# DAILY DRILLING REPORT
## PT. GEO DIPA ENERGI (Persero)
## 3-Aug-22

| | | | | | |
|---|---|---|---|---|---|
| OPERATOR | PT. GEO DIPA ENERGI (Persero) | CONTRACTOR | JV ADA - APS | REPORT NO. # | 39 |
| WELL/ PAD NAME | PTH-G-4C ST | FIELD | PATUHA | ENVIRONTMENT | ONSHORE |
| WELL TYPE/ PROFILE | BIG HOLE / J-TYPE | LATITUDE/ LONGITUDE | 7° 10' 16.711 S / 107° 25' 9.968 E | GL - MSL (M) | 1968 m-ASL |

| GENERAL | | | DRILLING PARAMETERS | | | AFE | |
|---|---|---|---|---|---|---|---|
| Rig TYPE / NAME | | LAND RIG / ARJUNA#88 | AVERAGE WOB (24 HRS) | KLBS | 24-33 | AFE NUMBER / AFE COST | USD 5,338,705.51 |
| RIG POWER | HP | 1,500 | AVERAGE ROP (24 HRS) | M/HR | 17.00 | DAILY COST | USD 69,817.66 |
| KB ELEVATION | Meter | 11.00 | AVERAGE SURFACE RPM / DHM | | 48-50/144-150 | % AFE / CUMULATIVE COST 85.4% | USD 4,560,610.52 |
| MIDNIGHT DEPTH | Meter | 1381 | ON / OFF BOTTOM TORQUE | KLBS-FT | 8,6-9,7/- | DAILY MUD COST | USD 6,102.15 |
| PROGRESS | Meter | 66 | FLOWRATE/ SPP | gpm/PSI | 600-605/1015-1290 | CUMULATIVE MUD COST | USD 299,485.50 |
| PROPOSED TD | Meter | 2150 | AIR RATE | SCFM | 800-2100 | PERSONNEL IN CHARGE | |
| SPUD DATE | | 25-Jun-22, 12:00 | CORR. INHIB./ FOAM RATE | GPH | 4-10/6-18 | DAY/ NIGHT DRILLING SUPV. | KETUT / WAWAN-TEUKU |
| RELEASE DATE | | | PUW/SOW/ROTW | KLBS | 195/160/137 | DRILLING SUPERINTENDENT | BUDI SETIAWAN |
| PLANNED DAYS | | 48 | TOTAL DRILLING TIME | HRS | 19 | RIG SUPERINTENDENT | NISAR JAHRI |
| DAYS f/ RIG RELEASE | | | TON MILES | | 224.0 | DRILLING ENGINEER | EKA DAYA SAMUDERA |
| | | | | | | HSE SUPERVISOR | HERDEDI |

| | |
|---|---|
| 24 HOURS SUMMARY | DOF to 1381 mMD. Got spike torque at 1381 mMD, got stall then stuck. Attempt to free stuck pipe. |
| 24 HOURS FORECAST | Attempt to free stuck pipe. Continue DOF with aerated mud to casing point est. in 1450-1650. |
| STATUS 05:00 Hrs 4-Aug-22 | |

### HSE

| SAFETY PERFORMANCE | | HOURS RECORD | | HAZARD MANAGEMENT | | EMERGENCY DRILLS | |
|---|---|---|---|---|---|---|---|
| Nearmiss | 1.0 | KM Hrs Light Vehicle | 188 | JSA/HIRA | 6 | H2S Drill | 19-Jun-22 |
| Incidents | 1.0 | KM Hrs Heavy Equipment | 20 | PTW | 6 | BOP Drill/ Kick Drill | 26-Jun-22 |
| Last MTI | - | Total Daily Personnel | 190 | Pre Tour Meeting | 2 | Fire Drill | 7-Jun-22 |
| Last LTI | - | Daily Safe Manhours / Cum Safe Manhours | 2,292/698,664 | Observation Card | 133 | Trip Drill | 26-Jun-22 |
| Days w/out LTI | 305.00 | DWLTI Since | 1-Oct-21 | Safety Inspection/ Training | 12 | Medivac Drill | 26-Jun-22 |

| ACCIDENT/ INCIDENT SUMMARY | SAFETY ISSUES |
|---|---|
| N/A | N/A |

| ENVIROMENTAL RECORD | | | | OCCUPATIONAL HEALTH RECORD | |
|---|---|---|---|---|---|
| Domestic Waste (m3) | 0 | Hazardous Waste (kg) | | Fit for duty / MCU (person) | 90 |
| Hazardous Waste/B3 (kg) | | Drill Cutting Vol (jumbo bag) | 7 | Clinic Visit | 9 |
| Spill Incidents (barrels) | | Other (BB) | | Number of Work Related Illnesses | |
| Enviro/ Community Issue | | Cummulative 24 Hrs | | Occupational Health Issue | |

## TIME BREAKDOWN

### OPERATIONS FOR PERIOD 00:00 TO 24:00 HRS ON Wed, 3-Aug-22

| TIME, HH:MM | | | DEPTH | PT/NPT | CODE | DESCRIPTION | OPERATIONS |
|---|---|---|---|---|---|---|---|
| START | END | ELAPSED | | | | | |
| 0:00 | 1:00 | 1.0 | 1,315 | PT | 5a | Circulate / Condition Mud | Circulation hole clean while working pipe interval 1285-1315 mMD with FR 600-800 gpm, SPP 1030-1100 psi, RPM/M 30/138, TQ 7.7-9.1 Klbs.ft.<br>- After aerated offline. Pressure drop 400 psi from 700-300 psi. Switch mud pump from #2, #3 to #1, #2. Transfer mud from reserve to active. Pressure gradually increase to normal.<br>- Observe dynamic loss. 2 Bpm. Indication foam on active system. |
| 1:00 | 8:30 | 7.5 | 1,381 | PT | 2a | Drilling Formation | Drill out formation 12.25" Hole with Aerated Mud (Rotate) from 1315 mMD to 1381 mMD/1241 mTVD. Intermitten-Return.<br>- Parameter : WOB 24-33 Klbs, FR 600-605 gpm, SPP 1015-1290 psi, RPM/M 48-50/144-150, TQ 8.6-9.7 Klbs.ft, MW In/Out : 8.7/8.7 ppg, Avg. ROP : 18.2 m/hrs. Temp In/Out : 40/60 deg°C. SCFM 2000-2100, ADP 1040-1340, Foam/Corr.Inhibitor 0-6/0-4 gph.<br>- Bit Hrs : 19.1 hrs. Cumm. Bit Hrs : 30.2 hrs. Krev OB/Tot : 215.6/369.2, Cumm. Krev.OB/Total : 324.5/577.9<br>- Mud Motor Hours : 35.8 hrs. Jar Hours : 35.8 hrs. Cumm. Jar Hours : 65.2 hrs.<br>- Sweep 50 Bbls Hi-vis after connection, 50 Bbls every joint, 100 Bbls while stand down.<br>- Lithology @ 1372 mMD : Lithic coarse pyroclastic<br>Last MeB @ 1369 mMD : 22 %.<br>- Last survey :<br>Depth 1318.31 mMD, 1191.7 mVD, Inc 38.92 deg, Azm 251.07 deg. CtoC : 15.59 m, 3.52 m below, 15.19 m left of plan. Distance to mother well CtoC = 29.09 m. Distance to PTH-G-4B = 246.65 m, DLS : 0.31 BHT : 65 @ 1373 mMD. P/U-R/W-S/O : 195/160/137 Klbs.<br>- Drilling break @ 1369-1370 mMD. |
| 8:30 | 9:30 | 1.0 | 1,381 | NPT | 2j | Stuck Pipe Include Handling operations | - Initially got spike torque at 1381 mMD with TQ reading 14-17 Klbs.ft.<br>- String stall at 1381 mMD with TQ reading to 23.4 Klbs.ft.<br>- Pressure increase from 910 psi to 2480 psi. Flow return on MFO ADA decrease from 20% to no return.<br>- Assumed string got pack off and stuck at 1381 mMD. |
| 9:30 | 17:00 | 7.5 | 1,381 | NPT | 2j | Stuck Pipe Include Handling operations | Attempt to free the stuck pipe at 1381 mMD with various combination.<br>- Inject aerated gradually from SCFM 1500-2200, ADP 2420-2700 psi, Foam/Corr.Inhibitor 6-18/4-10 gph.<br>- Apply tension to 260 Klbs, set down weight to 150 Klbs. Unsuccesful.<br>- Give Tension until 230 Klbs (Heating up) (09:30 - 13:00 hrs)<br>- Inject aereated with 1500-2700 Psi, SCFM 1000, Foam/ Corr Inh : 18/10 gph, (13:00 - 14:30 hrs). Apply tension to 265 Klbs, set down to 150 Klbs. Apply torque to string until 28 Klbs.ft 10 times. Got return at shaker after 30 minute inject aerated (return untill 50%), Temp out : 35 deg C. Stop Injected aerated and by pass Pressure at String to 1050 Psi.<br>- Pump thru string with mud ± 25 bbl, w/ 100 gpm, Pressure at string from 1050 Psi to 2000 Psi (14:30 - 14:45)<br>- Inject aerated with ADP 2100-2700 Psi, SCFM 1000, Foam/Corr Inh : 18/10 gph, (14:45 - 14:55) Aerated tendency can't inside thru string, stop inject and by pass string Pressure to 230 Psi.<br>- Working on pipe tension 350 Klbs, set down 80 Klbs (14:45 - 17:00 hrs)<br>Fire jaring up : 42 times, Fire jaring down : 15 times. Progress : 140 cm. Apply torque to string until 28 Klbs.ft |
| 17:00 | 22:30 | 5.5 | 1,381 | NPT | 2j | Stuck Pipe Include Handling operations | Relax pipe set down to 150 Klbs (1 hrs) while drop inspection object.<br>- Efficiency Test MP #2 and MP #3 : 89.6% and 89.3 %<br>- Heating up : give tension to 225 Klbs (18:00 - 22:30 hrs)<br>- Clean out gumbo box<br>- Got Return at Shaker 15 minute (return until 50%) (22:00 hrs) |
| 22:30 | 23:00 | 0.5 | 1,381 | NPT | 2j | Stuck Pipe Include Handling operations | Continue Attempt to free stuck Pipe @ 1381 m<br>- Pump thru string with mud ± 30 bbl, w/ 100 gpm, Pressure from 1230 psi to 300 Psi, tendency drop<br>- Inject Aerated with ADP 1000 - 2500 Psi, SCFM 800 - 1500, Foam/Corr Inh : 18/10<br>- No return<br>- Stop Inject aerated, by pass pressure at string to zero |
| 23:00 | 0:00 | 1.0 | 1,381 | NPT | 2j | Stuck Pipe Include Handling operations | Continue Heating up : give tension to 225 Klbs |
| TOTAL HRS | | 24.0 | | | | | |

**OPERATIONS FOR PERIOD 00:00 TO 05:00 HRS ON** **Thu, 4-Aug-2022**

| TIME, HH:MM | | | DEPTH | PT/NPT | CODE | DESCRIPTION | OPERATIONS |
|---|---|---|---|---|---|---|---|
| START | END | ELAPSED | | | | | |
| 0:00 | 3:30 | 3.5 | 1,381 | NPT | 2j | Stuck Pipe Include Handling operations | Cont'd Attempt free stuck Pipe @1378 m<br>- Working on pipe tension to 280 Klbs, set down to 100 Klbs<br>- Inject Aerated with ADP 1000 - 2500 Psi, SCFM 1000 - 1500, Foam/Corr Inh : 18/10 (00:30-01:30)<br>- No return<br>- Stop Inject aerated, by pass pressure at string to zero<br>- Apply torque to 28 Klbs.ft (3 times)<br>- Pump Mud + Lubricant 3% thru string 25 bbl, back to slug 9 bbl |
| 3:30 | 5:00 | 1.5 | 1,381 | NPT | 2j | Stuck Pipe Include Handling operations | Working on pipe tension to 400 Klbs, Set down to 50 Klbs, Fire jar up : 48 times, Fire Jar down : 3 times<br>(Cumm Fire Jar up : 90 times, Fire Jar down : 18 times) |

| GENERAL COMMENTS | SIGNATURE | | |
|---|---|---|---|
| | REPORTED BY | ACKNOWLEDGED BY | APPROVED BY |
| **Progress activity : 51%**<br><br>Estimated Mud Loss (24 Hrs) : ± 202 Bbls.<br>Estimated Cumulative Mud Loss : ± 22544 Bbls<br>Estimated Water Loss (24 hrs ) : ± 0 Bbls.<br>Estimated Cumulative Water Loss : ± 274501 Bbls.<br><br>**Record NPT**<br>- NPT Rig Bundling 0 hrs / Cum 21.5 hrs (2,3%)<br>- NPT Wireline/ Slick Line Job Unplanned 0 hrs/ Cum 32 hrs (3.4%)<br>- NPT Sperry 0 hrs / Cum 20 hrs (2.1%)<br>- NPT Wash / Reaming / Backreaming Unplanned 0 hrs / Cum 41.5 hrs (4.4%)<br>- NPT Stuck 15.5 hrs / Cum 84.5 hrs (8.9%)<br>- NPT Circulate / Condition Mud Unplanned 0 hrs / Cum 1.5 hrs (0.1%) | **KETUT D Y**<br>DRILLING SUPERVISOR | **NISAR JAHRI**<br>RIG SUPERINTENDENT | **AKHMAD RYAN SURYANSYAH**<br>PROJECT MANAGER PATUHA 2 |

## BIT RECORDS

| | 10 | 11 |
|---|---|---|
| Bit Number | 8 NB | 8 RR |
| Bit Size in | 12 1/4 | 12 1/4 |
| Bit Run | 11 | 12 |
| Manufacturer/Type | Baker/VM-S30DX2 | Baker/VM-S30DX2 |
| IADC Code | TCI 537 | TCI 537 |
| Jets /32 in | 2x32, 1x28 | 2x32, 1x28 |
| Serial # | 5321639 | 5321639 |
| Depth In m | 0.0 | 1,154.0 |
| Depth Out m | 1,154.0 | |
| Meterage m | 72.0 | 47.0 |
| Bit Hours 24 hrs | 11.12 | 19.10 |
| TFA in$^2$ | 2.172 | 2.172 |
| Tot Krev On Bttm | 108.9 | 215.60 |
| Tot Krev | 208.7 | 369.2 |
| Dull Grade In | New | 1-1-WT-A-E-I-NO-BHA |
| Dull Grade Out | 1-1-WT-A-E-I-NO-BHA | |

## BHA #12

| DESCRIPTION | OD in | Length m |
|---|---|---|
| TCI Bit | 12 1/4 | 0.33 |
| 8" SperryDrill Lobe 6/7- | 8 | 8.88 |
| 8" Float Sub c/w Float Valve | 8 | 0.65 |
| 11-1/2" Integral Blade | 8 | 2.15 |
| 8" NMDC | 8 | 9.34 |
| 8" EM Repeater Sub | 8 | 0.91 |
| 8" EM Antenna Sub | 8 | 0.95 |
| 3x8" DC | 8 | 28.13 |
| X/O | 8 | 0.47 |
| 1x6.5" DC | 6 1/2 | 9.33 |
| 9x5" HWDP | 5 | 84.13 |
| Sledgehammer Jar | 6 1/2 | 6.33 |
| 16x5" HWDP | 5 | 150.41 |
| Total | | **302.01** |

## BHA #13

| DESCRIPTION | OD in | Length m |
|---|---|---|
| TCI Bit | 12 1/4 | 0.33 |
| 8" SperryDrill Lobe | 8 | 8.82 |
| 8" Float Sub c/w Float Valve | 8 | 0.65 |
| 11-3/4" Integral Blade | 11 3/4 | 2.32 |
| 8" NMDC | 8 | 9.34 |
| 8" EM Repeater Sub | 8 | 0.91 |
| 8" EM Antenna Sub | 8 | 0.95 |
| 3x8" DC | 8 | 28.13 |
| X/O | 8 | 0.47 |
| 1x6.5" DC | 6 1/2 | 9.33 |
| 9x5" HWDP | 5 | 84.13 |
| Sledgehammer Jar | 6 1/2 | 6.33 |
| 16x5" HWDP | 5 | 150.41 |
| Total | | **302.12** |

## CASING

| | | |
|---|---|---|
| Last Size | in | 13-3/8 |
| Set MD | m | 1,026 |
| Set TVD | m | |
| Last FIT EMW | ppg | 11.51 |
| Next Size | in | 10-3/4 |
| Set MD | m | 1,650 |
| TOL | m | |

## MUD VOLUMES

| | | |
|---|---|---|
| Start | bbl | 2,099 |
| Lost Surface | bbl | |
| Lost DH | bbl | 202 |
| Dumped | bbl | |
| Built | bbl | 202 |
| Ending | bbl | 2,099 |

## SOLID CONTROL EQUIPMENTS

| SHAKERS | MODEL (TYPE) | SCREEN SIZE |
|---|---|---|
| Shaker #1 | DERRICK (FLC-2000-4) | 120/80/60 |
| Shaker #2 | DERRICK (FLC-2000-4) | 120/70/60 |
| Shaker #3 | DERRICK (FLC-2000-4) | 120/70/60 |
| Mud Cleaner | DERRICK (FLC-2000-4) | 4x140 |
| Hi-G Dryer | FLC 2000-4 | |
| Centrifuge | DE-1000 | |

## CUMULATIVE

| | |
|---|---|
| Meterage m | |
| Bit Hours Hrs | |
| ROP m/Hr | |

## CORROSION RING

| | Install Date | Release Date | Location |
|---|---|---|---|
| 1 | | | |
| 2 | | | |

## BOP TEST

| Date 1 | Date 2 |
|---|---|
| 7-Jul-22 | |

## GAS

| | |
|---|---|
| Max. Gas | - |
| Conn. Gas | - |
| Trip Gas | - |
| Back Gas | - |

## DRILLING FLUID

| | Active Tank | | | | Active Tank | | |
|---|---|---|---|---|---|---|---|
| Mud Type | KCL Polymer | KCL Polymer | KCL Polymer | Cl mg/l | 29000 | 29000 | 30000 |
| Time HH:MM | 11:00 | 20:00 | 23:30 | K mg/l | 27940 | 27400 | 28000 |
| MW in ppg | 8.7 | 8.7 | 8.7 | MBT lb/bbl | | | |
| MW out ppg | 8.7 | 8.7 | 8.7 | Sand % | 0.1 | 0.1 | 0.1 |
| Temp in degC | 40 | 30 | 30 | Solid Content % | 2 | 2 | 2 |
| Temp out degC | | | | Retort Water % | 98 | 98 | 98 |
| Pres. Grad psi/ft | | | | HGS % | | | |
| Funnel Visc sec | 43 | 46 | 46 | LGS % | | | |
| PV cP | 10 | 12 | 11 | 600 RPM | 42 | 47 | 46 |
| YP lbf/100ft2 | 22 | 23 | 24 | 300 RPM | 32 | 35 | 35 |
| Gels 10 sec | 7 | 11 | 9 | 200 RPM | 27 | 29 | 28 |
| Gels 10 min | 11 | 15 | 13 | 100 RPM | 22 | 20 | 19 |
| Fluid Loss mL/30min | 10.8 | 10.6 | 10.6 | 6 RPM | 10 | 12 | 12 |
| pH | 10 | 10 | 10 | 3 RPM | 7 | 9 | 9 |

## MUD ADDITIVE

| Type | Amount |
|---|---|
| KOH | |
| XCD | 15 |
| PAC LV | 14 |
| KCL | 5 |
| Corrosion Ring | |
| Defoamer | 1 |
| Soda Ash | 3 |

## HYDRAULIC

| | | |
|---|---|---|
| Annular Vel | m/min | |
| Pb | psi | |
| Sys HHP | | |
| HHPb | hp | |
| HSI | hp/in2 | |
| % psi bit | % | |
| Jet Velocity | m/sec | |
| Impact force | lbs | |
| IF/area | lbs/in2 | |

| Type | Amount |
|---|---|
| | |

## FUEL RECORD

| Fuel Tank Location | 0 | Usage (liters) | | Received (liters) | On H& (liters) |
|---|---|---|---|---|---|
| Rig | 71,237 | Rig Engines + Others | 5,978 | 16,000 | 75,159 |
| | | Light Vehicle/ HDE | 100 | | |
| | | Non Rig Bundling | 6,000 | | |
| Base Camp | 2,150 | Engine Basecamp | 400 | | 1,750 |
| Mini Camp | 0 | | | | |
| **TOTAL** | **73,387** | **12,478** | | **16,000** | **76,909** |

## WEATHER

| TEMP ($^0$C) | | FOGGY & RAINING | | BAROMETRIC | WELLSITE | | LOCATION CONDITION | | |
|---|---|---|---|---|---|---|---|---|---|
| HIGH | LOW | TIME | RAIN DEGREE | PRESS (ATM) | ELEVATION (M) | WIND SPEED (KM/H) | BASECAMP | ACCESS ROAD | WELLSITE |
| 19 | 10 | | | | 1968.00 | | Dry | Dry | Dry |

## MWD/ GYRO SURVEY

| MD (m) | TVD (m) | Incl. (deg) | Azm (deg) | DLS (°/30 m) | Distance to Plan, m | Above / Below f/ Plan, m | Right / Left f/ Plan, m |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## PERSONNEL

| COMPANY | ON BOARD | ON SITE |
|---|---|---|
| GDE | 7 | |
| APS | 101 | |
| ETI | 23 | |
| HALLIBURTON CEMENTING | 5 | |
| AERATED | 5 | |
| NABORS | 3 | |
| IMS | 24 | |
| PARAMA DATA UNIT | 7 | |
| DYFCO | 3 | |
| PRIMA HIDROKARBON | 3 | |
| HALLIBURTON SPERRY | 4 | |
| TOTAL POB : | 190 | |

| COMPANY | ON BOARD | ON SITE |
|---|---|---|
| Geologist | 1 | |
| JV ADA-APS | 4 | |
| NPS / BAKER | 0 | |
| VARCO | 0 | |
| SMITH | 0 | |
| NOV | 0 | |
| NMS | 0 | |
| LEKOM MARAS | 0 | |

## MUD PUMPS

| PUMP NO. | | 1 | 2 | 3 |
|---|---|---|---|---|
| Time | hh:mm | | | |
| Slow Speed? | y/n | N | N | N |
| Liner Lgt/Size | in | 12/7 | 12/7 | 12/7 |
| Capacity | bbl/stk | 0.1429 | 0.1429 | 0.1429 |
| Efficiency | 95% | 0.1357 | 0.1357 | 0.1357 |
| Strokes | SPM | 80 | 80 | |
| Flow Rate | gpm | 456 | 456 | |
| Pressure | psi | 1,050 | 1,050 | |
| PRV | psi | 2,900 | 2,900 | 2,900 |

## HEAVY DUTY EQUIPMENTS ON SITE

| VEHICLE | TYPE | HIRED BY | LOCATION | REMARKS |
|---|---|---|---|---|
| Crawler Crane Kobelco | 80T | APS | PPL-04 | |
| Forklift | 5T | APS | PPL-04 | |
| Forklift | 15T | APS | PPL-06 | |
| Roughter Crane Kato | 55T | APS | L/D Area | |
| Crawler Crane Sumitomo | 50T | APS | PPL-04 | |