  Sandstone (80%) clear, light to dark grey, unconsolidated to poorly consolidated, angular to subrounded very fine to fine grained, some black mineral grains and black shaly partings, micaceous and silty in part.
Shale (20%) dark grey to black, silty, micaceous, minor red shale as above.
Sandstone white to light grey and light green (bottom 8 inches), siliceous in part, dolomitic to calcareous in part, angular to subrounded, very fine to fine grained, well sorted, silty in part, scattered paper thin irregular dark grey to black shaly partings, scattered minor dark mineral grains, the sandstone is thin bedded, micaceous in part and phosphatic?

Sandstone dark green and greyish green, siliceous in part, angular to subrounded, very fine grained, well sorted, slightly dolomitic in part, silty, abundant green shale distributed throughout the interval in small partings, flecks, inclusions, and pockets. The sandstone is dense, hard, brittle and chloritic.

Sandstone dark rusty brown, with minor stringers of greyish green and green sand, siliceous in part, angular to subrounded, very fine grained, well sorted, very slightly dolomitic, argillaceous in part, silty and shaly. The shale is scattered throughout the interval in fine flecks, partings inclusions and pockets some of which are slickensided.

Sandstone dark reddish brown, greyish green and green, interbedded, siliceous in part, angular to subrounded very fine to fine grained, well sorted, dolomitic to calcareous in part, silty, some scattered thin lenses of dark reddish brown shale; flecks, partings and inclusions of red and green shale.
4530 - 4560  
Shale (50%) as above.  
Siltstone (30%) as above.  
Sandstone (20%) as above.

4560 - 4570  
Sandstone (70%) white to light grey, well consolidated, siliceous in part, angular to subrounded, very fine to fine grained, well sorted, some dark mineral grains and minor black shaly partings, dolomitic to calcareous in part, silty in part.  
Shale (20%) dark grey to black, micaceous, silty.  
Siltstone (10%) light to dark grey, micaceous in part, sandy in part.

4570 - 4580  
Siltstone (40%) light grey to greyish green, micaceous in part, sandy.  
Sandstone (40%) white, light grey and light greenish white, as above.  
Shale (20%) dark grey to black, some greyish green shale, minor red shale.

4580 - 4600  
Sandstone (70%) white, minor light grey, whitish pink and whitish green sand, well consolidated, siliceous in part, very fine to fine grained, well sorted, angular to subrounded, dolomitic in part, silty in part.  
Siltstone (20%) grey, green, dark grey, dolomitic in part, slightly micaceous, sandy in part.  
Shale (10%) dark grey to black, green, some red shale.
4430 - 4440 Sandstone (60%) white, light to dark greyish brown and dark grey, siliceous in part, very fine to fine grained well sorted, angular to subrounded, occasional medium grained quartz grains, slightly dolomitic, some black mineral grain and shaly partings, micaceous in part, silty, slightly pyritic.
Siltstone (20%) dark grey to black, dolomitic in part, micaceous, sandy in part.
Shale (20%) dark grey to black, blocky to platy, micaceous, silty, some reddish brown shale (cavings?)

4440 - 4450 Sandstone (80%) as above.
Siltstone (10%) as above.
Shale (10%) as above.

4450 - 4460 Sandstone (70%) as above.
Siltstone (20%) as above.
Shale (10%) as above.

4460 - 4470 Sandstone (40%) as above.
Siltstone (40%) as above.
Shale (20%) as above.

4470 - 4480 Shale (40%) dark grey to black minor red shale, blocky to platy, micaceous, silty.
Siltstone (30%) light to dark greyish brown, dolomitic in part, micaceous, sandy in part.
Sandstone (30%) white to greyish brown, siliceous in part, very fine to fine grained, angular to subrounded, well sorted, dolomitic in part, scattered black mineral grains and shaly partings, silty, micaceous in part.

4480 - 4500 Siltstone (50%) as above.
Sandstone (30%) as above.
Shale (20%) as above.

4500 - 4530 Shale (60%) dark grey to black, blocky to platy, very micaceous, silty, minor red shale (cavings?)
Siltstone (30%) light to dark grey, micaceous in part, slightly pyritic, argillaceous to sandy in part.
Sandstone (10%) white to dark grey, very fine to fine grained, angular to subrounded, well sorted, scattered dark mineral grains and black shaly partings, silty.
2'6"

(4618'6 - 4621) Sandstone white to light and dark grey to whitish green, grading to grey and brown sand towards the base, bottom two inches is a white sand; siliceous in part, very fine to fine grained, well sorted, dolomite to calcareous, silty, scattered thin lenses and pockets of rusty brown shale, dark grey shale and green shale, abundant inclusions, flecks and small patches of grey, green, rusty brown and red shale, some of which show slickensides, at 4619'8" one small inclusion of whitish orange gypsum. The sand may also be phosphatic in part.

The entire cored intervals showed no porosity or permeability whatsoever. No hydrocarbon shows, No dip.
GELLAN PETROLUML (N.T.) PTV LTD

GRADING CORE LOG

4245 - 4255' 10

K.B. 1945

Palm Valley "A"

Ore No. 10.

Land 5.70 10

Date: Thursday March 2, 1965

Described by R. Hay

Depth

Lithologic Description

4245

2.5" (4245' - 4247.5') Shale (60%) interbedded with Sandstone (40%)

2.5' (4257.5' - 4260') Shale: Dark grey to black, platy, micaceous, calcareous, silty in part

2.5' (4260' - 4262.5') Shale: Dark grey, green, thin layers, silty and slightly sandy in part

Bottom 2 inches mainly dark grey platy shale, fossiliferous.

6' (4264' - 4270') Shale (60%) interbedded with Sandstone (50%)

6' (4270' - 4276') Shale: Dark grey to black, platy, micaceous, calcareous, silty in part

Sandstone: White to dark grey, minor greyish brown sand, very fine to fine grained - with occasional thin stringers of fine to medium grained sand, angular to subrounded, sec well rounded grains, well sorted, calcareous to calcareous, silty in part. The sandstone is distributed in thin irregular lenses throughout the interval. Some sulphur-turuble? Bottom 4 inches consists of medium grey, hard, calcareous, silty sandy dolomite.

0.5' (4276' - 4276.5') Shale: Dark green, bluish hard, calcareous, silty

Sediments at base of interval.

No hydrocarbon shows, no dip.
Palm Valley No. 1  K.B. 1945  Tuesday, March 2nd, 1965.

Core No. 10, 4265 to 4275  Cored 10'.  Rec. 9'.

Formation: LOWER STOKES.

Coring Times: 40, 18, 10, 6, 6, 9, 5, 9 and 11 minutes per foot.

2'3"  Shale (60%) interbedded with sandstone (40%)

4265 - 4267'3"

Shale: Dark grey to black, platy, micaceous, dolomitic, calcareous in part, silty in part.
Sandstone: white to light grey, well consolidated, angular to subrounded, very fine grained, well sorted, dolomitic, calcareous in part, silty in part. The sandstone is distributed in thin irregular lenses and stringers throughout the interval. Some fossil fragments and worm tubes?

2'5"

4267'3" - 4269'8"

Shale: dark greyish green and dark green, blocky to platy, micaceous, dolomitic, silty and slightly sandy in part. Bottom 6 inches mainly dark grey platy shale, fossiliferous.

4'1"

4269'8" - 4273'8"

Shale (50%) interbedded with Sandstone (50%)

Shale: dark grey to black, platy, micaceous, dolomitic, silty in part.
Sandstone: white to dark grey, minor greyish brown sand, very fine to fine grained with occasional thin stringer of fine to medium grained sand, angular to subrounded with occasional well rounded quartz grains, well sorted, dolomitic to calcareous, silty in part. The sand is distributed in thin irregular lenses throughout the interval, some worm tubes? Bottom 6 inches consists of medium grey, hard, dolomitic, slightly sandy siltstone.

Shale dark green, blocky, hard, dolomitic, silty, slickensides at base of interval.

4273'8" - 4274

No hydrocarbon shows.  No dip.
**Formation: Stokes**

5"-6½" (3899-3904½") Shale, brown, interbedded with scattered lenses, stringers, and pockets of green shale, some stringers of green shale up to 6 inches thick. The shale is blocky to platy, micaceous, dolomitic, silty in part, minor scattered small flecks and inclusions of white gypsum. Severe slickensides scattered throughout the cored interval.

No apparent dip.
CORE NO. 9 3899 - 3909, Cored 10', Rec. 8'4" 83% Rec.

FORMATION: STOKES

Coring Times: 5, 4, 3, 4, 5, 3, 3, 4, 4 and 4 minutes per foot.

8'4"
3899 - 3907'4"

Shale brick red to reddish brown interbedded with scattered lenses, stringer and pockets of green shale, some stringers of green shale up to 6 inches thick. The shale is blocky to platy, micaceous, dolomitic and silty in part, minor scattered small flecks and inclusions of white gypsum. Severe slickensides scattered throughout the cored interval. No apparent dip (flat?).
IMCELLAN PETROLEUM (NT) PTY LTD.

GRAPHIC CORE LOG

Interval from: 3422.7 Ft to: 3432.6 Ft. Oct. 10, 74. 8 ft. recovered. 8% T.D. 60

Size & Type of Core Hole: 8 1/2" Hughes hard formation type I.

Date: Saturday, Feb. 27, 1965

<table>
<thead>
<tr>
<th>Depth</th>
<th>LITHOLOGY</th>
<th>LITHOLOGIC DESCRIPTION</th>
<th>SHOW DESCRIPTION</th>
<th>CORE ANALYSIS DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>3422'</td>
<td></td>
<td>Formation: STOKES</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1' (3422.7-3423.7) Shale green and greyish green with thin irregular</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>interbeds of red shale; blocky to platy, micaceous, dolomitic to ft, silty to pt.</td>
<td></td>
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</tr>
<tr>
<td>3423'</td>
<td></td>
<td>4.5&quot; (3423-3423.5) Shale brick red with minor flecks and partings</td>
<td></td>
<td></td>
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<tr>
<td>3424'</td>
<td></td>
<td>of green shale, blocky to platy, micaceous, slightly dolomitic and</td>
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<tr>
<td>3425'</td>
<td></td>
<td>silty to pt; scattered small particles and inclusions of white gypsum.</td>
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<tr>
<td>3426'</td>
<td></td>
<td>4' at 3426 (plus) fracture at approx 40 degrees (2 inches long)</td>
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<tr>
<td>3427'</td>
<td></td>
<td>filled with white gypsum.</td>
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<tr>
<td>3428'</td>
<td></td>
<td>6.7&quot; (3427-3427.7) Shale green = greyish green with thin</td>
<td></td>
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</tr>
<tr>
<td>3429'</td>
<td></td>
<td>irregular interbeds of red shale, slightly silty in part.</td>
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</tr>
<tr>
<td>3430'</td>
<td></td>
<td>2.5&quot; (3429-3430) Shale brick, minor flecks and partings of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3431'</td>
<td></td>
<td>greyish green and green shale, blocky to platy, micaceous, slightly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3432'</td>
<td></td>
<td>dolomitic, a few scattered small particles and spots of white gypsum.</td>
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<tr>
<td>3433'</td>
<td></td>
<td>No apparent dip. (Flat?)</td>
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</tr>
</tbody>
</table>
Palm Valley No. 1  K.B. 1945  Sat. Feb. 27th, 1945

Core No. 8  3622 - 3632  Cored 10'  Rec. 8'  80% Rec.

Formation: STOKES.

Coring times: 14, 8, 10, 8, 8, 11, 17, 16, 12 and 10 minutes per foot.

1'0"

Shale green and greyish green with thin irregular interbeds of red shale, blocky to platy, micaceous, dolomitic in part, silty in part.

3622 - 3623'

4'0"

Shale brick red with minor flecks and partings of green shale, blocky to platy, micaceous, slightly dolomitic and silty in part, scattered small pockets and inclusions of white gypsum, at 3626 (plus) fracture at approximately 40 degrees (2 inches long) filled with white gypsum.

3623' - 3627'

0'17"

3627' - 3627'17"

Shale green and greyish green with thin irregular interbeds of red shale, silty in part.

2'5"

3627'17 - 3630

Shale brick red; minor flecks and partings of greyish green and green shale; blocky to platy, micaceous, slightly dolomitic in part, a few scattered small pockets and spots of white gypsum.

No apparent dip (flat?)
<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Core Log</th>
<th>Lithologic Description</th>
<th>Shale Description</th>
<th>Core Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3293</td>
<td>10'</td>
<td>Siltstone (60%) and Shale (20%) interbedded.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3294'</td>
<td>11'</td>
<td>Siltstone: white, light pink and red, green and minor grey, micaceous, sandy and dolomitic in part, small scattered pebbles and inclusions of clear to white quartz. Shale: brackish to dark reddish brown, green, minor grey, green shale, black, to platy micaceous, silty in part, dolomitic in part. The shale is distributed throughout the interval.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3295'</td>
<td>12'</td>
<td>1' (3293'10&quot; - 3294'10&quot;) Siltstone: brackish to dark reddish brown, green, grey, and minor grey, silty to platy micaceous, dolomitic and silty in part, minor thin white to greyish green and green, silty, and sandy partings and inclusions. Shale: blue-grey, green, grey, and purple a.p.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3296'</td>
<td>13'</td>
<td>Siltstone (60%) white, greyish green, pink, dolomitic and micaceous in part. SS (30%) white to pink and red, micaceous, hard, angular to subrounded, fine grained, well sorted, silty in part, distributed in thin stringers and lenses, none thicker than one inch. These relate salt casts?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3297'</td>
<td>14'</td>
<td>1' (3294'10&quot; - 3295'10&quot;) Siltstone: blue-grey, green, grey, and purple a.p. Shale: blackish red with minor bleeds and thin partings of green shale and siltstone, black to platy micaceous, slightly silty and dolomitic in part, siltstone.</td>
<td></td>
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<tr>
<td>3298'</td>
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</tbody>
</table>
CORE NO. 7  
Formation: STOKES.
Coring Times: 13, 11, 21, 13 and 16 minutes per foot.

10''
Siltstone (80%) and Shale (20%) interbedded.

3293 - 3293'10''
Siltstone: white, light pink and red, green & minor grey, micaceous sandy and dolomitic in part, small scattered pockets and inclusions of clear to white gypsum.

Shale: brick red to dark reddish brown, green, minor greyish green shale, blocky to platy, micaceous, slightly dolomitic, silty in part. The shale is distributed throughout the interval in thin wavy irregular lenses and stringers.

1'
3293'10'' - 3294'10''
Shale: brick red to dark reddish brown, blocky to platy, micaceous in part, silty in part, minor thin white to greyish green and green silty and sandy partings and inclusions, slickensides.

1'2"
3294'10'' - 3296
Shale (60%) brick red, green, grey and purple, blocky to platy, micaceous in part, silty and dolomitic in part.

Siltstone (30%) white, greyish green, pink, dolomitic and micaceous in part, sandy in part.
Sandstone (10%) white to pink and red, silicious, hard, angular to subrounded, fine grained, well sorted, silty, distributed in thin stringers and lenses, none thicker than one inch. Trace of relic salt casts?

1'7"
3296 - 3297'7''
Shale: brick red with minor flecks and thin partings of green shale and siltstone, blocky to platy, micaceous in part, slightly silty and dolomitic, slickensides.

No hydrocarbon shows, no apparent dip (flat?)
LACELLAN PETROLEUM (NT) PTY LTD.

GRAPHIC CORE LOG

Interval from: 2789' Ft to: 2799' Ft Out: 10' Ft Recovered: 9'2" % Rec: 92.2%

Size & Type of Core Head: 6½" CHRISTENSON DIAMOND CORE BIT (BIT NO.CD52).

Data: Sat Feb 10, 1968. Described by: [Signature].

<table>
<thead>
<tr>
<th>Depth</th>
<th>Coring Rate</th>
<th>Lithology</th>
<th>Formation: MEBREENIE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2789'</td>
<td>16</td>
<td>A</td>
<td>8' Sandstone (95%) interbedded with minor thin breccia stringers, pockets and inclusions of dark reddish brown mineral clasts.</td>
</tr>
<tr>
<td>2790'</td>
<td>20</td>
<td>A</td>
<td>9'1&quot; Sandstone (2789'-2791'1&quot;) white, whitish pink and light purple, well consolidated, siliceous, hard, medium to coarse grained, orthoquartzite (fresh sparkling appearance), angular to subrounded.</td>
</tr>
<tr>
<td>2791'</td>
<td>17</td>
<td>A</td>
<td>10' Quartz grains, many well developed crystal facets on individual quartz grains, well sorted, minor scattered flecks of white.</td>
</tr>
<tr>
<td>2792'</td>
<td>13</td>
<td>A</td>
<td>11' and orange clay loe black mineral grains. The sandstone is slightly friable in part with some scattered pin point and intergranular porosity (estimated at 5 to 8%), but non-effective permeability. Fine vertical fractures fail when tested with quartz occur from 2791' to 2792'. Horizontal fractures at 2791' and a fracture at 2796' at approximate 25 degrees.</td>
</tr>
<tr>
<td>2793'</td>
<td>13</td>
<td>A</td>
<td>12' Sandstone (2791'1&quot;-2792'3&quot;) dark reddish brown with patches and pockets of greenish-white sand, well consolidated, siliceous.</td>
</tr>
<tr>
<td>2794'</td>
<td>13</td>
<td>A</td>
<td>13' In part, medium to coarse grained, subangular to rounded, well sorted, iron stained clay matrix and whitish green clay matrix in greenish white patches of sandstone, friable in part; no porosity due to clay matrix infill.</td>
</tr>
<tr>
<td>2795'</td>
<td>14</td>
<td>A</td>
<td>14'</td>
</tr>
<tr>
<td>2796'</td>
<td>16</td>
<td>A</td>
<td>15'</td>
</tr>
<tr>
<td>2797'</td>
<td>20</td>
<td>A</td>
<td>16'</td>
</tr>
<tr>
<td>2798'</td>
<td>11</td>
<td>A</td>
<td>17'</td>
</tr>
<tr>
<td>2799'</td>
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</tbody>
</table>

CORE ANALYSIS DATA

<table>
<thead>
<tr>
<th>Permeability</th>
<th>Residual Fluids</th>
</tr>
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<tbody>
<tr>
<td>Microlitres</td>
<td>Oil Water %</td>
</tr>
<tr>
<td>% Pores</td>
<td>% Sat. % Free</td>
</tr>
<tr>
<td>Variation</td>
<td></td>
</tr>
</tbody>
</table>
Sandstone (95%) interbedded with minor thin irregular stringers, pockets and inclusions of dark reddish brown micaceous shale.

Sandstone: white, whitish pink and purple, well consolidated, siliceous, hard, medium to coarse grained orthoquartzite (fresh sparkling appearance), angular to subrounded quartz grains, many well developed crystal facets on individual quartz grains, well sorted, minor scattered flecks of white and orange clay (felspar?) occasional black mineral grains. The sandstone is slightly friable in part with some scattered poor pin point and intergranular porosity (estimated at 5 to 8%), but no effective permeability. Fine vertical fractures healed with quartz occur from 2791' to 2793'. Horizontal fracture at 2791' and a fracture at 2796' at approximately 20 degrees.

Sandstone dark reddish brown with patches and pockets of greenish white sand, well consolidated, siliceous in part, medium to coarse grained, subangular to rounded, well sorted, iron stained clay matrix and whitish green clay matrix in greenish white patches of sandstone, friable in part, no porosity due to clay matrix in fill.
<table>
<thead>
<tr>
<th>Depth</th>
<th>Core Consistency</th>
<th>Lithology</th>
<th>Lithologic Description</th>
<th>Show Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2219</td>
<td></td>
<td></td>
<td>Sandstone: light orange to orange, well consolidated,</td>
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<td></td>
<td></td>
<td></td>
<td>silicic in part angular to rounded quartz grains,</td>
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<td></td>
<td></td>
<td></td>
<td>fine to medium grained, well sorted. Some thin interbeds</td>
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<td></td>
<td></td>
<td>of coarse grained sand scattered through. Thi</td>
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<td></td>
<td></td>
<td></td>
<td>silt to clay to good intergranular and fine point</td>
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<td></td>
<td>grains (estimated at 10 to 15%). At 2227 three</td>
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<td></td>
<td>thin beds of grey to red and purple sand, silici</td>
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<td></td>
<td></td>
<td>nium sand with minor sandy partings. Cross-beding</td>
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<td>in the sand from 2230 to 2234 with sets up 35°-60</td>
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<td>degrees (fine thin black line alternating the cross-</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>bedding). From 2232 to 34 the core is fractured,</td>
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<td></td>
<td></td>
<td>some fractures occur parallel to the cross-beding,</td>
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<td></td>
<td></td>
<td></td>
<td>and others at approx 45 to 50 degrees from the</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>horizintal. The entire core was written wet.</td>
<td></td>
</tr>
<tr>
<td>2235</td>
<td></td>
<td></td>
<td>Cross bedding and fractures (fractures from 2234 to 2239).</td>
<td></td>
</tr>
<tr>
<td>2233</td>
<td></td>
<td></td>
<td>Fractures 45 to 50 degrees.</td>
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</tr>
<tr>
<td>2234</td>
<td></td>
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</tbody>
</table>
INTEROFFICE MEMO

TO: R. Hopkins.
FROM: B. Wilson.
SUBJECT: Core No. 4 Palm Valley No. 1

5th February, 1965.

The first two lines of this description should read:

Sandstone light orange to orange, subangular to rounded quartz grains, fine to medium grained, well sorted, some thin........

fine to medium grained to be inserted.

Barbara.

B. Wilson.
CORE NO. 4  2219 to 2234  Cored 15'  Rec. 15'  100% Rec.
FORMATION:  MERENIE

Coring times:  12, 9, 8, 5, 4, 3, 3, 4, 3, 3, 2, 2, 3, 2, and 3 minutes per foot.

2219 - 2234  15'

Sandstone light orange to orange, subangular to rounded quartz grains, well sorted, some thin stringers of coarse grained sand scattered throughout, friable, fair to good intergranular and pin point porosity (estimated at 10 to 16 percent). At 2227' three inch band of grey to red and purple hard siliceous sand with minor shaly partings. Cross-bedding in the core from 2230 to 2234 with sets up to 25-30 degrees (fine thin scattered black lines show up the cross-bedding). From 2232 to 34 the core is fractured. Some fractures occur parallel to the cross-bedding and others at approximately 45 to 50 degrees.
**Interval:** 1621' to 1624' ft, Cut: 3, Ft Recovered: 2' 9", %Rec.: 91%  

**Size & Type of Core Hole:** Hughes hand formation TYPE J 8 7/8" (3)  
**Date:** Thursday, January 28, 1943  
**Described by:** Roy Hay

<table>
<thead>
<tr>
<th>Depth</th>
<th>LITHOLOGY</th>
<th>LITHOLOGIC DESCRIPTION</th>
<th>SHOW DESCRIPTION</th>
<th>CORE ANALYSIS DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1621'</td>
<td></td>
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<tr>
<td>1622'</td>
<td></td>
<td>Sandstone: orange-red, bottom foot of interval is white</td>
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<tr>
<td></td>
<td></td>
<td>to greyish white and light orange to orange-red, watered</td>
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<tr>
<td></td>
<td></td>
<td>The sandstone is well consolidated, siliceous, hard, tight,</td>
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<tr>
<td></td>
<td></td>
<td>very fine to fine grained, occ. medium grained,</td>
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<tr>
<td></td>
<td></td>
<td>Subangular to rounded quartz grains, detrital to calcareous</td>
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<tr>
<td></td>
<td></td>
<td>in part, dark mineral grains, scattered fine white lenses</td>
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<tr>
<td></td>
<td></td>
<td>and inclusions of dark reddish brown shale.</td>
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<tr>
<td>1623'</td>
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<tr>
<td>1624'</td>
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</table>

**Coring Times:** 27, 29, and 43 minutes per foot.
Formation: MEKEENIE.

1621 - 1623'9

2'9''

Sandstone orange red, bottom foot of interval is white to greyish white and light orange to orange red, mottled, the sandstone is well consolidated, siliceous, hard, tight, very fine to fine grained, occasionally medium grained, medium to well sorted, subangular to rounded, dolomitic to calcareous in part, dark mineral grains, scattered fine wavy lenses and inclusions of dark reddish brown shale.

Coring times: 27, 29 and 43

Core bit: Hughes hard formation type J 8'4''
**GRAPHIC CORE LOG**

Interval from: 1162' Ft to: 1167' Ft Cut: 5' Ft Recovered: 5' % Rec.: 100%  

Size & Type of Core: Hughes Hard Formation  
Type J 8 3/4" (2)  

Date: Tuesday, January 26, 1965  
Described by: Ron H. Hay

<table>
<thead>
<tr>
<th>Depth</th>
<th>CORING RATE min/ft</th>
<th>LITHOLOGY</th>
<th>LITHOLOGIC DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1162'</td>
<td></td>
<td>Formation: MEERENIE</td>
<td>SANDSTONE: orange to orange-red, well consolidated, siliceous, hard, tight, angular to subrounded, very fine to fine grained, well sorted, dolomitic, green mineral grains (feldspar?), minor white clay, scattered thin lenses and pockets of dark reddish brown shale, bottom foot of interval slightly shaler than top four feet. Six inches from base cored section two inch stringer of greyish green silty sand interbedded with dark reddish brown shale.</td>
</tr>
<tr>
<td>8</td>
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<tr>
<td>1163'</td>
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<tr>
<td>20</td>
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<td>1164'</td>
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<td>27</td>
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<tr>
<td>1165'</td>
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<tr>
<td>25</td>
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<tr>
<td>1166'</td>
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<tr>
<td>24</td>
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<tr>
<td>1167'</td>
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</tbody>
</table>

Coring Times: 8, 20, 27, 25 and 26 minutes per foot.
CORE NO. 2  1162 to 1167  Cored 5'.  Rec. 5'  100% Rec.
Formation: MERBENIE

5' Sandstone orange to orange-red, well consolidated, siliceous, hard, tight, angular to subrounded, very fine to fine grained, well sorted, dolomitic, green mineral grains, minor white clay, scattered thin lenses and pockets of dark reddish brown shale, bottom foot of interval slightly shaler than top four feet. Six inches from base of cored section two inch stringer of greyish green silty sand interbedded with dark reddish brown shale.
**LITHOLOGIC DESCRIPTION**

**FORMATION: PERTHARA**

- **693'**: Sandstone with minor thin interbeds of shale and siltstone near base of interval. Sandstone: orange to reddish brown, well consolidated, silicic in part, hard, tight, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous. Some green to shale, indurated, gray, slightly silty in part, scattered flakes and pockets of clear crystalline anhydrite, six inches from base of interval. Shale: dark reddish brown, bluish to black, micaceous, dolomitic in part, silty to slightly sandy in part, minor scattered patches and pockets of greenish shale, minor scattered fine flakes and inclusions of clear to white calcite.

- **694'**: Sandstone with minor thin interbeds of shale and siltstone near top of interval. Sandstone: orange to reddish brown, well consolidated, silicic in part, hard, tight, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous, silty in part, green mineral grains (feldspar), scattered flakes and inclusions of clear to white, crystalline anhydrite, some minor scattered flakes of dark red shale. Shale: dark red, platy, micaceous.

- **695'**: Siltstone: gray to grayish green, dolomitic, sandy in part.
Formation: PERTNJARA.

2'1"

Sandstone (95%) with minor interbeds of shale and siltstone near base of interval.

Sandstone: orange to reddish brown, well consolidated, siliceous in part, hard, tight, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous, some green to black mineral grains, slightly silty in part, scattered blebs and patches dark red shale (clay pellets), anhydritic in part (minor scattered flecks of clear anhydrite); six inches from base of interval one knot (½ inch in diameter) of clear crystalline anhydrite (or barite?).

Shale: dark reddish brown, platy, micaceous.

Siltstone: medium grey to greenish grey, dolomitic, sandy.

3'7"

695'1" to 698'8"

Shale: dark reddish brown, blocky to platy, dolomitic, micaceous, silty, slightly sandy in part, minor scattered patches and pockets of greyish green to green silty shale, minor fine flecks and inclusions of clear to white calcite.

2'6"

698'8" to 701'2"

Sandstone (95%) with minor thin interbeds of shale and siltstone near top of interval.

Sandstone: orange to reddish brown, well consolidated siliceous in part, hard, tight, very fine to medium grained, medium sorted, angular to subrounded, dolomitic to calcareous, silty in part, green mineral grains (feldspar?), scattered small flecks and inclusions of clear to white anhydrite (or Barite?), some minor scattered flecks of dark red shale.

Shale: dark red, platy, micaceous.

Siltstone: grey to greyish green, dolomitic, sandy in part.