Chikyu DAILY MORNING REPORT

Mission No. : CK18-04 **Exp. No. :** Exp 358 **Report No. :** 81

Site Name C0002 **Hole Name** C0002R **Lat.** 33° 18.0507'N **Long.** 136° 38.2029'E Seabed Depth : 1,967.5 mBRT RT-MSL : 28.5 m **Report Date :** 27/Dec/2018

Depth : @24:00 4,870.5 mBRT 2903.0 mbsf Progress : 33.0 m Drilling/Coring/Underreaming Hrs. : 21.75 hrs Last BOP PT: 2018/12/14 Next BOP PT: 2019/01/04

Depth : @06:00 4,888.0 mBRT 2920.5 mbsf LAST CASING : 11-3/4" x 2,922.50 mbsf(4,890.0 mBRT) Last BOP FT: 2018/12/22 Next BOP FT: 2018/12/29

Summary of Operation on 26-Dec : Drill 8-1/2" hole to 4,843mBRT. Pack off. Ream down to 4,843mBRT. Take surveys. Drill 8-1/2" hole to 4,870.5mBRT. Last Glycol 35gal Inj. 2018/12/25

Present Operation @ 06:00 on 27-Dec : Drill 8-1/2" hole at 4,887mBRT. mBRT: meter below rotary table

Time Breakdown (00:00 - 24:00 on 26-Dec) mbsf: meter below sea floor

From	To	Hrs	Code	Depth(mBRT)	Detail of Operation
0:00	2:30	2:30	DRL	4,838.0	Continue drilling 8-1/2" Kick off hole from 4,837.5mBRT to 4,842mBRT.
					(00:00-00:15) 4,837.5-4,838mBRT: Sliding Parameters: 0-100kN, 450gpm x 16.5MPa (Motor: 126rpm).
					(00:15-01:00) 4,838-4,839mBRT: Rotating Parameters: 80-100kN, 450gpm x 15-16MPa, 30-50rpm x 11-13kNm.
					(01:00-02:30) 4,839-4,842mBRT: Sliding Parameters: 50-80kN, 450gpm x 15-16MPa (Motor: 126rpm).
2:30	3:00	0:30	SP	4,842.0	Pick up the string and attempt to rotate - string stalled. Overpull 300kN and the string released. Reciprocate the string 4,838-4,835mBRT until torque stabilized
3:00	3:30	0:30	DRL	4,843.0	Drill 8-1/2" Kick off hole from 4,842mBRT to 4,843mBRT.
3:30	4:15	0:45	SP	4,843.0	Observe increasing torque from 12→30kNm and the string stalled and pack-off at 4,843mBRT. Observe 10MPa remaining pressure after stopping the pumps.
					Apply overpull 500kN and slack off 300kN to fire jar multiple times - the string released. Backream from 4,843mBRT to 4,824mBRT.
4:15	14:00	9:45	W&R	4,843.0	Ream down from 4,824mBRT to 4,843mBRT.
					Reaming parameters: WOB 0-100kN, 350-400-450gpm x 9-16MPa, 20-50rpm x 12-30kNm
					Attempt to reaming down with varying parameter - the string stalled out at 4,833-4,838mBRT multiple times due to high torque 12-14 → 30kNm and increasing
					pump pressure by 4MPa from normal circulation pressure.
					Pump 3m³ of BAROLIFT and 3m³ of Fracseal sweeps alternately every hour.
					(11:00-14:00) Observe cement returns at shakers - approximately <10 volume % - and decrease gradually.
					Stall
					at 4,834mBRT and release by pick up with 70kN. Torque and pressure (350gpm x 10MPa => 13MPa) increase at the same time. Stop pump for work pipe.
					at 4,832.5mBRT and release by overpull 370kN. Torque and pressure (400gpm x 12MPa => 16MPa) increase at the same time. Stop pump for work pipe.
					at 4,832.5mBRT and release by overpull 200kN . Torque and pressure (350gpm x 10MPa => 12MPa) increase at the same time. Stop pump for work pipe.
					at 4,835mBRT and release by overpull 650kN. Torque and pressure (350gpm x 10MPa => 12MPa) increase at the same time. Stop pump for work pipe.
					at 4,836mBRT and release by overpull 650kN. Torque fluctuate before stall and reduce rotation speed (50rpm x 8-25kNm => 20rpm x 8-30kNm).
					at 4,838mBRT and release by overpull 500kN. Torque increase at the same time. Stop pump for work pipe.
					at 4,835mBRT and release by overpull 250kN. Torque increase at the same time. Stop pump for work pipe.
					at 4,832.5mBRT and release by overpull 650kN. Torque fluctuate before stall.
					at 4,836mBRT and release by overpull 400kN. Torque and standpipe pressure (450gpm x 15MPa => 17MPa) increase suddenly.
					at 4,838mBRT and release by overpull 350kN. Torque and standpipe pressure (350gpm x 11MPa => 13MPa) increase suddenly.
					at 4,841mBRT and release by overpull 400kN. Torque fluctuate and standpipe increase gradually before stall.
14:00	18:30	4:30	DRL	4,858.0	Drill 8-1/2"kick off hole from 4,843mBRT to 4,858mBRT.
					Parameters: WOB 0-100kN, 350-400-450gpm x 12.0-14.3-16.4MPa, 50rpm x 11-14kNm, Ave.ROP 3.3m/hr.
					Pump 3m³ of BAROLIFT and 3m³ of Fracseal sweeps 15min later after BAROLIFT every hour.
18:30	19:00	0:30	OTHER	4,858.0	Take a survey at 4,857mBRT.
					Once reduce pump rate to 200gpm, back pump rate to 450gpm for survey.
19:00	22:00	3:00	DRL	4,866.0	Drill 8-1/2"kick off hole from 4,858mBRT to 4,866mBRT.
					Parameters: WOB 50-100kN, 450gpm x 16.5MPa, 50rpm x 10-15kNm, Ave.ROP 2.7m/hr.
					Pump 3m³ of BAROLIFT and 3m³ of Fracseal sweeps 15min later after BAROLIFT every hour.
22:00	22:30	0:30	OTHER	4,866.0	Take a survey at 4,864mBRT.
					Once reduce pump rate to 200gpm, back pump rate to 450gpm for survey.
22:30	24:00	1:30	DRL	4,870.5	Drill 8-1/2"kick off hole from 4,866mBRT to 4,870.5mBRT.
					Parameters: WOB 60-100kN, 480gpm x 18.4MPa, 50rpm x 10-16kNm, Ave.ROP 3.0m/hr.
					Pump 3m³ of BAROLIFT and 3m³ of Fracseal sweeps 15min later after BAROLIFT.
					<Offline>
					Find #2 Hydra Racker main arm unable to close and investigate solenoid valves by electrician, on going.
					Conduct function test for new Torque wrench for tubing, Ongoing
					Ditch magnet: 8kg (Total 70.5kg for Kick off hole)

Survey data (Depth: Telescope sensor depth)

Depth (mBRT)	Inc (deg)	Azi (deg)
4,836.64	5.2	78.51
4,844.04	5.77	85.98

Time Breakdown (00:00 - 06:00 on 27-Dec) * The data on 00:00 - 06:00 is unofficial.

From	To	Hrs.	Code	Depth(mBRT)	Detail of Operation
0:00	6:00	6:00	DRL	4,888.0	Drill 8-1/2"kick off hole from 4,870.5mBRT to 4,888mBRT.
					Parameters: WOB 80-100kN, 480gpm x 18.0MPa, 50rpm x 10-15kNm, Ave.ROP 2.9m/hr.
					Pump 3m³ of BAROLIFT and 3m³ of Fracseal sweeps 15min later after BAROLIFT every hour.

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
6	8.5	Smith	FHKi28ODVPS	527X	RG2023	3x 16/32"	4,772.0	4,870.5	98.5	21.00	0	100	0	50	219.00	4.7								

BHA Record @24:00

#18	8-1/2" KO BHA	8-1/2" Bit x A675XP PDM with 1.15° bent x 8-1/8" Stab (SLB) x Float Sub w/ Non-ported float valve (SLB) x 6-3/4" Pony NMDC x XO #1 x Telescope 675 x XO #2 x 6-3/4" NMDC x 6-3/4" DC (3 stds) x 6-1/2" Jar x 6-3/4" DC (2 jts) x XO #3 x 5.68" HWDP (3 stds) x XO #4 x 5-1/2" DP S-140 (25 stds) x XO #5 x 5-1/2" DP S-150 (65 stds) x XO #6 x 6-5/8" DP Z-140 (22 stds) x 6-5/8" DP UD-165

Hook Wt. (knt) @24:00 4,870.5 mBRT

Hook Load	2,833
BHA	180
Below HWDP	250
below Jar	125
HPS & Traveling block	615
Hook + RRT	-
Hook block	-

Jar Rotating time 24S/N: 1760-5031

Today	11.11	Total	21.00	hrs

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	1:00	4,838	1.39	65	26	31	12	12 19	6.6	1.0	9.9	0.1	128,000	0.20		18.0	1.75	11	9	22,000	0.42	3.37	4.30	16	-
KNPP	19:00	4,858	1.39	66	25	32	12	11 18	6.5	1.0	9.9	0.1	128,000	0.20		18.0	1.75	11	9	22,000	0.45	2.92	4.30	-	-

Cutting skip @24:00

Empty	Full	Total
33	0	33

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

No.	Liner Size	SPM	GPM	Press. (MPa)	Ann. Vel. (m/min) e.7/DC	Ann. Vel. (m/min) 5.5"DP
1	6"	48	240	18.4	51	40
2	6"	48	240			
3	6"(Booster)	90	450			

Personnel @24:00

CDEX	8
MQJ Crew	101
MWJ	15
Scientist	5
Telnite	2
Oceaneering	6
SLB Cementing	1
SLB WL	0
Geoservices	6
M-I SWACO	4
SLB Underreamer	2
SLB LWD	2
SLB Seismic	0
AFGlobal	0
ENVENTURE	0
SLB DD	2
Franks	0
HAL UR	1
Total	155

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

Item	Received	Used	Stock
Barite (Bulk)		4,000	475,000
Caustic Soda			1,200
Lime			200
Soda Ash			1,125
Caustic Potash			1,750
Tel-Polymer DX / L / H		0/200/0	4220/600/0
XCD-Polymer			1,025
Lignate NC			4,500
Clean Lube W			0
Tel Clean W			6,400
Astex-S			0
Deformer 30C			336
Tell DD			3,200
Bi-Carbonate			1,250
Citric Acid			2,275
Tan Cal M / F / FF			1,020 / 210 / 510
Telnite GXL			684
Treat-HS			9,200
Mud Seal P			130
Tel Plug C / M / F			500 / 500 / 500
Tel Stop P / G			500 / 260
Balolift (lbs)		15	2,085
Driscal D			0
Tel Flow P			0
Poro Seal			0
Steel Seal 50 (lbs)			3,000
KCl			11,000
NaCl			26,000
Fracseal (lbs)			6,000
Stopseal (lbs)			0
Bentonate(Bulk)			46,000

ROV @24:00

Status	Diving
Last Dive	2018/12/22
Injection Skid	Dive w/135 gal skid

Geologic Information @24:00

From	To	Lithology of cuttings

Heli Information @24:00

Flt. No.	Time Arrived	Time Departed	Passenger Are.	Passenger Dept.
1	9:17	9:27	8	9
2	11:25	11:33	7	8
3				
4				

Shale Shaker @24:00 Centrifuge:0 hrs

No.1	30, 120	No.4	30, 120	No.1	off
No.2	30, 120	No.5	30, 120	No.2	off
No.3	30, 120	No.6	30, 120	No.3	off

Safety (HSE) and other information

Incident	Last Incident	No. LTA
LTA		
HUNS cards	37	
Remarks		

Materials Stock on Board @24:00

Item	Unit	Stock	Used	Received
Fresh Water	m3	274.0	96.1	100.1
Potable Water	m3	218.0	5.5	0.0
Drill Water	m3	1,507.0	18.0	0.0
Fuel	m3	5,312.9	48.7	0.0
Lube, Oil	Ltrs	89,100	400.0	0.0
Heli Fuel	Ltrs	0.0	0.0	0.0
Cement "GWC"	ton	186.0	0.0	0.0
Cement "G"	ton	97.0	0.0	0.0

Mud volume@24:00

Mud Volume (m3)	
KNPP mud (1.37)	268
Slug mud	9
KNP mud (1.13)	105
STOPLOSS(1.37)	47
KNP mud (1.19)	58
KNPP mud (1.39)	252
total	739

Marine Information @24:00

Heave (m)	0.5
Pitch (deg)	0.2
Roll (deg)	0.1
Vessel Heading (deg)	000
Riser Tension (kN)	9750.0
V.D. Load (ton)	14300
Max Draught (m)	9.0
Thruster (kW)	1230

Boat Information @24:00

Boat Name	Status	Time @Chikyu Departed	Time @Chikyu Arrived
#8 Meiji-maru	Chikyu		2:10
Akatsuki	Chikyu		
Shincho-maru	Shingu	3:00	

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	c	12.0	18.3	1013.7	11.2	24	12.6	1.0	20	4.3	0.8	215	22.0

Today's Schedule: Drill 8-1/2" kick off hole.

Reported by : T. Yokoyama / A. Suzuki

Approved by : T. Ikawa