Chikyu DAILY MORNING REPORT

Mission No. : CK18-04 **Exp. No. :** Exp 358 **Report No. :** 153

Report Date : 9/Mar/2019

Site Name C0024 Hole Name C0024A Lat. 33° 02' 02.6379"N Long. 136° 47' 23.9464"E Seabed Depth : 3,870.0 mBRT RT-MSL : 28.5 m

Depth : @24:00 4,688.5 mBRT 818.5 mbsf Progress : 297.5 m Drilling/Coring/Underreaming Hrs. : 13.74 hrs Last BOP PT: - Next BOP PT: -

Depth : @06:00 4,728.0 mBRT 858.0 mbsf LAST CASING : x mbsf(mBRT) Last BOP FT: - Next BOP FT: -

Summary of Operation on 8-Mar : Cont. to drill down 8-1/2" LWD hole at 4,688.5mBRT. Take survey. Perform NSD connection. Last Glycol 35gal Inj. -

Present Operation @ 06:00 on 9-Mar : Ream up and down to confirm hole condition.

mBRT: meter below rotary table

Time Breakdown (00:00 - 24:00 on 8-Mar) mbsf: meter below sea floor

From	To	Hrs	Code	Depth(mBRT)	Detail of Operation
0:00	1:45	1:45	DRL	4,421.0	Continue to drill 8-1/2" LWD hole from 4,391mBRT to 4,421mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-60kN, HPS:110rpm x 0-14kNm, SPP:500gpm x 10.6MPa, Set Auto driller:21m/hr, Pump sweep 5m3 x 2times per stand(SPP:8.8MPa then back to normal)
1:45	2:00	0:15	OTHER	4,421.0	Take survey #14
2:00	2:30	0:30	OTHER	4,421.0	Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 10m away from well center.
2:30	4:15	1:45	DRL	4,460.0	Continue to drill 8-1/2" LWD hole from 4,421mBRT to 4,460mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-40kN, HPS:110rpm x 0-12kNm, SPP:500gpm x 10.5MPa, Set Auto driller:21m/hr, Pump sweep 5m3 x 2times per stand(SPP:9.6MPa then back to normal)
4:15	4:30	0:15	OTHER	4,460.0	Take survey #15
4:30	5:00	0:30	OTHER	4,460.0	Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 10m away from well center.
5:00	7:15	2:15	DRL	4,499.0	Continue to drill 8-1/2" LWD hole from 4,460mBRT to 4,499mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-30kN, HPS:110rpm x 0-16kNm, SPP:500gpm x 10.7MPa. Set Auto driller:21m/hr, Pump sweep 5m3 x 2times per stand(SPP:9.3MPa then back to normal)
7:15	7:30	0:15	OTHER	4,499.0	Take survey #16
7:30	8:00	0:30	OTHER	4,499.0	Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 10m away from well center.
8:00	9:45	1:45	DRL	4,535.0	Continue to drill 8-1/2" LWD hole from 4,499mBRT to 4,535mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-40kN, HPS:110rpm x 0-16kNm, SPP:540gpm x 12.2MPa. Set Auto driller:21m/hr, Pump sweep 5m3 x 2times per stand(SPP:11.1MPa then back to normal)
9:45	10:00	0:15	OTHER	4,535.0	Take survey #17
10:00	10:30	0:30	OTHER	4,535.0	Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 10m away from well center.
10:30	12:15	1:45	DRL	4,577.0	Continue to drill 8-1/2" LWD hole from 4,535mBRT to 4,577mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-40kN, HPS:110rpm x 0-20kNm, SPP:540gpm x 12.5MPa. Set Auto driller:21m/hr, Pump sweep 5m3 x 2times per stand(SPP:11.3MPa then back to normal)
					Observe ECD increase from 1.055sg to 1.083sg at 4,569mBRT(699mbsf). ECD decrease to 1.049sg with drilling down.
12:15	12:45	0:30	OTHER	4,577.0	Take survey #18
					Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 10m away from well center.
12:45	15:00	2:15	DRL	4,616.0	Continue to drill 8-1/2" LWD hole from 4,577mBRT to 4,616mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-90kN, HPS:110rpm x 0-18kNm, SPP:540gpm x 12.7MPa. Set Auto driller:21m/hr, Pump sweep 5m3 x 2times per stand(SPP:11.5MPa then back to normal)
					Observe long period swell affect to high WOB and torque
15:00	15:30	0:30	OTHER	4,616.0	Take survey #19
					Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 10m away from well center.
15:30	19:00	3:30	DRL	4,655.5	Continue to drill 8-1/2" LWD hole from 4,616mBRT to 4,655.5mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					(From 4,616mBRT to 4,626mBRT)
					WOB: 0-50kN, HPS:110rpm x 0-18kNm, SPP:540gpm x 12.5MPa. Set Auto driller:21m/hr, Pump sweep 10m3 x 1time
					At 4,626mBRT, when all 10m3 sweep come out from bit, observe torque and pressure increase to 26kNm and 18MPa (Downhole ECD increase from 1.05sg to 1.11sg)
					Reciprocate x 2times until torque and pressure decrease to 4-10kNm(120rpm) and 14.6MPa(540gpm) then pump sweep 5m3
					Continue reciprocate x 7times while pumping sweep w/70rpm x 2-4kNm, 540gpm x 12.5MPa (confirm ECD back to 1.05sg)
					(From 4,626mBRT to 4,655.5mBRT)
					WOB: 0-70kN, HPS:110rpm x 0-19kNm, SPP:540gpm x 12.5MPa. Set Auto driller:21m/hr, Pump sweep 5m3 x 1time(SPP:11.2MPa then back to normal)
19:00	19:30	0:30	OTHER	4,655.5	Take survey #20
					Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 10m away from well center.
19:30	24:00	4:30	DRL	4,688.5	Continue to drill 8-1/2" LWD hole from 4,655.5mBRT to 4,688.5mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					(From 4,656mBRT to 4,660mBRT)
					WOB: 0-30kN, HPS:110rpm x 0-15kNm, SPP:540gpm x 12.5MPa. Set Auto driller:21m/hr, Pump sweep 5m3 x 1time
					At 4,660mBRT, observe torque and pressure increase to 22kNm(110rpm) and 15MPa(540gpm). Downhole ECD increase from 1.05sg to 1.10sg.
					Reaming up and down x 3times until torque and pressure decrease to 2-9kNm(110rpm) and 12.2MPa(540gpm)
					While reciprocating, suddenly encounter stall out >26kNm then observe pressure increase to 18MPa and stop pump. Downhole ECD 1.10sg.
					PU w/100kN then start rotate(confirm pipe free w/60rpm x 3-10kNm) then start pump 540gpm x 13.5MPa
					Pump sweep 5m3 and continue reciprocate x 1time w/90-110rpm x 2-10kNm, 540gpm x 11-13MPa(confirm ECD back to 1.05sg)
					(From 4,660mBRT to 4,688.5mBRT) Change Auto driller setting
					WOB: 0kN, HPS:110rpm x 0-12kNm, SPP:540gpm x 12.9MPa. Set Auto driller:15m/hr, Pump sweep 5m3 x 2times(SPP:11MPa then back to normal)
					At 4,688.5mBRT, observe torque and pressure increase to 26kNm and 15MPa (Downhole ECD increase from 1.05sg to 1.10sg)
					PU string 10m w/110rpm x 15-26kNm and 540gpm x 15-18MPa(ECD continue increase gradually to 1.17sg) then reduce rotation speed to 80rpm
					Ream up and down 1time, observe torque and pressure decrease to 4-12kNm(80rpm) and 15.5MPa(540gpm). ECD decrease from 1.17sg to 1.10sg then pump sweep 3m3
					Continue to reciprocate while pumping sweep w/80rpm x 3-9kNm, 540gpm x 14.6-15.3MPa. Ongoing(Downhole ECD 1.10sg)
					<Iron roughneck>
					Conduct function test IR#B with NOV engineer. Confirm all function good. OK
					<Hydraracker>
					Find Hydraracker #1 tail arm guide head malfunction. Maintenance ongoing
					<DGR&RGR>
					Magnus effect affect to RGR sometimes difficult to rotate due to high side force.
					Continue to grease up RGR sufficiently while connection
					Continue to grease up and tighten bolt DGR while connection

Survey data (Depth: Telescope sensor depth)

No	Depth (mBRT)	Inc (deg)	Azi (deg)
#14	4,403.00	5.52	262.02
#15	4,442.09	5.79	263.71
#16	4,481.48	6.33	263.42
#17	4,520.43	6.69	264.04
#18	4,559.50	6.97	261.56
#19	4,598.69	7.31	265.11
#20	4,637.50	7.84	264.94

Time Breakdown (00:00 - 06:00 on 9-Mar) * The data on 00:00 - 06:00 is unofficial.

From	To	Hrs.	Code	Depth(mBRT)	Detail of Operation
0:00	2:30	2:30	OTHER	4,688.5	Continue to reaming up and down from 4,656mBRT to 4,688.5mBRT
					Ream up and down full stand while pumping sweep w/80rpm x 3-9kNm, 540gpm x 9.9-18.3MPa.(ECD 1.11sg). Observe drag 150kN at 4,677-4,674mBRT and 4,669mBRT.
					After reaming full stand for 3 times, SPP and ECD decrease to 9.9MPa and 1.052sg.
					Pump 10m3 of KNPP mud. When mud come out from nozzle, string packed off at 4,677mBRT and ECD increase to 1.194sg.
					Stop pump and release torque. Apply overpull 400kN and confirm string free. PU and string packed off again at 4,671mBRT. Apply overpull 200kN and confirm string free.
					Reaming up and down full stand for 3 times and confirm ECD decrease from 1.12sg to 1.057sg and SPP from 13.3MPa to 11.2MPa.
2:30	3:00	0:30	DRL	4,695.5	Continue to drill 8-1/2" LWD hole from 4,688.5mBRT to 4,695.5mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-20kN, HPS:110rpm x 0-120kNm, SPP:540gpm x 12.7MPa. Set Auto driller:15m/hr.
3:00	3:30	0:30	OTHER	4,695.5	Take survey #21
					Wipe full stand prior to taking survey.
					Perform NSD connection. Vessel move toward to opposite way from DP/RGR contacted position and stop vessel 12m away from well center.
3:30	6:00	2:30	DRL	4,728.0	Continue to drill 8-1/2" LWD hole from 4,695.5mBRT to 4,728mBRT (Vessel move 1.5m/10min toward to DP/RGR contacted direction for RGR rotation smoothly)
					WOB: 0-40kN, HPS:110rpm x 0-16kNm, SPP:540gpm x 13.3MPa. Set Auto driller:21m/hr, Pump sweep 3m3 x 3times per stand(SPP:11.8MPa then back to normal)
					ECD increase at 4,715mBRT. Reaming up and down and confirm ECD decrease to 1.069sg. Resume drilling and ECD decrease to 1.059sg with drilling down.
					Observe Torque and SPP increasing at 4,728mBRT (ECD: 1.17sg). Reaming up and down, on going.

Survey data (Depth: Telescope sensor depth)

No	Depth (mBRT)	Inc (deg)	Azi (deg)
#21	4,677.27	8.43	264.38

Bit Record @24:00

Bit No.	Size (in)	MFR	Type	IADC Code	S/No.	Nozzles	Depth (mBRT) From	Depth (mBRT) To	Meter-age	Hrs.	WOB (kN) Min.	WOB (kN) Max.	rpm Min.	rpm Max.	Total Rev. (krev)	ROP (m/hr)	Dull Condition Inner	Outer	Dull	Loc.	B	G	O.D.	RP
13	8.5	Smith	MDi516UBPXG	M223	QF3594	2 x 11/32, 3 x 15/32	3,870.0	4,688.5	818.5	35.27	0	90	30	120	191.67	23.9								

BHA Record @24:00

34	LWD	8-1/2" Bit x MicroScope 675 x arcVision675 x TeleScope675 x SonicScope675 x seismicVision675 x XO#1 x float sub (non-ported sub) x XO#2 x 6-3/4" DC (4 IF) (2stds) x XO#3 x 6-3/4" DC (4-1/2 IF) (1std) x 6-1/2"Jar x 6-3/4" DC (1std) x XO#4 x 5.68"HWDP (3stds)

Hook Wt. (knt) @24:00 4,687.0 mBRT

Hook Load	3,304
BHA	270
Below HWDP	220
below Jar	180
HPS & Traveling block	620
Hook + RRT	-
Hook block	145

Jar Rotating time 24:(S/N:1760-5679

Today	20.35	Total	107.00	hrs

Cutting skip @24:00

Empty	Full	Total
2	1	3

ROV @24:00

Status	-
Last Dive	-
Injection Skid	-

Mud Properties @24:00

Mud Type	Time	Depth (mBRT)	MW	VIS	PV	YV	6rpm	Gel St. (10", 10')	API	Cake	pH	Pf	Cl-	Sand	Oil	Solid	MBC	Temp In	Temp Out	K+	n	K	LGS	FIT 20/40 (mm) 0 min	FIT 20/40 (mm) 5min
KNPP	7:30	Act#4	1.35	51	22	16		4 11			12.2							18			0.66	0.62			
KNPP	8:00	Res#2	1.36	32	23	17		4 12			12.2							17			0.66	0.67			

Mud Pumps : 14-P-220 5.00 gallon/stroke @97%

No.	Liner Size	SPM	GPM	Press. (MPa)	Ann. Vel. (m/min)	
1	6"	54	270	18.0	5"DP	5.5"DP
2	6"	54	270		54	60
3	6"	0	0			

Geologic Information @24:00

From	To	Lithology of cuttings

Shale Shaker / Centrifuge @24:00

No.1	30, 60	No.4	30, 60	#1-#3 Centrifuge running time
No.2	30, 60	No.5	30, 60	
No.3	30, 60	No.6	30, 60	

Materials Stock on Board @24:00

Item	Unit	Stock	Used	Received
Fresh Water	m3	287.8	90.6	97.9
Potable Water	m3	188.9	6.9	0.0
Drill Water	m3	893.0	17.6	0.0
Fuel	m3	1,904.8	47.5	0.0
Lube, Oil	Ltrs	47,100	500.0	0.0
Heli Fuel	Ltrs	0.0	0.0	0.0
Cement "GWC"	ton	160.0	0.0	0.0
Cement "G"	ton	30.0	0.0	0.0

Boat Information @24:00

Boat Name	Status	Time @Chikyu Departed	Time @Chikyu Arrived
#8 Meiji-maru	Katsuura		15:00
Shincho-maru	Chikyu		23:30

Personnel @24:00

CDEX	8
MQJ Crew	102
MWJ	15
Scientist	18
MQJ (Other)	1
Telnite	1
Geoservices	4
SLB LWD	2
SLB Seismic	4
SLB WL	0
SLB Cementing	0
AFGlobal	2
Nustar	3
Franks	0
NOV	1
INPEX (Trainee)	2
Total	163

Mud volume@24:00

Mud Volume (m3)	
KNPP mud (1.34-1.39)	907
Fracseal(1.39sg,11ppb)	192
Fracseal(1.39sg,18ppb)	141
Fracseal(1.25sg,30ppb)	109
Barolift	30
STOPLOSS(1.37)	47
total	1426

Mud Materials on Board @24:00hrs (unit: kg)

Item	Received	Used	Stock
Barite (Bulk)			185,000
Caustic Soda			1,050
Lime			200
Soda Ash			575
Caustic Potash			1,075
Tel-Polymer DX / L / H			2240 / 0 / 0
XCD-Polymer			1,200
Lignate NC			4,500
Clean Lube W			8,000
Tel Clean W			4,600
Astex-S			4,400
Deformer 30C			480
Tell DD			3,200
Bi-Carbonate			300
Citric Acid			1,900
Tan Cal C / M / F			210 / 1,020 / 510
Telnite GXL			504
Treat-HS			6,940
Mud Seal P			130
Tel Plug C / M / F			500 / 500 / 500
Tel Stop P / G			500 / 260
Barolift (lbs)			1,890
Driscal D			0
Tel Flow P			0
Poro Seal			0
Steel Seal 50 (lbs)			1,000
KCl			0
NaCl			0
Fracseal (lbs)			0
Stopseal (lbs)			0
Bentonate(Bulk)			46,000

Heli Information @24:00

Flt. No.	Time Arrived	Time Departed	Passenger Are.	Passenger Dept.
1	09:25	09:31	8	3
2	11:55	12:02	3	3
3				
4				

Safety (HSE) and other information

Incident	Last Incident	No. LTA
LTA		
HUNS cards	24	

Remarks

Marine Information @24:00

Heave (m)	0.5
Pitch (deg)	0.6
Roll (deg)	0.1
Vessel Heading (deg)	070
Riser Tension (kN)	-
V.D. Load (ton)	12288
Max Draught (m)	9.0
Thruster (kW)	710

Weather Information

Time	Weather	Temp. (degC) Air	Temp. (degC) SW	Barometer (hPa)	Wind Speed (m/s)	Wind Dir. (deg)	Wind Gust (m/s)	Wave Height (m)	Wave Dir. (deg)	Wave Period (s)	Current Speed(knt)	Current Dir. (deg)	Visibility (km)
24:00	bc	12.0	15.9	1027.0	0.6	350	1.0	2.3	355	8.0	0.1	147	22.0

Today's Schedule: Continue to drill down 8-1/2" LWD hole.

Reported by : N. Sakurai / T. Nishiyama

Approved by : T. Saruhashi