

# Drilling Mud Report(Off Shore)

Engineer

H.Ito  
K.Mori

No. 59

Date 17, December, 2013

TOTAL Depth(MSL) 3,936.5m

Company MOJ

Well Name C0002P (NT3-01)

BRT Depth: 3,965.0m, SSL Depth: 1,997.5m

| Casing Program |                     | Mud Volume & Bit Data         |       | Pump Data          |       | String Data        |     | Circulation Data (min) |      |
|----------------|---------------------|-------------------------------|-------|--------------------|-------|--------------------|-----|------------------------|------|
| Conductor      | 36 in 2,121.5 m     | Riser Vol. (m <sup>3</sup> )  | 392   | Pump No.1 (l/st)   | 19.45 | DP Size (in)       | 5   | Surface to Bit         | 11   |
| Intermediate   | 20 in 2,827.8 m     | CSG Vol. (m <sup>3</sup> )    | 157   | Pump No.2 (l/st)   | 19.45 | DC1 Size (in)      | 8.5 | Bottom's Up            | 118  |
| Intermediate   | 13.375 in 3,976.5 m | B/Hole Vol. (m <sup>3</sup> ) |       | Pump No.3 (l/st)   | 19.45 | DC2 Size (in)      |     | Surf to Surf           | 128  |
| Intermediate   | in m                | Disp Vol. (m <sup>3</sup> )   | 19    | P/Speed No.1 (spm) | 87    | A/Vel DP (ft/min)  |     | System Total           | 159  |
| Intermediate   | in m                | T/Circ Vol. (m <sup>3</sup> ) | 630   | P/Speed No.2 (spm) | 87    | A/Vel DC1(ft/min)  |     | P/ Press(Mpa)          | 29.4 |
| Intermediate   | in m                | Pit Vol. (m <sup>3</sup> )    | 100   | P/Speed No.3 (spm) | 74    |                    |     |                        |      |
| Production     | in m                | Bit Size (inch)               | 12.25 | Rate (gal/min)     | 1,236 | A/Vel Rise(ft/min) |     |                        |      |

| Mud Type:                                 | KNPP | Mud Properties |             |             |                   | Materials Name |  | Daily Amount | Total Amount | Daily Cost |
|---|------|----------------|-------------|-------------|-------------------|----------------|--|--------------|--------------|------------|
| Time (Sampling : Suction )                |      | 4:00           | 19:30       | 22:30       | Tel-Bar           |                |  |              |              |            |
| Depth (m)                                 |      | 3940           | 3959        | Hivis       | Kunigel VO (Bulk) |                |  |              |              |            |
| Mud Weight (SG/PPG)                       |      | 1.25   10.4    | 1.28   10.7 | 1.28   10.7 | NaCl              |                |  |              |              |            |
| Funnel Viscosity(sec./qt.)                |      | 97             | 110         | 300         | KCL               |                |  |              |              |            |
| A.V(cps) at /49 cent.                     |      | 67.5           | 71.5/ 37    | 106         | Tel-Polymer DX    |                |  |              |              |            |
| P.V(cps)                                  |      | 45             | 45 / 22     | 59          | Tel-Polymer L     |                |  |              |              |            |
| Y.V(lb/100ft <sup>2</sup> )               |      | 45             | 53 / 30     | 94          | Tel-Polymer H     |                |  |              |              |            |
| 10"Gel(lb/100ft <sup>2</sup> )            |      | 6              | 6 / 4       | 15          | XCD-Polymer       |                |  |              |              |            |
| 10'Gel(lb/100ft <sup>2</sup> )            |      | 9              | 11 / 8      | 30          | Soda Ash          |                |  |              |              |            |
| API Filtrate(cc/30min.)                   |      | 2.9            | 2.8         |             | Caustic potash    |                |  |              |              |            |
| Cake Thickness(mm)                        |      | 0.5            | 0.5         |             | Clean Lube        |                |  |              |              |            |
| pH(-)                                     |      | 11.8           | 12.0        | 11.7        | Tel Clean         |                |  |              |              |            |
| Pf(cc)                                    |      | 0.2            | 0.2         |             | Bi-Carbonate      |                |  |              |              |            |
| Pm(cc)                                    |      | 4.3            | 4.5         |             | Lime              |                |  |              |              |            |
| Mf(cc)                                    |      | 0.5            | 0.5         |             | Defoamer 30C      |                |  |              |              |            |
| Cl (mg/l)                                 |      | 98,000         | 106,500     |             | Telnite GXL       |                |  |              |              |            |
| Sand Content(%)                           |      | 0.3            | 0.3         |             | Tel-DD            |                |  |              |              |            |
| Oil Content(% Vol.)                       |      | 0              | 0           |             | Caustic soda      |                |  |              |              |            |
| Solid Content(% Vol.)                     |      | 11             | 12.5        |             | Lignite NC        |                |  |              |              |            |
| M.B.C.(cc/cc.mud)                         |      | 1.00           | 1.00        |             | Astex S           |                |  |              |              |            |
| Temperature(in/out cent.)                 |      | 14   11        | 13   12     | 16          | Tel Stop G        |                |  |              |              |            |
| HT-HP Filtrate(cc)                        |      |                |             |             | Tel Stop P        |                |  |              |              |            |
| HT-HP Filtrate Cake(mm)                   |      |                |             |             | Tel Mica C        |                |  |              |              |            |
| K' (mg/l)                                 |      | 32,400         | 35,600      |             | Tel Mica M        |                |  |              |              |            |
| Ca <sup>++</sup> /Mg <sup>++</sup> (mg/l) |      | 120            | 80          |             | Tel Mica F        |                |  |              |              |            |
| n Value(600rpm/300rpm)                    |      | 0.58           | 0.51        | 0.47        | Tel Plug C        |                |  |              |              |            |
| k Value(600rpm/300rpm)                    |      | 2.35           | 2.18        | 8.14        | Tel Plug M        |                |  |              |              |            |
| LGS/Drill Solids(% Vol.)                  |      | 0.9   0.4      | 1.6   1.1   |             | Tel Plug F        |                |  |              |              |            |
|   |      |                |             |             | Tan Cal M         |                |  |              |              |            |
|   |      |                |             |             | Tan Cal F         |                |  |              |              |            |
|   |      |                |             |             | Tan Cal FF        |                |  |              |              |            |
|   |      |                |             |             | EZ Spot (gal/drm) |                |  |              |              |            |
|   |      |                |             |             | Speeder P         |                |  |              |              |            |
|   |      |                |             |             | Speeder X         |                |  |              |              |            |

| VG METER READING |         |          |         |         |         |       |       |
|------------------|---------|----------|---------|---------|---------|-------|-------|
| Time             | Temp    | 600rpm   | 300rpm  | 200rpm  | 100rpm  | 6rpm  | 3rpm  |
| 4:00             |         | 135      | 90      | 71      | 46      | 8     | 5     |
| 19:30            | 15   49 | 143   74 | 98   52 | 77   40 | 51   26 | 9   5 | 6   4 |
| 22:30            |         | 212      | 153     | 125     | 87      | 20    | 14    |

### Well Summary

Make up 12-1/4"Kick off BHA and RIH. RIH to 1,889m. Drill line cut and slip. Continue RIH to 3,868m. Break circulation. Continue RIH to 3,922m. Increased mud weight to 1.23sg. Kick off drilling to 3,959m. Back ream from 3,959m to 3,957m. Pump pressure increased, hole packing off. Attempt to go to 3,959m and jar down. Reduce pump rate 40spm. Add clean lube to mud from 4% to 7%(Act#4 only). pump 5m3 of Hivis, 5m3 of 30% clean lube mud and 5m3 of Hivis. Commence pump again 40spm/9.6Mpa and continue ja down. observe pressure reducing to 5.0Mpa, start rotation and establish free rotation. Increased pump rate, circulation. Increased mud weight to 1.28sg. Wash and ream down to 3,959m. Drilling on.

### On hand and Remarks

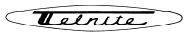
1.11sg KNPP mud : 369m3 @Re#1, Re#2 and Re#3  
 1.20sg dilution mud : 56m3 @Act#2  
 1.28sg Hi-vis mud : 67m3 @Act#1  
 1.13sg 20%LCM mud :24m3 @Act#3

Today's lost mud --m3. (Total 481m3).

| Shale Shaker |     |     |     |     |     | De-Sander |     | Mud Cleaner |     | Centrifuge |     |     |     |
|--------------|-----|-----|-----|-----|-----|-----------|-----|-------------|-----|------------|-----|-----|-----|
| No.          | #.1 | #.2 | #.3 | #.4 | #.5 | #.6       | #.1 | #.2         | #.1 | #.2        | #.1 | #.2 | #.3 |
| Top          | 10  | 10  | 10  | 10  | 10  | 10        |     |             |     |            |     |     |     |
| Btm1         | 145 | 145 | 145 | 145 | 145 | 145       |     |             |     |            | OFF | OFF | OFF |
| Btm2         | 145 | 145 | 145 | 145 | 145 | 145       |     |             |     |            |     |     |     |

|            |  |
|------------|--|
| Daily Cost |  |
| Total Cost |  |





# BALLAST REPORT(Off Shore)

NO. 59

Well Name C0002P (NT3-01)

DATE 17, Dec, 13

TIME 24:00

Active Tank

| Tank Name | Status     | M/W    | Vol.   | Monitor | Lo Limit | Remarks            |
|-----------|------------|--------|--------|---------|----------|--------------------|
| Active #1 | Hi-Vis mud | 1.28sg | 67.0KL |         |          |                    |
| Active #2 | KNPP       | 1.20sg | 56.0KL |         |          | Dilution mud       |
| Active #3 | 20%LCM mud | 1.13sg | 24.0KL |         |          |                    |
| Active #4 | KNPP       | 1.28sg | 49.0KL |         |          | Circ mud (Suction) |
| Active #5 | KNPP       | 1.28sg | 49.0KL |         |          | Circ mud (Return)  |
| Active #6 | Sea water  | 1.03sg | 6.0KL  |         |          |                    |
| Chemical  | MT         |        |        |         |          |                    |
| Slug      | Slug mud   | 1.44sg | 10.0KL |         |          |                    |

Chemical Tank

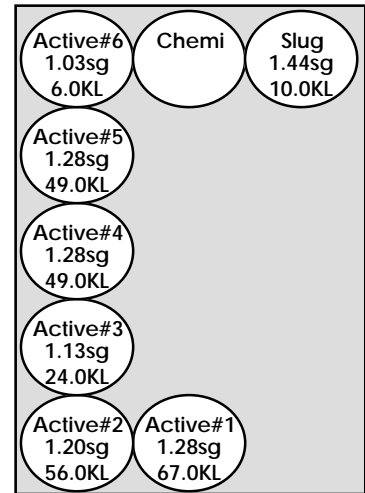
| Tank Name     | Status    | Weight   | Monitor |
|---------------|-----------|----------|---------|
| Storage #1    | Barite    | 0kg      |         |
| Storage #2    | Barite    | 0kg      |         |
| Storage #3    | Barite    | 31,000kg |         |
| Storage #4    | Barite    |          |         |
| Storage #5    | Bentonite | 0kg      |         |
| Storage #6    | Bentonite |          |         |
| Daily Tank #1 | Bentonite | 10,000kg |         |
| Daily Tank #2 | Barite    | 23,000kg |         |
| Bar/Surge #1  | Barite    | 0kg      |         |
| Bar/Surge #2  | Barite    | 3,400kg  |         |
| Gel/Surge #2  | Bentonite | 800kg    |         |

**Chemical Tank Total WT 68.2 ton**

Reserve Tank & Solid Control Tank

| Tank Name     | Status          | M/W    | Vol.    | Monitor | Lo Limit | Remarks |
|---------------|-----------------|--------|---------|---------|----------|---------|
| Reserve #1    | KNPP            | 1.11sg | 170.0KL |         |          |         |
| Reserve #2    | KNPP            | 1.11sg | 180.0KL |         |          |         |
| Reserve #3    | KNPP            | 1.11sg | 19.0KL  |         |          |         |
| Reserve #4    | KNPP            | 1.19sg | 36.0KL  |         |          |         |
| Reserve #5    | Empty           |        |         |         |          |         |
| Reserve #6    | Dirty Sea water | 1.03sg | 181.0KL |         |          |         |
| Reserve #7    | Dirty Sea water | 1.03sg | 182.0KL |         |          |         |
| Reserve #8    | Dirty Sea water | 1.03sg | 182.0KL |         |          |         |
| Sand Trap     | KNPP            | 1.28sg | 10.0KL  |         |          |         |
| Degasser      | KNPP            | 1.28sg | 10.0KL  |         |          |         |
| Desander      | KNPP            | 1.28sg | 10.0KL  |         |          |         |
| Desilter      | KNPP            | 1.28sg | 10.0KL  |         |          |         |
| Soli/con CF   | KNPP            | 1.28sg | 10.0KL  |         |          |         |
| Mud Return    | KNPP            | 1.28sg | 10.0KL  |         |          |         |
| Barite Rec CF | Drill water     | 1.00sg |         |         |          |         |

**Mud Tank Total WT 1416.7 ton**



Bulk Material

Unit(kg)

| Materials Name    | Receive | Total Receive | Use    | Total Use | On Hand | Remarks |
|-------------------|---------|---------------|--------|-----------|---------|---------|
| Tel-Bar           |         | 263,240       | 74,600 | 205,840   | 57,400  |         |
| Kunigel VO (Bulk) |         | 29,460        |        | 18,660    | 10,800  |         |

**Total SX ROOM Weight 66.6 ton**

**Total Weight 1,551.5 ton**

Made by : K.mori