Well: NT2-11B

Field: Nankai Trough

JAMSTEC

End of Well Report

MWD/LWD - DD

Prepared By:

Yu Ito/Mario Jakulj/ Derek Chang/William Barragan/Gilles Thezan/Tan Chee Sing/He Chang Hua

Schlumberger

July 2009

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1. WELL SUMMARY

NT2-11B Well Specifications

Operator	: CDEX
Well name	: NT2-11B
Field	: Nankai Trough
Location	: Kumanonada, Pacific Ocean
Country	: Japan
Spud date	: 19th May 2009
Interval logged	: 2082.3m-3577.8m
Drilling contractor	: MQJ
Rig	: Chikyu
Permanent Datum	: Mean Sea Level
Permanent Datau Elevation	: 0 m
Depth Reference	: Driller's Depth
Drilling measured from	: Drill Floor, 28.3m above Mean Sea Level
Water depth	: 2054m BMSL
Mud Type	: Sea Water in 36" jetting and 26" hole, WBM in 12.25&17" hole opener section
D&M service center	: Chiwan , Shekou
D&M logging unit	: OLU-KC-0504
Job number	: 09JAP0002

Services Provided

36" Jetting section	**From**	**To**
Surface Measurements	2082.0 m	2142.7 m
MWD DNI	2060.1 m	2120.8.m
ARC GR	2067.6 m	2128.3 m
ARC APWD	2068.4 m	2129.1 m

26" Hole section	**From**	**To**
Surface Measurements	2142.7 m	2794.0 m
MWD DNI	2120.6 m	2771.9 m
MWD GR	2121.2 m	2772.5 m
CDR APWD	2129.3 m	2780.6 m

12.25” Hole section	From	To
Surface Measurements	2798.0 m	3592.0 m
MWD DNI	2783.1 m	3577.1 m
MWD GR	2783.8 m	3577.8 m
MWD IWOB	2786.4 m	3580.4 m

17” Hole opening section	From	To
Surface Measurements	2786.0 m	3650.0 m
MWD DNI	2774.1 m	3638.1 m
MWD IWOB	2777.4 m	3641.4 m

Well Run Briefs

Totally 4 runs were drilled in this scientific well, and D&M Schlumberger has supplied MWD and ARC GR/APWD for 36”jetting operation, MWD GR and CDR APWD for 26” hole section, MWD GR along with IWOB measurement for 12.25” hole section, MWD IWOB measurement for 17” hole opener section. MWD survey and stick and slip measurements were provided throughout the run.

36” Jetting Section

Run 1(2082m BRT MD / 2082 m BRT TVD- 2143m BRT MD / 2143m BRT TVD)

(The objective of this run)
The objective of this run was to Jet 36" conductor while maintaining verticality. After landing and soaking conductor at +/- 2136.8m BRT, release CADA tool and drill ahead to +/- 2795m BRT. There is likely to be high drillstring magnetic interference on the surveys during this run due to the proximity of steel components to the D&I package. This will be calculated out using DMAG correction at the end of the run.

(MWD/LWD Run Summary Description)
BHA with Telescope and ARC8 was picked up at 21:00, 15th of May 2009.
Successful shallow hole test was made with flow rate of 625 gpm, stand pipe pressure of 333psi, and turbine rpm of 1757. After SHT, tools were racked back.
After assembling the 36” conductor assembly, ARC8 was reinitialized and BHA was run in hole at 7:30, 18th May 2009.
Bit reached bottom hole at 9:30, 19th May 2009 and jetting was conducted until 17:48.

36" conductor hole was jetted successfully, until about 2136m BRT.

After the flow lines were fixed and BHA assembly came down bottom to set the conductor, hole depth suddenly jumped up to 2142.69m BRT without being drilled nor with pumps on at 22:30, 19th May 2009.

It was found out that the connection between drill collar and CART(Cam Activation Rotational Tool) tool was sheared and bent as a result of miscalculation of slack weight and applying too much weight.

In order to salvage the BHA, it was decided to twist off the already sheared and bent joint, and to fish it up with fishing tool. This was done at 22:00, 20th May 2009.
BHA was immediately pulled out of hole after that.

First fishing with a spear head was unsuccessful, since the head sheared when it was attempted to fish out the tool.

Second attempt with an overshot however, was successful and BHA assembly with Telescope and ARC8 was salvaged from underwater at 12:00, 23rd May 2009.

Pump time: 7.7hrs
Drilling time: 7.5hrs

26" Hole Section

Run2 (2143m BRT MD / 2143 m BRT TVD – 2794m BRT MD / 2794 m BRT TVD)

(The objective of this run)
Drill 26" section with Telescope and CDR8 until +/- 2795m BRT MD.

(MWD/LWD Run Summary Description)
BHA was made up and shallow hole test has successfully passed at 20:30, 23rd May 2009. After that, run in hole.

Bit reached bottom and start drilling from 2143m at 8:20, 24th of May.

Successfully, finished drilling until TD depth of 2794m BRT MD at 11:30, 25th of May.

Pull out of hole and tools above rotary table at 10:00, 26th of May.

Good MWD signal throughout this run and good reading from APWD sensors on CDR.
The hole was kept vertical until the end of this run and we finished two days ahead of drilling schedule.

However, the tool G reading from MWD tool was slightly out of range from time to time. This can be speculated because of the heave and compensator wasn't working enough to neutralize the heave.
Therefore the tool x-axis was fluctuating in its value.

Pump time: 27.05hrs
Drilling time: 11.85hrs

12 ¼" Hole Section

Run3 (2795m BRT MD / 2795 m BRT TVD – 3592m BRT MD / 3592 m BRT TVD)

(The objective of this run)
Drill 12.25" hole keeping the inclination vertical for the coring that will take place after this run.
Estimated TD depth is +/- 3682m BRT and hole inclination will be tried to be kept within 3 degrees.

(MWD/LWD Run Summary Description)
BHA was made up and shallow hole test has successfully passed at 11:00, 27th June 2009.
After that, tools were run in hole until the depth of 2798m BRT at 22:30, 27th of June 2009.

At 6:00, 28th of June, TDS catches fire so drilling was halted at 2884.4m.
At 8:30, 29th of June, this problem was fixed and it was resumed drilling.

High gas level was detected at the depth of 3089.2m, at 22:20, 29th of June. It was decided to circulate, and then to wiper trip until the casing shoe.

It was resumed drilling at 08:00, 30th of June from the depth of 3089.2m.

Coring point was reached at 3592m, 11:00 2nd July 2009, in order to continue with the exploration phase of this research well.

Good MWD signal throughout this run, and good reading from all sensors.
Occasionally, high stick and slip up to 300 was observed in this run.

Pump time: 67.31hrs
Drilling time: 38.73hrs

17 inch Hole Opener Section

Run4 (2799m BRT MD/ 2799 m BRT TVD – 3650m BRT MD / 3650 m BRT TVD)

(The objective of this run)
Open the hole from 12.25in to 17in using MWD and hole opener BHA, no directional tool in BHA.

(MWD/LWD Run Summary Description)
BHA was picked up and made up at 12:30 15th of July 2009, and shallow hole test has successfully passed at 19:20, 15th July 2009.
After that, tools were run in hole until the depth of 2799m BRT and it was started to drill at 04:20 16th July 2009.

As soon as the drilling was started, severe stick and slip existed throughout when the bit was touching bottom.(Stick over 300 when RPM of 130 was being used) Several drilling parameters were used to reduce this, however it didn't make any difference.

At 10:00, 17th of July, TOS(tool out of specification) was signed by the OSI to agree to drill ahead under severe stick and slip condition.

Reached TD at 3650m BRT and inclination at the end was kept at 0.1 degrees at 12:35, 19th of July 2009.

Good signal was obtained throughout the run.
Severe sticknslip was observed throughout the run.(RPM:105, over sticknslip 210 and when RPM:120, sticknslip easily over 240)

Pump time: 79.23hrs
Drilling time: 50.10hrs

End of the Well

2. D&M PERSONNEL

D&M Personnel

Field Crew:

Mario Jakulj	MWD/LWD Engineer
Derek Zhang	MWD/LWD Engineer
Yu Ito	MWD/LWD Engineer
William Barragan	MWD/LWD Engineer
Gilles Thezan	Directional Driller
Tan Sing	Directional Driller

Onshore Support Staff:

Tri Utomo	Operation Manager
Wu Yang Song	Field Service Manager
Yoshio Ikeda	Engineer in Charge
Vera Krissentiawati	Service Quality Coach
Chen Zhen Yu	Quality Compliance Manager

Technicians:

Teo Chun Lin	R&M Manager
Edgar Magbanua	R&M Supervisor
Zhong Yong Ming	R&M SQC
Luo Lin	Mechanical Technician
Fan Rong	Electronics Technician

3. DIRECTIONAL DRILLING REPORT

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End of Well Report

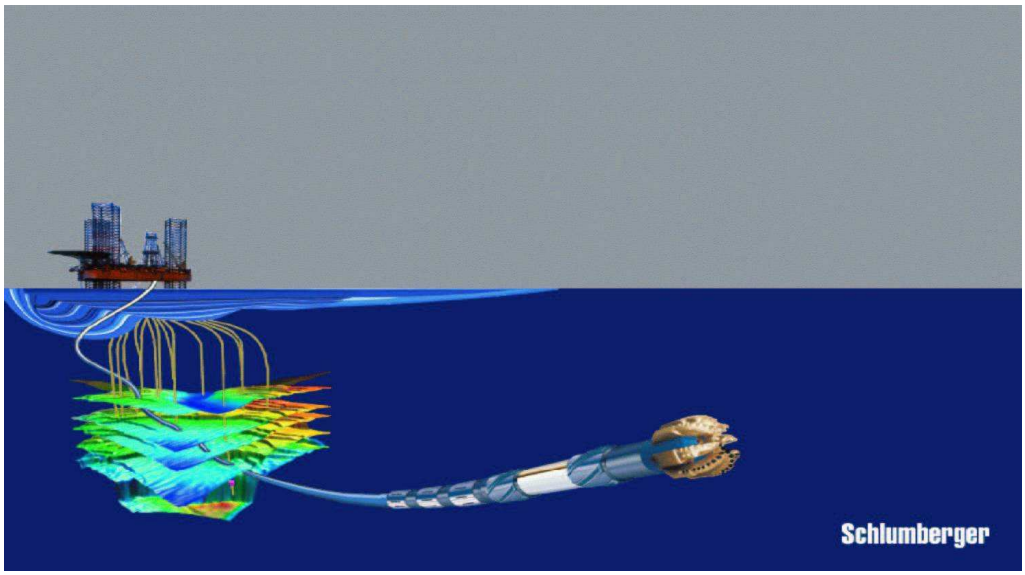
For

NT2-11B

FSM: *Yoshio Ikeda/ Wu Yang Song*

DD: Gilles Thezan/ Tan Chee Sing / He Chang Hua

Date: 05-July-2009



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GENERAL INFORMATION

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1. Client : Jamstec

Field	Location	Structure	Rig	Drilling Co.
Nankai Trough	Kumanonada	Chikyu	Chikyu	MQJ

2. SLB Service Information

Service Type	Service Period For The Project	Service Section of This Well
DD/MWD/LWD	19 May 09 - 03 Jul 09	2082m MD - 3592 MD

3. Structure Data

Coordinates System	RKB to MSL	MSL to Subsea
JGD2000 / UTM Zone 53N	28.3 m	2054m

Reference Point

Northing (m)	Easting (m)	Latitude (deg)	Longitude (deg)
3703100.938	642732.311	N 33 27 28.260	E 136 32 9.000

4. Data of Well -- NT2-11 B

Well Classification: Expedition
Spud Date: May 19, 2009
Profile Shape: Vertical
Surface Coordinates (m) **:** N+/S- = 0 E+/W-= 0
TVD Reference RKB

Magnetic Data

Declination	Grid Convergence	Total Corrected to Grid North
-6.587	0.846884	-7.434

Targets Data :

	Planned (m)				Actual (m)			
Target #	TVD	N+/S-	E+/W-	Radius	TVD	N+/S-	E+/W-	Offset
1	3690.00	0.00	0.00	15	3591.99	-2.31	0.89	2.47

Critical Trajectory Data :

	Planned Data	Actual Data
KOP (m)	N/A	N/A
Max Inclination (deg)	0.00	0.70
Vertical Section Azimuth (deg)	0.00	0.00
Vertical Section (m)	0.00	-2.23
Entry Point (m)	N/A	N/A
Drain Inclination (deg)	N/A	N/A
Drain Length (m)	N/A	N/A
Total Depth (m)	3690.00	3592.00
Total Vertical Depth (m)	3690.00	3591.99

Casing Program :

	36" Conductor	20" CSG	9-5/8" CSG	
Set Depth(m) BRT	2136.80	2786.20		

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JOB SUMMARY

NT2-11B

OBJECTIVES

Operations at NT2-11B will drill, sample and case the rocks above the locked portion of the coseismically active plate boundary thrust. These operations will also provide preparation for later observatory placement, which will monitor deformation, seismicity, pore pressure and temperature. The fundamental scientific objectives of Expedition 319 include: (1) documenting the lithostratigraphy, structural geology, physical properties, and composition of the upper 1600 m of basin-fill sediments in the hanging wall of the plate boundary fault; (2) collecting core at or near the depth of potential observatory installation to confirm stratigraphic and structural observations and interpretations made from geophysical techniques, and to obtain samples for shore-based geotechnical and mechanical analyses; and (3) conducting downhole tests to measure in situ pore pressures and stress states.

WELL TRAJECTORY

NT2-11B is designed as vertical well all the way to TD.

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BHA #1(2082.3m BRT–2136.8m BRT)–36”Conductor Jetting &26”Hole Section Drill Ahead

26” New Hughes mill tooth bit 3 x 24, 1 x 24CJ – 9 5/8 motor (A962M5640XP) 0 deg bend, 12 1/8” Stabilized motor sleeve---- 9” Float sub (ported) ---Spacer Sub-ARC8—PowerPulse8- 25 11/16” String Stabiliser-8 ½” NMDC- 26” String Stabiliser- 2 x 8 ½” DC—XO –CADAT (below)-CADAT(above)- 6 x 8 ½” DC- 7 ¾” Mechanical Jar- 5 x 8 ½” DC- XO- 5 ½” DP to surface

This BHA was used as a jetting assembly for the 36” casing so the above spacing was necessary to position the bit within the proper jetting window(5”outside) in relation to the casing shoe, confirmed with ROV of the space-out. The 36” was jetted to 2136.8mMD. 50 bbls of hi-vis sweeps were pumped every single to assist hole cleaning. After 10m of jetting, formations were noticeably firmer, flow rate was increased to a 1000gpm and later 1100gpm to assist ROP and hole cleaning. No signs of broaching observed while jetting.

(Please refer Jetting Parameter Sheet for specific details)

BHA#2(2136.8m BRT–2795m BRT)–26”Hole Section

26” New Hughes mill tooth bit 3 x 24, 1 x 24CJ – 9 5/8 motor (A962M5640XP) 0 deg bend, 12 1/8” Stabilized motor sleeve---- 9” Float sub (ported) --CDR8—PowerPulse8- 25 11/16” String Stabiliser-8 ½” NMDC- 26” String Stabiliser- 2 x 8 ½” DC - 6 x 8 ½” DC- 7 ¾” Mechanical Jar- 5 x 8 ½” DC- XO- 5 ½” DP to surface

BHA was RIH and drill ahead smoothly to TD in one run.

BHA#3(2798m BRT–3592m BRT)–12 1/4’’Hole Section

12.1/4’’Hycalog PDC bit with 2x15+5x14 nozzles – Power V 900AA – Float Sub – 12’’ Stabilizer – 8’’Pony NM – Telescope 825 HF – 8’’ Collar NM – 8 ½’’ collar x 5 jts – 7 ¾’’ Drilling jars – 8 ½’’ collar x 5 jts – XO – DP to surface

After a successfully SHT with Power V and MWD with 2460 L/Min Flow Rate and 4.2Mpa SSPP, BHA was RIH and drill ahead smoothly till 12.25” section TD in one run.

Drilling Summary

36" Conductor Jetting (2082m to 2136.8m)

36" conductor was jetted down to 2136.8m BRT MD, 54.5m below mudline. Jetting flow rates started out at about 10gpm not to plug the bit nozzle when spud in. This flow rate was increased to 1000gpm when no evident of broaching at sea bed from ROV observation, maximum flow rate used was 1100gpm. Flow rate was reduced when 36" conductor was set at desired depth and let it soaked for 2 hour. Bulleye reading was at ½" maximum before spud in and final bullseye reading matched this when 36" conductor was jetted in with mudmat on sea bed.

26" Drilling Assembly (2136.8m to 2795m)

Once CADA tool was released, 26" commenced with low flow rate at 800gpm & low rpm at 30 to avoid washing out at conductor setting depth, it was gradually increased to maximum at 1000gpm when firmer formation was seen. No excessive torque & drag was seen throughout the run. BHA was back reamed once before making connection, a short wiper trip at 2548m MD was done, and it was drilled to section TD.

20" casing run smoothly and cemented in place at 2786.2m Shoe.

17'' BHA was run to drill out casing shoe and 3m formation to 2798m to conduct a LOT.

12 ¼" Drilling Assembly (2798m to 3592m)

At the commencement of drilling, drilling parameters were set as Flow 2460L/Min, RPM 140rpm, controlling ROP less than 20m/hrs to check the actual performance of all relative systems. Everything was OK when the first stand kelly down. Increase Flow to 2650L/Min, RPM 160rpm, increase WOB step by step to achieve 25m/h ROP. When drill to 2884m, TDS burned, POOH to casing shoe for fixing TDS reason.

Resume drilling after TDS was fixed. Drill with Flow 700gpm, RPM 160rpm, WOB 2-4KN, control ROP less than 25m/hr. Stop drilling when drill to 3072m because of cutting reasons. After clean up the packed off cutting at shale shaker and continue drill ahead with same parameters. When drill to 3089m, drilling was stopped again because of high gas percent reason. CBU till hole clean and wiper trip to casing shoe was then decided by Client.

No tight spots were encountered during wiper trip. When bit return to bottom drilling was commenced again. Keep same drill parameters and control ROP less than 25m/hr. From 3257m to 3281m Stick-Slip was high than expected, to decrease Stick-Slip, CIRC one hour was decided by Client. After CIRC, drill ahead with same parameters, Stick-Slip resume to normal level. When drill to 3407m, Gas percent high than 30%, CBU and then wiper trip to the shoe was decided by Client.

No resistance during trip. Work pipe up and down 2 joints when RIH to bottom, no abnormal issue was observed. Drill ahead with Flow 700gpm, RPM 160rpm, WOB 2-4KN, control ROP less than 25m/hr. The Stick-Slip kept low level while drilling, everything goes smoothly without any problems. Drilling with PowerV system was finished at 3592m BRT.

While drilling this 12.25" section, the performance of Power V was excellent, the Inc was well controlled by Power V and Max. Inc was 0.14deg although the actual Flow Rate was 50gpm less than the plan. Back ream and ream down was performed once before survey and connection throughout the section. To get accurate down hole WOB and Torque as per requirement of Client, IWOB and DWOB calibration was performed as per MWD requirement. Also, high Stick-Slip was encountered and decreased it successfully by circulation and dropped ROP.

Conclusion / Recommendations

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- To ensure no excessive WOB applied while jetting, extra patience needed as ROP is not impressive even with 1100gpm flow rate.
- BHA maintained verticality well in 26” hole section.
- Power V maintained well verticality in 12.25” hole section although the actual flow rate was 50gpm less than plan, the Max. Inc was 0.15deg.
- Stick-Slip was a mainly factor that could decrease ROP and negative impact on the performance of Power V. For this section, circulating to clean the hole, drill with high RPM and controlling ROP less than 25m/hr are helpful to decrease unexpected Stick-Slip and enhance good performance of Power V.
- Drill operation goes smoothly throughout whole 12.25” section, but unexpected problems happened many times on TDS during drilling the section. This decrease the efficiency of drill operation.
- Generally, it was a successful application and practice of Power V on drilling vertical hole in Japan.

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WELL PLOTS

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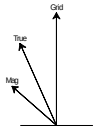
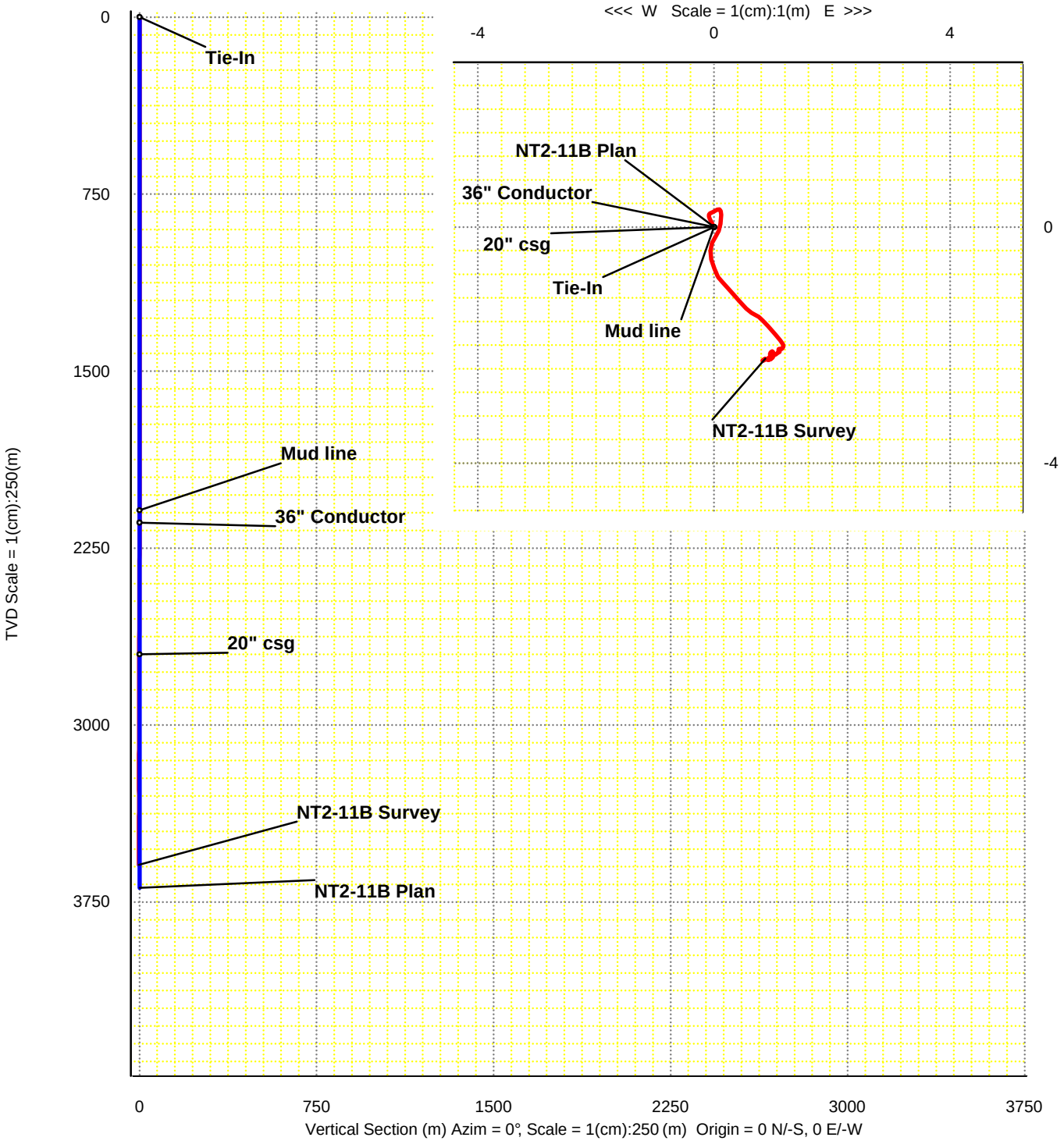
WELL	FIELD	STRUCTURE
Jamstec NT2-11B Deepwater	Jamstec NT2-11B Deepwater	Jamstec NT2-11B Deepwater

Magnetic Parameters					Surface Location					Miscellaneous			
Model:	BGGM 2008	Dip:	46.942°	Date:	May 11, 2009	Lat:	N33 27 28.260	Northing:	3703100.94 m	Slot:	Jamstec NT2-11 Deepwater	TVD Ref:	KB (28.30 m above MSL)
		Mag Dec:	-6.587°	FS:	45998.7 nT	Lon:	E136 32 9.000	Easting:	642732.31 m	Plan:	NT2-1 B MWD Survey	Srvy Date:	May 11, 2009

JGD2000 / UTM Zone 53N
Grid Conv: +0.84688400°
Scale Fact: 0.9998511691

Grid North
Tot Corr (M->G -7.4339°)
Mag Dec (-6.587°)
Grid Conv (+0.84688400°)





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SURVEY REPORT

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NT2-11B Survey Report

Report Date:	July 4, 2009	**Survey / DLS Computation Method:**	Minimum Curvature / Lubinski
Client:	Jamstec	**Vertical Section Azimuth:**	0.000°
Field:	Jamstec NT2-11B Deepwater	**Vertical Section Origin:**	N 0.000 m, E 0.000 m
Structure / Slot:	Jamstec NT2-11B Deepwater / Jamstec NT2-11 Deepwater	**TVD Reference Datum:**	KB
Well:	Jamstec NT2-11B Deepwater	**TVD Reference Elevation:**	28.3 m relative to MSL
Borehole:	Jamstec NT2-11B Deepwater	**Sea Bed / Ground Level Elevation:**	-2053.700 m relative to MSL
UWI/API#:		**Magnetic Declination:**	-6.587°
Survey Name / Date:	NT2-1 B MWD Survey / May 11, 2009	**Total Field Strength:**	45998.693 nT
Tort / AHD / DDI / ERD ratio:	6.006° / 4.20 m / 1.918 / 0.001	**Magnetic Dip:**	46.942°
Grid Coordinate System:	JGD2000 / UTM Zone 53N	**Declination Date:**	May 11, 2009
Location Lat/Long:	N 33 27 28.260, E 136 32 9.000	**Magnetic Declination Model:**	BGGM 2008
Location Grid N/E Y/X:	N 3703100.938 m, E 642732.311 m	**North Reference:**	Grid North
Grid Convergence Angle:	+0.84688400°	**Total Corr Mag North -> Grid North:**	-7.434°
Grid Scale Factor:	0.99985117	**Local Coordinates Referenced To:**	Well Head

Comments	Measured Depth (m)	Inclination (deg)	Azimuth (deg)	TVD (m)	Vertical Section (m)	NS (m)	EW (m)	Closure (m)	Closure Azimuth (deg)	DLS (deg/30 m)	Mag / Grav Tool Face (deg)	Northing (m)	Easting (m)	Latitude	Longitude
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	3703100.94	642732.31	N 33 27 28.260	E 136 32 9.000
RKB to Mud line	2082.00	0.00	0.00	2082.00	0.00	0.00	0.00	0.00	0.00	0.00	332.71M	3703100.94	642732.31	N 33 27 28.260	E 136 32 9.000
	2137.87	0.30	332.71	2137.87	0.13	0.13	-0.07	0.15	332.71	0.16	66.33M	3703101.07	642732.24	N 33 27 28.264	E 136 32 8.997
	2174.02	0.15	66.33	2174.02	0.23	0.23	-0.07	0.24	343.94	0.29	61.50M	3703101.17	642732.24	N 33 27 28.268	E 136 32 8.998
	2214.16	0.24	61.50	2214.16	0.29	0.29	0.05	0.30	10.56	0.07	181.19M	3703101.23	642732.37	N 33 27 28.270	E 136 32 9.002
	2251.74	0.38	181.19	2251.74	0.21	0.21	0.12	0.24	30.37	0.43	217.97M	3703101.15	642732.43	N 33 27 28.267	E 136 32 9.005
	2327.80	0.21	217.97	2327.80	-0.15	-0.15	0.03	0.16	168.86	0.10	155.36M	3703100.78	642732.34	N 33 27 28.255	E 136 32 9.001
	2481.39	0.27	155.36	2481.39	-0.71	-0.71	0.01	0.71	179.34	0.05	165.79M	3703100.23	642732.32	N 33 27 28.237	E 136 32 9.000
	2520.03	0.09	165.79	2520.03	-0.82	-0.82	0.05	0.82	176.25	0.14	136.76M	3703100.12	642732.36	N 33 27 28.233	E 136 32 9.002
	2556.40	0.32	136.76	2556.40	-0.92	-0.92	0.13	0.93	171.94	0.20	139.46M	3703100.02	642732.44	N 33 27 28.230	E 136 32 9.005
	2634.48	0.37	139.46	2634.48	-1.27	-1.27	0.44	1.35	160.75	0.02	107.11M	3703099.67	642732.75	N 33 27 28.219	E 136 32 9.016
	2712.20	0.16	107.11	2712.19	-1.49	-1.49	0.71	1.65	154.55	0.10	137.91M	3703099.45	642733.02	N 33 27 28.211	E 136 32 9.027
	2749.79	0.70	137.91	2749.78	-1.68	-1.68	0.91	1.91	151.42	0.45	208.87M	3703099.26	642733.23	N 33 27 28.205	E 136 32 9.034
	2818.15	0.06	208.87	2818.14	-2.02	-2.02	1.18	2.34	149.77	0.30	211.78M	3703098.92	642733.49	N 33 27 28.194	E 136 32 9.044
	2854.57	0.06	211.78	2854.56	-2.05	-2.05	1.16	2.36	150.58	0.00	287.33M	3703098.89	642733.47	N 33 27 28.193	E 136 32 9.044
	2897.90	0.09	287.33	2897.89	-2.06	-2.06	1.11	2.34	151.63	0.07	180.06M	3703098.88	642733.42	N 33 27 28.193	E 136 32 9.042
	2927.95	0.12	180.06	2927.94	-2.09	-2.09	1.09	2.35	152.40	0.17	52.08M	3703098.85	642733.40	N 33 27 28.192	E 136 32 9.041
	2967.36	0.06	52.08	2967.35	-2.11	-2.11	1.11	2.39	152.37	0.12	237.05M	3703098.82	642733.42	N 33 27 28.191	E 136 32 9.042
	3005.41	0.10	237.05	3005.40	-2.12	-2.12	1.09	2.39	152.69	0.13	229.16M	3703098.82	642733.41	N 33 27 28.191	E 136 32 9.041
	3045.44	0.06	229.16	3045.43	-2.15	-2.15	1.05	2.40	154.01	0.03	266.85M	3703098.79	642733.36	N 33 27 28.190	E 136 32 9.039
	3083.61	0.06	266.85	3083.60	-2.17	-2.17	1.01	2.39	154.92	0.03	222.32M	3703098.77	642733.33	N 33 27 28.189	E 136 32 9.038
	3122.10	0.09	222.32	3122.09	-2.19	-2.19	0.97	2.40	156.03	0.05	315.23M	3703098.75	642733.28	N 33 27 28.188	E 136 32 9.036
	3159.07	0.03	315.23	3159.06	-2.21	-2.21	0.95	2.40	156.75	0.08	222.71M	3703098.73	642733.26	N 33 27 28.188	E 136 32 9.035
	3198.28	0.10	222.71	3198.27	-2.22	-2.22	0.92	2.41	157.58	0.08	80.78M	3703098.72	642733.23	N 33 27 28.187	E 136 32 9.034

Comments	Measured Depth (m)	Inclination (deg)	Azimuth (deg)	TVD (m)	Vertical Section (m)	NS (m)	EW (m)	Closure (m)	Closure Azimuth (deg)	DLS (deg/30 m)	Mag / Grav Tool Face (deg)	Northing (m)	Easting (m)	Latitude	Longitude
	3237.12	0.14	80.78	3237.11	-2.24	-2.24	0.94	2.43	157.22	0.18	327.76M	3703098.70	642733.25	N 33 27 28.187	E 136 32 9.035
	3274.27	0.15	327.76	3274.26	-2.19	-2.19	0.96	2.39	156.35	0.20	44.75M	3703098.75	642733.27	N 33 27 28.188	E 136 32 9.036
	3313.21	0.12	44.75	3313.20	-2.12	-2.12	0.96	2.33	155.61	0.13	156.55M	3703098.82	642733.27	N 33 27 28.191	E 136 32 9.036
	3350.83	0.09	156.55	3350.82	-2.12	-2.12	1.00	2.34	154.72	0.14	189.00M	3703098.82	642733.31	N 33 27 28.191	E 136 32 9.038
	3386.58	0.10	189.00	3386.57	-2.18	-2.18	1.01	2.40	155.16	0.05	238.44M	3703098.76	642733.32	N 33 27 28.189	E 136 32 9.038
	3428.71	0.14	238.44	3428.70	-2.24	-2.24	0.96	2.44	156.84	0.08	193.81M	3703098.70	642733.27	N 33 27 28.187	E 136 32 9.036
	3503.76	0.06	193.81	3503.75	-2.33	-2.33	0.87	2.48	159.48	0.04	273.54M	3703098.61	642733.18	N 33 27 28.184	E 136 32 9.032
	3541.16	0.06	273.54	3541.15	-2.34	-2.34	0.85	2.49	160.15	0.06	59.40M	3703098.60	642733.16	N 33 27 28.184	E 136 32 9.031
	3568.31	0.10	59.40	3568.30	-2.33	-2.33	0.85	2.48	159.91	0.17	---	3703098.61	642733.16	N 33 27 28.184	E 136 32 9.032
Projection TD	3592.00	0.10	59.40	3591.99	-2.31	-2.31	0.89	2.47	158.97	0.00	---	3703098.63	642733.20	N 33 27 28.185	E 136 32 9.033

Survey Type: Definitive Survey

Survey Error Model: **SLB ISCWSA version 24 *** 3-D 95.00% Confidence 2.7955 sigma**

Surveying Prog:

MD From (m)	MD To (m)	EOU Freq	Survey Tool Type	Borehole -> Survey
0.00	2082.00	Act-Stns	SLB_MWD-INC_ONLY-Depth Only	Jamstec NT2-11B Deepwater -> NT2-1 B MWD Survey
2082.00	2749.79	Act-Stns	SLB_MWD-STD	Jamstec NT2-11B Deepwater -> NT2-1 B MWD Survey
2749.79	3592.00	Act-Stns	SLB_MWD-INC_ONLY	Jamstec NT2-11B Deepwater -> NT2-1 B MWD Survey

BOTTOM HOLE ASSEMBLY

Schlumberger

JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

BHA Data Sheet

JAMSTEC - NT2-11 Deepwater

BHA #1	NT2-11 36/26 Jet Assy Rev#1	**Date**	May 11, 2009
Field	Japan NT2-11 Deepwater	**Well**	NT2-11 Deepwater
Structure	Japan NT2-11 Deepwater	**Borehole**	NT2-11

Item	Name	Vendor/ Model	Serial #	Fish. Neck OD (in)/ Length (m)	OD (in)/ ID (in)	Max OD (in)	Bottom/ Top Connection	Length (m)	Cum. Length (m)
1	26" Bit	TSK	65937-T		15.60	26.00		0.548	0.548
		SS-MZC			3.75		7.63 Reg Pin		
2	A962M5640XP	Schlumberger	01093	9.56	9.63	12.13	7.63 Reg Box	9.210	9.758
		A962M5640XP		0.43	7.88		6.63 Reg Box		
3	Float Sub(Ported)	Schlumberger	SBD1826		8.19	8.19	6.63 Reg Pin	0.876	10.634
					3.00		6.63 Reg Box		
4	Spacer Sub(Float Sub)	Schlumberger	SBD2626		8.00	8.00	6.63 Reg Pin	0.794	11.428
					2.81		6.63 Reg Box		
5	ARC-8	Schlumberger	1950-SRPC		8.25	9.10	6.63 Reg Pin	6.360	17.788
		ARC-8			2.81		6.63 FH Box		
6	PowerPulse HF w/IWOB	Schlumberger	YH56		8.25	8.41	6.63 FH Pin	8.504	26.292
		PowerPulse HF w/IWOB			5.90		6.63 Reg Box		
7	25 7/8" Stabilizer	Schlumberger	FEST2066-5	9.50	9.50	25.88	6.63 Reg Pin	1.315	27.607
				0.36	2.06		6.63 Reg Box		
8	8" NonMag DC	Schlumberger	SBD2833		7.88	7.88	6.63 Reg Pin	9.340	36.947
					2.88		6.63 Reg Box		
9	26" Stabilizer	Schlumberger	FEST2600-3	8.00	8.00	8.00	6.63 Reg Pin	1.574	38.521
				0.49	2.81		6.63 Reg Box		
10	2 x 8" Collar (2 joints)	CDEX			8.00	8.00	6.63 Reg Pin	18.624	57.145
					2.81		6.63 Reg Box		
11	CADAT Down	Vetco Gray			8.00	8.00	6.63 Reg Pin	1.249	58.394
					2.81		6.63 Reg Box		
12	CADAT Up	Vetco Gray			8.00	8.00	6.63 Reg Pin	0.742	59.136
					2.81		6.63 Reg Box		
13	6 x 8" Collar (6 joints)	CDEX			8.00	8.00	6.63 Reg Pin	55.859	114.995
					2.81		6.63 Reg Box		
14	Hydro-Mechanical Jar				8.00	8.16	6.63 Reg Pin	10.700	125.695
		n/a			2.81		6.63 Reg Box		
15	5 x 8" Collar (5 joints)	CDEX			8.00	8.00	6.63 Reg Pin	46.541	172.236
					2.81		6.63 Reg Box		
16	Crossover	CDEX			8.00	8.00	6.63 Reg Pin	0.790	173.026
					2.81		5.50 FH Box		
17	5-1/2 " 24.70 DPS, Prem.				5.50	7.25	5.50 FH Pin		
	5.5,24.7,Premium				4.67		5.50 FH Box		
					Total Weight (kN)		385	**Total Len.**	173.026
					Below Jar (kN)		258.0		

Remarks:
1) Bit to CADAT down= 58.394m
2) Bit Stick-out =5.71 inch or 0.145m (58.394-58.249)
3) 5 x 8" DC above Jar (changed from 2 x 8"DC)
4) Item 13 to 16 lengths are approx
5) Weight Below CADAT= 13 ton in air

BHA Comments:

Stabilizer	
Blade Length (m)	**Mid-Pt. To Bit (m)**
	Bend To Bottom
Bent Housing Angle (deg)	**Connection (m)**

Sensor	
Type	**Distance To Bit (m)**

Bit Nozzles	
Count	**Size(/32in)**
4	24.00
TFA (in2)	1.767

Quality Control	
Created By:	tcsing
Checked By:	

Schlumberger

JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

BHA Data Sheet

JAMSTEC NT2-11B Deepwater

BHA #2	26 BHA	**Date**	May 23, 2009
Field	Jamstec NT2-11B Deepwater	**Well**	Jamstec NT2-11B Deepwater
Structure	Jamstec NT2-11B Deepwater	**Borehole**	Jamstec NT2-11B Deepwater

Item	Name	Vendor/ Model	Serial #	Fish. Neck OD (in)/ Length (m)	OD (in)/ ID (in)	Max OD (in)	Bottom/ Top Connection	Length (m)	Cum. Length (m)
1	26" Bit	TSK	65937--T		15.60	26.00		0.548	0.548
		SS-MZC			3.75		7.63 Reg Pin		
2	A962M5640XP	Schlumberger	01093	9.56	9.63	12.13	7.63 Reg Box	9.173	9.721
		A962M5640XP		0.43	7.88		6.63 Reg Box		
3	Float Sub (Ported)	Schlumberger	SBD1826		8.19	8.19	6.63 Reg Pin	0.875	10.596
					3.00		6.63 Reg Box		
4	ARC-8	Schlumberger	8002		8.25	9.10	6.63 Reg Pin	7.430	18.026
		CDR			2.81		6.63 FH Box		
5	PowerPulse HF w/IWOB	Schlumberger	YH56		8.25	8.41	6.63 FH Pin	8.504	26.530
		PowerPulse HF w/IWOB			5.90		6.63 Reg Box		
6	25 7/8" Stabilizer	Schlumberger	FEST2066-	9.50	9.50	25.88	6.63 Reg Pin	1.256	27.786
				0.36	2.06		6.63 Reg Box		
7	8" NonMag DC	Schlumberger	SBD2833		7.88	7.88	6.63 Reg Pin	9.345	37.131
					2.88		6.63 Reg Box		
8	26" Stabilizer	Schlumberger	FEST2600-	8.00	8.00	26.00	6.63 Reg Pin	1.566	38.697
				0.49	2.81		6.63 Reg Box		
9	2 x 8 1/2" Collar (2 joints)	CDEX			8.50	8.50	6.63 Reg Pin	18.620	57.317
					2.50		6.63 Reg Box		
10	6x 8 1/2" Collar (6 joints)	CDEX			8.50	8.50	6.63 Reg Pin	55.854	113.171
					2.50		6.63 Reg Box		
11	Mechanical Jar	Weatherford Interna	D-445H		7.75	7.75	6.63 Reg Pin	10.725	123.896
					3.00		6.63 Reg Box		
12	5 x 8 1/2" Collar (5 joints)	CDEX			8.50	8.50	6.63 Reg Pin	46.551	170.447
					2.50		6.63 Reg Box		
13	Crossover	CDEX	01-126-0001		8.00	8.00	6.63 Reg Pin	0.790	171.237
					2.81		5.50 FH Box		
14	5-1/2 " DPS, Prem.	CDEX			5.50	7.25	5.50 FH Pin		
	5.5,24.7,Premium				4.13		5.50 FH Box		
						Total Weight (kN)	405	**Total Len.**	171.237
						Below Jar (kN)	272.0		

BHA Comments:	Drill to TD as per plan, Parameter Flow 1000GPM- RPM80 - WOB 30KgN- Pressure 24MPa

Stabilizer	
Blade Length (m)	**Mid-Pt. To Bit (m)**
0.46	1.26
0.60	27.28
0.60	37.88

Bent Housing Angle (deg)	**Bend To Bottom Connection (m)**

Sensor	
Type	**Distance To Bit (m)**
Resistivity	12.91
Gamma Ray	16.27
D&I	22.15

Bit Nozzles	
Count	**Size(/32in)**
4	24.00
TFA (in2)	1.767

Quality Control	
Created By:	GThezan
Checked By:	

Schlumberger

JAMSTEC

Jamstec

Jamstec NT2-11B Deepwater

26in BHA

	Cum. Len. (m)
Crossover	181.23
5 x 8 1/2" Collar (5 joints)	170.44
Mechanical Jar	123.89
6x 8 1/2" Collar (6 joints)	113.17
2 x 8 1/2" Collar (2 joints)	57.31
26" Stabilizer	38.69
8" NonMag DC	37.13
25 7/8" Stabilizer	27.78
PowerPulse HF w/IWOB	26.53
ARC-8	18.02
Float Sub (Ported)	10.59
A962M5640XP	9.72
26" Bit	0.55

BHA DESCRIPTION

ELEMENT	LENGTH (m)	OD (in)	ID (in)	MAX OD (in)
26" Bit	0.55	26.00	3.75	26.00
A962M5640XP	9.17	9.63	7.88	12.13
Float Sub (Ported)	0.88	8.19	3.00	8.19
ARC-8	7.43	8.25	2.81	9.10
PowerPulse HF w/IWOB	8.50	8.25	5.90	8.41
25 7/8" Stabilizer	1.26	9.50	2.06	25.88
8" NonMag DC	9.35	7.88	2.88	7.88
26" Stabilizer	1.57	8.00	2.81	26.00
2 x 8 1/2" Collar (2 joints)	18.62	8.50	2.50	8.50
6x 8 1/2" Collar (6 joints)	55.85	8.50	2.50	8.50
Mechanical Jar	10.73	7.75	3.00	7.75
5 x 8 1/2" Collar (5 joints)	46.55	8.50	2.50	8.50
Crossover	0.79	8.00	2.81	8.00
5-1/2 " DPS, Premium	10.00	5.50	4.13	7.50

Bit to Gamma Ray Sensor = 21.50 m
Bit to APWD Sensor = 18.90 m
Bit to Direction & Inclination Sensor = 22.15 m

DRILLING OVERVIEW

Drill to TD as per plan, Parameter Flow 1000GPM- RPM80 - WOB 30KN- Pressure 24MPa. Good performance.

Depth in:	2136.00 m	Depth out:	2794.00 m
Inclination in:	0.15°	To:	0.70°
Direction in:	66.33°	To:	137.91°
Total Drilled	658.00 m	Dogleg:	Maxi = 0.45

Schlumberger

Quality Control
Created by: GThezan Date: 7/4/2009
Checked by: Date:

Schlumberger

JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

BHA Data Sheet

JAMSTEC NT2-11B Deepwater

BHA # 3	12.25 BHA	**Date**	6/26/2009
Field	Jamstec NT2-11B Deepwater	**Well**	Jamstec NT2-11B Deepwater
Structure	Jamstec NT2-11B Deepwater	**Borehole**	Jamstec NT2-11B Deepwater

Item	Name	Vendor/ Model	Serial #	Fish. Neck OD (in)/ Length (m)	OD (in)/ ID (in)	Max OD (in)	Bottom/ Top Connection	Length (m)	Cum. Length (m)
1	12 1/4 " Bit	Hycalog	218338		8.00	12.25		0.280	0.275
		RSX519S-D2			2.82		6 5/8" Reg Pin		
2	PD 900 AA 12 1/4"	Schlumberger	CU335/	8.38	9.06	9.50	6 5/8" Reg Box	4.200	4.480
	restrictor 40	PD 900 AA 12 1/4"	BU51478	0.72	3.00		6 5/8" Reg Box		
3	8" Float Sub	Schlumberger	SBD2626		8.00	8.00	6 5/8" Reg Pin	0.785	5.265
					2.82		6 5/8" Reg Box		
4	12" Stabilizer	Schlumberger	GP7101-4	8.00	8.00	12.00	6 5/8" Reg Pin	1.987	7.252
				0.74	2.82		6 5/8" Reg Box		
5	8" Collar Pony NM	Schlumberger	SBD2834		8.00	8.00	6 5/8" Reg Pin	3.008	10.260
					2.88		6 5/8" Reg Box		
6	Telescope 825 HF	Schlumberger	E2315		8.38	8.41	6 5/8" Reg Pin	8.973	19.233
		Telescope 825 HF			4.30		6 5/8" Reg Box		
7	8" Collar NM	Schlumberger	SBD2833		7.88	8.00	6 5/8" Reg Pin	9.345	28.578
					2.88		6 5/8" Reg Box		
8	8 1/2" Collar X 5 joints	MQJ			8.50	8.50	6 5/8" Reg Pin	46.541	75.119
					2.50		65/8" Reg Box		
9	7-3/4" Drilling Jar	MQJ	HT7637	7.75	7.19	7.75	6 5/8" Reg Pin	10.700	85.819
				0.47	2.75		65/8" Reg Box		
10	8 1/2" Collarx 5 joints	MQJ			8.50	8.50	6 5/8" Reg Pin	46.551	132.370
					2.50		6 5/8" Reg Box		
11	Crossover	MQJ	01-126-0001	7.50	8.50	8.50	6 5/8" Reg Pin	0.791	133.161
				0.45	3.25		5.75 FH Box		
12	5-1/2 " DP S150	MQJ			5.50	7.00	5.75 FH Pin	10.000	143.161
					4.30		5.75 FH Box		
					Total Weight (kN)		327	**Total Len.**	178.77
					Below Jar (kN)		187.0		

BHA Comments:	Drill 12.25 section vertical as per plan.
Good performance of PowerV. Max Inc 0.15deg.	

Stabilizer	
Blade Length (m)	**Mid-Pt. To Bit (m)**
0.60	6.13
	Bend To Bottom
Bent Housing Angle (deg)	**Connection (m)**

Sensor	
Type	**Distance To Bit (m)**
Gamma Ray	14.32
D&I	14.97

Bit Nozzles	
Count	**Size(mm)**
2	15.00
5	14.00
TFA (mm2)	707.00

Quality Control	
Created By:	GThezan
Checked By:	

Schlumberger

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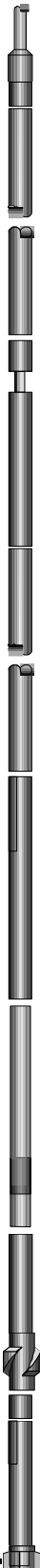
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

Jamstec
Jamstec NT2-11B Deepwater

12.25in BHA



	Cum. Len. (m)
5-1/2 " DP	143.16
Crossover	133.16
8 1/2" Collarx5 (5 joints)	132.37
7-3/4" Drilling Jar	85.82
8 1/2" Collar X5 (5 joints)	75.12
8" Collar NM	28.58
Telescope 825 HF	19.23
8" Collar Pony NM	10.26
12" Stabilizer	7.25
8" Float Sub	5.27
PD 900 AA 12 1/4"	4.47
	0.275

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BHA DESCRIPTION

ELEMENT	LENGTH (m)	OD (in)	ID (in)	MAX OD (in)
12 1/4 " Bit	0.28	12.25	2.82	12.25
PD 900 AA 12 1/4"	4.20	9.06	3.00	9.50
8" Float Sub	0.80	8.00	2.82	8.00
12" Stabilizer	1.99	8.00	2.82	12.00
8" Collar Pony NM	3.01	8.00	2.88	8.00
Telescope 825 HF	8.97	8.25	5.11	8.41
8" Collar NM	9.35	7.88	2.88	7.88
8 1/2" Collar X5 (5 joints)	46.54	8.50	2.50	8.50
7-3/4" Drilling Jar	10.70	7.75	3.00	7.75
8 1/2" Collarx5 (5 joints)	46.55	8.50	2.50	8.50
Crossover	0.79	8.00	2.81	8.00
5-1/2 " DP	10.00	5.44	4.30	7.00

Bit to Gamma Rai Sensor = 14.21 m
Bit to Direction & Inclination Sensor = 14.86 m

Bit to IWOB Sensor = 11.61 m

DRILLING OVERVIEW

Drill 12.25 section vertical as per plan.
Maxi incl 0.15 dgr, Parameter : WOB 2 T, Flow 700gPM, RPM 160, Pressure 15Mpa

Depth in:	2798.00 m	Depth out:	3592.00 m
Inclination in:	0.06°	To:	52.08°
Direction in:	0.10°	To:	59.40°
Total Drilled	794.00 m	Dogleg:	maxi 0.20

Quality Control
Created by: GThezan Date: 6/29/2009
Checked by: Date:

DRILLING PARAMETERS

Schlumberger

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Schlumberger D & M
JAMSTEC

Jetting 36" Casing

Well - NT2-11B
Rig - Chikyu

Jetting Date : 19-May-2009
RKB - Water : 28.3 m
RKB - Seabed : 2082 m
Water Depth : 2053.70 m
Casing hookload: 535 kN in seawater
BHA Below CADA: 130 kN in seawater
BHA weight: 358 kN in seawater
BHA weight b jar: 239 kN in seawater

Jamstec Supervisor: Saruhashi
Jamstec Supervisor: Sawada/ Ikenomoto
Jetting Supervisor : Gilles Thezan/ Tan CS

Bullseye 2 degree
ROV Oceaneering
MWD PowerPulse
Motor A962XP Motor with 12 1/8" slv

Note: Bullseye readings(two) before tagging bottom : 0 deg (#3) / 1/4 deg (#2)

Bit space out: 4" (from ROV image)

BF 0.870

Date	Depth (Meters) From	To	Time From	To	M/Hr ROP	WOB kN	Flow GPM	Pres Mpa	Drag Up kN	Drag Down kN	Bulleye Reading #3	#2	Csg Air kN	Csg Wt Bouyed kN	2/3 csg Bouyed kN	80% csg Bouyed kN	BHA Bouyed kN	Total 100% kN	% Used	Usable 2/3 kN	Usable 80% kN	(2520kN hookload before spudding in)
		0											0.0	0.0	0.0	0.0	0.0	0.0	0%	0	0	
	0	2	9:30	9:34	30	20	180	1.2			0	0.25	21.2	18.5	12.3	14.8	4.5	23.0	87%	15	18	After 3m penetration with 10spm
	2	4	9:34	9:36	30	20	180	1.2					42.4	36.9	24.6	29.5	9.0	45.9	44%	31	37	
	4	6	9:36	9:40	15	20	300	2.9					63.6	55.4	36.9	44.3	13.5	68.9	29%	46	55	
	6	8	9:40	9:50	14	40	600	4.7	2640				84.8	73.8	49.2	59.0	18.0	91.8	44%	61	73	
	8	10	9:50	10:00	12	50	900	18.5	2660				106.0	92.3	61.5	73.8	22.5	114.8	44%	77	92	50bbls hivis
	10	12	10:00	10:05	12	70	1000	22.5	2660				127.2	110.7	73.8	88.6	27.0	137.7	51%	92	110	
	12	14	10:05	10:15	11	90	1000	22.5	2660				148.4	129.2	86.1	103.3	31.5	160.7	56%	107	129	
	14	16	10:15	10:30	12	110	1000	21.2	2670				169.7	147.6	98.4	118.1	36.0	183.6	60%	122	147	
	16	18	10:30	10:45	12	120	1000	21.3	2665				190.9	166.1	110.7	132.9	40.5	206.6	58%	138	165	
	18	20	10:45	11:00	10	130	1100	25.2	2780				212.1	184.5	123.0	147.6	45.0	229.5	57%	153	184	50bbls hivis
	20	22	11:00	11:15	10	150	1100	25.2	2850				233.3	203.0	135.3	162.4	49.5	252.5	59%	168	202	
	22	24	11:15	11:30	15	150	1100	25.2	2890				254.5	221.4	147.6	177.1	54.0	275.4	54%	183.6	220	
	24	26	11:30	11:40	12	170	1100	25	2950				275.7	239.9	159.9	191.9	58.5	298.4	57%	198.9	239	
	26	28	11:40	11:50	12	180	1100	25	2980				296.9	258.3	172.2	206.7	63.0	321.3	56%	214.2	257	
	28	30	11:50	12:00	15	190	1100	25	2980				318.1	276.8	184.5	221.4	67.5	344.3	55%	229.5	275	50bbls hivis
	30	32	12:00	12:10	15	210	1100	25	2980				339.3	295.2	196.8	236.2	72.0	367.2	57%	244.8	294	
	32	34	12:10	12:30	12	230	1100	24.2	2980				360.5	313.7	209.1	250.9	76.5	390.2	59%	260.1	312	
	34	36	12:30	12:50	12	240	1100	24.6	2960		0	0.50	381.7	332.1	221.4	265.7	81.0	413.1	58%	275.4	331	Connection, worked 2 x singles/ 50 bbls
	36	38	12:50	13:15	10	250	1100	25	3000				402.9	350.6	233.7	280.5	85.5	436.1	57%	290.7	349	
	38	40	13:15	13:40	10	270	1100	24.6	3010				424.1	369.0	246.0	295.2	90.0	459.0	59%	306.0	367	
	40	42	13:25	14:45	10	280	1100	24.7	3120				445.3	387.5	258.3	310.0	94.5	482.0	58%	321.3	386	50bbls hivis
	42	44	14:45	14:55	10	270	1100	24.7	3080				466.6	405.9	270.6	324.8	99.0	505.0	53%	336.6	404	
	44	46	14:55	15:15	10	320	1100	24.7	2850				487.8	424.4	282.9	339.5	103.5	527.9	61%	351.9	422	
	46	48	15:15	15:35	10	330	1100	24.7	3190				509.0	442.8	295.2	354.3	108.0	550.9	60%	367.2	441	
	48	50	15:35	16:00	10	340	1100	24.7	3150				530.2	461.3	307.5	369.0	112.5	573.8	59%	382.5	459	50bbls hivis
	50	52	16:00	16:15	10	360	1100	24.7	3250				551.4	479.7	319.8	383.8	117.0	596.8	60%	397.8	477	
	52	54	16:15	17:00	10	370	1100	24.7	3205				572.6	498.2	332.1	398.6	121.5	619.7	60%	413.1	496	
	54	54.5	17:00	17:30	10	400	1100	24.7	3215		0.25	0.50	577.9	502.8	335.2	402.3	122.6	625.5	64%	417.0	500	100bbls/ Compensator on/ soaked 2 hours

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JAMSTEC NT2-11B Slide Sheet

BHA: 26 BHA

Client: Jamstec
Field: Jamstec NT2-11B Deepwater
Structure: Jamstec NT2-11B Deepwater
Well: Jamstec NT2-11B Deepwater
Borehole: Jamstec NT2-11B Deepwater
UWI/API#:
Directional Driller: Gilles Thezan
Directional Driller: Tan CS
Job #: 09JAP0002

Depth In: 2137.00 **Depth Out:** 2794.00 **Tot Distance:** 657.00 **Total Time:** 11.86 **Total ROP:** 55.4
Inclination In: 0.30 **Inclination Out:** 0.70 **SLIDE:** 0.00 **% SLIDE** 0.0 **Time:** 0.0
Azimuth In: 332.71 **Azimuth Out:** 137.91 **ROTATE:** 657.00 **% ROTAT** 100.0 11.86 **ROTATE ROP:** 55.4

Comments: Good run, TD in one run & maintained verticality.

Statistics:

Min	Max	Sum	Min	Max	Sum	Avg	None	Max	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	None	Max	Avg	Avg	Avg	Avg	Avg
	5/25/2009 11:25	12.750	2137.00	2794.00	657.00	54.0			0	3774	21	22	1	24.9	77	8.8		2749.79	0.29	135.66	0.18	0.05	15.38

Start Time (m/d/yy h:mm)	End Time (m/d/yy h:mm)	Duration (hr)	Md From (m)	Md To (m)	Course (m)	Calc ROP (m/h)	Orienting Method	TF Mode (G/M)	TF Angle (°)	Flow (L/min)	SPP Off Bot (MPa)	SPP On Bot (MPa)	Delta P (MPa)	WOB (1000 N)	RPM (c/min)	Torque (kN.m)	Comment	Svy Md (m)	Incl (°)	Azmth (°)	DLS (° / 30 m)	BR (° / 30 m)	TR (° / 30 m)
5/24/2009 8:25	5/24/2009 9:25	1.000	2137.00	2165.00	28.00	28.0	ROTATE	G	0.0	3785	20	21	1	5.0	30	5.0		2137.87	0.30	332.71	0.16	0.16	0.00
5/24/2009 10:15	5/24/2009 11:05	0.833	2165.00	2203.00	38.00	45.6	ROTATE	G	0.0	3785	20	21	1	10.0	70	5.0	Pump Hi Vis each single	2174.02	0.15	66.33	0.29	-0.12	77.69
5/24/2009 11:40	5/24/2009 12:42	1.033	2203.00	2241.00	38.00	36.8	ROTATE	G	0.0	3785	20	21	1	10.0	80	9.0		2214.16	0.24	61.50	0.07	0.07	-3.61
5/24/2009 13:27	5/24/2009 14:14	0.783	2241.00	2277.00	36.00	46.0	ROTATE	G	0.0	3785	20	21	1	20.0	80	9.0		2251.74	0.38	181.19	0.43	0.11	95.55
5/24/2009 15:03	5/24/2009 15:42	0.650	2277.00	2317.00	40.00	61.5	ROTATE	G	0.0	3785	20	21	1	20.0	80	9.0							
5/24/2009 17:07	5/24/2009 17:45	0.633	2317.00	2356.00	39.00	61.6	ROTATE	G	0.0	3600	19	20	1	20.0	80	9.0	Ream twice	2327.80	0.21	217.97	0.10	-0.07	14.51
5/24/2009 18:35	5/24/2009 19:08	0.550	2356.00	2394.00	38.00	69.1	ROTATE	G	0.0	3785	22	22	1	30.0	80	9.0							
5/24/2009 19:35	5/24/2009 20:30	0.917	2394.00	2433.00	39.00	42.5	ROTATE	G	0.0	3785	21	22	1	30.0	80	9.0							
5/24/2009 21:13	5/24/2009 21:50	0.617	2433.00	2471.00	38.00	61.6	ROTATE	G	0.0	3785	21	22	1	30.0	80	9.0							
5/24/2009 22:22	5/24/2009 23:00	0.633	2471.00	2509.00	38.00	60.0	ROTATE	G	0.0	3785	22	23	1	30.0	80	10.0		2481.39	0.27	155.36	0.05	0.01	-12.23
5/24/2009 23:33	5/25/2009 0:17	0.733	2509.00	2548.00	39.00	53.2	ROTATE	G	0.0	3785	22	23	1	30.0	80	9.0	Ream 3x, wiper trip 5 stands	2520.03	0.09	165.79	0.14	-0.14	8.10
5/25/2009 2:40	5/25/2009 3:18	0.633	2548.00	2585.00	37.00	58.4	ROTATE	G	0.0	3785	22	22	0	30.0	80	9.0		2556.40	0.32	136.76	0.20	0.19	-23.95
5/25/2009 3:55	5/25/2009 4:35	0.667	2585.00	2624.00	39.00	58.5	ROTATE	G	0.0	3785	22	23	1	30.0	80	9.0							
5/25/2009 5:12	5/25/2009 5:57	0.750	2624.00	2663.00	39.00	52.0	ROTATE	G	0.0	3785	22	23	1	30.0	80	9.0		2634.48	0.37	139.46	0.02	0.02	1.04
5/25/2009 6:22	5/25/2009 7:00	0.633	2663.00	2700.00	37.00	58.4	ROTATE	G	0.0	3785	22	23	1	30.0	80	9.0							
5/25/2009 7:40	5/25/2009 8:13	0.550	2700.00	2739.00	39.00	70.9	ROTATE	G	0.0	3785	22	23	1	30.0	80	10.0	Work on wash pipe	2712.20	0.16	107.11	0.10	-0.08	-12.49
5/25/2009 9:42	5/25/2009 10:30	0.800	2739.00	2777.00	38.00	47.5	ROTATE	G	0.0	3785	22	23	1	30.0	80	10.0		2749.79	0.70	137.91	0.45	0.43	24.58
5/25/2009 11:05	5/25/2009 11:25	0.333	2777.00	2794.00	17.00	51.0	ROTATE	G	0.0	3785	22	23	1	30.0	80	10.0	TD						

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JAMSTEC

JAMSTEC NT2-11B Slide Sheet

BHA: 12.25 BHA

Client:	Jamstec	**Well:**	Jamstec NT2-11B Deepwater	**Directional Driller:**	Gilles Thezan
Field:	Jamstec NT2-11B Deepwater	**Borehole:**	Jamstec NT2-11B Deepwater	**Directional Driller:**	He Chang Hua
Structure:	Jamstec NT2-11B Deepwater	**UWI/API#:**		**Job #:**	09JAP0002

Depth In:	2798.00	**Depth Out:**	3592.00	**Tot Distance:**	794.00			**Total Time:**	38.7	**Total ROP:**	20.5
Inclination In:	0.06	**Inclination Out:**	0.10	**ROTATE:**	0.00	**% ROTAT**	0.0	**Time:**	0.0		
Azimuth In:	208.87	**Azimuth Out:**	59.40	**STRAIGHT:**	794.00	**% STRAI**	100.0		38.7	**STRAIGHT ROP:**	20.5

Comments: Good performance of PowerV. TD by one run, Max Inc 0.15deg.

Statistics:

Min	Max	Sum	Min	Max	Sum	Avg	None	Max	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	None	Max	Avg	Avg	Avg	Avg	Avg
	7/2/2009 12:40	39.350	2798.00	3592.00	794.00	21.0		G	180.0	100.000	2636	13	13	3.0	159	5.6		3568.31	0.09	235.66	0.11	-0.01	-3.05

Start Time	End Time	Duration	Md From	Md To	Course	Calc ROP	Orienting Method	TF Mode	TF Angle	Power Set	Flow	SPP Off Bot	SPP On Bot	WOB	RPM	Torque	Comment	Svy Md	Incl	Azmth	DLS	BR	TR
(m/d/yy h:mm)	(m/d/yy h:mm)	(hr)	(m)	(m)	(m)	(m/h)		(G/M)	(°)	(%)	(L/min)	(MPa)	(MPa)	(1000 N)	(c/min)	(kN.m)		(m)	(°)	(°)	(° / 30 m)	(° / 30 m)	(° / 30 m)
6/27/2009 22:50	6/28/2009 0:25	1.583	2798.00	2818.00	20.00	12.6	STRAIGHT	G	180.0	100.000	2355	11	11	5.0	140	5.0	Boost Riser: 473L/Min	2818.15	0.06	208.87	0.30	-0.28	31.14
6/28/2009 0:45	6/28/2009 2:18	1.550	2818.00	2836.00	18.00	11.6	STRAIGHT	G	180.0	100.000	2355	11	11	5.0	140	5.0							
6/28/2009 2:54	6/28/2009 5:15	2.350	2836.00	2869.00	33.00	14.0	STRAIGHT	G	180.0	100.000	2650	12	13	5.0	160	5.0	B/R 2271L/Min, 120rpm, IWOB,DWOB	2854.57	0.06	211.78	0.00	0.00	2.40
6/28/2009 5:50	6/28/2009 6:18	0.467	2869.00	2884.00	15.00	32.1	STRAIGHT	G	180.0	100.000	2650	12	13	5.0	160	5.0	Fix TDS						
6/29/2009 8:45	6/29/2009 10:09	1.400	2884.00	2909.00	25.00	17.9	STRAIGHT	G	180.0	100.000	2650	13	13	4.0	160	5.0		2897.90	0.09	287.33	0.07	0.02	52.31
6/29/2009 10:45	6/29/2009 12:41	1.933	2909.00	2951.00	42.00	21.7	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	5.0	SCR	2927.95	0.12	180.06	0.17	0.03	-107.09
6/29/2009 13:30	6/29/2009 15:00	1.500	2951.00	2989.00	38.00	25.3	STRAIGHT	G	180.0	100.000	2650	13	13	2.0	160	5.0	ROP 25 m/h	2967.36	0.06	52.08	0.12	-0.05	-97.42
6/29/2009 15:37	6/29/2009 17:13	1.600	2989.00	3027.00	38.00	23.7	STRAIGHT	G	180.0	100.000	2650	13	13	2.0	160	5.0		3005.41	0.10	237.05	0.13	0.03	-138.00
6/29/2009 17:49	6/29/2009 19:23	1.567	3027.00	3065.00	38.00	24.3	STRAIGHT	G	180.0	100.000	2650	13	13	2.0	160	5.0	P/U 2070KN, S/O 2058KN	3045.44	0.06	229.16	0.03	-0.03	-5.91
6/29/2009 19:55	6/29/2009 20:20	0.417	3065.00	3072.00	7.00	16.8	STRAIGHT	G	180.0	100.000	2650	13	13	2.0	160	5.0	Stop for cutting problem, flow check						
6/29/2009 21:18	6/29/2009 22:20	1.033	3072.00	3089.00	17.00	16.5	STRAIGHT	G	180.0	100.000	2650	13	13	2.0	160	5.0	Control ROP <20m/hr, CBU, Wiper Trip to casing Shoe	3083.61	0.06	266.85	0.03	0.00	29.62
6/30/2009 8:00	6/30/2009 8:47	0.783	3089.00	3103.00	14.00	17.9	STRAIGHT	G	180.0	100.000	2650	13	13	2.0	160	5.0	P/U 2110,S/O 2080, R 2070						
6/30/2009 9:10	6/30/2009 10:54	1.733	3103.00	3141.00	38.00	21.9	STRAIGHT	G	180.0	100.000	2650	13	13	2.0	160	5.0	SCR	3122.10	0.09	222.32	0.05	0.02	-34.71
6/30/2009 11:30	6/30/2009 13:20	1.833	3141.00	3180.00	39.00	21.3	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	5.0	ROP 25m/h	3159.07	0.03	315.23	0.08	-0.05	75.39
6/30/2009 13:58	6/30/2009 15:42	1.733	3180.00	3218.00	38.00	21.9	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	5.0	Calibrate IWOB and DWOB per stand	3198.28	0.10	222.71	0.08	0.05	-70.79
6/30/2009 16:37	6/30/2009 18:00	1.383	3218.00	3253.00	35.00	25.3	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	5.0	Stop for Gas CIRC	3237.12	0.14	80.78	0.18	0.03	-109.63
6/30/2009 19:00	6/30/2009 19:20	0.333	3253.00	3257.00	4.00	12.0	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	4.0							
6/30/2009 20:00	6/30/2009 21:00	1.000	3257.00	3281.00	24.00	24.0	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	6.0	Stop drill because high Stick-Slip	3274.27	0.15	327.76	0.20	0.01	-91.27
6/30/2009 22:00	6/30/2009 22:47	0.783	3281.00	3296.00	15.00	19.1	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	6.0	CIRC one hour to clean hole						
6/30/2009 23:23	7/1/2009 0:00	0.617	3296.00	3313.00	17.00	27.6	STRAIGHT	G	180.0	100.000	2650	13	13	3.0	160	6.0		3313.21	0.12	44.75	0.13	-0.02	59.31
7/1/2009 0:00	7/1/2009 0:55	0.917	3313.00	3332.00	19.00	20.7	STRAIGHT	G	180.0	100.000	2650	14	14	3.0	160	6.0							
7/1/2009 1:38	7/1/2009 3:30	1.867	3332.00	3371.00	39.00	20.9	STRAIGHT	G	180.0	100.000	2650	14	14	3.0	160	6.0	High Gas, Flow Check	3350.83	0.09	156.55	0.14	-0.02	89.15
7/1/2009 4:15	7/1/2009 5:57	1.700	3371.00	3407.00	36.00	21.2	STRAIGHT	G	180.0	100.000	2650	14	14	3.0	160	6.0	CBU, Wliper Trip to CSG	3386.58	0.10	189.00	0.05	0.01	27.23
7/2/2009 0:00	7/2/2009 0:10	0.167	3407.00	3410.00	3.00	18.0	STRAIGHT	G	180.0	100.000	2650	14	14	3.0	160	7.0							
7/2/2009 0:35	7/2/2009 2:24	1.817	3410.00	3448.00	38.00	20.9	STRAIGHT	G	180.0	100.000	2650	14	14	3.0	160	7.0		3428.71	0.14	238.44	0.08	0.03	35.21
7/2/2009 3:00	7/2/2009 3:08	0.133	3448.00	3452.00	4.00	30.0	STRAIGHT	G	180.0	100.000	2650	14	14	3.0	160	7.0	Put Mudlog pill into Drill String						
7/2/2009 3:25	7/2/2009 5:05	1.667	3452.00	3487.00	35.00	21.0	STRAIGHT	G	180.0	100.000	2650	14	14	3.0	160	7.0		3466.38	0.11	298.63	0.10	-0.02	47.93
7/2/2009 6:08	7/2/2009 7:56	1.800	3487.00	3525.00	38.00	21.1	STRAIGHT	G	180.0	100.000	2650	14	15	3.0	160	7.0	P/U 2243KN, S/O 2220KN	3503.76	0.06	193.81	0.11	-0.04	-84.13
7/2/2009 8:29	7/2/2009 10:30	2.017	3525.00	3563.00	38.00	18.8	STRAIGHT	G	180.0	100.000	2650	14	15	3.0	160	7.0		3541.16	0.06	273.54	0.06	0.00	63.95
7/2/2009 11:00	7/2/2009 12:40	1.667	3563.00	3592.00	29.00	17.4	STRAIGHT	G	180.0	100.000	2650	14	15	3.0	160	7.0	12-1/4" section TD	3568.31	0.10	59.40	0.17	0.04	161.17

MOTOR OPERATION SUMMARY

Schlumberger

JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

9-5/8" MOTOR RUN REPORT

1. Well Information

Well :	NT2-11B	**Client :**	JAMSTEC	**Service Type :**	DD/Motor/MWD
Rig :	CHIKYU	**Location:**	Philipine sea	**SLB Engineers :**	Giles / Tan CS

2. Motor Data

Motor Run : 1 **S/N :** 1093

MotorType:	A962M5640XP	**Motor Size:**	9-5/8"	**SAB Angle:**	0.00	**Stab.Type:**	Sleeve	**Stab.OD** (in)	12 1/8"
Run Type :	Steerable	Thrust Bearing Play :	3	mm	Radial Bearing Play :	N/A	mm		

3. Bit Data

Bit Maker : TSK

IADC Code:	114C	**Bit Type :**	SS-MZC	**TFA (mm^2) :**	1140	**Nozzles :**	4 x 24		
	Inner Rows	Outer Rows	Dull Char.	Location	Bearings	Gauge	Other Ch.	Reason Pulled out	
Grade IN :	New								
Grade OUT:	1	1	WT	A	E	I	NO	TD	

4. Drilling Parameters

Hole Size (in) : **36"**

WOB : (1000kN)	10-30	**Flow Rate** : (L/min)	4158	**Surf. RPM :** (c/min)		**SPP On Btm:** (MPa)	25	**SPP Off Btm:** (MPa)	24.7
Formation :	Shale ,Sand								

5. Drilling Statistics

Max Inc (deg) : 0.50 **Max DLS** (deg/30m) : 0.16

Date In :	May/19/09	**Depth In** (m):	2082	**Footage** (m)	54.5	**Pump Hrs :**	7.70	**Slide ROP :**	
Date Out :	May/19/09	**Depth Out**(m)	2136.5	**Sliding F.**(m)		**Drilling Hrs:**	7.7	**Drilling ROP :**	

6. Mud Property

Mud Type : Sea Water

Mud Wt (g/cm^2)	Viscosity (s/qt)	PV (cP)	YP (lb/100ft²)	Chlorides (mg/l)	pH	Solids(%)	Mud Cake (32nds)	% Sand	Temp. (°C)

7. BHA

26" Milltooth Bit	A962M5640XP Motor	Float Sub -Spacer sub	ARC MWD	25 11/16" 8.5 NMDC
26"Stab	8 1/2" DC*2Jts	CADAT - 8 1/2" DC*6	Mechanical Jar	8 1/2" DC* 5jts
X/O		5.5" DP to surface		

8. Objective

Objective :	Jetting conductor to setting depth
Results :	Achieved objective.

9. Failure

Problem or Failure Reported :	**Failure :** No	**Category :**	**Type :**
R&M Diagnosis :			
Action Follow Up :			

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JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

9-5/8" MOTOR RUN REPORT

1. Well Information

Well :	NT2-11B	**Client :**	JAMSTEC	**Service Type :**	DD/Motor/MWD
Rig :	CHIKYU	**Location:**	Philipine sea	**SLB Engineers :**	Gilles / Tan CS

2. Motor Data

Motor Run : 2 **S/N :** 1093

MotorType:	A962M5640XP	**Motor Size:**	9-5/8"	**SAB Angle:**	0.00	**Stab.Type:** Sleeve	**Stab.OD** (in) 12 1/8"
Run Type :	Steerable	Thrust Bearing Play :	3 mm	Radial Bearing Play :	N/A mm		

3. Bit Data

Bit Maker : TSK

IADC Code: 114C		**Bit Type :** SS-MZC		**TFA (mm^2) :** 1140		**Nozzles :** 4 x 24		
	Inner Rows	Outer Rows	Dull Char.	Location	Bearings	Gauge	Other Ch.	Reason Pulled out
Grade IN :	1	1	WT	A	E	I	NO	TD
Grade OUT:	1	1	WT	A	E	I	NO	TD

4. Drilling Parameters

Hole Size (in) **: 26"**

WOB : (1000kN)	10-30	**Flow Rate** : (L/min)	3785	**Surf. RPM :** (c/min)	80	**SPP On Btm:** (MPa)	23.4	**SPP Off Btm:** (MPa)	22.7
Formation : Shale ,Sand									

5. Drilling Statistics

Max Inc (deg) : 0.70 **Max DLS** (deg/30m) : 0.45

Date In :	May/23/09	**Depth In** (m):	2136.5	**Footage** (m)	657.5	**Pump Hrs :** 27.05	**Slide ROP :**
Date Out :	may/26/09	**Depth Out**(m)	2794	**Sliding F.**(m)		**Drilling Hrs:** 11.85	**Drilling ROP :** 55.50

6. Mud Property

Mud Type : Sea Water

Mud Wt (g/cm^2)	Viscosity (s/qt)	PV (cP)	YP ($lb/100ft^2$)	Chlorides (mg/l)	pH	Solids(%)	Mud Cake (32nds)	% Sand	Temp. (^{C})

7. BHA

26" Milltooth Bit	A962M5640XP Motor	Float Sub	ARC MWD	25 11/16"	8.5 NMDC
26"Stab	8 1/2" DC*2Jts	8 1/2" DC*6	Mechanical Jar		8 1/2" DC* 5jts
X/O		5.5" DP to surface			

8. Objective

Objective : Drill 26" hole section to TD and maintain verticality
Results : Achieved objective.

9. Failure

Problem or Failure Reported :	**Failure :** No	**Category :**	**Type :**
R&M Diagnosis :			
Action Follow Up :			

POWERDRIVE OPERATION SUMMARY

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Bit Run Summary

Please do not make any changes to this form !!!

PowerDrive — The new direction in rotary drilling

JOB NUMBER	COMPANY REP.	DATE IN	DATE OUT	PowerDrive Run #	MWD Run #	Rig Bit Run #	PD Engineer
09JAP0002	T. Abe	2009-06-27	2009-07-3	1	3	3	Gilles / He CH

CLIENT	Hole Depth - FROM		TO		Extension Sub #	Control Unit #	Bias Unit #
JAMSTEC	2798	M	3592	M	49274	335	51478

RIG NAME	Inclination - FROM	TO	Flex Collar #	Control Unit Collar #	ShortHop #
Chikyu	0.7 deg	137.9 deg	N/A	N/A	N/A

WELL NAME		TO	Bit Mfg / type / serial #
NT2-11B	0.1 deg	59.4 deg	Hycalog/RSX519S-D2/218338

LOCATION	Hole Size	Bit To Survey	On Bottom Hours	Last Casing size/wt / depth	
Philipines Sea	12.25 inches	14.97 m	38.73	20"	2786.2

Map file name	Mag Dec / Grid Cor / Total Corr.			Connector Phase Angle	Downlink response ?	Circulating Hours	ft / M Drilled	
335Confirm.scb	-6.587	0.847	-7.434	335	N/A	28.58	794.00 m	M

RTC / FTC		Bit to Midpoint of lower Stab	Bit to Midpoint of upper Stab	Bit to Bottom of Pad	Below Rotary Table Hours	Initial / Final Battery Voltage	
30	30	N/A	N/A	N/A	147.25	3.76	N/A

Pulse height threshhold	Pulse Width MIN / MAX		Digit Time	RPM MIN / MAX		Actual Flowrate MIN / MAX		PowerDrive Operating Hours	PowerDrive ft/M Drilled	
5 %	4 sec	8 sec	30 sec	140	160	650	700	67.31	794.00	M

Bit Grading - MEL		Cone Lock		Guage	Pump Output / Type		Tool Flowrate MIN / MAX		DLS MIN / MAX (deg / 30M)		OB ROP	Oper ROP
TEETH	0	YES	X NO	I	5	Triplex	647	1254	0.02	0.20	20.5	5.4

IADC BIT CUTTING STRUCTURE					Shallow Hole Test					Reason Pulled
I.R.	1	O.R.	0	D.C. NO	Amplitude 600	Threshhold 240	Rotation Rate 100			Coring

SOFTWARE VERSION							Upper / Lower Stab guage - before	Upper / Lower Stab guage - after	
Surface	14.0c	Comms module CMV505	Sensor module SMV502R	PPI 6.2	IDEAL 14.C.02		12	N/A	N/A

Bit Hydraulics Calculations

Enter data in blue areas

Pump Flow	700
Mud Weight	9.02
Bit Diameter	12.25
Bit Flow	683
Bit Pressure Drop	322
Hydraulic HP	128
HSI	1.1
Impact Press.	582

Note: Rock compressive strength should be greater than the Impact Pressure.

Bit Nozzle Size and TFA

Nozzle	/ 32	TFA
1	14	0.150
2	14	0.150
3	14	0.150
4	14	0.150
5	14	0.150
6	15	0.173
7	15	0.173
8		
9		
10		
Bit TFA =		1.097

Flow Restrictor Pressure Drop

Nozzle size (32nd)	TFA	Press. Drop
40	1.23	257 psi

Total Pressure Drop Below PowerDrive

578.72

Note: If the box above is red, the total pressure drop below the PowerDrive is not in the optimal range for pad operation. Confirm restrictor and bit nozzle selection is correct such that the total pressure drop below the PowerDrive is between 600 psi and 800 psi.

PowerDrive Serial No.

PART	PFIX	SN	START	CUM
Control Unit	CU	335	0	67.31
Bias Unit	BU	51478	0	67.31
Upper Torquer	PDUT	45882	0	67.31
Lower Torquer	PDLT	37196	0	67.31
Sensor Module	PDSA	651	0	67.31
Comms Module	PDEM	630	0	67.31

PUMP HOURS

Downward Telemetry Calculations

Enter data in the blue areas

Digit Time	30	secs
Falling Time Constant (FTC)	30	secs
Rising Time Constant (RTC)	30	secs
Driller's Pulse - High / Low	700 / 650	
Driller's Pulse Height	31	%
Pulse Amplitude	20	%
Minimum Recoverable Pulse	12	%
Minimum Threshold	90	%

Threshold OK

Data	REALTIME HRS	REALTIME FAIL?	REALTIME FT/M	RECORDED HRS	RECORDED FAIL	RECORDED FT/M
Inclination		No				
Azimuth		No				
Temperature		No				
Vibration		No				

Mud properties

Mud Company	TELNITE
Mud Type	KNNP
Mud Weight	9.0 ppg
Funnel Viscosity	98 sec
Plastic Viscosity	36
Yeild Point	38
Maximum DH Temperature	20 degC
Sand %	0.5 %
Soild %	N/A

CHECK SHOT TYPE:

DEPTH: INCL: AZI:

Run Summary

Purpose of the run was to maintain the hole vertically till 12.25" section TD.
After LOT, to avoid washout the formation, it was decided by Client to drill the section by 750gpm whist boost riser during drilling. To achieve the objective, 40/32" restrictor nozzle was utilized to drop bit pressure drop while maintain the operating pressure drop of Power V.
When RIH to 17" hole bottom, Client decided to drill the hole by flow rate 2355L/Min, RPM 140rpm, controlling ROP less than 20m/hrs to check the actual performance of all relative systems. Every thing were perfect after one stand kelly down, so Client decided increase Flow Rate to 2650L/Min, increase RPM to 160rpm, control ROP less than 25m/hr and drill ahead. Those drilling parameters were utilized throughout whole 12.25" section.
By drilling with above drilling parameters, Power V achieved high quality performance to maintain the hole vertically, the Max. Inc was 0.15deg, although the actual flow rate was 190L/Min less than plan and the actual total PAD pressure drop was about 580Psi.
High Stick-Slip was encountered, decreased it successfully by circulation and dropped ROP.
Generally, this was a successful application and practice of Power V on drilling vertical hole in Japan.

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HYDRAULIC REPORT

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JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

HYDRAULICS - SUMMARY

Company Name:	**Jamstec**
Field:	**Jamstec NT2-11B Deepwater**
Structure:	**Jamstec NT2-11B Deepwater**
Well:	**Jamstec NT2-11B Deepwater**
Location:	
Borehole:	**Jamstec NT2-11B Deepwater**
Operator:	
District:	
BHA Data:	**36/26 Jetting BHA**
Wellbore Data:	**WG**
Survey Data:	**NT2-11B Plan**
Date:	**24-May-2009 19:04**

P-T:	**Off**	
Mud Wt:	**1.030**	g/cm3
PV:	**13.5**	cP
YP:	**6.0**	Pa
K:	**291.6**	eq.cP
n:	**0.602**	
Fann 3:	**0.0**	Pa
Fann 6:	**0.0**	Pa
Fann 100:	**0.0**	Pa
Fann 200:	**0.0**	Pa
Fann 300:	**12.5**	Pa
Fann 600:	**18.9**	Pa
Model:	**Power Law**	

Pressure Drop Summary

Surf. Eqpt:	**1**	MPa
* Inside Drillstr.	**16**	MPa
Tools:	**3**	MPa
Motor/RSS:	**3**	MPa
Bit Nozzles:	**2**	MPa
* Annulus:	**0**	MPa
Chokeline:		MPa
Hyd Imbalance:	**0**	MPa
TOTAL:	**25**	MPa
(Actual):		

*Including TJ losses (10%) and Cuttings (Annulus)

Flowrate:	**4164**	L/min
** ECD at Bit:	**1.0377**	g/cm3
** ECD at Shoe:	**1.0526**	g/cm3
User Depth:	**0.0**	m
** ECD at Depth:	**1.0545**	g/cm3

Depth In:		m
Depth Out:		m
Bit TVD:	**2137.0**	m
Bit MD:	**2137.0**	m

** ECD's are corrected for Tool Joints

Bit Optimization

Bit Flowrate:	**4156**	L/min
Jet Velocity:	**60.7**	m/s
Bit HSI:	**0.37**	hp/in2
Jet Imp.Force:	**4.3**	kN
% Hyd Pow:	**8.49**	

BHA Description *Including TJ losses (10%)

Element	Length m	ID in	OD in	Cum Len m	* Press Drop MPa
26" Bit + nozz	**0.55**	**3.75**	**15.60**	**0.55**	**2.1**
A962M5640XP	**9.21**	**7.88**	**9.63**	**9.76**	**2.9**
Float Sub (Ported)	**0.88**	**3.00**	**8.19**	**10.63**	**0.0**
Spacer Sub (Float su	**0.79**	**2.81**	**8.00**	**11.43**	**0.0**
ARC-8	**6.36**	**2.81**	**8.25**	**17.79**	**0.1**
PowerPulse HF w/IW	**8.50**	**5.90**	**8.25**	**26.29**	**2.5**
25 7/8" Stabilizer	**1.32**	**2.06**	**9.50**	**27.61**	**0.1**
8" NonMag DC	**9.34**	**2.88**	**7.88**	**36.95**	**0.2**
26" Stabilizer	**1.57**	**2.81**	**8.00**	**38.52**	**0.0**
2 x 8 1/2" Collar	**18.62**	**2.50**	**8.50**	**57.14**	**0.9**
CADAT Down	**1.25**	**2.81**	**8.00**	**58.39**	**0.0**
CADAT Up	**0.74**	**2.81**	**8.00**	**59.13**	**0.0**
6x 8 1/2" Collar	**55.80**	**2.50**	**8.50**	**114.93**	**2.6**
Mechanical Jar	**9.00**	**3.00**	**7.75**	**123.93**	**0.2**
5 x 8 1/2" Collar	**46.50**	**2.50**	**8.50**	**170.43**	**2.2**
Crossover	**0.50**	**2.81**	**8.00**	**170.93**	**0.0**
5-1/2 " DPS, Premiur	**1966.07**	**4.13**	**5.50**	**2137.00**	**9.8**

Borehole description

Element	Length m	ID in	Cum Len m
Air	**8.63**		**8.63**
Sea Water	**628.19**		**636.82**
36" Casing	**52.70**	**33.00**	**689.52**
Open Hole	**8.00**	**36.00**	**697.52**
Open Hole	**1439.48**	**26.00**	**2137.00**

Warning: RKB to seafloor does not match WG

Bit Details

Type:	**Milled Tooth**	
Bit Diameter:	**26.000**	in
TFA:	**1140.1**	mm2
Nozzles (1/32in)	**4x24**	

Reamer

Type:		
Diameter:	0.000	in
TFA:		

Surface Equipment : 3

	Length m	ID in
Standpipe:	**14**	**4.00**
Rotary Hose:	**17**	**3.00**
Swivel:	**2**	**2.50**
Kelly:	**12**	**3.25**
Effective:	**146**	**3.83**

Motor Details

Motor:	**A962M5640XP**	
Bearing Flow:	**0.2**	%
Wear:	**0.2**	%
Rotor Nozzle:	**0**	in/32
Min Flowrate:	**2271.2**	L/min
Max Flowrate:	**4542.5**	L/min
Bearing Flowrate:	**8.3**	L/min
Nozzle Flowrate:	**0.0**	L/min
Motor Flowrate:	**4164.0**	L/min
RSS Flowrate:		L/min
RSS Actuator Flow:		%

Hydraulic Thrust:	79.0	1000 N
Bearing Capacity:	**216.6**	1000 N
On-Bottom RPM:	**121.8**	rpm
WOB:	**32.0**	1000 N
DTOR:	**1.7**	kN.m
Delta P:	**0.3**	MPa
Mechanical HP:	21.6	kW
Optimum HP:	**190.9**	kW
Efficiency:	**11.3**	%

Maximum WOB:	295.6	1000 N
Maximum Overpull:	137.6	1000 N
On-Bottom Pressure Drop:	**2.9**	MPa
Off-Bottom Pressure Drop:	**2.6**	MPa
Stall Nozzle Flowrate:	**0.0**	L/min
Stall Motor Flowrate:	**4164.0**	L/min
Stall WOB:	**662.4**	1000 N
Stall DTOR:	**35.0**	kN.m
Stall Pressure Drop:	**9.7**	MPa

Cuttings

Cuttings Diameter:	in
Cuttings Density:	g/cm3
ROP:	m/h
Cutt. Concentration:	% by Vol
Bit ECD Increase:	g/cm3

Hole Cleaning

RPM:		
Critical Rate:		L/min
Annular Flow:		L/min
Critical MD:		m
Hole Inclination:		deg

Quality Control:	Date:
Created By:	
Checked By:	

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JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

HYDRAULICS - SUMMARY

Company Name:	**Jamstec**
Field:	**Jamstec NT2-11B Deepwater**
Structure:	**Jamstec NT2-11B Deepwater**
Well:	**Jamstec NT2-11B Deepwater**
Location:	
Borehole:	**Jamstec NT2-11B Deepwater**
Operator:	
District:	
BHA Data:	**26 BHA**
Wellbore Data:	**WG**
Survey Data:	**NT2-11B Plan**
Date:	**24-May-2009 19:09**

P-T:	**Off**	
Mud Wt:	**1.030**	g/cm3
PV:	**13.5**	cP
YP:	**6.0**	Pa
K:	**291.6**	eq.cP
n:	**0.602**	
Fann 3:	**0.0**	Pa
Fann 6:	**0.0**	Pa
Fann 100:	**0.0**	Pa
Fann 200:	**0.0**	Pa
Fann 300:	**12.5**	Pa
Fann 600:	**18.9**	Pa
Model:	**Power Law**	

Pressure Drop Summary

Surf. Eqpt:	**1**	MPa
* Inside Drillstr.	**17**	MPa
Tools:	**2**	MPa
Motor/RSS:	**3**	MPa
Bit Nozzles:	**2**	MPa
* Annulus:	**0**	MPa
Chokeline:		MPa
Hyd Imbalance:	**0**	MPa
TOTAL: (Actual):	**24**	MPa

*Including TJ losses (10%) and Cuttings (Annulus)

Flowrate:	**3785**	L/min
** ECD at Bit:	**1.0360**	g/cm3
** ECD at Shoe:	**1.0526**	g/cm3
User Depth:	**0.0**	m
** ECD at Depth:	**1.0545**	g/cm3

Depth In:		m
Depth Out:		m
Bit TVD:	**2800.0**	m
Bit MD:	**2800.0**	m

** ECD's are corrected for Tool Joints

Bit Optimization

Bit Flowrate:	**3778**	L/min
Jet Velocity:	**55.2**	m/s
Bit HSI:	**0.28**	hp/in2
Jet Imp.Force:	**3.6**	kN
% Hyd Pow:	**7.27**	

BHA Description *Including TJ losses (10%)

Element	Length m	ID in	OD in	Cum Len m	* Press Drop MPa
26" Bit + nozz	**0.55**	**3.75**	**15.60**	**0.55**	**1.7**
A962M5640XP	**9.17**	**7.88**	**9.63**	**9.72**	**2.6**
Float Sub (Ported)	**0.88**	**3.00**	**8.19**	**10.59**	**0.0**
ARC-8	**7.43**	**2.81**	**8.25**	**18.02**	**0.1**
PowerPulse HF w/IW	**8.50**	**5.90**	**8.25**	**26.53**	**2.0**
25 7/8" Stabilizer	**1.26**	**2.06**	**9.50**	**27.78**	**0.1**
8" NonMag DC	**9.35**	**2.88**	**7.88**	**37.13**	**0.2**
26" Stabilizer	**1.57**	**2.81**	**8.00**	**38.69**	**0.0**
2 x 8 1/2" Collar	**18.62**	**2.50**	**8.50**	**57.31**	**0.7**
6x 8 1/2" Collar	**55.85**	**2.50**	**8.50**	**113.17**	**2.2**
Mechanical Jar	**10.73**	**3.00**	**7.75**	**123.89**	**0.2**
5 x 8 1/2" Collar	**46.55**	**2.50**	**8.50**	**170.44**	**1.8**
Crossover	**0.79**	**2.81**	**8.00**	**171.23**	**0.0**
5-1/2 " DPS, Premiur	**2628.77**	**4.13**	**5.50**	**2800.00**	**11.2**

Borehole description

Element	Length m	ID in	Cum Len m
Air	**8.63**		**8.63**
Sea Water	**628.19**		**636.82**
36" Casing	**52.70**	**33.00**	**689.52**
Open Hole	**8.00**	**36.00**	**697.52**
Open Hole	**2102.48**	**26.00**	**2800.00**

Warning: RKB to seafloor does not match WG

Bit Details

Type:	**Milled Tooth**	
Bit Diameter:	**26.000**	in
TFA:	**1140.1**	mm2
Nozzles (1/32in)	**4x24**	

Reamer

Type:		
Diameter:	0.000	in
TFA:		

Surface Equipment : 3

	Length m	ID in
Standpipe:	**14**	**4.00**
Rotary Hose:	**17**	**3.00**
Swivel:	**2**	**2.50**
Kelly:	**12**	**3.25**
Effective:	**146**	**3.83**

Motor Details

Motor:	**A962M5640XP**	
Bearing Flow:	**0.2**	%
Wear:	**0.2**	%
Rotor Nozzle:	**0**	in/32
Min Flowrate:	**2271.2**	L/min
Max Flowrate:	**4542.5**	L/min
Bearing Flowrate:	**7.6**	L/min
Nozzle Flowrate:	**0.0**	L/min
Motor Flowrate:	**3785.4**	L/min
RSS Flowrate:		L/min
RSS Actuator Flow:		%

Hydraulic Thrust:	70.3	1000 N
Bearing Capacity:	**216.6**	1000 N
On-Bottom RPM:	**110.7**	rpm
WOB:	**32.0**	1000 N
DTOR:	**1.7**	kN.m
Delta P:	**0.3**	MPa
Mechanical HP:	19.6	kW
Optimum HP:	**170.8**	kW
Efficiency:	**11.5**	%

Maximum WOB:	286.9	1000 N
Maximum Overpull:	146.4	1000 N
On-Bottom Pressure Drop:	**2.6**	MPa
Off-Bottom Pressure Drop:	**2.2**	MPa
Stall Nozzle Flowrate:	**0.0**	L/min
Stall Motor Flowrate:	**3785.4**	L/min
Stall WOB:	**645.5**	1000 N
Stall DTOR:	**34.1**	kN.m
Stall Pressure Drop:	**9.2**	MPa

Cuttings

Cuttings Diameter:		in
Cuttings Density:		g/cm3
ROP:		m/h
Cutt. Concentration:		% by Vol
Bit ECD Increase:		g/cm3

Hole Cleaning

RPM:		
Critical Rate:		L/min
Annular Flow:		L/min
Critical MD:		m
Hole Inclination:		deg

Quality Control:	Date:
Created By:	
Checked By:	

Schlumberger

JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

HYDRAULICS - SUMMARY

Company Name:	**Jamstec**
Field:	**Jamstec NT2-11B Deepwater**
Structure:	**Jamstec NT2-11B Deepwater**
Well:	**Jamstec NT2-11B Deepwater**
Location:	
Borehole:	**Jamstec NT2-11B Deepwater**
Operator:	
District:	
BHA Data:	**12.25 BHA**
Wellbore Data:	**WG**
Survey Data:	**NT2-11B Plan**
Date:	**03-Jul-2009 00:02**

P-T:	**Off**	
Mud Wt:	**1.060**	g/cm3
PV:	**36.0**	cP
YP:	**38.0**	lbf/100ft2
K:	**1004.7**	eq.cP
n:	**0.572**	
Fann 3:	**0.0**	lbf/100ft2
Fann 6:	**0.0**	lbf/100ft2
Fann 100:	**0.0**	lbf/100ft2
Fann 200:	**0.0**	lbf/100ft2
Fann 300:	**74.0**	lbf/100ft2
Fann 600:	**110.0**	lbf/100ft2
Model:	**Power Law**	

Pressure Drop Summary

Surf. Eqpt:	**1**	MPa
* Inside Drillstr.	**10**	MPa
Tools:	**1**	MPa
Motor/RSS:	**2**	MPa
Bit Nozzles:	**2**	MPa
* Annulus:	**0**	MPa
Chokeline:		MPa
Hyd Imbalance:	**0**	MPa
TOTAL:	**16**	MPa
(Actual):		

*Including TJ losses (10%)

Bit Optimization

Bit Flowrate:	**2602**	L/min
Jet Velocity:	**61.3**	m/s
Bit HSI:	**1.09**	hp/in2
Jet Imp.Force:	**2.8**	kN
% Hyd Pow:	**14.21**	

Flowrate:	**2650**	L/min
** ECD at Bit:	**1.0715**	g/cm3
** ECD at Shoe:	**1.0646**	g/cm3
User Depth:	**0.0**	m
** ECD at Depth:	**1.0600**	g/cm3

Depth In:		m
Depth Out:		m
Bit TVD:	**3592.0**	m
Bit MD:	**3592.0**	m

** ECD's are corrected for Tool Joints

BHA Description *Including TJ losses (10%)

Element	Length m	ID in	OD in	Cum Len m	* Press Drop MPa
12 1/4 " Bit + nozz	**0.28**	**2.82**	**8.00**	**0.28**	**2.2**
PD 900 AA 12 1/4"	**4.20**	**3.00**	**9.06**	**4.47**	**1.8**
8" Float Sub	**0.80**	**2.82**	**8.00**	**5.27**	**0.0**
12" Stabilizer	**1.99**	**2.82**	**8.00**	**7.25**	**0.0**
8" Collar Pony NM	**3.01**	**2.88**	**8.00**	**10.26**	**0.0**
Telescope 825 HF	**8.97**	**5.11**	**8.25**	**19.23**	**1.0**
8" Collar NM	**9.35**	**2.88**	**8.88**	**28.58**	**0.1**
8 1/2" Collar X5	**46.54**	**2.50**	**8.50**	**75.12**	**1.3**
7-3/4" Drilling Jar	**10.70**	**3.00**	**7.75**	**85.82**	**0.1**
8 1/2" Collarx5	**46.55**	**2.50**	**8.50**	**132.37**	**1.3**
Crossover	**0.79**	**2.81**	**8.00**	**133.16**	**0.0**
5-1/2 " DP	**3458.84**	**4.49**	**5.44**	**3592.00**	**6.5**

Borehole description

Element	Length m	ID in	Cum Len m
20" Riser	**2089.30**	**19.50**	**2089.30**
20" Casing	**700.70**	**18.75**	**2790.00**
Open Hole	**802.00**	**12.25**	**3592.00**

Bit Details

Type:	**PDC**	
Bit Diameter:	**12.250**	in
TFA:	**707.6**	mm2
Nozzles (1/32in)	**5x14, 2x15**	

Reamer

Type:		
Diameter:	0.000	in
TFA:		

Surface Equipment : 3

	Length m	ID in
Standpipe:	**14**	**4.00**
Rotary Hose:	**17**	**3.00**
Swivel:	**2**	**2.50**
Kelly:	**12**	**3.25**
Effective:	**146**	**3.83**

Motor Details

Motor:			Hydraulic Thrust:		1000 N	Maximum WOB:	1000 N
Bearing Flow:		%	Bearing Capacity:		1000 N	Maximum Overpull:	1000 N
Wear:		%					
Rotor Nozzle:		in/32	On-Bottom RPM:		rpm	On-Bottom Pressure Drop:	MPa
Min Flowrate:		L/min	WOB:		1000 N	Off-Bottom Pressure Drop:	MPa
Max Flowrate:		L/min	DTOR:		kN.m		
Bearing Flowrate:		L/min	Delta P:		MPa	Stall Nozzle Flowrate:	L/min
Nozzle Flowrate:		L/min				Stall Motor Flowrate:	L/min
Motor Flowrate:		L/min	Mechanical HP:		kW	Stall WOB:	1000 N
			Optimum HP:		kW	Stall DTOR:	kN.m
RSS Flowrate:	700.06	L/min	Efficiency:		%	Stall Pressure Drop:	MPa
RSS Actuator Flow:	1.81	%					

Cuttings

Cuttings Diameter:		in
Cuttings Density:		g/cm3
ROP:		m/h
Cutt. Concentration:		% by Vol
Bit ECD Increase:		g/cm3

Hole Cleaning

RPM:		
Critical Rate:		L/min
Annular Flow:		L/min
Critical MD:		m
Hole Inclination:		deg

C:\Documents and Settings\gthezan\Desktop\Japan Chikyu\DO\bha 12.25 hydrau.hyd

Quality Control:	Date:
Created By:	
Checked By:	

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JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

TORQUE AND DRAG REPORT

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JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

DRILLSTRING ANALYSIS SUMMARY REPORT

Client:	*Jamstec*
Field:	*Jamstec NT2-11B Deepwater*
Rig:	*Jamstec NT2-11B Deepwater*
Well:	*Jamstec NT2-11B Deepwater*
Bore Hole:	*Jamstec NT2-11B Deepwater*
Engineer:	*GThezan*
Date:	*May 24, 2009*

BHA & WELLBORE DATA

BHA Data:	*26 BHA*
Survey Data:	*NT2-11B Plan*
Wellbore Data:	*WG*

DRILLING PARAMETERS

Operation Mode:	*ROTATION ON BOTTOM*
Mud Weight (g/cm3):	1.03
DWOB (1000 N):	30.0
DTOR (kN.m):	3.0
Block Weight (1000 N):	715.0
Bit Measured Depth (m):	2790.0

BHA DESCRIPTION

Component Name	Steel Grade	Length m	Cum Length m	ID in	OD in	Max OD in	Bend Angle deg	Sub Comp To Bottom m	Sensor To Bit m	Lin Weight kg/m	Non-Mag
26" Bit		.55	.55	3 3/4	15.600	26				638.45	No
A962M5640XP		9.17	9.72	7.880	9 5/8	9 5/8				299.30	No
A962M5640XP - Stabilizer #1		.46				17 1/4		.72			
Float Sub (Ported)		.88	10.59	3	8 3/16	8 3/16				220.00	No
ARC-8		7.43	18.02	2.810	8 1/4	8 1/4			12.70	231.50	Yes
PowerPulse HF w/IWOB		8.50	26.53	5.900	8 1/4	8 1/4			21.63	185.95	Yes
25 7/8" Stabilizer		1.26	27.78	2 1/16	9 1/2	25 7/8				332.46	No
8" NonMag DC		9.35	37.13	2 7/8	7 7/8	7 7/8				213.57	No
26" Stabilizer		1.57	38.69	2 13/16	8	26				222.03	No
2 x 8 1/2" Collar		18.62	57.31	2 1/2	8 1/2	8 1/2				261.32	No
6x 8 1/2" Collar		55.85	113.17	2 1/2	8 1/2	8 1/2				242.00	No
Mechanical Jar		10.73	123.89	3	7 3/4	7 3/4				152.01	No
5 x 8 1/2" Collar		46.55	170.44	2 1/2	8 1/2	8 1/2				242.00	No
Crossover		.79	171.23	2 13/16	8	8				222.03	No
5-1/2 " DPS, Premium	S-135	2618.77	2790.00	4 1/8	5 1/2	7 1/2				51.30	No

WELLBORE DESCRIPTION

Section Name	Length m	Cum Length m	Diameter in
Air Gap/Water Depth	2089.30	2089.30	
36" Casing	52.70	2142.00	33 5/16
Open Hole	8.00	2150.00	36
Open Hole	640.00	2790.00	26

FRICTION FACTORS

	Length m	Cum Length m	Friction Factors Rotation	Translation
	2142.00	2142.00	.20	.00
	648.00	2790.00	.30	.00

SUMMARY OUTPUT

Hook Load (1000 N):	2176.32
Applied Torque at RKB (kN.m):	3.0
Neutral Point Location	
- From the Bit (m):	10.64
- From the Surface (m):	2779.36

Component Name	Buckling	Stretch m	Max Torque kN.m	% of Torsion Yield	Max Bending Stress MPa	Von Mises Stress MPa	% of Tensile Yield	Max Side Force 1000 N/10 m
26" Bit	NO	.00	3.00		.00	.26		.00
A962M5640XP	NO	.00	3.00		.00	3.73		.00
A962M5640XP - Stabilizer #1	NO	.00	3.00		.00	3.69		.00
Float Sub (Ported)	NO	.00	3.00		.00	3.00		.00
ARC-8	NO	.00	3.00		.00	2.93		.00
PowerPulse HF w/IWOB	NO	.00	3.00		.00	4.21		.00
25 7/8" Stabilizer	NO	.00	3.00		.00	2.02		.00
8" NonMag DC	NO	.00	3.00		.00	3.78		.00
26" Stabilizer	NO	.00	3.00		.00	3.67		.00
2 x 8 1/2" Collar	NO	.00	3.00		.00	3.69		.00
6x 8 1/2" Collar	NO	.00	3.00		.00	6.22		.00
Mechanical Jar	NO	.00	3.00		.00	8.99		.00
5 x 8 1/2" Collar	NO	.00	3.00		.00	9.73		.00
Crossover	NO	.00	3.00		.00	11.54		.00
5-1/2 " DPS, Premium	NO	1.65	3.00	1.53	.00	218.38	23.46	.00

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JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

DRILLSTRING ANALYSIS SUMMARY REPORT

Client:	*Jamstec*
Field:	*Jamstec NT2-11B Deepwater*
Rig:	*Jamstec NT2-11B Deepwater*
Well:	*Jamstec NT2-11B Deepwater*
Bore Hole:	*Jamstec NT2-11B Deepwater*
Engineer:	*GThezan*
Date:	*25-Jun-09*

BHA & WELLBORE DATA

BHA Data:	*12.25 BHA*
Survey Data:	*NT2-11B Plan*
Wellbore Data:	*WG*

DRILLING PARAMETERS

Operation Mode:	*ROTATION ON BOTTOM*
Mud Weight (g/cm3):	1.06
DWOB (1000 N):	10.0
DTOR (kN.m):	6.0
Block Weight (1000 N):	715.0
Bit Measured Depth (m):	3592.0

BHA DESCRIPTION

Component Name	Steel Grade	Length m	Cum Length m	ID in	OD in	Max OD in	Bend Angle deg	Sub Comp To Bottom m	Sensor To Bit m	Lin Weight kg/m	Non-Mag
12 1/4 " Bit		.28	.28	2.820	8	12 1/4				417.68	No
PD 900 AA 12 1/4"-RSS Bias Unit		.82	1.10	5.400	9 1/2	9 1/2				223.23	No
RSS Bias Unit's PAD		.02				11.800		.03			
PD 900 AA 12 1/4"-RSS Extension Sub		.29	1.39	5.100	9.190	9.190				232.23	No
PD 900 AA 12 1/4"-RSS Control Unit		3.09	4.48	5 1/4	9.060	9.060				245.55	No
8" Float Sub		.79	5.27	2.820	8	8				222.70	No
12" Stabilizer		1.99	7.25	2.820	8	12				228.58	No
8" Collar Pony NM		3.01	10.26	2 7/8	8	8				221.46	Yes
Telescope 825 HF		8.97	19.23	5.109	8 1/4	8 1/4			13.28	216.08	Yes
8" Collar NM		9.35	28.58	2 7/8	8 7/8	8 7/8				280.13	Yes
8 1/2" Collar X5		46.54	75.12	2 1/2	8 1/2	8 1/2				261.32	No
7-3/4" Drilling Jar		10.70	85.82	3	7 3/4	7 3/4				152.01	No
8 1/2" Collarx5		46.55	132.37	2 1/2	8 1/2	8 1/2				261.32	No
Crossover		.79	133.16	2.810	8	8				222.93	No
5-1/2 " 24.70 DPS, 10% Wear	S-135	3458.84	3592.00	4 1/8	5 1/2	7 1/2				42.96	No

WELLBORE DESCRIPTION

Section Name	Length m	Cum Length m	Diameter in
20" Riser	2089.30	2089.30	19 1/2
20" Casing	700.70	2790.00	18 3/4
Open Hole	900.00	3690.00	12 1/4

FRICTION FACTORS

	Length m	Cum Length m	Friction Factors Rotation	Translation
	2786.00	2786.00	.10	.00
	806.00	3592.00	.30	.00

SUMMARY OUTPUT

Hook Load (1000 N):	2246.53
Applied Torque at RKB (kN.m):	6.0
Neutral Point Location	
- From the Bit (m):	4.63
- From the Surface (m):	3587.37

Component Name	Buckling	Stretch m	Max Torque kN.m	% of Torsion Yield	Max Bending Stress MPa	Von Mises Stress MPa	% of Tensile Yield	Max Side Force 1000 N/10 m
12 1/4 " Bit	NO	.00	6.00		.00	.35		.00
PD 900 AA 12 1/4"-RSS Bias U	NO	.00	6.00		.00	4.22		.00
RSS Bias Unit's PAD	NO	.00	6.00		.00	4.22		.00
PD 900 AA 12 1/4"-RSS Exten	NO	.00	6.00		.00	4.60		.00
PD 900 AA 12 1/4"-RSS Contr	NO	.00	6.00		.00	4.90		.00
8" Float Sub	NO	.00	6.00		.00	6.41		.00
12" Stabilizer	NO	.00	6.00		.00	6.41		.00
8" Collar Pony NM	NO	.00	6.00		.00	6.42		.00
Telescope 825 HF	NO	.00	6.00		.00	6.83		.00
8" Collar NM	NO	.00	6.00		.00	4.82		.00
8 1/2" Collar X5	NO	.00	6.00		.00	6.69		.00
7-3/4" Drilling Jar	NO	.00	6.00		.00	9.40		.00
8 1/2" Collarx5	NO	.00	6.00		.00	9.58		.00
Crossover	NO	.00	6.00		.00	11.44		.00
5-1/2 " 24.70 DPS, 10% Wear	NO	2.21	6.00	3.05	.00	230.14	24.73	.00

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JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

BIT RUN SUMMARY

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JAMSTEC
JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY

Bit Run Summary

Client : JAMSTEC

Well Name : NT2-11B **Field :** Nankai Kumano

Bit #	Date IN OUT	Bit Data						Bit Dull Grading (In/Out)								Footage & ROP					Drilling Parameters			
		Size(in)	IADC	Type	S/N	Maker	TFA (mm^2)	IR	OR	DC	L	B	G	OC	RP	Depth In out (m)	Footage (m)	Bit Time (hrs)	Pump Time (hrs)	Drlg ROP (m/h)	WOB 1000kN	Bit RPM (rpm)	Flow Rate (L/min)	Max SPP (MPa)
1	19-May-09	26	114C	SS-MZC	65937-T	TSK	1140	New								2082	54.5	7.5	7.7	7.27	20	110	4160	25
	19-May-09							1	1	WT	A	E	I	NO	TD	2136.5								
2	23-May-09	26	114C	SS-MZC	65937-T	TSK	1140	1	1	WT	A	E	I	NO	TD	2136.5	657.5	11.85	27.05	55.50	30	180	3785	23.4
	26-May-09							1	1	WT	A	E	I	NO	TD	2794								
3	27-Jun-09	12 1/4	S422	RSX519S-D2	218338	Hycalog	707	New								2798	794	38.73	67.31	20.20	3	160	2650	14.8
	3-Jul-09							1	0	WT	N	X	I	NO	TD	3592								
4																								
5																								
6																								
7																								

4. TOOL RUN SUMMARY

Schlumberger

NT2-11B

Tool Run Summary

Company: Jamstec
Well: NT2-11B
Rig: Chikyu

Run	Service Provided		Depth Start	Depth End	Meterage	Date in	Date out	Drilling Hours	Pumping Hours	Notes
1	**PowerPak 963**	PowerPak 962	2082.00	2142.70	60.70	18-May-09	23-May-08	7.50	7.70	Good MWD Run
	Telescope	GR								
		Drilling Parameter Acquisition Service								
		Continuous D&I								
		CRPM & Stick and slip								
		High data rate (QPSK - 6BPS)								
		TRPM For Washout Detection								
		MWD Logging								
		Real-Time DH Shock Monitoring								
	ARC	APWD								
	Surface Drilling Parameters Acquisition		2082.00	2142.70	60.70	18-May-09	23-May-08			

Cell Manager: Yu Ito

Verified by Client Representative:

Schlumberger

NT2-11B

Tool Run Summary

Company: Jamstec
Well: NT2-11B
Rig: Chikyu

Run	Service Provided		Depth Start	Depth End	Meterage	Date in	Date out	Drilling Hours	Pumping Hours	Notes
2	**PowerPak 962**	PowerPak 962	2142.70	2794.00	651.30	23-May-09	25-May-08	11.85	27.05	Good MWD Run
	Telescope	GR								
		Drilling Parameter Acquisition Service								
		Continuous D&I								
		CRPM & Stick and slip								
		High data rate (QPSK - 6BPS)								
		TRPM For Washout Detection								
		MWD Logging								
		Real-Time DH Shock Monitoring								
	CDR	APWD								
	Surface Drilling Parameters Acquisition		2142.70	2794.00	651.30	23-May-09	25-May-08			

Cell Manager: Yu Ito

Verified by Client Representative:

Schlumberger

NT2-11B

Tool Run Summary

Company: Jamstec
Well: NT2-11B
Rig: Chikyu

Run	Service Provided		Depth Start	Depth End	Meterage	Date in	Date out	Drilling Hours	Pumping Hours	Notes
3	**PowerV**	PowerV	2798.00	3592.00	794.00	27-Jun-08	3-Jul-08	38.73	67.31	Good MWD Run
	Telescope	GR								
		Drilling Parameter Acquisition Service								
		Continuous D&I and IWOB								
		CRPM & Stick and Slip								
		High data rate (QPSK - 6BPS)								
		TRPM For Washout Detection								
		MWD Logging								
		Real-Time DH Shock Monitoring								
	Surface Drilling Parameters Acquisition		2798.00	3592.00	794.00	27-Jun-08	3-Jul-08			

Cell Manager: Yu Ito

Verified by Client Representative:

Schlumberger

NT2-11B

Tool Run Summary

Company: Jamstec
Well: NT2-11B
Rig: Chikyu

Run	Service Provided		Depth Start	Depth End	Meterage	Date in	Date out	Drilling Hours	Pumping Hours	Notes
4	**Telescope**	Drilling Parameter Acquisition Service Continuous D&I and IWOB CRPM High data rate (QPSK - 6BPS) TRPM For Washout Detection MWD Logging Real-Time DH Shock Monitoring	2786.00	3650.00	864.00	15-Jul-09	20-Jul-09	50.10	79.23	Good MWD Run
	Surface Drilling Parameters Acquisition		2786.00	3650.00	864.00	15-Jul-09	20-Jul-09			

Cell Manager: Yu Ito

Verified by Client Representative:

5. MWD/LWD BIT RUN SUMMARY

Schlumberger

BHA Report

24-May-2009
3:13PM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 1 **BHA Type:** Straight Motor

								Fishing Neck		Stab	Bottom Connection		Top Connection		
Item	Description	Vendor	Tool Name	Serial Number	Length	OD, in	ID, in	OD, in	Len, m	OD, in	Size	Type	Size	Type	Cumul Len
1	BIT	Other	Milltooth	65937-T	0.55 m	26.00	3.75						7 5/8"	REG PIN	0.55 m
2	MOTORS	D&M	PowerPak	01093	9.21 m	9.63	7.88	9.56	0.43	12.13	7 5/8"	REG BOX	6 5/8"	REG BOX	9.76 m
3	FLOAT SUB	D&M	Ported Float Sub	SBD1826	0.88 m	8.19	3.00				6 5/8"	REG PIN	6 5/8"	REG BOX	10.64 m
4	FLOAT SUB	D&M	FS as Spacer Sub	SBD2626	0.79 m	8.00	2.81				6 5/8"	REG PIN	6 5/8"	REG BOX	11.43 m
5	LWD	D&M	arcVISION	1950-SRPC	6.36 m	8.25	2.81				6 5/8"	REG PIN	6 5/8"	FH BOX	17.79 m
6	MWD	D&M	PowerPulse	YH56	8.50 m	8.25	5.90				6 5/8"	FH PIN	6 5/8"	REG BOX	26.29 m
7	STABILIZER	D&M	25-7/8" Stabilizer	FEST2600-5	1.32 m	9.50	2.06	9.50	0.36	25.88	6 5/8"	REG PIN	6 5/8"	REG BOX	27.61 m
8	MONEL	D&M	NMDC	SBD2833	9.34 m	7.88	2.88				6 5/8"	REG PIN	6 5/8"	REG BOX	36.95 m
9	STABILIZER	D&M	Full Gauge Stab	FEST2600-3	1.57 m	8.00	2.81	8.00	0.49	26.00	6 5/8"	REG PIN	6 5/8"	REG BOX	38.52 m
10	DRILL COLLAR	CDEX	2 x 8-1/2" DC	x	18.62 m	8.50	2.50				6 5/8"	REG PIN	6 5/8"	REG BOX	57.14 m
11	SUB	Vetco Gray	Lower CADA tool	x	1.25 m	8.00	2.81				6 5/8"	REG PIN	6 5/8"	REG BOX	58.39 m
12	SUB	Vetco Gray	Upper CADA tool	x	0.74 m	8.00	2.81				6 5/8"	REG PIN	6 5/8"	REG BOX	59.13 m
13	DRILL COLLAR	CDEX	6 x 8-1/2" DC	x	55.80 m	8.50	2.50				5 5/8"	REG PIN	6 5/8"	REG BOX	114.93 m
14	JAR	Weatherford	Mechanical Jar	x	9.00 m	7.75	2.75				6 5/8"	REG PIN	6 5/8"	REG BOX	123.93 m
15	DRILL COLLAR	CDEX	5 x 8-1/2" DC	x	46.50 m	8.50	2.50				6 5/8"	REG PIN	6 5/8"	REG BOX	170.43 m
16	CROSSOVER	CDEX	6-5/8 Reg x 5-1/2 FH	x	0.50 m	8.00	2.81				6 5/8"	REG PIN	5 1/2"	FH BOX	170.93 m

Predicted BHA Tendency: Hold Vertical

Hookload Out:	kg	Wt Below Jars:	27,552 kg
Pickup Out:	kg	Wt Above Jars:	13,707 kg
Slack Weight:	kg	Total Air Wt:	41,259 kg

	Mid Pt	Blade			Gauge		
Stab Description	to Bit	Type	Len	Width	Len	In	Out
25-7/8" Stabilizer		IBS				25.88	
Full Gauge Stab		IBS				26.00	

Bit to Read Out Port		
MOTORS-PowerPak		
LWD-arcVISION	15.50	m
MWD-PowerPulse	19.60	m

Bit to Measurement Port		
arcVISION-APWD	13.64	m
PowerPulse-D&I	21.91	m
PowerPulse-Shock & Vibratio	21.91	m

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Equipment Run Summary Report

24-May-2009
3:13PM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 1

Run Information

	Date In		Date Out
	18-May-2009 7:15AM		23-May-2009 7:00PM
Depth (MD):	2082.0 m	to	2142.7 m
Depth (TVD):	2082.0 m	to	2142.7 m
Inclination:	0.00 deg	to	0.56 deg
Azimuth:	0.00 deg	to	54.31 deg

Drilling Distance:	60.70 m	Drilling Hours:	7.50 hrs
Rotary Drilling Distance:	60.70 m	Rotary Drilling Hrs:	7.50 hrs
Sliding Distance:	0.00 m	Sliding Hours:	0.00 hrs
Reaming Distance:	0.00 m	Reaming Hours:	0.00 hrs
		Hrs Below Rotary:	131.75 hrs
		Total Pumping Hrs:	7.70 hrs

Hole Size:	26.00 in	Min DLS:	0.00 deg/30 m
Last Casing Size:	0.000 in	Max DLS:	0.00 deg/30 m
Last Casing Depth:	0.0 m (MD)	Max DLS Depth:	0.0 m
Tool Face Arc:	.0 cm	Surface Screen:	No
Total Face Angle:	0.00 deg	DFS Used:	No
North Ref Used:	Grid North	Inline Filter:	Yes
Magnetic Dec:	-6.590 deg		
Grid Correction:	-0.847 deg		
Total Correction:	-7.434 deg		
Est. Mag. Int:	0.08 deg		

Rig Information

Rig Type:	Drill Ship	Pump Type:	Triplex
Water Depth:	2,061.00 m	Pulse Damp Press:	0 psi
Air Gap:	28.30 m	Number of Pumps:	3
RKB Height:	0.00 m	Pump Line ID:	6.00 in
Ground Elevation:	2,061.00 m	Pump Output:	4.99 galUS/stroke
		Pump Stroke Len:	18.89 in

Run Objective

Jet 36" Conductor while maintaining verticality. After landing and soaking conductor at +/- 2144.3m BRT, release CADA tool and drill ahead to +/- 2789.3m BRT. There is likely to be high drillstring magnetic interference on the surveys during this run due to the proximity of steel components to the D&I package. This will be calculated out using DMAG correction at the end of the run.

D&M Crew List:

Cell Manager: Mario Jakulj
Crew: Yu Ito, LWD
Mario Jakulj, Cell Manager
Chee Sing Tan, DD
Gilles Thezan, DD
Cheng Zhang, LWD

DH Motor Information

Manufacturer:	D&M	Bit to Bend Dist:	m	RSS Manufacturer:	
Motor Type:	PowerPak	Bearing Play In:	0.00 in	RSS Type:	
Motor Size:	9.63	Bearing Play Out:	in	RSS SN:	
Serial No.:	01093	Bent Sub Angle:	0.0000 deg	RSS Size:	
Lobe Config:	5:6	Bent HSG Angle:	0.0000 deg	Pulse Ht Threshold:	
Stage Length:	m			Min Pulse Width:	
Rubber:	RM100D			Max Pulse Width:	
Sleeve Position:				Conn Phase Angle:	deg
Sleeve Size:	12.13 in			Rise Time Const:	
Bearing Type:	Mud Lubricated			Fall Time Const:	
				Digit Time:	

MWD Configuration

Mod Type:	QPSK	Int Tool Face Offset:	0.00 deg	Bit Rate:	3 bps	Slimpulse Pulser Config:	
Mod Gap:	0.12000 in	Turbine Config:	600-1200 galUS/min	Frequency:	12 Hz	Pred Sig Strength @ TD:	5.0 psi
SPT Type:	HB						

Drilling Parameters

Schlumberger

Equipment Run Summary Report

24-May-2009
3:13PM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 1

	Min	Max	Avg
BH Temperature:	50.00 degC	52.80 degC	51.40 degC
Surface RPM:	0.00 rpm	0.00 rpm	0.00 rpm
ROP:	7.31 m/hr	7.31 m/hr	8.09 m/hr
Surface Torque:			
Flow Rate:	1,000.00 galUS/min	1,100.00 galUS/min	1,050.00 galUS/min
WOB Sliding:	10,000.00 kg	20,000.00 kg	15,000.00 kg

Total DH Shocks (k): 0 k
Max Shock Level: 0
Max Shock Duration: 0 sec
Checkshot Type:
Checkshot Depth: m
Checkshot Incl: deg
Checkshot Azim: deg
H2S In Well: No

Average Pump Pressure: psi

Turbine RPM @ Min Flow Rate: 3,281 rpm Min Flow Rate: 1,000.00galUS/min SPP Off Bottom: psi
Turbine RPM @ Max Flow Rate: 3,671 rpm Max Flow Rate: 1,100.00galUS/min SPP On Bottom: 3,089.00 psi

Mud Information

Mud Type: Sea Water Mud Clean: Yes pH: 11.90
Mud Company: LCM Type: Chlorides: ppm
Mud Brand: LCM Size: Sand Content: %
Funnel Viscosity: 168.00 s/qt LCM Concentration: lbs/bbl Solids: %
Plastic Viscosity: 22.00 cp Weighting Material: Barite Percent Oil: %
Yield Point: 85.00 lbm/100ft2 Mud Weight: 8.70 lbm/galUS
Mud Resistivity: ohm-m

IADC Bit Grading

Manufacturer: Other Total Revs: IADC Code:
Model: SS-MZC Stick/Slip: Jets (/ 32 in): 4X24
Type: Milltooth Reason Pulled: Twist Off Bit TFA: 1.77 in2

Inner Row	Outer Row	Dull Char	Location	Bearings/Seals	Gauge	Other Chars
0.00	0.00	NO	A	E	I	NO

End of Run - Summary

Sync Hours: 7.60 hrs Downhole Noise: No Run Failed: No
Jamming: No 0.00 hrs Surface System Failure: No D&M Trip: No
Surface Vibration: No Surface Noise: No Low Oil Flag: No 0.00 hrs
Trans Fail: No H2S in Well: No Filter Screen/Plug Shear: No

Client Inconvenience: **No** Lost Time: hrs
Reason for POOH: Twist Off

D&M Run Obj Met? [DD and MWD/LWD]: **No**

Brief Run Summary:

36" conductor hole was jetted until about 2176m BRT.

After the flow lines were fixed and BHA assembly came down bottom to set the conductor, hole depth suddenly jumped up to 2142.69m without being drilled nor with pumps on.

It was found out that the connection between drill collar and CART(Cam Activation Rotational Tool) tool was sheared and bent as a result of miscalculation of slack weight and applying too much weight.

In order to salvage the BHA, it was decided to twist off the already sheared and bent joint, and to fish it up with fishing tool.

First fishing with a spear head was unsuccessful, since the head sheared when it was attempted to fish out the tool.

Second attempt with an overshot however, was successful and BHA assembly with Telescope and ARC8 was salvaged from underwater.

If not, why?:

In this run, we were supposed to drill a 26" section after 36" was drilled with jetting for conductor.
However, since drill collar joint was sheared, BHA had to be fished to be recovered.

Schlumberger

Equipment Run Summary Report

24-May-2009
3:13PM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 1

Equipment on the Run

	Pump Hours			
Equipment	Start	Cumulative	Software Version	Tool Size
A962M-01093	0.00 hrs	7.70 hrs		9.63 in
ARC8D-BB-1950-SRPC	0.00 hrs	7.70 hrs	V9.3B	8.25 in
H524743-54743	0.00 hrs	7.70 hrs		8.25 in
H524743-54753	0.00 hrs	7.70 hrs		8.25 in
MDCIX-MA-YH56	0.00 hrs	7.70 hrs	V9.2C02	8.25 in
NMDC-8.00X31FT-SBD2833	0.00 hrs	7.70 hrs		8.00 in
SFS-SBD1826	0.00 hrs	7.70 hrs		8.25 in
SFS-SBD2626	0.00 hrs	7.70 hrs		8.25 in

Services on the Run

			Real Time			Recorded Mode			
Equipment	Service	Tool Name	Hours	Failed	Depth	Hours	Failed	Depth	CAF
MOTORS	PowerPak	PowerPak	7.70 hrs		60.7 m	hrs			
LWD	APWD	arcVision	7.70 hrs		60.7 m	131.75 hrs		60.7 m	
MWD	D&I	PowerPulse	7.70 hrs		60.7 m	hrs			
MWD	Shock & Vibration	PowerPulse	7.70 hrs		60.7 m	hrs			
MWD	Cont D&I	PowerPulse	7.70 hrs		60.7 m	hrs			

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Daily Drilling Activity Report

24-May-2009
3:13PM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run No: 1

From	To	Elapsed	Depth in m From	Depth in m To	IADC Activity	Description
15-May-2009						
00:00	13:00	13.00	0.0	0.0	Other	Loading battery on ARC
13:00	14:30	1.50	0.0	0.0	Other	Program MWD on the pipe deck
14:30	16:00	1.50	0.0	0.0	Other	Program ARC on the pipe deck
16:00	18:00	2.00	0.0	0.0	Other	Put the magnet on the ARC and waiting for M/U BHA
18:00	21:00	3.00	0.0	0.0	PU / LD BHA / Tripping	Start to M/U BHA
21:00	00:00	3.00	0.0	0.0	PU / LD BHA / Tripping	P/U BHA with bit, motor, ARC, MWD
16-May-2009						
00:00	00:30	0.50	0.0	0.0	Other	SHT with mwd stat 4, ARC stat 0, spm 125, flow rate 625, SPPA 333psi, TRPM 1757, SPT2 2.5psi
00:30	02:00	1.50	0.0	0.0	Other	Rack back BHA on the drill floor
02:00	15:00	13.00	0.0	0.0	Other	Install SPT1 and function tested
15:00	16:00	1.00	0.0	0.0	Other	Calibrate Pump Pressure.
16:00	17:00	1.00	0.0	0.0	Other	Test ICPC inside company man office.
17:00	00:00	7.00	0.0	0.0	Other	Standby, wait for P/U BHA
17-May-2009						
00:00	22:00	22.00	0.0	0.0	Other	Standby, waiting for P/U BHA
22:00	00:00	2.00	0.0	0.0	PU / LD BHA / Tripping	P/U 36" casing.
18-May-2009						
00:00	07:15	7.25	0.0	0.0	PU / LD BHA / Tripping	P/U 36" Casing.
07:15	07:30	0.25	0.0	0.0	PU / LD BHA / Tripping	Reinits ARC and install ROP
07:30	20:00	12.50	0.0	2040.0	PU / LD BHA / Tripping	Trip in to 2040m from drill floor
20:00	00:00	4.00	2040.0	2040.0	Other	ROV is not working, pull out ROV and try to fix
19-May-2009						
00:00	08:20	8.33	2040.0	2040.0	Other	Fix ROV on deck
08:20	09:30	1.17	2040.0	2082.0	PU / LD BHA / Tripping	Trip to sea bed at 2082m.
09:30	17:48	8.30	2082.0	2142.7	Drilling	Jetting with 26" BHA+36" Casing with flow rate 1000gpm. Totally jetting for 54.5m. Finished jetting.
17:48	22:30	4.70	2142.7	2142.7	Repair rig	Pumps off. Repairing flow lines
22:30	00:00	1.50	2142.7	2142.7	Other	Too much WOB was apllied and as a result, the drill pipe assembly sheared and bended. Fishing operation has to be done to salvage our tools.
20-May-2009						
00:00	20:00	20.00	2142.7	2142.7	Other	Fishing operation is being prepared.
20:00	22:00	2.00	2142.7	2142.7	Other	Breaking the sheared drill collar connection.
22:00	00:00	2.00	2142.7	2142.7	Other	Pulling the detached drill pipe and collar assembly out of hole.
21-May-2009						
00:00	07:30	7.50	2142.7	2142.7	Other	Continueing on POOH
07:00	07:30	0.50	2142.7	2142.7	PU / LD BHA / Tripping	P/U fishing BHA
07:30	00:00	16.50	2142.7	2142.7	PU / LD BHA / Tripping	Trip in fishing BHA with overshot
22-May-2009						
00:00	00:30	0.50	2142.7	2142.7	PU / LD BHA / Tripping	Continue tripping in fishing BHA with overshot
00:30	06:00	5.50	2142.7	2142.7	Fishing	Engage on BHA with fishing assembly

Schlumberger

Daily Drilling Activity Report

24-May-2009
3:13PM

Job Number:	09JAP0002	**Company:**	JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY	**Rig Name:**	Chikyu
Company Rep:	T. Abe & I. Sawada	**Location:**	MEA-CHG-JAP	**Well Name:**	NT2-11B
Run No:	1				

			Depth in m			
From	To	Elapsed	From	To	IADC Activity	Description
04:30	09:00	4.50	2142.7	2142.7	PU / LD BHA / Tripping	POOH the fishing assembly
09:00	16:30	7.50	2142.7	2142.7	PU / LD BHA / Tripping	Continue POOH until surface, then make up fishing assembly with overshot.
16:30	22:15	5.75	2142.7	2142.7	PU / LD BHA / Tripping	RIH with overshot fishing assembly.
22:15	00:00	1.75	2142.7	2142.7	Fishing	Fishing overshot reaches BHA assembly, attempt to fish it out.
23-May-2009						
00:00	07:00	7.00	2142.7	2142.7	Fishing	Continue fishing BHA assembly.
07:00	12:00	5.00	2142.7	20.0	PU / LD BHA / Tripping	Fishing successfull, unlatch casing and POOH.
12:00	18:00	6.00	20.0	0.0	PU / LD BHA / Tripping	Tools arrive at surface, start to L/D fishing tools.
18:00	19:20	1.33	0.0	0.0	PU / LD BHA / Tripping	Start to L/D BHA, post job shallow hole test.
19:20	20:30	1.17	0.0	0.0	PU / LD BHA / Tripping	Bit ART, finish laying down tools.

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Time Description Report

24-May-2009
3:13PM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 1

Date/Time	Depth		Description
15-May-2009 2:30PM	0.0	m	Program MWD on the deck
15-May-2009 4:00PM	0.0	m	Finish loading battery for ARC, remove downhole extender and install bull nose..
15-May-2009 9:00PM	0.0	m	Start to M/U BHA.
16-May-2009 12:30AM	0.0	m	SHT with mwd stat 4, ARC stat 0, spm 125, flow rate 625, SPPA 333psi, TRPM 1757, SPT2 2.5psi
17-May-2009 10:00PM	0.0	m	P/U 36" Casing.
18-May-2009 7:15AM	0.0	m	Reinits ARC and install ROP
18-May-2009 8:00PM	2040.0	m	Trip in to 2040m from drill floor
19-May-2009 8:20AM	2082.0	m	Trip to sea bed at 2082m.
19-May-2009 9:30AM	2082.0	m	Jetting with 26" BHA+36" Casing with flow rate 1000gpm. Totally jetting for 54.5m. Finished jetting.
19-May-2009 5:48PM	2142.7	m	Pumps off. Repairing flow lines
19-May-2009 10:30PM	2142.7	m	Too much WOB was apllied and as a result, the drill pipe assembly sheared and bended. Fishing operation has to be done to salvage our tools.
20-May-2009 12:00AM	2142.7	m	Fishing operation is being prepared.
20-May-2009 8:00PM	2142.7	m	Breaking the sheared drill collar connection.
20-May-2009 10:00PM	2142.7	m	Pulling the detached drill pipe and collar assembly out of hole.
21-May-2009 7:00AM	2142.7	m	P/U fishing BHA
22-May-2009 12:30AM	2142.7	m	Engage on BHA with fishing assembly
22-May-2009 4:30AM	2142.7	m	POOH the fishing assembly
22-May-2009 4:30PM	2142.7	m	RIH with overshot fishing assembly.
22-May-2009 10:15PM	2142.7	m	Fishing overshot reaches BHA assembly, attempt to fish it out.
23-May-2009 7:00AM	2142.7	m	Fishing successfull, unlatch casing and POOH.
23-May-2009 12:00PM	0.0	m	Tools arrive at surface, start to L/D fishing tools.

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Drilling Parameters Report

24-May-2009
3:13:34PM

Job Number: 09JAP0002
Company: JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY
Rig Name: Chikyu
Company Rep: T. Abe & I. Sawada
Location: MEA-CHG-JAP
Well Name: NT2-11B
Run Number: 1

	19-May-2009 1:00 PM	19-May-2009 11:00 AM
Field Engineer	Cheng Zhang	Cheng Zhang
Depth	2,111.00 m	2,098.00 m
Avg ROP	2.53 m/hr	2.53 m/hr
On Bottom ROP	8.09 m/hr	8.09 m/hr
Flow Rate	1,100.00 galUS/min	1,000.00 galUS/min
Turbine RPM	3,671 rpm	3,281 rpm
Surface RPM		
WOB Rotating		
WOB Sliding	20,000.00 kg	10,000.00 kg
DH WOB		
Surface Torque		
DH Torque		
Hookload	238,000 kg	248,000 kg
PickUp Weight		
Slack Weight		
Friction		
SPP On Bottom	3,510.00 psi	3,089.00 psi
SPP Off Bottom		
Diff Pressure		
BH Temperature	52.80 degC	50.00 degC
Total Shocks (k)		
Max Shock Level		
Max Shock Duration		
Torsional Vib		
Lateral Vib		
Axial Vib		
CRPM		
Stick/Slip		
Formation	Other	Other
Signal Strength	13.40 psi	12.60 psi
Percent Signal Conf	93 %	97 %

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BHA Report

27-May-2009
5:44AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 2 **BHA Type:** Straight Motor

								Fishing Neck		Stab	Bottom Connection		Top Connection		
Item	Description	Vendor	Tool Name	Serial Number	Length	OD, in	ID, in	OD, in	Len, m	OD, in	Size	Type	Size	Type	Cumul Len
1	BIT	TSK	Milltooth	65937--T	0.55 m	26.00							6 5/8"	REG PIN	0.55 m
2	MOTORS	D&M	PowerPak	01093	9.17 m	9.63	7.88	9.56	0.43	12.13	7 5/8"	REG BOX	6 5/8"	REG BOX	9.72 m
3	FLOAT SUB	D&M	Ported Float Sub	SBD1826	0.88 m	8.19	3.00				6 5/8"	REG PIN	6 5/8"	REG BOX	10.60 m
4	LWD	D&M	CDR	8002	7.43 m	8.25	2.81				6 5/8"	REG PIN	6 5/8"	FH BOX	18.03 m
5	MWD	D&M	PowerPulse	YH56	8.50 m	8.25	5.90				6 5/8"	FH PIN	6 5/8"	REG BOX	26.53 m
6	STABILIZER	D&M	25-7/8" Stabilizer	FEST2600-5	1.26 m	9.50	2.06	9.50	0.36	25.88	6 5/8"	REG PIN	6 5/8"	REG BOX	27.79 m
7	MONEL	D&M	NMDC	SBD2833	9.35 m	7.88	2.88				6 5/8"	REG PIN	6 5/8"	REG BOX	37.14 m
8	STABILIZER	D&M	Full Gauge Stab	FEST2600-3	1.57 m	8.00	2.81	8.00	0.49	26.00	6 5/8"	REG PIN	6 5/8"	REG BOX	38.71 m
9	DRILL COLLAR	CDEX	2 x 8-1/2" DC	x	18.62 m	8.50	2.50				6 5/8"	REG PIN	6 5/8"	REG BOX	57.33 m
10	DRILL COLLAR	CDEX	6 x 8-1/2" DC	x	55.85 m	8.50	2.50				5 5/8"	REG PIN	6 5/8"	REG BOX	113.18 m
11	JAR	Weatherford	Mechanical Jar	x	10.73 m	7.75	2.75				6 5/8"	REG PIN	6 5/8"	REG BOX	123.91 m
12	DRILL COLLAR	CDEX	5 x 8-1/2" DC	x	46.55 m	8.50	2.50				6 5/8"	REG PIN	6 5/8"	REG BOX	170.46 m
13	CROSSOVER	CDEX	6-5/8 Reg x 5-1/2 FH	x	0.79 m	8.00	2.81				6 5/8"	REG PIN	5 1/2"	FH BOX	171.25 m

Predicted BHA Tendency: Hold Vertical

Hookload Out:	kg	Wt Below Jars:	27,552 kg
Pickup Out:	kg	Wt Above Jars:	13,707 kg
Slack Weight:	kg	Total Air Wt:	41,259 kg

	Mid Pt	Blade			Gauge		
Stab Description	to Bit	Type	Len	Width	Len	In	Out
25-7/8" Stabilizer		IBS				25.88	
Full Gauge Stab		IBS				26.00	

Bit to Read Out Port		
MOTORS-PowerPak		
LWD-CDR	13.90	m
MWD-PowerPulse	19.80	m

Bit to Measurement Port		
PowerPulse-D&I	22.15	m
PowerPulse-Shock & Vibratio	22.15	m
CDR-Gamma Ray	16.27	m
CDR-APWD	13.45	m

Schlumberger

Equipment Run Summary Report

27-May-2009
5:44AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 2

Run Information

	Date In		Date Out
	23-May-2009 8:30PM		26-May-2009 10:00AM
Depth (MD):	2142.7 m	to	2794.0 m
Depth (TVD):	2142.7 m	to	2794.0 m
Inclination:	0.56 deg	to	0.37 deg
Azimuth:	54.31 deg	to	150.08 deg

Drilling Distance:	651.30 m	Drilling Hours:	11.85 hrs
Rotary Drilling Distance:	651.30 m	Rotary Drilling Hrs:	26.00 hrs
Sliding Distance:	0.00 m	Sliding Hours:	0.00 hrs
Reaming Distance:	0.00 m	Reaming Hours:	3.67 hrs
		Hrs Below Rotary:	61.50 hrs
		Total Pumping Hrs:	27.05 hrs

Hole Size:	26.00 in	Min DLS:	0.06 deg/30 m
Last Casing Size:	36.000 in	Max DLS:	0.45 deg/30 m
Last Casing Depth:	2136.5 m (MD)	Max DLS Depth:	2,749.8 m
Tool Face Arc:		Surface Screen:	No
Total Face Angle:	deg	DFS Used:	No

North Ref Used:	Grid North	Inline Filter:	No
Magnetic Dec:	-6.590 deg		
Grid Correction:	0.850 deg		
Total Correction:	-7.440 deg		
Est. Mag. Int:	0.37 deg		

Rig Information

Rig Type:	Drill Ship	Pump Type:	Triplex
Water Depth:	2,061.00 m	Pulse Damp Press:	0 psi
Air Gap:	28.30 m	Number of Pumps:	3
RKB Height:	0.00 m	Pump Line ID:	6.00 in
Ground Elevation:	2,061.00 m	Pump Output:	4.99 galUS/stroke
		Pump Stroke Len:	18.89 in

Run Objective

Drill 26" section with Telescope and CDR8 until +/- 2789m MD.

D&M Crew List:

Cell Manager: Cheng Zhang
Crew: Yu Ito, LWD
Chee Sing Tan, DD
Gilles Thezan, DD
Cheng Zhang, Cell Manager

DH Motor Information

Manufacturer:	D&M	Bit to Bend Dist:	m	RSS Manufacturer:	
Motor Type:	PowerPak	Bearing Play In:	0.00 in	RSS Type:	
Motor Size:	9.63	Bearing Play Out:	in	RSS SN:	
Serial No.:	01093	Bent Sub Angle:	0.0000 deg	RSS Size:	
Lobe Config:	5:6	Bent HSG Angle:	0.0000 deg	Pulse Ht Threshold:	
Stage Length:	m			Min Pulse Width:	
Rubber:	RM100D			Max Pulse Width:	
Sleeve Position:				Conn Phase Angle:	deg
Sleeve Size:	12.13 in			Rise Time Const:	
Bearing Type:	Mud Lubricated			Fall Time Const:	
				Digit Time:	

RSS Information

MWD Configuration

Mod Type:	QPSK	Int Tool Face Offset:	0.00 deg	Bit Rate:	3 bps	Slimpulse Pulser Config:	
Mod Gap:	0.12000 in	Turbine Config:	600-1200 galUS/min	Frequency:	12 Hz	Pred Sig Strength @ TD:	5.0 psi
SPT Type:	HB						

Drilling Parameters

Schlumberger

Equipment Run Summary Report

27-May-2009
5:44AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 2

	Min	Max	Avg
BH Temperature:	9.41 degC	9.41 degC	9.41 degC
Surface RPM:	80.00 rpm	80.00 rpm	80.00 rpm
ROP:	12.10 m/hr	34.33 m/hr	54.96 m/hr
Surface Torque:			
Flow Rate:	700.00 galUS/min	700.00 galUS/min	700.00 galUS/min
WOB Sliding:			

Total DH Shocks (k): 0 k
Max Shock Level: 0
Max Shock Duration: 0 sec
Checkshot Type:
Checkshot Depth: m
Checkshot Incl: deg
Checkshot Azim: deg

Average Pump Pressure: psi

H2S In Well: No

Turbine RPM @ Min Flow Rate: 3,398 rpm Min Flow Rate: 700.00galUS/min SPP Off Bottom: psi
Turbine RPM @ Max Flow Rate: 3,398 rpm Max Flow Rate: 700.00galUS/min SPP On Bottom: 3,139.00 psi

Mud Information

Mud Type: Sea Water Mud Clean: No pH: 11.90
Mud Company: LCM Type: Chlorides: ppm
Mud Brand: LCM Size: Sand Content: %
Funnel Viscosity: 165.00 s/qt LCM Concentration: lbs/bbl Solids: %
Plastic Viscosity: 18.00 cp Weighting Material: Barite Percent Oil: %
Yield Point: 74.00 lbm/100ft2 Mud Weight: 1.04 lbm/galUS
Mud Resistivity: ohm-m

IADC Bit Grading

Manufacturer: TSK Total Revs: 127,980.00 IADC Code:
Model: SS-MZC Stick/Slip: 70 Jets (/ 32 in): 4X24
Type: Milltooth Reason Pulled: Total Depth/Casing Depth Bit TFA: 1.77 in2

Inner Row	Outer Row	Dull Char	Location	Bearings/Seals	Gauge	Other Chars
1.00	1.00	WT	A	E	I	NO

End of Run - Summary

Sync Hours: 26.05 hrs Downhole Noise: No Run Failed: No
Jamming: No 0.00 hrs Surface System Failure: No D&M Trip: No
Surface Vibration: No Surface Noise: No Low Oil Flag: No 0.00 hrs
Trans Fail: No H2S in Well: No Filter Screen/Plug Shear: No

Client Inconvenience: **No** Lost Time: hrs

Reason for POOH: Total Depth/Casing Depth

D&M Run Obj Met? [DD and MWD/LWD]: **Yes**

Brief Run Summary:

Successfully finished drilling @ TD deth of 2794m MD.
Good MWD signal throughout this run and good reading from APWD sensors on CDR.
The hole was kept vertical until the end of this run and we finished two days ahead of drilling schedule.

However, the tool G reading from MWD tool was slightly out of range from time to time.
This can be speculated because of the heave and compensator wasn't working enough to neutralize the heave.
Therefore the tool x-axis was fluctuating in its value.

If not, why?:

Schlumberger

Equipment Run Summary Report

27-May-2009
5:44AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 2

Equipment on the Run

	Pump Hours			
Equipment	Start	Cumulative	Software Version	Tool Size
A962M-01093	7.70 hrs	34.75 hrs		9.63 in
CDDC-BC-8002	0.00 hrs	27.05 hrs	V6.0B08	8.25 in
H524743-53890	0.00 hrs	27.05 hrs		8.25 in
H524743-54752	0.00 hrs	27.05 hrs		8.25 in
MDCIX-MA-YH56	7.70 hrs	34.75 hrs	V9.2C02	8.25 in
NMDC-8.00X31FT-SBD2833	7.70 hrs	34.75 hrs		8.00 in
SFS-SBD1826	7.70 hrs	34.75 hrs		8.25 in
SFS-SBD2626	7.70 hrs	34.75 hrs		8.25 in

Services on the Run

			Real Time			Recorded Mode			
Equipment	Service	Tool Name	Hours	Failed	Depth	Hours	Failed	Depth	CAF
LWD	Gamma Ray	CDR	27.05 hrs		651.3 m	37.50 hrs		651.3 m	
LWD	APWD	CDR	27.05 hrs		651.3 m	37.50 hrs		651.3 m	
MWD	D&I	PowerPulse	27.05 hrs		651.3 m	hrs			
MWD	Shock & Vibration	PowerPulse	27.05 hrs		651.3 m	hrs			
MWD	Cont D&I	PowerPulse	27.05 hrs		651.3 m	hrs			
MOTORS	PowerPak	PowerPak	27.05 hrs		651.3 m	hrs			

Schlumberger

Daily Drilling Activity Report

27-May-2009
5:44AM

Job Number:	09JAP0002	**Company:**	JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY	**Rig Name:**	Chikyu
Company Rep:	T. Abe & I. Sawada	**Location:**	MEA-CHG-JAP	**Well Name:**	NT2-11B
Run No:	2				

From	To	Elapsed	Depth in m From	Depth in m To	IADC Activity	Description
23-May-2009						
20:30	00:00	3.50	0.0	125.0	PU / LD BHA / Tripping	Initialized CDR. M/U BHA and RIH. SHT passed.
24-May-2009						
00:00	06:00	6.00	125.0	2043.6	PU / LD BHA / Tripping	Continue on RIH. Set depth at 2043.6
06:00	08:20	2.33	2043.6	2136.3	PU / LD BHA / Tripping	Continue RIH. Reached bottom at 2136.3m
08:20	00:00	15.67	2142.7	2532.2	Drilling	Start drilling.
25-May-2009						
00:00	01:00	1.00	2532.2	2544.3	Drilling	Continue drilling.
01:00	02:10	1.17	2544.3	2544.3	Reaming / Hole opener / Unc	Wiper trip to 2360m.
02:10	04:30	2.33	2544.3	2624.4	Drilling	Continue drilling until 2624.4m.
04:30	11:30	7.00	2624.4	2794.0	Drilling	Continue drilling until TD depth @ 2794m
11:30	14:00	2.50	2794.0	2794.0	Reaming / Hole opener / Unc	Ream up and down.
14:00	20:15	6.25	2794.0	2794.0	PU / LD BHA / Tripping	Wiper trip until casing shoe.
20:15	23:15	3.00	2794.0	2794.0	Circulate / Condition mud	Circulating to clean hole at hole bottom.
23:15	00:00	0.75	2794.0	2600.0	PU / LD BHA / Tripping	Start POOH.
26-May-2009						
00:00	10:00	10.00	2600.0	0.0	PU / LD BHA / Tripping	Continue POOH.
10:00	11:00	1.00	0.0	0.0	PU / LD BHA / Tripping	Tools ART. Dump the CDR data, rack back the BHA with MWD and CDR.
11:00	13:00	2.00	0.0	0.0	PU / LD BHA / Tripping	Clients decided to L/D tools instead. Break connections and L/D tools on deck. Unload batteries from CDR.

Schlumberger

Time Description Report

27-May-2009
5:44AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 2

Date/Time	Depth		Description
23-May-2009 8:30PM	125.0	m	Initialized CDR. M/U BHA and RIH. SHT passed.
24-May-2009 8:20AM	2136.3	m	Taggged bottom and start drilling.
25-May-2009 1:00AM	2360.0	m	Wiper trip for 5 stands.
25-May-2009 11:30AM	2794.0	m	TD reached at this depth. Start circulating.
25-May-2009 2:00PM	2794.0	m	Wiper tripping until casi g shoe.
25-May-2009 8:15PM	2794.0	m	Circulating bottom up.
25-May-2009 11:15PM	2794.0	m	Start POOH.
26-May-2009 10:00AM	0.0	m	Tools ART. Dump the CDR data, rack back the BHA with MWD and CDR.
26-May-2009 11:00AM	0.0	m	Clients changed their mind to L/D the tool.
26-May-2009 1:00PM	0.0	m	Battery removed from CDR.

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Drilling Parameters Report

27-May-2009
5:44:13AM

Job Number: 09JAP0002
Company Rep: T. Abe & I. Sawada
Run Number: 2

Company: JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY
Location: MEA-CHG-JAP

Rig Name: Chikyu
Well Name: NT2-11B

	25-May-2009 4:01 AM
Field Engineer	Yu Ito
Depth	2,533.08 m
Avg ROP	26.18 m/hr
On Bottom ROP	50.06 m/hr
Flow Rate	700.00 galUS/min
Turbine RPM	3,398 rpm
Surface RPM	80 rpm
WOB Rotating	3,000.00 kg
WOB Sliding	
DH WOB	
Surface Torque	
DH Torque	
Hookload	200,000 kg
PickUp Weight	
Slack Weight	
Friction	
SPP On Bottom	3,139.00 psi
SPP Off Bottom	
Diff Pressure	
BH Temperature	9.41 degC
Total Shocks (k)	
Max Shock Level	
Max Shock Duration	
Torsional Vib	
Lateral Vib	
Axial Vib	
CRPM	73 rpm
Stick/Slip	81
Formation	Other
Signal Strength	13.00 psi
Percent Signal Conf	92 %

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BHA Repo

4-Jul-20(
2:53A

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 3 **BHA Type:** Rotary Steerable

								Fishing Neck		Stab	Bottom Connection		Top Connection		
Item	Description	Vendor	Tool Name	Serial Number	Length	OD, in	ID, in	OD, in	Len, m	OD, in	Size	Type	Size	Type	Cumul Len
1	BIT	Hycalog	PDC	218338	0.28 m	12.25	2.82						6 5/8"	REG BOX	0.28 m
2	RSS	D&M	PowerDrive X5	51478	4.20 m	9.00	3.00	8.38	0.72		6 5/8"	REG PIN	6 5/8"	REG BOX	4.48 m
3	FLOAT SUB	D&M	Float Sub	SBD2626	0.79 m	8.00	3.00				6 5/8"	REG PIN	6 5/8"	REG BOX	5.27 m
4	STABILIZER	D&M	Stabilizer	GP7101-4	1.98 m	8.00	2.81	8.00	0.74	12.00	6 5/8"	REG PIN	6 5/8"	REG BOX	7.25 m
5	MONEL	D&M	Pony Monel	SBD2834	3.01 m	8.00	2.88				6 5/8"	REG PIN	6 5/8"	REG BOX	10.26 m
6	MWD	D&M	TeleScope	E2315	8.97 m	8.25	4.30			8.41	6 5/8"	REG PIN	6 5/8"	REG BOX	19.23 m
7	MONEL	D&M	Monel	SBD2833	9.35 m	8.00	2.88				6 5/8"	REG PIN	6 5/8"	REG BOX	28.58 m
8	DRILL COLLAR	MQJ	Drill Collars	n/a	46.54 m	8.50	2.50				6 5/8"	REG PIN	6 5/8"	REG BOX	75.12 m
9	JAR	MQJ	Jar	n/a	10.70 m	7.75	3.00	7.75	0.47		6 5/8"	REG PIN	6 5/8"	REG BOX	85.82 m
10	DRILL COLLAR	MQJ	Drill Collars	n/a	46.55 m	8.50	2.50				6 5/8"	REG PIN	6 5/8"	REG BOX	132.37 m
11	CROSSOVER	MQJ	Cross Over	n/a	0.79 m	8.00	2.80	7.50	0.45		6 5/8"	REG PIN	5 1/2"	H90 BOX	133.16 m
12	DRILLPIPE	MQJ	Drill Pipe	n/a	10.00 m	5.50	4.30				5 1/2"	H90 PIN	5 1/2"	H90 BOX	143.16 m

Predicted BHA Tendency: Hold Vertical

Hookload Out:	kg	Wt Below Jars:	18,700 kg
Pickup Out:	kg	Wt Above Jars:	14,000 kg
Slack Weight:	kg	Total Air Wt:	32,700 kg

		Blade			Gauge		
Stab Description	Mid Pt to Bit	Type	Len	Width	Len	In	Out
Stabilizer	6.19 m	spiral	17.91	3.00			

Bit to Read Out Port		
RSS-PowerDrive X5		
MWD-TeleScope	12.50	m

Bit to Measurement Port		
TeleScope-D&I	14.97	m
TeleScope-Gamma Ray	14.32	m
TeleScope-IWOB	11.61	m

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Equipment Run Summary Report

4-Jul-2009
2:53AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 3

Run Information

	Date In		Date Out
	27-Jun-2009 11:00AM		3-Jul-2009 2:15PM
Depth (MD):	2798.0 m	to	3592.0 m
Depth (TVD):	2798.0 m	to	3592.0 m
Inclination:	0.37 deg	to	0.10 deg
Azimuth:	150.08 deg	to	59.40 deg

Drilling Distance:	794.00 m	Drilling Hours:	38.73 hrs
Rotary Drilling Distance:	794.00 m	Rotary Drilling Hrs:	38.73 hrs
Sliding Distance:	0.00 m	Sliding Hours:	0.00 hrs
Reaming Distance:	0.00 m	Reaming Hours:	0.00 hrs
		Hrs Below Rotary:	147.25 hrs
		Total Pumping Hrs:	67.31 hrs

Hole Size:	12.25 in	Min DLS:	0.06 deg/30 m
Last Casing Size:	20.000 in	Max DLS:	0.30 deg/30 m
Last Casing Depth:	2786.2 m (MD)	Max DLS Depth:	2,818.2 m
Tool Face Arc:	.0 cm	Surface Screen:	No
Total Face Angle:	0.00 deg	DFS Used:	No

North Ref Used:	Grid North	Inline Filter:	No
Magnetic Dec:	-6.590 deg		
Grid Correction:	0.850 deg		
Total Correction:	-7.440 deg		
Est. Mag. Int:	0.00 deg		

Rig Information

Rig Type:	Drill Ship	Pump Type:	Triplex
Water Depth:	2,082.30 m	Pulse Damp Press:	0 psi
Air Gap:	28.30 m	Number of Pumps:	3
RKB Height:	0.00 m	Pump Line ID:	6.00 in
Ground Elevation:	28.50 m	Pump Output:	4.99 galUS/stroke
		Pump Stroke Len:	18.89 in

Run Objective

Drill 12.25" hole keeping the inclination vertical for the coring that will take place after this run.

Estimated TD depth is +/- 3561m and hole inclination will be tried to be kept within 3 degrees.

D&M Crew List:

Cell Manager: William Barragan

Crew: William Barragan, Cell Manager
Chang Hua He, DD
Yoshio Ikeda, LWD
Yu Ito, LWD
Gilles Thezan, DD

DH Motor Information

Manufacturer:		Bit to Bend Dist:	m		
Motor Type:		Bearing Play In:	in		
Motor Size:		Bearing Play Out:	in		
Serial No.:		Bent Sub Angle:	deg		
Lobe Config:		Bent HSG Angle:	deg		
Stage Length:	m				
Rubber:					
Sleeve Position:					
Sleeve Size:	in				
Bearing Type:					

RSS Information

RSS Manufacturer:	D&M		
RSS Type:	PowerDrive X5		
RSS SN:	51478		
RSS Size:			9.00
Pulse Ht Threshold:	5.00		
Min Pulse Width:	4.00		
Max Pulse Width:	8.00		
Conn Phase Angle:	335.00 deg		
Rise Time Const:	30.00		
Fall Time Const:	30.00		
Digit Time:	30.00		

MWD Configuration

Mod Type:	QPSK	Int Tool Face Offset:	0.00 deg	Bit Rate:	3 bps	Slimpulse Pulser Config:	
Mod Gap:	0.01200 in	Turbine Config:	600-1200 galUS/min	Frequency:	12 Hz	Pred Sig Strength @ TD:	4.1 psi
SPT Type:	HB						

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Equipment Run Summary Report

4-Jul-2009
2:53AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 3

Drilling Parameters

	Min	Max	Avg
BH Temperature:	14.12 degC	17.25 degC	15.91 degC
Surface RPM:	140.00 rpm	160.00 rpm	155.71 rpm
ROP:	0.00 m/hr	21.94 m/hr	20.50 m/hr
Surface Torque:	3.50 kN.m	5.42 kN.m	4.54 kN.m
Flow Rate:	650.00 galUS/min	700.00 galUS/min	692.86 galUS/min
WOB Sliding:			

Total DH Shocks (k): 0 k
Max Shock Level: 0
Max Shock Duration: 0 sec
Checkshot Type:
Checkshot Depth: m
Checkshot Incl: deg
Checkshot Azim: deg

Average Pump Pressure: 17 psi

H2S In Well: No

Turbine RPM @ Min Flow Rate: 1,796 rpm
Turbine RPM @ Max Flow Rate: 2,031 rpm
Min Flow Rate: 650.00galUS/min
Max Flow Rate: 700.00galUS/min
SPP Off Bottom: 1,853.00 psi
SPP On Bottom: 1,594.00 psi

Mud Information

Mud Type: Water Base
Mud Company: Telnite
Mud Brand: KNPP
Funnel Viscosity: 91.00 s/qt
Plastic Viscosity: 33.00 cp
Yield Point: 36.00 lbm/100ft2
Mud Resistivity: 0.08 ohm-m

Mud Clean: Yes
LCM Type:
LCM Size:
LCM Concentration: 0.00 lbs/bbl
Weighting Material:
Mud Weight: 9.00 lbm/galUS

pH: 10.40
Chlorides: 57,500.00 ppm
Sand Content: 0.40 %
Solids: 6.00 %
Percent Oil: 0.00 %

IADC Bit Grading

Manufacturer: Hycalog
Model: RSX519S
Type: PDC

Total Revs: 371,808.00
Stick/Slip: 80
Reason Pulled: Total Depth/Casing Depth

IADC Code:
Jets (/ 32 in): 2X15 5X14
Bit TFA: 1.10 in2

Inner Row	Outer Row	Dull Char	Location	Bearings/Seals	Gauge	Other Chars
1.00	0.00	WT	N		I	NO

End of Run - Summary

Sync Hours: 49.04 hrs
Jamming: No 0.00 hrs
Surface Vibration: No
Trans Fail: No

Downhole Noise: No
Surface System Failure: No
Surface Noise: No
H2S in Well: No

Run Failed: No
D&M Trip: No
Low Oil Flag: No 0.00 hrs
Filter Screen/Plug Shear: No

Client Inconvenience: **No** Lost Time: hrs

Reason for POOH: Total Depth/Casing Depth

D&M Run Obj Met? [DD and MWD/LWD]: **Yes**

Brief Run Summary:

Reach coring point vertically drilling the BT2-11B into the Nankai - Kumano basin in order to continue with the exploration phase of this research well.

If not, why?:

Schlumberger

Equipment Run Summary Report

4-Jul-2009
2:53AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 3

Equipment on the Run

	Pump Hours			
Equipment	Start	Cumulative	Software Version	Tool Size
MDCIX-GA-E2315	0.00 hrs	67.31 hrs	V9.2C02	8.25 in
NMDC-8.00-O.D.-SBD2834	0.00 hrs	67.31 hrs		8.00 in
NMDC-8.00X31FT-SBD2833	34.75 hrs	102.06 hrs		8.00 in
PDX9BU-AA-51478	0.00 hrs	67.31 hrs	CMV505,SM	9.00 in
SFS-SBD2626	34.75 hrs	102.06 hrs		8.00 in
SSTAB1200-GP7101-4	0.00 hrs	67.31 hrs	0	8.00 in

Services on the Run

			Real Time			Recorded Mode			
Equipment	Service	Tool Name	Hours	Failed	Depth	Hours	Failed	Depth	CAF
RSS	PowerV	PowerDrive X5	67.31 hrs		794.0 m	hrs			
MWD	Gamma Ray	TeleScope	67.31 hrs		794.0 m	147.25 hrs		794.0 m	
MWD	Shock and Vibration	TeleScope	67.31 hrs		794.0 m	147.25 hrs		794.0 m	
MWD	Cont D&I	TeleScope	67.31 hrs		794.0 m	hrs			
MWD	D&I	TeleScope	67.31 hrs		794.0 m	147.25 hrs		794.0 m	
MWD	IWOB	Telescope	67.31 hrs		794.0 m	hrs			

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Daily Drilling Activity Report

4-Jul-2009
2:53AM

Job Number:	09JAP0002	**Company:**	JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY	**Rig Name:**	Chikyu
Company Rep:	T. Abe & I. Sawada	**Location:**	MEA-CHG-JAP	**Well Name:**	NT2-11B
Run No:	3				

From	To	Elapsed	Depth in m From	Depth in m To	IADC Activity	Description
13-Jun-2009						
08:00	00:00	16.00	0.0	0.0	Other	Arrived to the rig and preparing the tools for the next run.
14-Jun-2009						
00:00	10:00	10.00	0.0	0.0	Other	On standby.
10:00	10:45	0.75	0.0	0.0	Other	Abandon ship drill.
10:45	00:00	13.25	0.0	0.0	Other	On standby.
15-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Other	Crews on standby.
16-Jun-2009						
00:00	00:00	24.00	0.0		Other	Crews on standby.
17-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Other	Crews on standby.
18-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Other	Standby
19-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Other	All crew on standby.
20-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Other	All crew on standby.
21-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Other	Crew on standby.
22-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Other	All crew on standby.
23-Jun-2009						
00:00	00:00	24.00	0.0	0.0	Test BOP	All D&M crew on standby, meanwhile, BOP gets tested.
24-Jun-2009						
00:00	20:00	20.00	0.0	0.0	Other	Fixing the elevator.
20:00	00:00	4.00	0.0	0.0	PU / LD BHA / Tripping	Pick up drilling assembly and RIH.
25-Jun-2009						
00:00	09:15	9.25	0.0	2760.0	PU / LD BHA / Tripping	Continuing run in hole. Reach top of cement.
09:15	22:00	12.75	2760.0	2780.0	Other	Drill on cement. Circulating bottom up.
22:00	00:00	2.00	2780.0	2780.0	Other	Problem with releasing the pressure.
26-Jun-2009						
00:00	17:00	17.00	2780.0	0.0	Other	Leak of test, then pull out of hole.
17:00	00:00	7.00	0.0	0.0	Repair rig	Repairing top drive elevator, pumps, etc. etc.

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Daily Drilling Activity Report

4-Jul-2009
2:53AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run No: 3

From	To	Elapsed	Depth in m From	Depth in m To	IADC Activity	Description
27-Jun-2009						
00:00	06:00	6.00	0.0	0.0	Repair rig	Repairing the rig.
06:00	08:00	2.00	0.0	10.0	PU / LD BHA / Tripping	Start making up BHA. Bit below rotary table.
08:00	11:00	3.00	10.0	10.0	Repair rig	Repairing the rig.
11:00	20:30	9.50	10.0	2647.0	PU / LD BHA / Tripping	Take shallow hole test and run in hole.
20:30	22:30	2.00	2647.0	2798.0	PU / LD BHA / Tripping	Filling the pipe, after that, continue to run in hole and reach bottom.
22:30	00:00	1.50	2798.0	2816.0	Drilling	Reached bottom and start drilling.
28-Jun-2009						
00:00	06:30	6.50	2816.0	2884.4	Drilling	Continue on drilling.
06:30	00:00	17.50	2884.4	2369.5	Repair rig	TDS catches fire and starts to burn, fire was extinguished. Pull up the tools until the casing shoe and repair the TDS.
29-Jun-2009						
00:00	06:00	6.00	2369.5	2369.5	Repair rig	Continue to repair the TDS.
06:00	08:30	2.50	2369.5	2884.4	PU / LD BHA / Tripping	RIH to continue drilling ahead.
08:30	13:04	4.57	2884.4	2951.4	Drilling	Continue drilling ahead.
13:04	13:15	0.18	2951.4	2951.4	Circulate / Condition mud	Slow Circulation Rate (SCR), pump 1 30 SPM, pump 2 40 SPM, pump 3 50 SPM
13:15	20:25	7.17	2951.4	3071.8	Drilling	Continue drilling ahead.
20:25	21:20	0.92	3071.8	3071.8	Circulate / Condition mud	Cutting didn't surface, so pump at a slow pump rate and discuss. pump 1 70 SPM
21:20	22:20	1.00	3071.8	3089.2	Drilling	Continue drilling ahead.
22:20	00:00	1.67	3089.2	3089.2	Circulate / Condition mud	Circulate bottom up, since high gas level was detected.
30-Jun-2009						
00:00	03:00	3.00	3089.2	3089.2	Circulate / Condition mud	Continue circulating.
03:00	04:15	1.25	3089.2	2761.1	PU / LD BHA / Tripping	Wiper trip until casing shoe.
04:15	05:15	1.00	2761.1	2761.1	Other	Toolstring at casing shoe.
05:15	08:00	2.75	2761.1	3089.2	PU / LD BHA / Tripping	Run in hole, touch bottom, geolograph cable snapped off, changing cable.
08:00	09:30	1.50	3089.2	3110.7	Drilling	Continue drilling ahead, high torque and low wob zone encountered.
09:30	21:00	11.50	3110.7	3280.8	Drilling	Continue drilling ahead.
21:00	22:00	1.00	3280.8	3280.8	Circulate / Condition mud	High stick and slip up to 294 experienced. Circulate to clean the hole.
22:00	00:00	2.00	3280.8	3309.8	Drilling	Continue drilling ahead.
1-Jul-2009						
00:00	06:00	6.00	3309.8	3407.0	Drilling	Continuing drilling ahead.
06:00	11:00	5.00	3407.0	3407.0	Circulate / Condition mud	Flow check and then, bottom up.
11:00	20:00	9.00	3407.0	2700.0	PU / LD BHA / Tripping	POOH, short wiper trip, repair TDS.
20:00	23:00	3.00	2700.0	3407.0	PU / LD BHA / Tripping	Continue RIH
23:00	00:00	1.00	3407.0	3407.0	Drilling	Calibrate the sensor and start drilling.
2-Jul-2009						
00:00	05:00	5.00	3407.0	3486.0	Drilling	Continue drilling
05:00	06:06	1.10	3486.0	3486.0	Circulate / Condition mud	Circulating, hole cleanning, survey, continue to D/A.
06:06	07:54	1.80	3486.0	3525.5	Drilling	Continue drilling ahead.
07:54	08:25	0.52	3525.5	3525.5	Circulate / Condition mud	Circulating, hole cleanning, survey, continue to D/A.

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Daily Drilling Activity Report

4-Jul-2009
2:53AM

Job Number:	09JAP0002	**Company:**	JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY	**Rig Name:**	Chikyu
Company Rep:	T. Abe & I. Sawada	**Location:**	MEA-CHG-JAP	**Well Name:**	NT2-11B
Run No:	3				

			Depth in m			
From	**To**	**Elapsed**	**From**	**To**	**IADC Activity**	**Description**
08:25	10:31	2.10	3525.5	3563.3	Drilling	Continue drilling ahead.
10:31	11:02	0.52	3563.3	3563.3	Circulate / Condition mud	Circulating, hole cleanning, survey, continue to D/A.
11:02	12:40	1.63	3563.3	3592.0	Drilling	TD, circulating.
12:40	18:00	5.33	3592.0	3592.0	Circulate / Condition mud	Circulate and bottom's up
18:00	20:40	2.67	3592.0	3400.0	PU / LD BHA / Tripping	Tripping out, and circulate. Leakage from Top Drive
20:40	21:30	0.83	3400.0	2700.0	PU / LD BHA / Tripping	Trip out to Casing Shoe, fix Top Drive
21:30	00:00	2.50	2700.0	2700.0	Repair rig	Fixing Top Drive
3-Jul-2009						
00:00	05:00	5.00	2700.0	2700.0	Repair rig	Fixing Top Drive
05:00	12:00	7.00	2700.0	400.0	PU / LD BHA / Tripping	POOH, short trip to bottom, continue to surface.
12:00	13:00	1.00	400.0	400.0	Repair rig	Repair Rig, safety meeting.
13:00	14:15	1.25	400.0	0.0	PU / LD BHA / Tripping	Continue to L/D BHA. TART.
14:15	18:00	3.75	0.0	0.0	PU / LD BHA / Tripping	Continue to L/D all the equipment, tidy up the rig floor.
18:00	00:00	6.00	0.0	100.0	PU / LD BHA / Tripping	Start to P/U coring assembly.

Schlumberger

Time Description Report

4-Jul-2009
2:53AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 3

Date/Time	Depth		Description
14-Jun-2009 10:00AM	0.0	m	Abandon ship drill.
16-Jun-2009 10:00AM	0.0	m	Wellsite audit was conducted.
17-Jun-2009 2:00PM	0.0	m	Small meeting was held to explain about our tools to the scientists.
20-Jun-2009 7:30AM	0.0	m	Crew were invited to laboratory tour.
21-Jun-2009 10:00AM	0.0	m	Oil spill emergency drill.
26-Jun-2009 1:00AM	2780.0	m	Leak of test performed, however formation could not withstand 110 PSI of pressure.
27-Jun-2009 6:00AM	0.0	m	Start making up BHA.
27-Jun-2009 7:00AM	0.0	m	Bit below rotary table.
27-Jun-2009 11:00AM	10.0	m	Successful shallow hole test. MWDSTAT:0, SPM:130, FR:650GPM, TRPM:1914, SPT1:30.1PSI, and DNITEMP:27.45C
27-Jun-2009 10:30PM	2795.0	m	Reached bottom and started to drill.
28-Jun-2009 6:30AM	2884.4	m	Top drive blew up.
29-Jun-2009 6:00AM	2369.5	m	Continue to repair the TDS.
29-Jun-2009 8:30AM	2884.0	m	RIH to continue drilling ahead.
29-Jun-2009 1:04PM	2951.0	m	Continue drilling ahead.
29-Jun-2009 1:15PM	2951.0	m	Slow Circulation Rate (SCR), pump 1 30 SPM, pump 2 40 SPM, pump 3 50 SPM
29-Jun-2009 8:25PM	3071.8	m	Continue drilling ahead.
29-Jun-2009 9:20PM	3071.8	m	Cutting didn't surface, so pump at a slow pump rate and discuss. pump 1 70 SPM
29-Jun-2009 10:20PM	3089.2	m	Continue drilling ahead.
29-Jun-2009 11:59PM	3089.2	m	Circulate bottom up, since high gas level was detected.
30-Jun-2009 3:00AM	3089.2	m	Continue circulating.
30-Jun-2009 4:15AM	2761.0	m	Wiper trip until casing shoe.
30-Jun-2009 5:15AM	2761.0	m	Toolstring at casing shoe.
30-Jun-2009 8:00AM	3089.0	m	Run in hole, touch bottom, geolograph cable snapped off, changing cable
30-Jun-2009 9:30AM	3110.7	m	Continue drilling ahead, high torque and low wob zone encountered.
30-Jun-2009 9:00PM	3280.0	m	Continue drilling ahead.
30-Jun-2009 10:00PM	3280.8	m	High stick and slip up to 294 experienced. Circulate to clean the hole.
30-Jun-2009 11:59PM	3309.8	m	Continue drilling ahead.
1-Jul-2009 12:00AM	3309.8	m	Continue drilling
1-Jul-2009 6:00AM	3407.0	m	Flow checking.
1-Jul-2009 11:00AM	3407.0	m	Start wiper trip and repair TDS.
1-Jul-2009 8:00PM	2700.0	m	Start RIH.
1-Jul-2009 11:00PM	3407.0	m	Calibrate the sensors, start pumping.
1-Jul-2009 11:59PM	3407.0	m	Start drilling.
2-Jul-2009 5:00AM	3486.0	m	Continue drilling.
2-Jul-2009 6:06AM	3486.0	m	Circulating, hole cleanning, survey, continue to D/A.
2-Jul-2009 7:54AM	3525.0	m	Continue drilling ahead.
2-Jul-2009 8:25AM	3525.0	m	Circulating, hole cleanning, survey, continue to D/A.
2-Jul-2009 10:31AM	3563.0	m	Continue drilling ahead.
2-Jul-2009 11:02AM	3563.0	m	Circulating, hole cleanning, survey, continue to D/A.
2-Jul-2009 12:40PM	3592.0	m	TD, circulating.
2-Jul-2009 6:00PM	3592.0	m	Circulate and bottom's up
2-Jul-2009 8:40PM	3400.0	m	Tripping out, and circulate. Leakage from Top Drive

Date/Time	Depth		Description
2-Jul-2009 9:30PM	2700.0	m	Trip out to Casing Shoe, fix Top Drive
2-Jul-2009 11:59PM	2700.0	m	Fixing Top Drive
3-Jul-2009 5:00AM	2700.0	m	Fixing Top Drive
3-Jul-2009 12:00PM	400.0	m	POOH, short trip to bottom, continue to surface.
3-Jul-2009 1:00PM	400.0	m	Repair Rig, safety meeting.
3-Jul-2009 2:15PM	0.0	m	Continue to L/D BHA. TART.
3-Jul-2009 6:00PM	0.0	m	Continue to L/D all the equipment, tidy up the rig floor.
3-Jul-2009 11:59PM	100.0	m	Start to P/U coring assembly.

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Drilling Parameters Repor

4-Jul-200
2:53:55A

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 3

	02-Jul-2009 11:11 AM	01-Jul-2009 3:10 AM	30-Jun-2009 10:39 PM	30-Jun-2009 3:39 PM	29-Jun-2009 6:56 PM	29-Jun-2009 9:47 AM	28-Jun-2009 1:54 AM
Field Engineer	William Barragan	Yu Ito	Yu Ito	William Barragan	William Barragan	William Barragan	Yu Ito
Depth	3,565.62 m	3,365.58 m	3,293.93 m	3,218.00 m	3,054.80 m	2,905.00 m	2,831.75 m
Avg ROP	7.71 m/hr	4.05 m/hr	9.19 m/hr	9.19 m/hr	8.53 m/hr	8.53 m/hr	2.85 m/hr
On Bottom ROP	17.56 m/hr	13.89 m/hr	19.66 m/hr	19.66 m/hr	21.90 m/hr	21.90 m/hr	13.60 m/hr
Flow Rate	700.00 galUS/min	700.00 galUS/min	700.00 galUS/min	700.00 galUS/min	700.00 galUS/min	700.00 galUS/min	650.00 galUS/min
Turbine RPM	2,031 rpm	2,070 rpm	2,070 rpm	2,070 rpm	2,070 rpm	2,031 rpm	1,796 rpm
Surface RPM	160 rpm	160 rpm	160 rpm	160 rpm	160 rpm	150 rpm	140 rpm
WOB Rotating	3,000.00 kg	1,000.00 kg	1,000.00 kg	3,000.00 kg	4,160.00 kg	2,450.00 kg	1,000.00 kg
WOB Sliding							
DH WOB	1,200.00 kg	800.00 kg	1,200.00 kg	2,100.00 kg	3,200.00 kg	2,100.00 kg	
Surface Torque	5.00 kN.m	4.00 kN.m	5.00 kN.m	4.30 kN.m	3.50 kN.m	5.42 kN.m	
DH Torque	.73 kN.m	1.00 kN.m	1.50 kN.m	6.21 kN.m	1.58 kN.m	4.88 kN.m	
Hookload	223,900 kg	218,500 kg	216,800 kg	206,300 kg	210,300 kg	205,200 kg	164,000 kg
PickUp Weight	224,300.00 kg	224,300.00 kg	224,300.00 kg				163,000.00 kg
Slack Weight	222,000.00 kg	222,000.00 kg	222,000.00 kg				
Friction							
SPP On Bottom	2,084.00 psi	2,009.00 psi	2,010.00 psi	1,981.00 psi	1,878.00 psi	1,900.00 psi	1,594.00 psi
SPP Off Bottom	2,065.00 psi	1,989.00 psi	1,993.00 psi	1,976.00 psi	1,853.00 psi		
Diff Pressure	19 psi	20 psi	17 psi	5 psi	25 psi		
BH Temperature	16.47 degC	16.47 degC	15.69 degC	14.90 degC	14.12 degC	17.25 degC	16.47 degC
Total Shocks (k)							
Max Shock Level							
Max Shock Duration							
Torsional Vib							1,606
Lateral Vib							
Axial Vib							
CRPM	181 rpm	180 rpm	198 rpm	172 rpm	155 rpm	143 rpm	135 rpm
Stick/Slip	102	108	174	135	54	99	63
Formation	Igneous	Igneous	Igneous	Igneous	Igneous	Igneous	Igneous
Signal Strength	4.04 psi	3.91 psi	5.09 psi	4.47 psi	5.00 psi	5.02 psi	3.50 psi
Percent Signal Conf	71 %	78 %	78 %	80 %	89 %	90 %	90 %

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BHA Repo

21-Jul-20(
12:41A

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu

Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B

Run Number: 4 **BHA Type:** Rotary

								Fishing Neck		Stab	Bottom Connection		Top Connection		
Item	Description	Vendor	Tool Name	Serial Number	Length	OD, in	ID, in	OD, in	Len, m	OD, in	Size	Type	Size	Type	Cumul Len
1	BIT	Other	PDC	EH-114P	0.37 m	10.63	3.31						6 5/8"	REG PIN	0.37 m
2	BIT SUB		Bit Sub	02-004-0001	0.92 m	8.50	2.50	8.50	0.92		6 5/8"	REG BOX	6 5/8"	REG BOX	1.29 m
3	REAMER		Hole Opener	JY8679	1.40 m	17.00	3.00	9.94	0.42		6 5/8"	REG PIN	6 5/8"	REG BOX	2.69 m
4	CROSSOVER		Crossover Sub	01-302-000	0.61 m	9.50	2.50	8.50	0.31		6 5/8"	REG PIN	6 5/8"	REG PIN	3.30 m
5	BIT SUB		Bit Sub	02-004-0002	0.92 m	8.50	2.50	8.50	0.92		6 5/8"	REG BOX	6 5/8"	REG BOX	4.22 m
6	DRILL COLLAR - NONMAG	D&M	Pony NMDC	SBD2834	3.09 m	8.25	2.44	8.25	3.09		6 5/8"	REG PIN	6 5/8"	REG BOX	7.31 m
7	MWD	D&M	TeleScope	E2314	8.95 m	8.25	4.38	8.38	8.95		6 5/8"	REG PIN	6 5/8"	REG BOX	16.26 m
8	DRILL COLLAR - NONMAG	D&M	NMDC	SBD2833	9.35 m	8.25	2.88	8.25	9.35		6 5/8"	REG PIN	6 5/8"	REG BOX	25.61 m
9	STABILIZER	D&M	Stabilizer	DOTR21157	2.22 m	8.25	2.81	8.00	0.78	16.75	6 5/8"	REG PIN	6 5/8"	REG BOX	27.83 m
10	DRILL COLLAR		Drill Collar	02-001-0018	9.31 m	8.50	2.50	8.56	0.66		6 5/8"	REG PIN	6 5/8"	REG BOX	37.14 m
11	DRILL COLLAR		Drill Collar	02-0001-0020	9.31 m	8.50	2.50	8.56	0.66		6 5/8"	REG PIN	6 5/8"	REG BOX	46.45 m
12	STABILIZER	D&M	Stabilizer	DOTR21158	2.21 m	8.25	2.81	8.00	0.76	16.75	6 5/8"	REG PIN	6 5/8"	REG BOX	48.66 m
13	DRILL COLLAR		Drill Collar	02-001-0014	9.30 m	8.56	2.50	8.56	0.65		6 5/8"	REG PIN	6 5/8"	REG BOX	57.96 m
14	DRILL COLLAR		Drill Collar	02-001-0023	9.31 m	8.50	2.50	8.50	0.66		6 5/8"	REG PIN	6 5/8"	REG BOX	67.27 m
15	DRILL COLLAR		Drill Collar	02-001-0017	9.31 m	8.50	2.50	8.50	0.65		6 5/8"	REG PIN	6 5/8"	REG BOX	76.58 m
16	DRILL COLLAR		Drill Collar	02-001-0009	9.31 m	8.50	2.50	8.50	0.65		6 5/8"	REG PIN	6 5/8"	REG BOX	85.89 m
17	JAR		Jar	HT7637	10.70 m	7.19	2.75	7.75	0.47		6 5/8"	REG PIN	6 5/8"	REG BOX	96.59 m
18	DRILL COLLAR		Drill Collar	02-001-0004	9.31 m	8.56	2.50	8.63	0.66		6 5/8"	REG PIN	6 5/8"	REG BOX	105.90 m
19	DRILL COLLAR		Drill Collar	02-001-0002	9.31 m	8.56	2.50	8.56	0.66		6 5/8"	REG PIN	6 5/8"	REG BOX	115.21 m
20	DRILL COLLAR		Drill Collar	02-001-0001	9.31 m	8.56	2.50	8.56	0.66		6 5/8"	REG PIN	6 5/8"	REG BOX	124.52 m
21	DRILL COLLAR		Drill Collar	02-001-0022	9.31 m	8.50	2.50	8.56	0.65		6 5/8"	REG PIN	6 5/8"	REG BOX	133.83 m
22	DRILL COLLAR		Drill Collar	02-001-0024	9.31 m	8.50	2.50	8.56	0.66		6 5/8"	REG PIN	6 5/8"	REG BOX	143.14 m
23	CROSSOVER		Crosover	01-124-0001	0.80 m	8.50	3.25	7.00	0.48		6 5/8"	REG PIN	5 1/2"	FH BOX	143.94 m

Predicted BHA Tendency: Hold Vertical

Hookload Out:	kg		Wt Below Jars:	18,700	kg
Pickup Out:	kg		Wt Above Jars:	14,000	kg
Slack Weight:	kg		Total Air Wt:	32,700	kg

Stab Description	Mid Pt to Bit	Blade Type	Blade Len	Blade Width	Gauge Len	Gauge In	Gauge Out

Bit to Read Out Port		
MWD-TeleScope	9.50	m

Bit to Measurement Port		
TeleScope-D&I	11.89	m
TeleScope-Gamma Ray	11.24	m
TeleScope-IWOB	8.64	m

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Equipment Run Summary Report

21-Jul-2009
12:41AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 4

Run Information

Date In	Date Out
15-Jul-2009 12:30PM	20-Jul-2009 10:00PM

Depth (MD):	2786.0 m to	3650.0 m	
Depth (TVD):	2786.0 m to	3650.0 m	
Inclination:	0.10 deg to	0.10 deg	
Azimuth:	59.40 deg to	244.46 deg	
Hole Size:	17.00 in		
Last Casing Size:	20.000 in		
Last Casing Depth:	2786.0 m (MD)		
Tool Face Arc:	.0 cm		
Total Face Angle:	0.00 deg		

Drilling Distance:	864.00 m	Drilling Hours:	50.10 hrs
Rotary Drilling Distance:	864.00 m	Rotary Drilling Hrs:	50.10 hrs
Sliding Distance:	0.00 m	Sliding Hours:	0.00 hrs
Reaming Distance:	0.00 m	Reaming Hours:	0.00 hrs
		Hrs Below Rotary:	129.50 hrs
		Total Pumping Hrs:	79.23 hrs
		Min DLS:	0.09 deg/30 m
North Ref Used:	Grid North	Max DLS:	0.63 deg/30 m
Magnetic Dec:	-6.587 deg	Max DLS Depth:	2,830.8 m
Grid Correction:	0.847 deg	Surface Screen:	No
Total Correction:	-7.434 deg	DFS Used:	No
Est. Mag. Int:	0.00 deg	Inline Filter:	No

Rig Information

Rig Type:	Drill Ship	Pump Type:	Triplex
Water Depth:	2,082.30 m	Pulse Damp Press:	0 psi
Air Gap:	28.30 m	Number of Pumps:	3
RKB Height:	0.00 m	Pump Line ID:	6.00 in
Ground Elevation:	28.50 m	Pump Output:	4.99 galUS/stroke
		Pump Stroke Len:	18.89 in

Run Objective

Open the hole from 12.25in to 17in using MWD and hole opener BHA, no directional tool in the BHA.

D&M Crew List:

Cell Manager: William Barragan
Crew: William Barragan, Cell Manager
Yu Ito, LWD

DH Motor Information

Manufacturer:		Bit to Bend Dist:	m	RSS Manufacturer:	
Motor Type:		Bearing Play In:	in	RSS Type:	
Motor Size:		Bearing Play Out:	in	RSS SN:	
Serial No.:		Bent Sub Angle:	deg	RSS Size:	
Lobe Config:		Bent HSG Angle:	deg	Pulse Ht Threshold:	
Stage Length:	m			Min Pulse Width:	
Rubber:				Max Pulse Width:	
Sleeve Position:				Conn Phase Angle:	deg
Sleeve Size:	in			Rise Time Const:	
Bearing Type:				Fall Time Const:	
				Digit Time:	

RSS Information

MWD Configuration

Mod Type:	QPSK	Int Tool Face Offset:	deg	Bit Rate:	3 bps	Slimpulse Pulser Config:	
Mod Gap:	0.12500 in	Turbine Config:	600-1200 galUS/min	Frequency:	12 Hz	Pred Sig Strength @ TD:	18.1 psi
SPT Type:	HA						

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Equipment Run Summary Report

21-Jul-2009
12:41AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 4

Drilling Parameters

	Min	Max	Avg
BH Temperature:	15.69 degC	18.82 degC	16.82 degC
Surface RPM:	100.00 rpm	140.00 rpm	118.00 rpm
ROP:	m/hr	m/hr	17.25 m/hr
Surface Torque:	8.00 kN.m	21.00 kN.m	12.44 kN.m
Flow Rate:	950.00 galUS/min	1,150.00 galUS/min	1,022.22 galUS/min
WOB Sliding:			

Total DH Shocks (k): 0 k
Max Shock Level: 0
Max Shock Duration: 0 sec
Checkshot Type:
Checkshot Depth: m
Checkshot Incl: deg
Checkshot Azim: deg

Average Pump Pressure: psi

H2S In Well: No

Turbine RPM @ Min Flow Rate: 3,164 rpm
Turbine RPM @ Max Flow Rate: 3,242 rpm
Min Flow Rate: 950.00galUS/min
Max Flow Rate: 1,150.00galUS/min
SPP Off Bottom: psi
SPP On Bottom: 2,383.00 psi

Mud Information

Mud Type: Water Base
Mud Company: Telnite
Mud Brand:
Funnel Viscosity: 118.00 s/qt
Plastic Viscosity: 41.00 cp
Yield Point: 45.00 lbm/100ft2
Mud Resistivity: ohm-m

Mud Clean: No
LCM Type:
LCM Size:
LCM Concentration: lbs/bbl
Weighting Material: Barite
Mud Weight: 9.20 lbm/galUS

pH: 10.90
Chlorides: 68,796.70 ppm
Sand Content: 0.20 %
Solids: 6.00 %
Percent Oil: 0.00 %

IADC Bit Grading

Manufacturer: Other
Model:
Type: PDC

Total Revs:
Stick/Slip: 240
Reason Pulled: Total Depth/Casing Depth

IADC Code:
Jets (/ 32 in): 1X16 1X16 1X16
Bit TFA: 0.60 in2

Inner Row	Outer Row	Dull Char	Location	Bearings/Seals	Gauge	Other Chars
0.00	1.00	CT	S	X	I	NO

End of Run - Summary

Sync Hours: 79.23 hrs
Jamming: No 0.00 hrs
Surface Vibration: No
Trans Fail: No

Downhole Noise: No
Surface System Failure: No
Surface Noise: No
H2S in Well: No

Run Failed: No
D&M Trip: No
Low Oil Flag: No 0.00 hrs
Filter Screen/Plug Shear: No

Client Inconvenience: **No** Lost Time: hrs

Reason for POOH: Total Depth/Casing Depth

D&M Run Obj Met? [DD and MWD/LWD]: **Yes**

Brief Run Summary:

Reached TD at 3650m and inclination at the end was kept at 0.1 degrees.

Good signal was obtained throughout the run.
Severe sticknslip was observed throughuot the run.(RPM:105, over sticknslip 210 and when RPM:120, sticknslip easily over 240)

If not, why?:

Schlumberger

Equipment Run Summary Report

21-Jul-2009
12:41AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOL(**Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 4

Equipment on the Run

Equipment	Pump Hours Start	Pump Hours Cumulative	Software Version	Tool Size
MDCIX-GA-E2314	0.00 hrs	79.23 hrs	9.2	8.25 in
NMDC-8.00-O.D.-SBD2834	67.31 hrs	146.54 hrs		8.25 in
NMDC-8.00X31FT-SBD2833	102.06 hrs	181.29 hrs		8.25 in
SSTAB1643IBS-DOTR21157	0.00 hrs	79.23 hrs		8.25 in
SSTAB1643IBS-DOTR21158	0.00 hrs	79.23 hrs		8.25 in

Services on the Run

Equipment	Service	Tool Name	Real Time Hours	Real Time Failed	Real Time Depth	Recorded Mode Hours	Recorded Mode Failed	Recorded Mode Depth	CAF
MWD	Gamma Ray	TeleScope	79.23 hrs		864.0 m	129.50 hrs		864.0 m	
MWD	Shock and Vibration	TeleScope	79.23 hrs		864.0 m	129.50 hrs		864.0 m	
MWD	Cont D&I	TeleScope	79.23 hrs		864.0 m	hrs			
MWD	D&I	TeleScope	79.23 hrs		864.0 m	129.50 hrs		864.0 m	
MWD	IWOB	Telescope	79.23 hrs		864.0 m	hrs			

Schlumberger

Daily Drilling Activity Report

21-Jul-2009
12:41AM

Job Number:	09JAP0002	**Company:**	JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY	**Rig Name:**	Chikyu
Company Rep:	T. Abe & I. Sawada	**Location:**	MEA-CHG-JAP	**Well Name:**	NT2-11B
Run No:	4				

			Depth in m			
From	**To**	**Elapsed**	**From**	**To**	**IADC Activity**	**Description**
13-Jul-2009						
13:45	15:00	1.25	3000.0	3000.0	Other	D&M Personnel arrrive to the rig. Operation on going, wiper trip previous the 3rd wireline run.
15:00	00:00	9.00	3000.0	2000.0	PU / LD BHA / Tripping	Wiper trip, POOH for 3rd wireline run.
14-Jul-2009						
00:00	08:00	8.00	2000.0	0.0	PU / LD BHA / Tripping	POOH wiper trip assembly.
08:00	00:00	16.00	0.0	0.0	Wireline logs	Wireline logging.
15-Jul-2009						
00:00	12:30	12.50	0.0	0.0	Wireline logs	Finishing up wireline operation.
12:30	00:00	11.50	0.0	2000.0	PU / LD BHA / Tripping	Pick up and make up BHA. Successful SHT, then RIH.
16-Jul-2009						
00:00	04:20	4.33	2000.0	2800.0	PU / LD BHA / Tripping	Continue running in hole.
04:20	07:45	3.42	2800.0	2848.1	Reaming / Hole opener / Unc	Start hole openning drilling from 2800m.
07:45	08:15	0.50	2848.1	2848.1	Circulate / Condition mud	Circulating.
08:15	10:30	2.25	2848.1	2886.1	Reaming / Hole opener / Unc	Continue hole openning drilling.
10:30	11:15	0.75	2886.1	2886.1	Circulate / Condition mud	Circulating, make connection and take survey. Then, IWOB calibraiton.
11:15	14:03	2.80	2886.1	2924.2	Reaming / Hole opener / Unc	Continue hole openning drilling.
14:03	14:31	0.47	2924.2	2924.2	Circulate / Condition mud	Circulating, make connection and take survey.
14:31	16:37	2.10	2924.2	2962.5	Reaming / Hole opener / Unc	Continue hole openning drilling. High stick and slip seen, mitigate reducing the WOB to 30KN, efective at bottom from 2KN to 7KN and Increasing RPM to 120.
16:37	20:34	3.95	2962.5	2936.0	Circulate / Condition mud	Short Wiper Trip, reaming to clean the hole. Survey.
20:34	22:11	1.62	2962.5	3000.8	Reaming / Hole opener / Unc	Continue hole openning drilling.
22:11	22:45	0.57	3000.8	2995.5	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
22:45	00:00	1.25	2995.5	3020.0	Reaming / Hole opener / Unc	Continue hole openning drilling.
17-Jul-2009						
00:00	01:03	1.05	3020.0	3038.9	Reaming / Hole opener / Unc	Continue hole openning drilling.
01:03	01:42	0.65	3038.9	3038.9	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
01:42	04:00	2.30	3038.9	3076.3	Reaming / Hole opener / Unc	Continue hole openning drilling.
04:00	04:30	0.50	3076.3	3076.3	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole.
04:30	04:45	0.25	3076.3	3077.9	Reaming / Hole opener / Unc	Continue hole openning drilling.
04:45	12:40	7.92	3077.9	3077.9	PU / LD BHA / Tripping	Pull up drill string until the casing shoe. Repair rig. RIH.
12:40	14:55	2.25	3077.9	3114.4	Reaming / Hole opener / Unc	Continue hole openning drilling.
14:55	15:30	0.58	3114.4	3110.0	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
15:30	18:10	2.67	3114.4	3152.2	Reaming / Hole opener / Unc	Continue hole openning drilling.
18:10	18:42	0.53	3152.2	3146.0	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
18:42	21:45	3.05	3152.2	3182.7	Reaming / Hole opener / Unc	Continue hole openning drilling.
21:45	22:35	0.83	3182.7	3182.7	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
22:35	00:00	1.42	3182.7	3201.0	Reaming / Hole opener / Unc	Continue hole openning drilling.
18-Jul-2009						
00:00	03:00	3.00	3201.0	3229.6	Reaming / Hole opener / Unc	Continue hole openning drilling.

Schlumberger

Daily Drilling Activity Report

21-Jul-2009
12:41AM

Job Number:	09JAP0002	**Company:**	JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY	**Rig Name:**	Chikyu
Company Rep:	T. Abe & I. Sawada	**Location:**	MEA-CHG-JAP	**Well Name:**	NT2-11B
Run No:	4				

			Depth in m			
From	**To**	**Elapsed**	**From**	**To**	**IADC Activity**	**Description**
03:00	03:52	0.87	3229.6	3229.6	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
03:52	07:30	3.63	3229.6	3270.0	Reaming / Hole opener / Unc	Continue hole openning drilling.
07:30	08:00	0.50	3270.0	3269.0	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
08:00	12:18	4.30	3270.0	3306.2	Reaming / Hole opener / Unc	Continue hole openning drilling.
12:18	13:19	1.02	3306.2	3303.6	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
13:19	15:40	2.35	3306.2	3344.5	Reaming / Hole opener / Unc	Continue hole openning drilling. High stick and slip experienced, TOS form given to the client.
15:40	17:08	1.47	3344.5	3340.0	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
17:08	19:14	2.10	3344.5	3383.1	Reaming / Hole opener / Unc	Continue hole openning drilling.
19:14	20:02	0.80	3383.1	3380.0	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
20:02	23:50	3.80	3383.1	3459.2	Reaming / Hole opener / Unc	Continue hole openning drilling.
23:50	00:00	0.17	3459.2	3459.2	Reaming / Hole opener / Unc	Working up drill pipe, circulating to clean the hole.
19-Jul-2009						
00:00	00:45	0.75	3459.2	3459.2	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
00:45	02:10	1.42	3459.2	3497.1	Reaming / Hole opener / Unc	Continue hole openning drilling.
02:10	03:00	0.83	3497.1	3497.1	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
03:00	04:40	1.67	3497.1	3535.3	Reaming / Hole opener / Unc	Continue hole openning drilling.
04:40	05:25	0.75	3535.3	3535.3	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
05:25	07:20	1.92	3535.3	3573.5	Reaming / Hole opener / Unc	Continue hole openning drilling.
07:20	07:50	0.50	3573.5	3573.5	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
07:50	10:24	2.57	3573.5	3612.0	Reaming / Hole opener / Unc	Continue hole openning drilling.
10:24	11:00	0.60	3612.0	3610.0	Circulate / Condition mud	Working up drill pipe, circulating to clean the hole. Survey.
11:00	12:35	1.58	3612.0	3650.0	Reaming / Hole opener / Unc	Continue hole openning drilling. TD @ 3650m MD
12:35	19:00	6.42	3650.0	3620.0	Circulate / Condition mud	Circulate bottoms up, clean the hole. Some pack off experienced, contiue for a wiper trip.
19:00	23:00	4.00	3620.0	2786.0	PU / LD BHA / Tripping	POOH to the casing shoe.
23:00	00:00	1.00	2786.0	3000.0	PU / LD BHA / Tripping	Run in hole to bottom.
20-Jul-2009						
00:00	05:00	5.00	3000.0	3640.0	PU / LD BHA / Tripping	Continue running in hole.
05:00	10:00	5.00	3640.0	3640.0	Circulate / Condition mud	Circulating at bottom.
10:00	22:00	12.00	3640.0	0.0	PU / LD BHA / Tripping	POOH. Tools ART.

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Time Description Report

21-Jul-2009
12:41AM

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 4

Date/Time	Depth		Description
13-Jul-2009 12:00AM	2000.0	m	Wiper trip, POOH for 3rd wireline run.
13-Jul-2009 3:00PM	3000.0	m	D&M Personnel arrrive to the rig. Operation on going, wiper trip previous the 3rd wireline run.
14-Jul-2009 2:00PM	0.0	m	Initialized Telescope E2314
15-Jul-2009 12:30PM	0.0	m	Bit below rotary table.
15-Jul-2009 7:20PM	30.0	m	Successful SHT, MWD Stat: 4, SPM:120, GPM:700, SPPA:381.98, TRPM:2148, SPT1: 18.1, SPT2:7.08, DNI Temp:29 celsius.
16-Jul-2009 4:20AM	2800.0	m	Start opening hole from this depth.
16-Jul-2009 10:30AM	2886.1	m	Until now, high stick and slip existed throughout our run(constantly around 270). Asked the client to mitigate this and they agreed to apply less weight on bit.
16-Jul-2009 11:59PM	3020.0	m	Drilled until 3020m.
17-Jul-2009 12:00AM	3020.0	m	Continue hole opening drilling.
17-Jul-2009 11:59PM	3201.0	m	Opened hole until 3201m.
18-Jul-2009 12:00AM	3201.0	m	Continue hole openning drilling.
18-Jul-2009 4:19AM	3235.0	m	High stick and slip observed throughout this run, parameters were changed to reduce this but reducing the WOB severly reduced the ROP. It was agreed with the drilling engineer to pick up the drill string once in a while to release the torque.
18-Jul-2009 11:55PM	3459.2	m	Opened hole until 3459.2m.
19-Jul-2009 12:45AM	3459.2	m	Continue hole openning drilling.
19-Jul-2009 12:35PM	3650.0	m	TD @ 3650m. Circulating.
19-Jul-2009 7:00PM	2786.0	m	POOH to the casing shoe.
19-Jul-2009 11:00PM	2786.0	m	Start running in hole to the bottom.
20-Jul-2009 10:00AM	3640.0	m	It was decided to rack back our BHA until wireline operation is finished, since the vessel rented for VSP is almost expiring its contract due date. Also, it was started to POOH at this time.
20-Jul-2009 10:00PM	0.0	m	Tools above rotary table.

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Drilling Parameters Repor

21-Jul-200
12:41:17A

Job Number: 09JAP0002 **Company:** JAPAN AGENCY FOR MARINE-EARTH SCIENCE & TECHNOLOGY **Rig Name:** Chikyu
Company Rep: T. Abe & I. Sawada **Location:** MEA-CHG-JAP **Well Name:** NT2-11B
Run Number: 4

	19-Jul-2009 1:00 AM	18-Jul-2009 6:43 PM	18-Jul-2009 3:08 PM	18-Jul-2009 4:25 AM	18-Jul-2009 1:37 AM	17-Jul-2009 3:31 PM	16-Jul-2009 9:17 PM
Field Engineer	Yu Ito	William Barragan	William Barragan	Yu Ito	Yu Ito	William Barragan	William Barragan
Depth	3,464.00 m	3,372.50 m	3,336.17 m	3,236.32 m	3,215.05 m	3,114.50 m	2,979.46 m
Avg ROP							
On Bottom ROP							
Flow Rate	1,100.00 galUS/min	1,150.00 galUS/min	1,100.00 galUS/min	1,100.00 galUS/min	950.00 galUS/min	950.00 galUS/min	950.00 galUS/min
Turbine RPM	3,203 rpm	3,242 rpm	3,242 rpm	3,477 rpm	3,164 rpm	3,125 rpm	3,125 rpm
Surface RPM	105 rpm	107 rpm	140 rpm	130 rpm	140 rpm	120 rpm	120 rpm
WOB Rotating	4,000.00 kg	5,000.00 kg	7,500.00 kg	5,000.00 kg	1,500.00 kg	10,000.00 kg	4,500.00 kg
WOB Sliding							
DH WOB	2,700.00 kg	4,300.00 kg	5,900.00 kg	3,400.00 kg	1,700.00 kg	3,400.00 kg	1,500.00 kg
Surface Torque	12.00 kN.m	12.00 kN.m	15.00 kN.m	21.00 kN.m	12.00 kN.m	10.00 kN.m	8.00 kN.m
DH Torque	2.56 kN.m	5.40 kN.m	5.20 kN.m	7.30 kN.m	3.00 kN.m	.40 kN.m	.90 kN.m
Hookload	215,700 kg	218,800 kg	217,210 kg	206,400 kg	207,700 kg	220,000 kg	220,000 kg
PickUp Weight							
Slack Weight	213,000.00 kg			203,000.00 kg	206,000.00 kg		
Friction							
SPP On Bottom	2,965.00 psi	2,962.00 psi	2,916.00 psi	3,037.00 psi	2,717.00 psi	2,644.00 psi	2,518.00 psi
SPP Off Bottom							
Diff Pressure							
BH Temperature	18.82 degC	17.25 degC	17.25 degC	17.25 degC	17.25 degC	16.47 degC	15.69 degC
Total Shocks (k)							
Max Shock Level							
Max Shock Duration							
Torsional Vib							
Lateral Vib							
Axial Vib							
CRPM	88 rpm	103 rpm	118 rpm	131 rpm	106 rpm	135 rpm	108 rpm
Stick/Slip	237	264	240	282	225	270	168
Formation	Mudstone	Mudstone	Mudstone	Mudstone	Mudstone	Mudstone	Mudstone
Signal Strength	8.08 psi	9.16 psi	8.95 psi	10.50 psi	8.66 psi	9.14 psi	7.15 psi
Percent Signal Conf	93 %	88 %	90 %	96 %	89 %	92 %	98 %

	16-Jul-2009 9:38 AM	16-Jul-2009 6:46 AM
Field Engineer	Yu Ito	Yu Ito
Depth	2,871.27 m	2,825.60 m
Avg ROP		
On Bottom ROP		
Flow Rate	950.00 galUS/min	950.00 galUS/min
Turbine RPM	3,085 rpm	3,125 rpm
Surface RPM	100 rpm	100 rpm
WOB Rotating	3,700.00 kg	4,000.00 kg
WOB Sliding		
DH WOB		
Surface Torque	10.00 kN.m	12.00 kN.m
DH Torque		
Hookload	202,000 kg	202,000 kg
PickUp Weight		
Slack Weight	198,000.00 kg	198,000.00 kg
Friction		
SPP On Bottom	2,383.00 psi	2,415.00 psi
SPP Off Bottom		
Diff Pressure		
BH Temperature	15.69 degC	15.69 degC
Total Shocks (k)		
Max Shock Level		
Max Shock Duration		
Torsional Vib		
Lateral Vib		
Axial Vib		
CRPM	31 rpm	81 rpm
Stick/Slip	280	213
Formation	Mudstone	Mudstone
Signal Strength	10.30 psi	10.40 psi
Percent Signal Conf	94 %	92 %

6. EDI REPORT

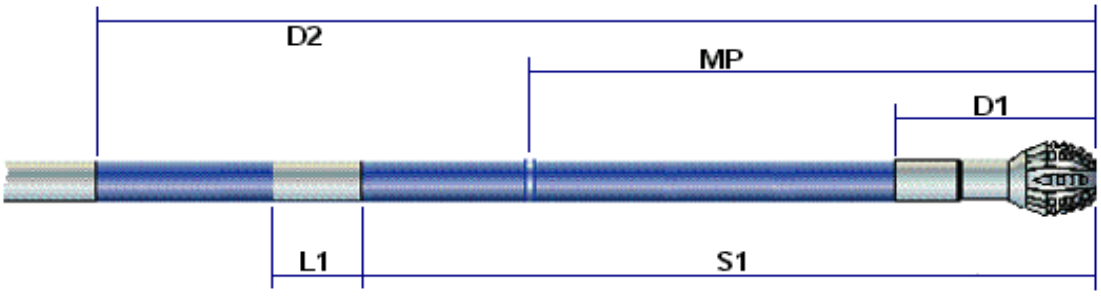
Schlumberger

Estimated Drillstring Magnetic Interference Report

Client:	JAMSTEC	**Field:**	Nankai-Kumano
Rig:	Chikyu	**Well:**	NT2-11B
BHA:	Run 1 - 36" and 26"	**Description:**	Manual Input
Engineer:	Mario Jakulj	**Date:**	14-May-09

Grid Azimuth:	265.79	deg	**Magnetic Azimuth:**	270	deg
Declination:	-6.587	deg	**Grid Convergence:**	-2.372	deg
Inclination:	3	deg	**Dip Angle:**	46.94	deg
Field Strength:	45999	nT	**BHA Type:**	Three	
BHA Size:	Large		**L1:**	1.31	m
D1:	11.43	m	**S1:**	26.29	m
MP:	21.91	m			
D2:	36.95	m			
Interfering Field:	882	nT	**FAC Variation |B|:**	647	nT
			FAC Variation Dip:	0.74	deg

Azimuth Error Calculation Result: 0.08 **deg** **(2 Sigma)**



v5.00

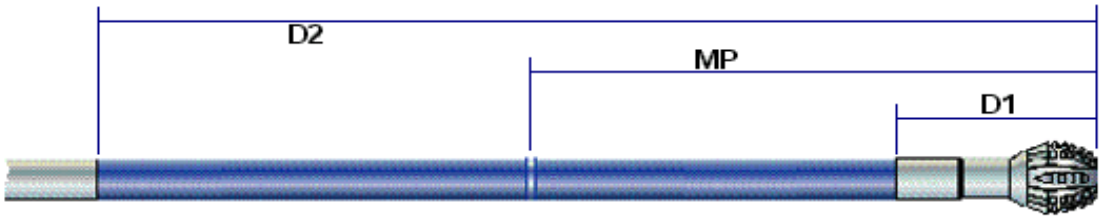
Schlumberger

Estimated Drillstring Magnetic Interference Report

Client:	JAMSTEC	**Field:**	Nankai-Kumano
Rig:	Chikyu	**Well:**	NT2-11B
BHA:	Run1-26"	**Description:**	Manual Input
Engineer:	Yu Ito	**Date:**	23-May-09

Grid Azimuth:	266 deg	**Magnetic Azimuth:**	273.44 deg
Declination:	-6.59 deg	**Grid Convergence:**	0.85 deg
Inclination:	3 deg	**Dip Angle:**	46.94
Field Strength:	45999 nT	**BHA Type:**	One
BHA Size:	Large		
D1:	10.6 m		
MP:	22.15 m		
D2:	26.53 m		
Interfering Field:	3849 nT	**FAC Variation |B|:**	2887 nT
		FAC Variation Dip:	3.07 deg

Azimuth Error Calculation Result: 0.37 **deg** **(2 Sigma)**



v4.00

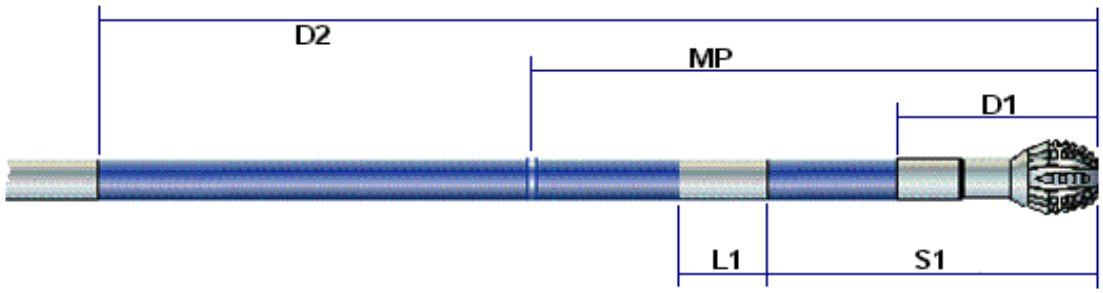
Schlumberger

Estimated Drillstring Magnetic Interference Report

Client:	JAMSTEC	**Field:**	Nankai Kumano
Rig:	Chikyu	**Well:**	NT2-11B
BHA:	3	**Description:**	Manual Input
Engineer:	William Barragan	**Date:**	June 25th, 2009

Grid Azimuth:	90 deg	**Magnetic Azimuth:**	89.15 deg
Declination:	-6.587 deg	**Grid Convergence:**	-7.434 deg
Inclination:	0 deg	**Dip Angle:**	46.94 deg
Field Strength:	45999 nT	**BHA Type:**	Two
BHA Size:	Large	**L1:**	2.77 m
D1:	0.28 m	**S1:**	4.47 m
MP:	14.86 m		
D2:	28.58 m		
Interfering Field:	428 nT	**FAC Variation |B|:**	314 nT
		FAC Variation Dip:	0.36 deg

Azimuth Error Calculation Result: 0 **deg** **(2 Sigma)**



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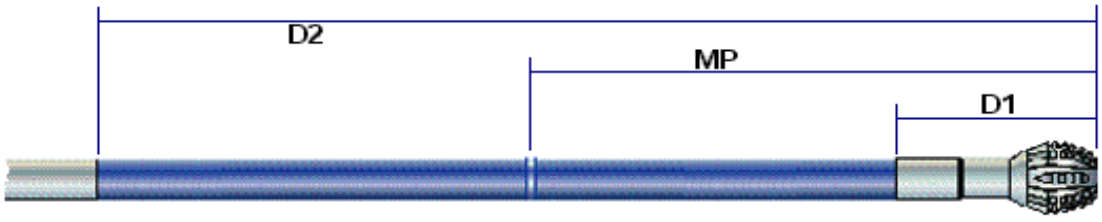
Schlumberger

Estimated Drillstring Magnetic Interference Report

Client:	JAMSTEC	**Field:**	Nankai-Kumano
Rig:	Chikyu	**Well:**	NT2-11B
BHA:	4	**Description:**	Manual Input
Engineer:	Barragan/Ito	**Date:**	15/7/2009

Grid Azimuth:	90 deg	**Magnetic Azimuth:**	97.44 deg
Declination:	-6.59 deg	**Grid Convergence:**	0.85 deg
Inclination:	3 deg	**Dip Angle:**	46.95
Field Strength:	45997 nT	**BHA Type:**	One
BHA Size:	Large		
D1:	4.21 m		
MP:	9.73 m		
D2:	25.6 m		
Interfering Field:	435 nT	**FAC Variation |B|:**	316 nT
		FAC Variation Dip:	0.37 deg

Azimuth Error Calculation Result: 0.04 **deg** **(2 Sigma)**



v4.00

7. SENSORS CALIBRATION & DEPTH CONTROL BOOK

Depth tracking performed as per Schlumberger Depth Control Standard document

D&M-SLB-STD016

SLB D&M SQ S016
Revision 1.0 - 25 Jun 08

Schlumberger

CHS Pre-Job Depth Control Report

Job Information

Date	18-May-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Run #	1

Hole Section Information

Hole Size	36" Jetting and 26" hole section
Tool Size	8.25in
Services	GR, D&I and APWD
BHA Type	Straight Motor
Inclination	0
Azimuth	0

Expected Casing Shoe	36" - 2143mbrt

Planned TD / Casing Point	2800mbrt

Zones of Interest (As per Geologist Advice)
2565mbrt - possible hydrate zone

Acquisition System

Signal Processor	ASAP-AA
IDEAL Version	ideal14_0c_12
HSPM Version	hspm14_0c_02

Depth Control System

Depth Tracking System	Geolograph
Depth Reference	Drillers depth
Depth Measurement Source	D&M

Depth Calibration Information

Standard Block Height Calibration Equipment is DWC	
DWC Serial No.	n/a
Date of Last Drill Line Slip & Cut	
Date of Last Calibration	18-May-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	0	328
2	100	328

Exemption Request Reference

Fill out an exemption request on QUEST and give its reference in this section if any of the following is true:
1. Depth reference is not Driller's Pipe Tally
2. Depth measurement data is obtained from third party for any reason.

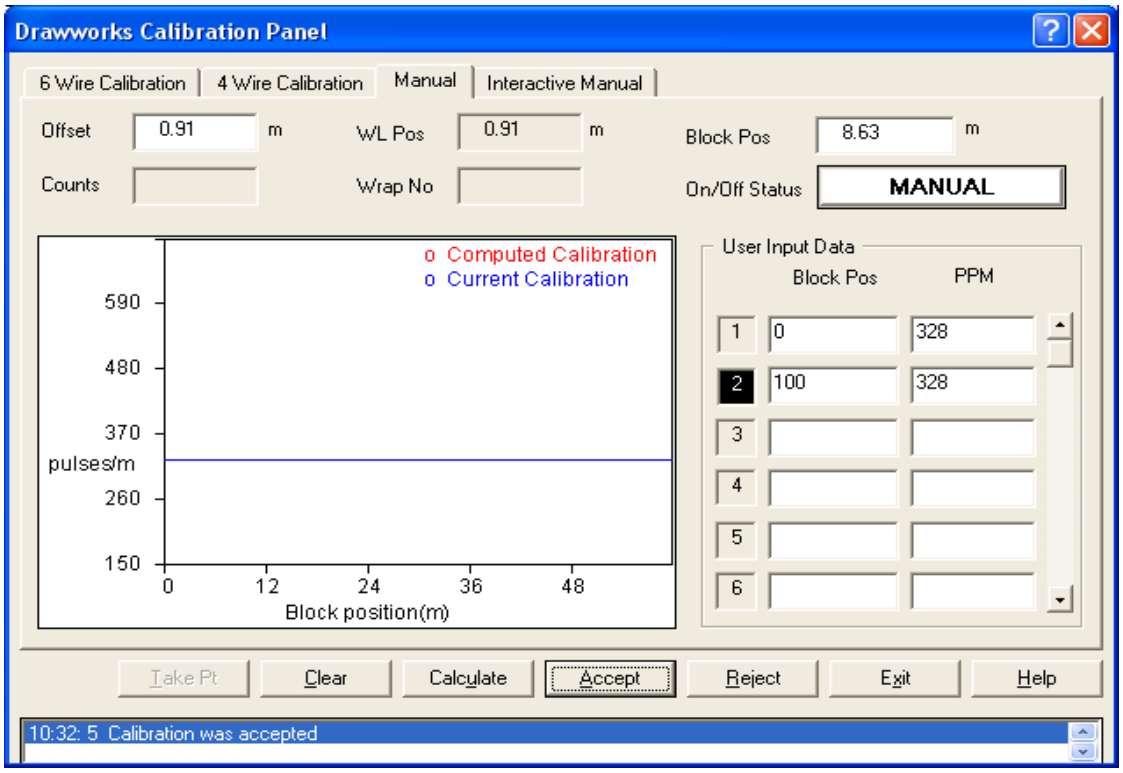
Cell Manager Mario Jakulj _____ 5/18/2009
Signature Date

Document Owner: D&M CHS SQC

Schlumberger

Client: JAMSTEC
Rig: Chikyu
Well: NT2-11B
Job Number: 09JAP0002
Remark:

Date/Time: 18-May-2008 / 08:00
Run: 1



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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	18-May-09	**BHA no**	1
Client	Jamstec	**Date out**	23-May-09	**D&M Run no**	1
Hole Section	36-26 inch	**Start Depth**	2089.30	**D&M Tools**	ARC8+TeleScope8
BHA Length	172.933 m	**End Depth**	2142.69	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	Mario Jakulj

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.559	38.240	9.559	182.492	182.492									
D	9.567		19.126	192.059	192.059									
T	9.572		28.698	201.631	201.631									
1	9.542		38.240	211.173	211.173									
S	9.567	38.178	47.807	220.740	220.740									
D	9.536		57.343	230.276	230.276									
T	9.520		66.863	239.796	239.796									
2	9.555		76.418	249.351	249.351									
S	9.557	38.254	85.975	258.908	258.908									
D	9.574		95.549	268.482	268.482									
T	9.563		105.112	278.045	278.045									
3	9.560		114.672	287.605	287.605									
S	9.567	38.227	124.239	297.172	297.172									
D	9.545		133.784	306.717	306.717									
T	9.572		143.356	316.289	316.289									
4	9.543		152.899	325.832	325.832									
S	9.532	38.232	162.431	335.364	335.364									
D	9.565		171.996	344.929	344.929									
T	9.565		181.561	354.494	354.494									
5	9.570		191.131	364.064	364.064									
S	9.565	38.222	200.696	373.629	373.629									
D	9.530		210.226	383.159	383.159									
T	9.564		219.790	392.723	392.723									
6	9.563		229.353	402.286	402.286									
S	9.555	38.221	238.908	411.841	411.841									
D	9.572		248.480	421.413	421.413									
T	9.554		258.034	430.967	430.967									
7	9.540		267.574	440.507	440.507									
S	9.555	38.236	277.129	450.062	450.062									
D	9.576		286.705	459.638	459.638									
T	9.555		296.260	469.193	469.193									
8	9.550		305.810	478.743	478.743									
S	9.560	38.229	315.370	488.303	488.303									
D	9.567		324.937	497.870	497.870									
T	9.548		334.485	507.418	507.418									
9	9.554		344.039	516.972	516.972									
S	9.570	38.280	353.609	526.542	526.542									
D	9.580		363.189	536.122	536.122									
T	9.573		372.762	545.695	545.695									
10	9.557		382.319	555.252	555.252									
S	9.573	38.222	391.892	564.825	564.825									
D	9.550		401.442	574.375	574.375									
T	9.551		410.993	583.926	583.926									
11	9.548		420.541	593.474	593.474									
S	9.554	38.193	430.095	603.028	603.028									
D	9.558		439.653	612.586	612.586									
T	9.536		449.189	622.122	622.122									
12	9.545		458.734	631.667	631.667									
S	9.575	38.266	468.309	641.242	641.242									
D	9.563		477.872	650.805	650.805									
T	9.573		487.445	660.378	660.378									
13	9.555		497.000	669.933	669.933									
S	9.559	38.221	506.559	679.492	679.492									
D	9.544		516.103	689.036	689.036									
T	9.558		525.661	698.594	698.594									
14	9.560		535.221	708.154	708.154									
S	9.573	38.239	544.794	717.727	717.727									
D	9.560		554.354	727.287	727.287									
T	9.560		563.914	736.847	736.847									
15	9.546		573.460	746.393	746.393									

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CHS Depth Tracking Data Sheet

Well /Field			NT2-11B/Nankai-Kumano		**Date in**		18-May-09			**BHA no**		1		
Client			Jamstec		**Date out**		23-May-09			**D&M Run no**		1		
Hole Section			36-26 inch		**Start Depth**		2089.30			**D&M Tools**		ARC8+TeleScope8		
BHA Length			172.933 m		**End Depth**		2142.69			**BHA Type**		Straight Motor		
Stick-up			0.000 m		**Length Unit**		Meters			**Cell Manager**		Mario Jakulj		

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.558	38.203	583.018	755.951	755.951									
D	9.560		592.578	765.511	765.511									
T	9.545		602.123	775.056	775.056									
16	9.540		611.663	784.596	784.596									
S	9.565	38.244	621.228	794.161	794.161									
D	9.555		630.783	803.716	803.716									
T	9.564		640.347	813.280	813.280									
17	9.560		649.907	822.840	822.840									
S	9.559	38.246	659.466	832.399	832.399									
D	9.546		669.012	841.945	841.945									
T	9.577		678.589	851.522	851.522									
18	9.564		688.153	861.086	861.086									
S	9.546	38.206	697.699	870.632	870.632									
D	9.566		707.265	880.198	880.198									
T	9.547		716.812	889.745	889.745									
19	9.547		726.359	899.292	899.292									
S	9.562	38.229	735.921	908.854	908.854									
D	9.567		745.488	918.421	918.421									
T	9.544		755.032	927.965	927.965									
20	9.556		764.588	937.521	937.521									
S	9.541	38.201	774.129	947.062	947.062									
D	9.576		783.705	956.638	956.638									
T	9.533		793.238	966.171	966.171									
21	9.551		802.789	975.722	975.722									
S	9.572	38.251	812.361	985.294	985.294									
D	9.570		821.931	994.864	994.864									
T	9.564		831.495	1004.428	1004.428									
22	9.545		841.040	1013.973	1013.973									
S	9.542	38.214	850.582	1023.515	1023.515									
D	9.549		860.131	1033.064	1033.064									
T	9.563		869.694	1042.627	1042.627									
23	9.560		879.254	1052.187	1052.187									
S	9.579	38.213	888.833	1061.766	1061.766									
D	9.550		898.383	1071.316	1071.316									
T	9.552		907.935	1080.868	1080.868									
24	9.532		917.467	1090.400	1090.400									
S	9.553	38.182	927.020	1099.953	1099.953									
D	9.534		936.554	1109.487	1109.487									
T	9.537		946.091	1119.024	1119.024									
25	9.558		955.649	1128.582	1128.582									
S	9.576	38.249	965.225	1138.158	1138.158									
D	9.568		974.793	1147.726	1147.726									
T	9.562		984.355	1157.288	1157.288									
26	9.543		993.898	1166.831	1166.831									
S	9.556	38.234	1003.454	1176.387	1176.387									
D	9.555		1013.009	1185.942	1185.942									
T	9.574		1022.583	1195.516	1195.516									
27	9.549		1032.132	1205.065	1205.065									
S	9.534	38.168	1041.666	1214.599	1214.599									
D	9.538		1051.204	1224.137	1224.137									
T	9.539		1060.743	1233.676	1233.676									
28	9.557		1070.300	1243.233	1243.233									
S	9.542	38.153	1079.842	1252.775	1252.775									
D	9.521		1089.363	1262.296	1262.296									
T	9.514		1098.877	1271.810	1271.810									
29	9.576		1108.453	1281.386	1281.386									
S	9.577	38.173	1118.030	1290.963	1290.963									
D	9.535		1127.565	1300.498	1300.498									
T	9.514		1137.079	1310.012	1310.012									
30	9.547		1146.626	1319.559	1319.559									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	18-May-09	**BHA no**	1
Client	Jamstec	**Date out**	23-May-09	**D&M Run no**	1
Hole Section	36-26 inch	**Start Depth**	2089.30	**D&M Tools**	ARC8+TeleScope8
BHA Length	172.933 m	**End Depth**	2142.69	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	Mario Jakulj

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.547	38.183	1156.173	1329.106	1329.106									
D	9.552		1165.725	1338.658	1338.658									
T	9.541		1175.266	1348.199	1348.199									
31	9.543		1184.809	1357.742	1357.742									
S	9.538	38.184	1194.347	1367.280	1367.280									
D	9.541		1203.888	1376.821	1376.821									
T	9.547		1213.435	1386.368	1386.368									
32	9.558		1222.993	1395.926	1395.926									
S	9.552	38.217	1232.545	1405.478	1405.478									
D	9.564		1242.109	1415.042	1415.042									
T	9.560		1251.669	1424.602	1424.602									
33	9.541		1261.210	1434.143	1434.143									
S	9.538	38.188	1270.748	1443.681	1443.681									
D	9.559		1280.307	1453.240	1453.240									
T	9.547		1289.854	1462.787	1462.787									
34	9.544		1299.398	1472.331	1472.331									
S	9.547	38.148	1308.945	1481.878	1481.878									
D	9.538		1318.483	1491.416	1491.416									
T	9.529		1328.012	1500.945	1500.945									
35	9.534		1337.546	1510.479	1510.479									
S	9.550	38.142	1347.096	1520.029	1520.029									
D	9.514		1356.610	1529.543	1529.543									
T	9.548		1366.158	1539.091	1539.091									
36	9.530		1375.688	1548.621	1548.621									
S	9.561	38.257	1385.249	1558.182	1558.182									
D	9.581		1394.830	1567.763	1567.763									
T	9.567		1404.397	1577.330	1577.330									
37	9.548		1413.945	1586.878	1586.878									
S	9.557	38.234	1423.502	1596.435	1596.435									
D	9.566		1433.068	1606.001	1606.001									
T	9.554		1442.622	1615.555	1615.555									
38	9.557		1452.179	1625.112	1625.112									
S	9.545	38.246	1461.724	1634.657	1634.657									
D	9.561		1471.285	1644.218	1644.218									
T	9.576		1480.861	1653.794	1653.794									
39	9.564		1490.425	1663.358	1663.358									
S	9.578	38.046	1500.003	1672.936	1672.936									
D	9.561		1509.564	1682.497	1682.497									
T	9.456		1519.020	1691.953	1691.953									
40	9.451		1528.471	1701.404	1701.404									
S	9.562	38.190	1538.033	1710.966	1710.966									
D	9.541		1547.574	1720.507	1720.507									
T	9.515		1557.089	1730.022	1730.022									
41	9.572		1566.661	1739.594	1739.594									
S	9.566	38.109	1576.227	1749.160	1749.160									
D	9.424		1585.651	1758.584	1758.584									
T	9.553		1595.204	1768.137	1768.137									
42	9.566		1604.770	1777.703	1777.703									
S	9.557	38.224	1614.327	1787.260	1787.260									
D	9.561		1623.888	1796.821	1796.821									
T	9.544		1633.432	1806.365	1806.365									
43	9.562		1642.994	1815.927	1815.927									
S	9.571	38.243	1652.565	1825.498	1825.498									
D	9.551		1662.116	1835.049	1835.049									
T	9.560		1671.676	1844.609	1844.609									
44	9.561		1681.237	1854.170	1854.170									
S	9.550	38.229	1690.787	1863.720	1863.720									
D	9.558		1700.345	1873.278	1873.278									
T	9.575		1709.920	1882.853	1882.853									
45	9.546		1719.466	1892.399	1892.399									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	18-May-09	**BHA no**	1
Client	Jamstec	**Date out**	23-May-09	**D&M Run no**	1
Hole Section	36-26 inch	**Start Depth**	2089.30	**D&M Tools**	ARC8+TeleScope8
BHA Length	172.933 m	**End Depth**	2142.69	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	Mario Jakulj

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.557	38.237	1729.023	1901.956	1901.956									
D	9.569		1738.592	1911.525	1911.525									
T	9.549		1748.141	1921.074	1921.074									
46	9.562		1757.703	1930.636	1930.636									
S	9.558	38.210	1767.261	1940.194	1940.194									
D	9.547		1776.808	1949.741	1949.741									
T	9.543		1786.351	1959.284	1959.284									
47	9.562		1795.913	1968.846	1968.846									
S	9.551	38.223	1805.464	1978.397	1978.397									
D	9.554		1815.018	1987.951	1987.951									
T	9.553		1824.571	1997.504	1997.504									
48	9.565		1834.136	2007.069	2007.069									
S	9.572	38.243	1843.708	2016.641	2016.641									
D	9.561		1853.269	2026.202	2026.202									
T	9.551		1862.820	2035.753	2035.753									
49	9.559		1872.379	2045.312	2045.312	2045.31	0.00		8:55 AM	19-May-09	0.00		11.60	Set the depth at pipe joint.
S	9.569	38.207	1881.948	2054.881	2054.881									
D	9.552		1891.500	2064.433	2064.433									
T	9.549		1901.049	2073.982	2073.982									
50	9.537		1910.586	2083.519	2083.519	2083.30	0.22		11:13 AM		16.52		11.60	
S	9.547	38.246	1920.133	2093.066	2093.066									
D	9.566		1929.699	2102.632	2102.632									
T	9.569		1939.268	2112.201	2112.201									
51	9.564		1948.832	2121.765	2121.765	2121.61	0.15		2:25 PM		11.97		11.60	
S	9.550	38.224	1958.382	2131.315	2131.315									
D	9.551		1967.933	2140.866	2140.866									TD@2142.7m
T	9.564		1977.497	2150.430	2150.430									
52	9.559		1987.056	2159.989	2159.989									

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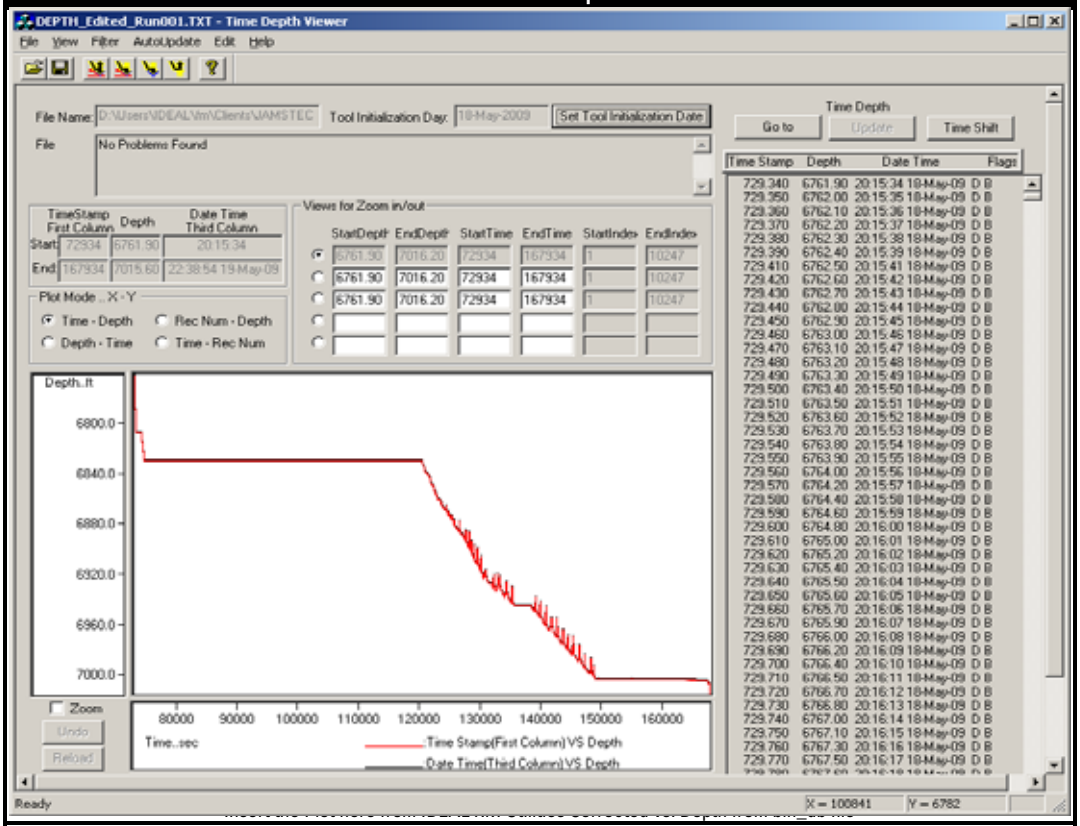
CHS Post-Job Depth Control Report

Job Information	
Date	18-May-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Well Profile	Vertical well
Run #	1

Hole Section Information	
Hole Size	36" Jetting and 26" hole section
Tool Size	8.25in
Services	GR, D&I and APWD
BHA Type	Straight Motor
Inclination	0.56
Azimuth	54.31
Start Depth	2082
End Depth	2142.7

IDEAL DTM Corrected Depth vs. Time Plot



Depth Control Reference	Driller's depth	**RT vs. RM Log Discrepancy before Time Shift**	no
Time Shift in RM Processing	no	**RT vs. RM Log Discrepancy after Time Shift**	no

Annotations

This section provides details of editing performed on the raw depth files and time shifting performed on the tool dump files.

RAW DEPTH VS. TIME FILES		
Run no.	Edited Interval	Remarks
1	na	No edited interval in this run. ARC RM data delivered to clients.

TOOL DUMP FILE		
Run no.	Edited Interval	Remarks
1	na	ARC RM data delivered to clients.

Cell Manager: Yu Ito

Engineer Performed Editing: Yu Ito

Depth Acquisition Equipment Details

NOTE:

The Precision Depth Assembly (PDA) is the standard depth system for Drilling & Measurements. The purpose of the PDA is to make an accurate determination of the traveling block altitude on fixed rigs.
The components of the PDA are:

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIOMETER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

JOB RECORD FOR PRECISION DEPTH ASSEMBLY (PDA)		
Equipment Type	Serial no.	Remarks
CLT	2007213008	Sensor working fine.
Geolograph	na	Sensor working fine.

As per requirements of the D&M Depth Control Standard, Block Height calibrations are to be carried out at the beginning of the job and after every slip-and-cut operation.

DES CALIBRATION HISTORY			
Calibration Date	**Type**	**Calibration Reason**	**Date**
5/18/2009	Manual	Start Job	18-May-09

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CHS Pre-Job Depth Control Report

Job Information

Date	23-May-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Run #	2

Hole Section Information

Hole Size	26" Section
Tool Size	8.25in
Services	GR, D&I and APWD
BHA Type	Straight Motor
Inclination	0.56
Azimuth	54.31

Expected Casing Shoe	36" - 2143mbrt

Planned TD / Casing Point	2800mbrt

Zones of Interest (As per Geologist Advice)
2565mbrt - possible hydrate zone

Acquisition System

Signal Processor	ASAP-AA
IDEAL Version	ideal14_0c_12
HSPM Version	hspm14_0c_02

Depth Control System

Depth Tracking System	Geolograph
Depth Reference	Drillers depth
Depth Measurement Source	D&M

Depth Calibration Information

Standard Block Height Calibration Equipment is DWC	
DWC Serial No.	n/a
Date of Last Drill Line Slip & Cut	
Date of Last Calibration	18-May-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	0	328
2	100	328

Exemption Request Reference

Fill out an exemption request on QUEST and give its reference in this section if any of the following is true:
1. Depth reference is not Driller's Pipe Tally
2. Depth measurement data is obtained from third party for any reason.

Cell Manager Yu Ito _____ 5/23/2009
Signature Date

Document Owner: D&M CHS SQC

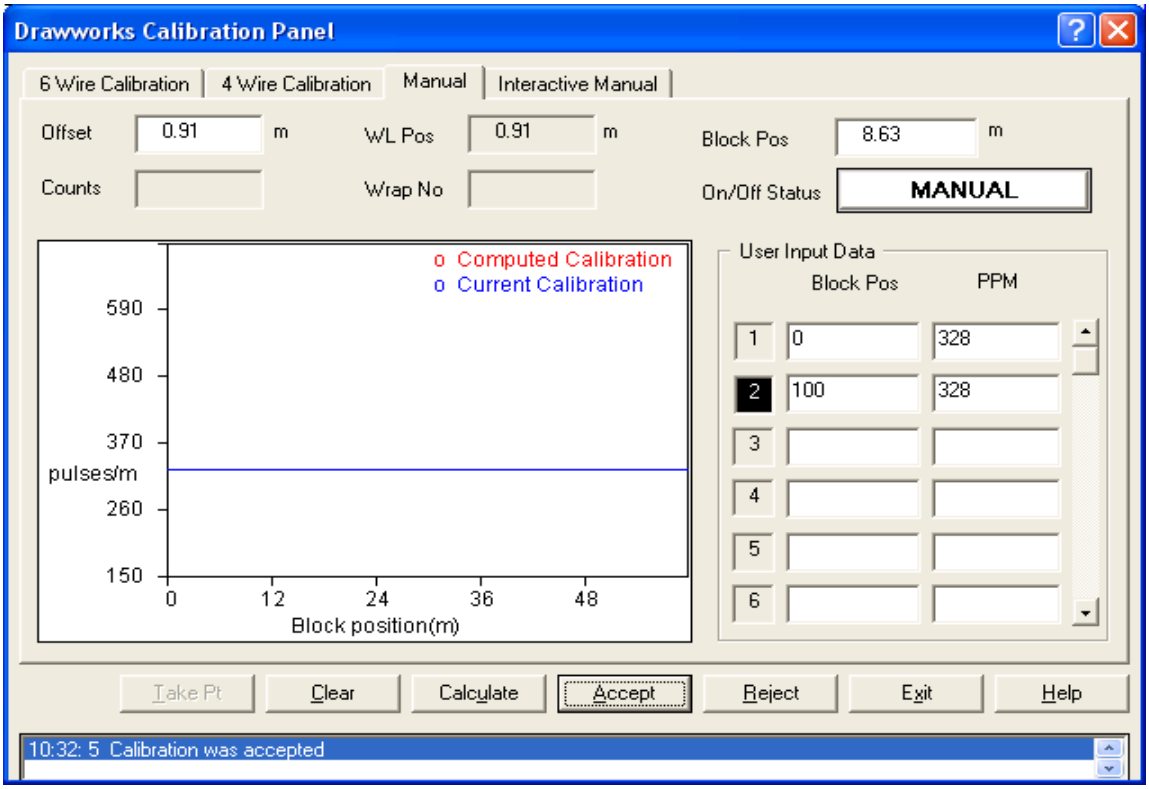
Schlumberger

Client: JAMSTEC
Rig: Chikyu
Remark:

Well: NT2-11B
Job Number: 09JAP0002

Date/Time: 18-May-2009 / 08:00

Run: 2



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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	23-May-09	**BHA no**	2
Client	Jamstec	**Date out**	25-May-09	**D&M Run no**	2
Hole Section	26 inch	**Start Depth**	2142.69	**D&M Tools**	CDR8+TeleScope8
BHA Length	171.237 m	**End Depth**	2794.00	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	ZhangCheng

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.559	38.240	9.559	180.796	180.796									
D	9.567		19.126	190.363	190.363									
T	9.572		28.698	199.935	199.935									
1	9.542		38.240	209.477	209.477									
S	9.567	38.178	47.807	219.044	219.044									
D	9.536		57.343	228.580	228.580									
T	9.520		66.863	238.100	238.100									
2	9.555		76.418	247.655	247.655									
S	9.557	38.254	85.975	257.212	257.212									
D	9.574		95.549	266.786	266.786									
T	9.563		105.112	276.349	276.349									
3	9.560		114.672	285.909	285.909									
S	9.567	38.227	124.239	295.476	295.476									
D	9.545		133.784	305.021	305.021									
T	9.572		143.356	314.593	314.593									
4	9.543		152.899	324.136	324.136									
S	9.532	38.232	162.431	333.668	333.668									
D	9.565		171.996	343.233	343.233									
T	9.565		181.561	352.798	352.798									
5	9.570		191.131	362.368	362.368									
S	9.565	38.222	200.696	371.933	371.933									
D	9.530		210.226	381.463	381.463									
T	9.564		219.790	391.027	391.027									
6	9.563		229.353	400.590	400.590									
S	9.555	38.221	238.908	410.145	410.145									
D	9.572		248.480	419.717	419.717									
T	9.554		258.034	429.271	429.271									
7	9.540		267.574	438.811	438.811									
S	9.555	38.236	277.129	448.366	448.366									
D	9.576		286.705	457.942	457.942									
T	9.555		296.260	467.497	467.497									
8	9.550		305.810	477.047	477.047									
S	9.560	38.229	315.370	486.607	486.607									
D	9.567		324.937	496.174	496.174									
T	9.548		334.485	505.722	505.722									
9	9.554		344.039	515.276	515.276									
S	9.570	38.280	353.609	524.846	524.846									
D	9.580		363.189	534.426	534.426									
T	9.573		372.762	543.999	543.999									
10	9.557		382.319	553.556	553.556									
S	9.573	38.222	391.892	563.129	563.129									
D	9.550		401.442	572.679	572.679									
T	9.551		410.993	582.230	582.230									
11	9.548		420.541	591.778	591.778									
S	9.554	38.193	430.095	601.332	601.332									
D	9.558		439.653	610.890	610.890									
T	9.536		449.189	620.426	620.426									
12	9.545		458.734	629.971	629.971									
S	9.575	38.266	468.309	639.546	639.546									
D	9.563		477.872	649.109	649.109									
T	9.573		487.445	658.682	658.682									
13	9.555		497.000	668.237	668.237									
S	9.559	38.221	506.559	677.796	677.796									
D	9.544		516.103	687.340	687.340									
T	9.558		525.661	696.898	696.898									
14	9.560		535.221	706.458	706.458									
S	9.573	38.239	544.794	716.031	716.031									
D	9.560		554.354	725.591	725.591									
T	9.560		563.914	735.151	735.151									
15	9.546		573.460	744.697	744.697									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	23-May-09	**BHA no**	2
Client	Jamstec	**Date out**	25-May-09	**D&M Run no**	2
Hole Section	26 inch	**Start Depth**	2142.69	**D&M Tools**	CDR8+TeleScope8
BHA Length	171.237 m	**End Depth**	2794.00	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	ZhangCheng

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.558	38.203	583.018	754.255	754.255									
D	9.560		592.578	763.815	763.815									
T	9.545		602.123	773.360	773.360									
16	9.540		611.663	782.900	782.900									
S	9.565	38.244	621.228	792.465	792.465									
D	9.555		630.783	802.020	802.020									
T	9.564		640.347	811.584	811.584									
17	9.560		649.907	821.144	821.144									
S	9.559	38.246	659.466	830.703	830.703									
D	9.546		669.012	840.249	840.249									
T	9.577		678.589	849.826	849.826									
18	9.564		688.153	859.390	859.390									
S	9.546	38.206	697.699	868.936	868.936									
D	9.566		707.265	878.502	878.502									
T	9.547		716.812	888.049	888.049									
19	9.547		726.359	897.596	897.596									
S	9.562	38.229	735.921	907.158	907.158									
D	9.567		745.488	916.725	916.725									
T	9.544		755.032	926.269	926.269									
20	9.556		764.588	935.825	935.825									
S	9.541	38.201	774.129	945.366	945.366									
D	9.576		783.705	954.942	954.942									
T	9.533		793.238	964.475	964.475									
21	9.551		802.789	974.026	974.026									
S	9.572	38.251	812.361	983.598	983.598									
D	9.570		821.931	993.168	993.168									
T	9.564		831.495	1002.732	1002.732									
22	9.545		841.040	1012.277	1012.277									
S	9.542	38.214	850.582	1021.819	1021.819									
D	9.549		860.131	1031.368	1031.368									
T	9.563		869.694	1040.931	1040.931									
23	9.560		879.254	1050.491	1050.491									
S	9.579	38.213	888.833	1060.070	1060.070									
D	9.550		898.383	1069.620	1069.620									
T	9.552		907.935	1079.172	1079.172									
24	9.532		917.467	1088.704	1088.704									
S	9.553	38.182	927.020	1098.257	1098.257									
D	9.534		936.554	1107.791	1107.791									
T	9.537		946.091	1117.328	1117.328									
25	9.558		955.649	1126.886	1126.886									
S	9.576	38.249	965.225	1136.462	1136.462									
D	9.568		974.793	1146.030	1146.030									
T	9.562		984.355	1155.592	1155.592									
26	9.543		993.898	1165.135	1165.135									
S	9.556	38.234	1003.454	1174.691	1174.691									
D	9.555		1013.009	1184.246	1184.246									
T	9.574		1022.583	1193.820	1193.820									
27	9.549		1032.132	1203.369	1203.369									
S	9.534	38.168	1041.666	1212.903	1212.903									
D	9.538		1051.204	1222.441	1222.441									
T	9.539		1060.743	1231.980	1231.980									
28	9.557		1070.300	1241.537	1241.537									
S	9.542	38.153	1079.842	1251.079	1251.079									
D	9.521		1089.363	1260.600	1260.600									
T	9.514		1098.877	1270.114	1270.114									
29	9.576		1108.453	1279.690	1279.690									
S	9.577	38.173	1118.030	1289.267	1289.267									
D	9.535		1127.565	1298.802	1298.802									
T	9.514		1137.079	1308.316	1308.316									
30	9.547		1146.626	1317.863	1317.863									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	23-May-09	**BHA no**	2
Client	Jamstec	**Date out**	25-May-09	**D&M Run no**	2
Hole Section	26 inch	**Start Depth**	2142.69	**D&M Tools**	CDR8+TeleScope8
BHA Length	171.237 m	**End Depth**	2794.00	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	ZhangCheng

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.547	38.183	1156.173	1327.410	1327.410									
D	9.552		1165.725	1336.962	1336.962									
T	9.541		1175.266	1346.503	1346.503									
31	9.543		1184.809	1356.046	1356.046									
S	9.538	38.184	1194.347	1365.584	1365.584									
D	9.541		1203.888	1375.125	1375.125									
T	9.547		1213.435	1384.672	1384.672									
32	9.558		1222.993	1394.230	1394.230									
S	9.552	38.217	1232.545	1403.782	1403.782									
D	9.564		1242.109	1413.346	1413.346									
T	9.560		1251.669	1422.906	1422.906									
33	9.541		1261.210	1432.447	1432.447									
S	9.538	38.188	1270.748	1441.985	1441.985									
D	9.559		1280.307	1451.544	1451.544									
T	9.547		1289.854	1461.091	1461.091									
34	9.544		1299.398	1470.635	1470.635									
S	9.547	38.148	1308.945	1480.182	1480.182									
D	9.538		1318.483	1489.720	1489.720									
T	9.529		1328.012	1499.249	1499.249									
35	9.534		1337.546	1508.783	1508.783									
S	9.550	38.142	1347.096	1518.333	1518.333									
D	9.514		1356.610	1527.847	1527.847									
T	9.548		1366.158	1537.395	1537.395									
36	9.530		1375.688	1546.925	1546.925									
S	9.561	38.257	1385.249	1556.486	1556.486									
D	9.581		1394.830	1566.067	1566.067									
T	9.567		1404.397	1575.634	1575.634									
37	9.548		1413.945	1585.182	1585.182									
S	9.557	38.234	1423.502	1594.739	1594.739									
D	9.566		1433.068	1604.305	1604.305									
T	9.554		1442.622	1613.859	1613.859									
38	9.557		1452.179	1623.416	1623.416									
S	9.545	38.246	1461.724	1632.961	1632.961									
D	9.561		1471.285	1642.522	1642.522									
T	9.576		1480.861	1652.098	1652.098									
39	9.564		1490.425	1661.662	1661.662									
S	9.578	38.046	1500.003	1671.240	1671.240									
D	9.561		1509.564	1680.801	1680.801									
T	9.456		1519.020	1690.257	1690.257									
40	9.451		1528.471	1699.708	1699.708									
S	9.562	38.190	1538.033	1709.270	1709.270									
D	9.541		1547.574	1718.811	1718.811									
T	9.515		1557.089	1728.326	1728.326									
41	9.572		1566.661	1737.898	1737.898									
S	9.566	38.109	1576.227	1747.464	1747.464									
D	9.424		1585.651	1756.888	1756.888									
T	9.553		1595.204	1766.441	1766.441									
42	9.566		1604.770	1776.007	1776.007									
S	9.557	38.224	1614.327	1785.564	1785.564									
D	9.561		1623.888	1795.125	1795.125									
T	9.544		1633.432	1804.669	1804.669									
43	9.562		1642.994	1814.231	1814.231									
S	9.571	38.243	1652.565	1823.802	1823.802									
D	9.551		1662.116	1833.353	1833.353									
T	9.560		1671.676	1842.913	1842.913									
44	9.561		1681.237	1852.474	1852.474									
S	9.550	38.229	1690.787	1862.024	1862.024									
D	9.558		1700.345	1871.582	1871.582									
T	9.575		1709.920	1881.157	1881.157									
45	9.546		1719.466	1890.703	1890.703									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	23-May-09	**BHA no**	2
Client	Jamstec	**Date out**	25-May-09	**D&M Run no**	2
Hole Section	26 inch	**Start Depth**	2142.69	**D&M Tools**	CDR8+TeleScope8
BHA Length	171.237 m	**End Depth**	2794.00	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	ZhangCheng

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.557	38.237	1729.023	1900.260	1900.260									
D	9.569		1738.592	1909.829	1909.829									
T	9.549		1748.141	1919.378	1919.378									
46	9.562		1757.703	1928.940	1928.940									
S	9.558	38.210	1767.261	1938.498	1938.498									
D	9.547		1776.808	1948.045	1948.045									
T	9.543		1786.351	1957.588	1957.588									
47	9.562		1795.913	1967.150	1967.150									
S	9.551	38.223	1805.464	1976.701	1976.701									
D	9.554		1815.018	1986.255	1986.255									
T	9.553		1824.571	1995.808	1995.808									
48	9.565		1834.136	2005.373	2005.373									
S	9.572	47.786	1843.708	2014.945	2014.945									
D	9.561		1853.269	2024.506	2024.506									
T	9.551		1862.820	2034.057	2034.057									
49	19.102		1881.922	2053.159	2053.159	2053.16	0.00		6:00 AM	24-May-09	0.00			Set depth here
S	9.569	38.207	1891.491	2062.728	2062.728									
D	9.552		1901.043	2072.280	2072.280									
T	9.549		1910.592	2081.829	2081.829									
50	9.537		1920.129	2091.366	2091.366									
S	9.547	38.246	1929.676	2100.913	2100.913									
D	9.566		1939.242	2110.479	2110.479									
T	9.569		1948.811	2120.048	2120.048									
51	9.564		1958.375	2129.612	2129.612									
S	9.550	38.224	1967.925	2139.162	2139.162									
D	9.551		1977.476	2148.713	2148.713									
T	9.564		1987.040	2158.277	2158.277									
52	9.559		1996.599	2167.836	2167.836									
S	9.552	38.220	2006.151	2177.388	2177.388									
D	9.550		2015.701	2186.938	2186.938									
T	9.558		2025.259	2196.496	2196.496									
53	9.560		2034.819	2206.056	2206.056	2205.95	0.11	BD+0.3	11:05 AM	24-May-09	30.06		8.00	
S	9.556	38.201	2044.375	2215.612	2215.612									
D	9.556		2053.931	2225.168	2225.168									
T	9.554		2063.485	2234.722	2234.722									
54	9.535		2073.020	2244.257	2244.257	2244.12	0.14		12:45 PM		22.90		8.00	
S	9.562	38.212	2082.582	2253.819	2253.819									
D	9.553		2092.135	2263.372	2263.372									
T	9.550		2101.685	2272.922	2272.922									
55	9.547		2111.232	2282.469	2282.469	2282.26	0.21		2:13 PM		26.00		8.00	
S	9.566	38.228	2120.798	2292.035	2292.035									
D	9.560		2130.358	2301.595	2301.595									
T	9.558		2139.916	2311.153	2311.153									
56	9.544		2149.460	2320.697	2320.697	2320.42	0.28		3:44 PM		25.16		8.00	
S	9.558	38.242	2159.018	2330.255	2330.255									
D	9.541		2168.559	2339.796	2339.796									
T	9.568		2178.127	2349.364	2349.364									
57	9.575		2187.702	2358.939	2358.939	2358.74	0.20		5:50 PM		18.25		8.00	
S	9.561	38.240	2197.263	2368.500	2368.500									
D	9.566		2206.829	2378.066	2378.066									
T	9.547		2216.376	2387.613	2387.613									
58	9.566		2225.942	2397.179	2397.179	2396.90	0.28		7:58 PM		17.89		8.63	
S	9.562	38.235	2235.504	2406.741	2406.741									
D	9.541		2245.045	2416.282	2416.282									
T	9.565		2254.610	2425.847	2425.847									
59	9.567		2264.177	2435.414	2435.414	2435.42	0.01		9:24 PM		26.87		8.63	
S	9.532	38.168	2273.709	2444.946	2444.946									
D	9.523		2283.232	2454.469	2454.469									
T	9.556		2292.788	2464.025	2464.025									
60	9.557		2302.345	2473.582	2473.582	2473.80	0.22		10:27 PM		36.55		9.41	

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	23-May-09	**BHA no**	2
Client	Jamstec	**Date out**	25-May-09	**D&M Run no**	2
Hole Section	26 inch	**Start Depth**	2142.69	**D&M Tools**	CDR8+TeleScope8
BHA Length	171.237 m	**End Depth**	2794.00	**BHA Type**	Straight Motor
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	ZhangCheng

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.554	38.231	2311.899	2483.136	2483.136									
D	9.552		2321.451	2492.688	2492.688									
T	9.563		2331.014	2502.251	2502.251									
61	9.562		2340.576	2511.813	2511.813	2511.73	0.08		11:41 PM		30.75		9.41	
S	9.562	38.237	2350.138	2521.375	2521.375									
D	9.550		2359.688	2530.925	2530.925									
T	9.572		2369.260	2540.497	2540.497									
62	9.553		2378.813	2550.050	2550.050	2550.08	0.03	BD-0.7	2:48 AM	25-May-09	12.30		9.41	
S	9.546	38.187	2388.359	2559.596	2559.596									
D	9.543		2397.902	2569.139	2569.139									
T	9.553		2407.455	2578.692	2578.692									
63	9.545		2417.000	2588.237	2588.237	2587.99	0.25		3:59 AM		32.04		9.41	
S	9.573	38.265	2426.573	2597.810	2597.810									
D	9.572		2436.145	2607.382	2607.382									
T	9.555		2445.700	2616.937	2616.937									
64	9.565		2455.265	2626.502	2626.502	2626.54	0.04		5:14 AM		30.84		10.19	
S	9.566	38.232	2464.831	2636.068	2636.068									
D	9.550		2474.381	2645.618	2645.618									
T	9.566		2483.947	2655.184	2655.184									
65	9.550		2493.497	2664.734	2664.734	2664.96	0.23		6:24 AM		32.93		10.19	
S	9.557	38.224	2503.054	2674.291	2674.291									
D	9.560		2512.614	2683.851	2683.851									
T	9.544		2522.158	2693.395	2693.395									
66	9.563		2531.721	2702.958	2702.958	2702.92	0.04		7:02 AM		59.94		10.19	
S	9.544	38.251	2541.265	2712.502	2712.502									
D	9.583		2550.848	2722.085	2722.085									
T	9.562		2560.410	2731.647	2731.647									
67	9.562		2569.972	2741.209	2741.209	2741.41	0.20		8:13 AM		32.53		10.19	
S	9.561	38.255	2579.533	2750.770	2750.770									
D	9.546		2589.079	2760.316	2760.316									
T	9.571		2598.650	2769.887	2769.887									
68	9.577		2608.227	2779.464	2779.464	2777.97	1.49		10:24 AM		16.75		10.19	
S	9.547	38.209	2617.774	2789.011	2789.011									
D	9.556		2627.330	2798.567	2798.567									TD@2794m
T	9.554		2636.884	2808.121	2808.121									
69	9.552		2646.436	2817.673	2817.673									

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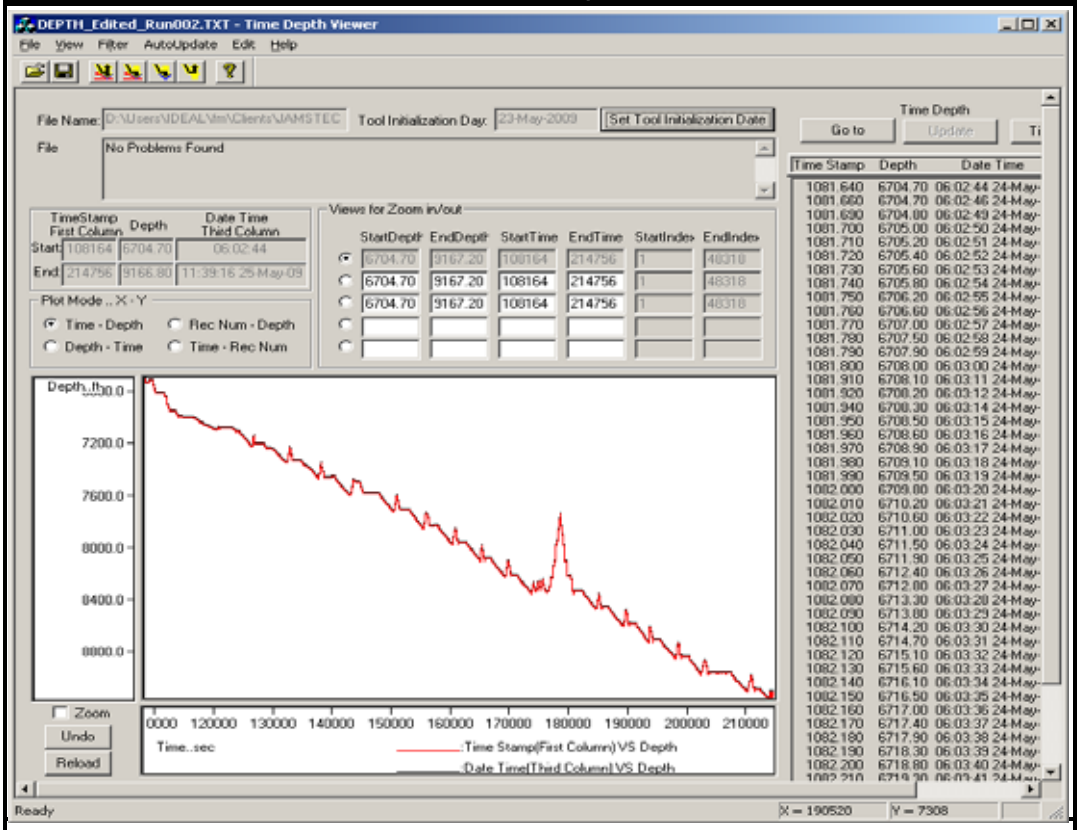
CHS Post-Job Depth Control Report

Job Information	
Date	23-May-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Well Profile	Vertical well
Run #	2

Hole Section Information	
Hole Size	26" Section
Tool Size	8.25in
Services	GR, D&I and APWD
BHA Type	Straight Motor
Inclination	0.37
Azimuth	150.08
Start Depth	2142.7
End Depth	2794.0

IDEAL DTM Corrected Depth vs. Time Plot



Depth Control Reference	Driller's depth	RT vs. RM Log Discrepancy before Time Shift	no
Time Shift in RM Processing	no	RT vs. RM Log Discrepancy after Time Shift	no

Annotations

This section provides details of editing performed on the raw depth files and time shifting performed on the tool dump files.

RAW DEPTH VS. TIME FILES		
Run no.	Edited Interval	Remarks
2	na	No edited interval during this run. Telescope and CDR RM data delivered to client.

TOOL DUMP FILE		
Run no.	Edited Interval	Remarks
2	na	Telescope and CDR RM data delivered to client.

Cell Manager: Yu Ito

Engineer Performed Editing: Yu Ito

Depth Acquisition Equipment Details

NOTE:

The Precision Depth Assembly (PDA) is the standard depth system for Drilling & Measurements. The purpose of the PDA is to make an accurate determination of the traveling block altitude on fixed rigs.
The components of the PDA are:

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIOMETER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

JOB RECORD FOR PRECISION DEPTH ASSEMBLY (PDA)		
Equipment Type	Serial no.	Remarks
CLT	2007213008	Sensor working fine.
Geolograph	na	Sensor working fine.

As per requirements of the D&M Depth Control Standard, Block Height calibrations are to be carried out at the beginning of the job and after every slip-and-cut operation.

DES CALIBRATION HISTORY			
Calibration Date	**Type**	**Calibration Reason**	**Date**
5/18/2009	Manual	Start Job	5/18/2009

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CHS Pre-Job Depth Control Report

Job Information

Date	27-Jun-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Run #	3

Hole Section Information

Hole Size	12.25" section
Tool Size	8.25in
Services	GR, D&I and IWOB
BHA Type	PowerV
Inclination	0.37
Azimuth	150.08

Expected Casing Shoe	36" - 2800mbrt

Planned TD / Casing Point	3690mbrt

Zones of Interest (As per Geologist Advice)
2565mbrt - possible hydrate zone

Acquisition System

Signal Processor	ASAP-AA
IDEAL Version	ideal14_0c_12
HSPM Version	hspm14_0c_02

Depth Control System

Depth Tracking System	Geolograph
Depth Reference	Drillers depth
Depth Measurement Source	D&M

Depth Calibration Information

Standard Block Height Calibration Equipment is DWC	
DWC Serial No.	n/a
Date of Last Drill Line Slip & Cut	
Date of Last Calibration	18-May-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	0	328
2	100	328

Exemption Request Reference

Fill out an exemption request on QUEST and give its reference in this section if any of the following is true:
1. Depth reference is not Driller's Pipe Tally
2. Depth measurement data is obtained from third party for any reason.

Cell Manager Yu Ito _____ 6/27/2009
Signature Date

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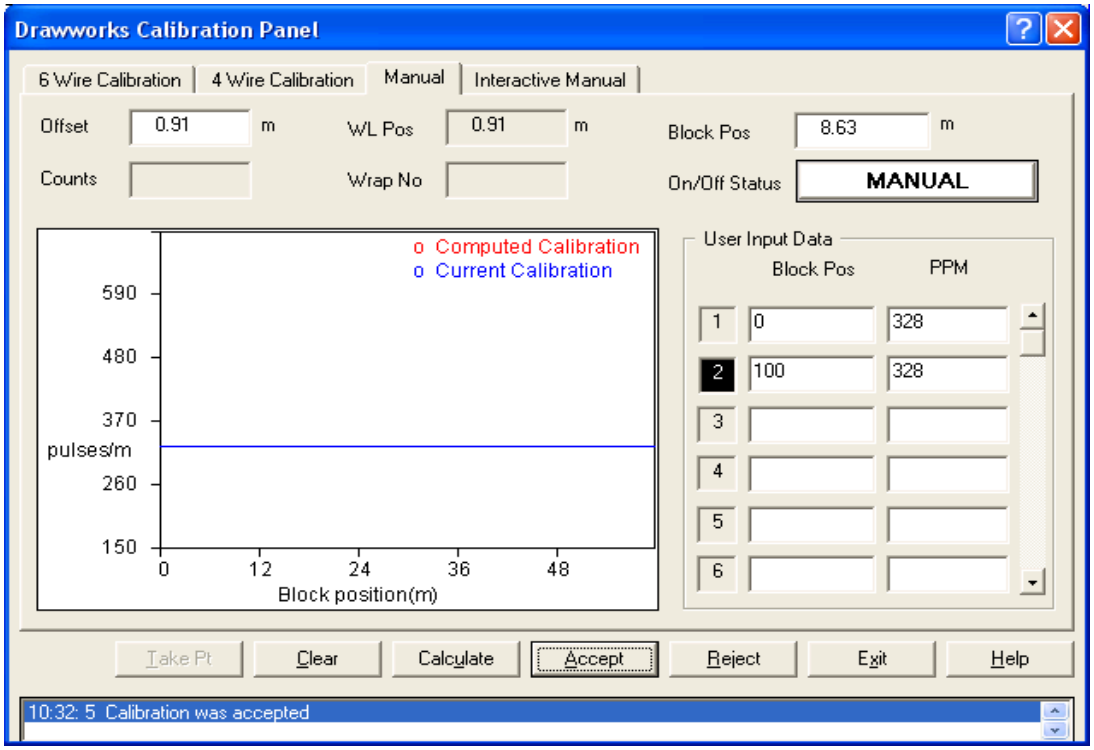
Client: JAMSTEC
Rig: Chikyu
Well: NT2-11B
Job Number: 09JAP0002
Remark:

Date/Time: 18-May-2008 / 08:00
Run: 3



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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	27-Jun-09	**BHA no**	3
Client	Jamstec	**Date out**	3-Jul-09	**D&M Run no**	3
Hole Section	12.25inch	**Start Depth**	2798.00	**D&M Tools**	TeleScope8 + PowerV
BHA Length	133.165 m	**End Depth**	3592.00	**BHA Type**	Rotary Steerable System
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.472	37.928	9.472	142.637	142.637									
D	9.486		18.958	152.123	152.123									
T	9.477		28.435	161.600	161.600									
1	9.493		37.928	171.093	171.093									
S	9.477	37.888	47.405	180.570	180.570									
D	9.470		56.875	190.040	190.040									
T	9.461		66.336	199.501	199.501									
2	9.480		75.816	208.981	208.981									
S	9.460	37.871	85.276	218.441	218.441									
D	9.472		94.748	227.913	227.913									
T	9.467		104.215	237.380	237.380									
3	9.472		113.687	246.852	246.852									
S	9.438	37.862	123.125	256.290	256.290									
D	9.488		132.613	265.778	265.778									
T	9.464		142.077	275.242	275.242									
4	9.472		151.549	284.714	284.714									
S	9.486	37.920	161.035	294.200	294.200									
D	9.487		170.522	303.687	303.687									
T	9.465		179.987	313.152	313.152									
5	9.482		189.469	322.634	322.634									
S	9.476	37.893	198.945	332.110	332.110									
D	9.466		208.411	341.576	341.576									
T	9.483		217.894	351.059	351.059									
6	9.468		227.362	360.527	360.527									
S	9.472	37.892	236.834	369.999	369.999									
D	9.481		246.315	379.480	379.480									
T	9.474		255.789	388.954	388.954									
7	9.465		265.254	398.419	398.419									
S	9.463	37.891	274.717	407.882	407.882									
D	9.480		284.197	417.362	417.362									
T	9.472		293.669	426.834	426.834									
8	9.476		303.145	436.310	436.310									
S	9.483	37.912	312.628	445.793	445.793									
D	9.494		322.122	455.287	455.287									
T	9.455		331.577	464.742	464.742									
9	9.480		341.057	474.222	474.222									
S	9.465	37.827	350.522	483.687	483.687									
D	9.430		359.952	493.117	493.117									
T	9.475		369.427	502.592	502.592									
10	9.457		378.884	512.049	512.049									
S	9.465	37.829	388.349	521.514	521.514									
D	9.456		397.805	530.970	530.970									
T	9.464		407.269	540.434	540.434									
11	9.444		416.713	549.878	549.878									
S	9.454	37.833	426.167	559.332	559.332									
D	9.463		435.630	568.795	568.795									
T	9.444		445.074	578.239	578.239									
12	9.472		454.546	587.711	587.711									
S	9.451	37.843	463.997	597.162	597.162									
D	9.475		473.472	606.637	606.637									
T	9.464		482.936	616.101	616.101									
13	9.453		492.389	625.554	625.554									
S	9.475	37.847	501.864	635.029	635.029									
D	9.477		511.341	644.506	644.506									
T	9.445		520.786	653.951	653.951									
14	9.450		530.236	663.401	663.401									
S	9.440	37.868	539.676	672.841	672.841									
D	9.475		549.151	682.316	682.316									
T	9.472		558.623	691.788	691.788									
15	9.481		568.104	701.269	701.269									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	27-Jun-09	**BHA no**	3
Client	Jamstec	**Date out**	3-Jul-09	**D&M Run no**	3
Hole Section	12.25inch	**Start Depth**	2798.00	**D&M Tools**	TeleScope8 + PowerV
BHA Length	133.165 m	**End Depth**	3592.00	**BHA Type**	Rotary Steerable System
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.475	37.890	577.579	710.744	710.744									
D	9.455		587.034	720.199	720.199									
T	9.477		596.511	729.676	729.676									
16	9.483		605.994	739.159	739.159									
S	9.445	37.852	615.439	748.604	748.604									
D	9.461		624.900	758.065	758.065									
T	9.480		634.380	767.545	767.545									
17	9.466		643.846	777.011	777.011									
S	9.475	37.894	653.321	786.486	786.486									
D	9.480		662.801	795.966	795.966									
T	9.462		672.263	805.428	805.428									
18	9.477		681.740	814.905	814.905									
S	9.466	37.889	691.206	824.371	824.371									
D	9.474		700.680	833.845	833.845									
T	9.467		710.147	843.312	843.312									
19	9.482		719.629	852.794	852.794									
S	9.475	37.902	729.104	862.269	862.269									
D	9.484		738.588	871.753	871.753									
T	9.467		748.055	881.220	881.220									
20	9.476		757.531	890.696	890.696									
S	9.462	37.851	766.993	900.158	900.158									
D	9.474		776.467	909.632	909.632									
T	9.451		785.918	919.083	919.083									
21	9.464		795.382	928.547	928.547									
S	9.482	37.917	804.864	938.029	938.029									
D	9.481		814.345	947.510	947.510									
T	9.480		823.825	956.990	956.990									
22	9.474		833.299	966.464	966.464									
S	9.474	37.872	842.773	975.938	975.938									
D	9.448		852.221	985.386	985.386									
T	9.485		861.706	994.871	994.871									
23	9.465		871.171	1004.336	1004.336									
S	9.485	37.868	880.656	1013.821	1013.821									
D	9.455		890.111	1023.276	1023.276									
T	9.475		899.586	1032.751	1032.751									
24	9.453		909.039	1042.204	1042.204									
S	9.447	38.790	918.486	1051.651	1051.651									
D	9.465		927.951	1061.116	1061.116									
T	9.453		937.404	1070.569	1070.569									
25	10.425		947.829	1080.994	1080.994									
S	9.545	38.226	957.374	1090.539	1090.539									
D	9.570		966.944	1100.109	1100.109									
T	9.555		976.499	1109.664	1109.664									
26	9.556		986.055	1119.220	1119.220									
S	9.536	38.168	995.591	1128.756	1128.756									
D	9.520		1005.111	1138.276	1138.276									
T	9.555		1014.666	1147.831	1147.831									
27	9.557		1024.223	1157.388	1157.388									
S	9.574	38.264	1033.797	1166.962	1166.962									
D	9.563		1043.360	1176.525	1176.525									
T	9.560		1052.920	1186.085	1186.085									
28	9.567		1062.487	1195.652	1195.652									
S	9.545	38.192	1072.032	1205.197	1205.197									
D	9.572		1081.604	1214.769	1214.769									
T	9.543		1091.147	1224.312	1224.312									
29	9.532		1100.679	1233.844	1233.844									
S	9.565	38.265	1110.244	1243.409	1243.409									
D	9.565		1119.809	1252.974	1252.974									
T	9.570		1129.379	1262.544	1262.544									
30	9.565		1138.944	1272.109	1272.109									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	27-Jun-09	**BHA no**	3
Client	Jamstec	**Date out**	3-Jul-09	**D&M Run no**	3
Hole Section	12.25inch	**Start Depth**	2798.00	**D&M Tools**	TeleScope8 + PowerV
BHA Length	133.165 m	**End Depth**	3592.00	**BHA Type**	Rotary Steerable System
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.530	38.212	1148.474	1281.639	1281.639									
D	9.564		1158.038	1291.203	1291.203									
T	9.563		1167.601	1300.766	1300.766									
31	9.555		1177.156	1310.321	1310.321									
S	9.572	38.221	1186.728	1319.893	1319.893									
D	9.554		1196.282	1329.447	1329.447									
T	9.540		1205.822	1338.987	1338.987									
32	9.555		1215.377	1348.542	1348.542									
S	9.576	38.241	1224.953	1358.118	1358.118									
D	9.555		1234.508	1367.673	1367.673									
T	9.550		1244.058	1377.223	1377.223									
33	9.560		1253.618	1386.783	1386.783									
S	9.567	38.239	1263.185	1396.350	1396.350									
D	9.548		1272.733	1405.898	1405.898									
T	9.554		1282.287	1415.452	1415.452									
34	9.570		1291.857	1425.022	1425.022									
S	9.580	38.283	1301.437	1434.602	1434.602									
D	9.573		1311.010	1444.175	1444.175									
T	9.557		1320.567	1453.732	1453.732									
35	9.573		1330.140	1463.305	1463.305									
S	9.550	38.203	1339.690	1472.855	1472.855									
D	9.551		1349.241	1482.406	1482.406									
T	9.548		1358.789	1491.954	1491.954									
36	9.554		1368.343	1501.508	1501.508									
S	9.558	38.214	1377.901	1511.066	1511.066									
D	9.536		1387.437	1520.602	1520.602									
T	9.545		1396.982	1530.147	1530.147									
37	9.575		1406.557	1539.722	1539.722									
S	9.563	38.250	1416.120	1549.285	1549.285									
D	9.573		1425.693	1558.858	1558.858									
T	9.555		1435.248	1568.413	1568.413									
38	9.559		1444.807	1577.972	1577.972									
S	9.544	38.235	1454.351	1587.516	1587.516									
D	9.558		1463.909	1597.074	1597.074									
T	9.560		1473.469	1606.634	1606.634									
39	9.573		1483.042	1616.207	1616.207									
S	9.560	38.224	1492.602	1625.767	1625.767									
D	9.560		1502.162	1635.327	1635.327									
T	9.546		1511.708	1644.873	1644.873									
40	9.558		1521.266	1654.431	1654.431									
S	9.560	38.210	1530.826	1663.991	1663.991									
D	9.545		1540.371	1673.536	1673.536									
T	9.540		1549.911	1683.076	1683.076									
41	9.565		1559.476	1692.641	1692.641									
S	9.555	38.238	1569.031	1702.196	1702.196									
D	9.564		1578.595	1711.760	1711.760									
T	9.560		1588.155	1721.320	1721.320									
42	9.559		1597.714	1730.879	1730.879									
S	9.546	38.233	1607.260	1740.425	1740.425									
D	9.577		1616.837	1750.002	1750.002									
T	9.564		1626.401	1759.566	1759.566									
43	9.546		1635.947	1769.112	1769.112									
S	9.566	38.222	1645.513	1778.678	1778.678									
D	9.547		1655.060	1788.225	1788.225									
T	9.547		1664.607	1797.772	1797.772									
44	9.562		1674.169	1807.334	1807.334									
S	9.567	38.208	1683.736	1816.901	1816.901									
D	9.544		1693.280	1826.445	1826.445									
T	9.556		1702.836	1836.001	1836.001									
45	9.541		1712.377	1845.542	1845.542									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	27-Jun-09	**BHA no**	3
Client	Jamstec	**Date out**	3-Jul-09	**D&M Run no**	3
Hole Section	12.25inch	**Start Depth**	2798.00	**D&M Tools**	TeleScope8 + PowerV
BHA Length	133.165 m	**End Depth**	3592.00	**BHA Type**	Rotary Steerable System
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.576	38.232	1721.953	1855.118	1855.118									
D	9.533		1731.486	1864.651	1864.651									
T	9.551		1741.037	1874.202	1874.202									
46	9.572		1750.609	1883.774	1883.774									
S	9.570	38.221	1760.179	1893.344	1893.344									
D	9.564		1769.743	1902.908	1902.908									
T	9.545		1779.288	1912.453	1912.453									
47	9.542		1788.830	1921.995	1921.995									
S	9.549	38.251	1798.379	1931.544	1931.544									
D	9.563		1807.942	1941.107	1941.107									
T	9.560		1817.502	1950.667	1950.667									
48	9.579		1827.081	1960.246	1960.246									
S	9.550	38.187	1836.631	1969.796	1969.796									
D	9.552		1846.183	1979.348	1979.348									
T	9.532		1855.715	1988.880	1988.880									
49	9.553		1865.268	1998.433	1998.433									
S	9.534	38.205	1874.802	2007.967	2007.967									
D	9.537		1884.339	2017.504	2017.504									
T	9.558		1893.897	2027.062	2027.062									
50	9.576		1903.473	2036.638	2036.638									
S	9.568	38.229	1913.041	2046.206	2046.206									
D	9.562		1922.603	2055.768	2055.768									
T	9.543		1932.146	2065.311	2065.311									
51	9.556		1941.702	2074.867	2074.867									
S	9.555	38.212	1951.257	2084.422	2084.422									
D	9.574		1960.831	2093.996	2093.996									
T	9.549		1970.380	2103.545	2103.545									
52	9.534		1979.914	2113.079	2113.079									
S	9.538	38.176	1989.452	2122.617	2122.617									
D	9.539		1998.991	2132.156	2132.156									
T	9.557		2008.548	2141.713	2141.713									
53	9.542		2018.090	2151.255	2151.255									
S	9.521	38.188	2027.611	2160.776	2160.776									
D	9.514		2037.125	2170.290	2170.290									
T	9.576		2046.701	2179.866	2179.866									
54	9.577		2056.278	2189.443	2189.443									
S	9.535	38.143	2065.813	2198.978	2198.978									
D	9.514		2075.327	2208.492	2208.492									
T	9.547		2084.874	2218.039	2218.039									
55	9.547		2094.421	2227.586	2227.586									
S	9.552	38.174	2103.973	2237.138	2237.138									
D	9.541		2113.514	2246.679	2246.679									
T	9.543		2123.057	2256.222	2256.222									
56	9.538		2132.595	2265.760	2265.760									
S	9.541	38.198	2142.136	2275.301	2275.301									
D	9.547		2151.683	2284.848	2284.848									
T	9.558		2161.241	2294.406	2294.406									
57	9.552		2170.793	2303.958	2303.958									
S	9.564	38.203	2180.357	2313.522	2313.522									
D	9.560		2189.917	2323.082	2323.082									
T	9.541		2199.458	2332.623	2332.623									
58	9.538		2208.996	2342.161	2342.161									
S	9.559	38.197	2218.555	2351.720	2351.720									
D	9.547		2228.102	2361.267	2361.267									
T	9.544		2237.646	2370.811	2370.811									
59	9.547		2247.193	2380.358	2380.358									
S	9.538	38.151	2256.731	2389.896	2389.896									
D	9.529		2266.260	2399.425	2399.425									
T	9.534		2275.794	2408.959	2408.959									
60	9.550		2285.344	2418.509	2418.509									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	27-Jun-09	**BHA no**	3
Client	Jamstec	**Date out**	3-Jul-09	**D&M Run no**	3
Hole Section	12.25inch	**Start Depth**	2798.00	**D&M Tools**	TeleScope8 + PowerV
BHA Length	133.165 m	**End Depth**	3592.00	**BHA Type**	Rotary Steerable System
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.514	38.153	2294.858	2428.023	2428.023									
D	9.548		2304.406	2437.571	2437.571									
T	9.530		2313.936	2447.101	2447.101									
61	9.561		2323.497	2456.662	2456.662									
S	9.581	38.253	2333.078	2466.243	2466.243									
D	9.567		2342.645	2475.810	2475.810									
T	9.548		2352.193	2485.358	2485.358									
62	9.557		2361.750	2494.915	2494.915									
S	9.566	38.222	2371.316	2504.481	2504.481									
D	9.554		2380.870	2514.035	2514.035									
T	9.557		2390.427	2523.592	2523.592									
63	9.545		2399.972	2533.137	2533.137									
S	9.561	38.279	2409.533	2542.698	2542.698									
D	9.576		2419.109	2552.274	2552.274									
T	9.564		2428.673	2561.838	2561.838									
64	9.578		2438.251	2571.416	2571.416									
S	9.561	38.030	2447.812	2580.977	2580.977									
D	9.456		2457.268	2590.433	2590.433									
T	9.451		2466.719	2599.884	2599.884									
65	9.562		2476.281	2609.446	2609.446									
S	9.541	38.194	2485.822	2618.987	2618.987									
D	9.515		2495.337	2628.502	2628.502									
T	9.572		2504.909	2638.074	2638.074									
66	9.566		2514.475	2647.640	2647.640									
S	9.424	38.100	2523.899	2657.064	2657.064									
D	9.553		2533.452	2666.617	2666.617									
T	9.566		2543.018	2676.183	2676.183									
67	9.557		2552.575	2685.740	2685.740									
S	9.561	38.238	2562.136	2695.301	2695.301									
D	9.544		2571.680	2704.845	2704.845									
T	9.562		2581.242	2714.407	2714.407									
68	9.571		2590.813	2723.978	2723.978									
S	9.551	38.222	2600.364	2733.529	2733.529									
D	9.560		2609.924	2743.089	2743.089									
T	9.561		2619.485	2752.650	2752.650									
69	9.550		2629.035	2762.200	2762.200									
S	9.558	38.236	2638.593	2771.758	2771.758									
D	9.575		2648.168	2781.333	2781.333									
T	9.546		2657.714	2790.879	2790.879	2790.88	0.00		10:15 PM	27-Jun-09	0.00			Set depth at 2790.879
70	9.557		2667.271	2800.436	2800.436									
S	9.569	38.238	2676.840	2810.005	2810.005									
D	9.549		2686.389	2819.554	2819.554									
T	9.562		2695.951	2829.116	2829.116									
71	9.558		2705.509	2838.674	2838.674	2838.50	0.17		3:04 AM	28-Jun-09	9.89		17.25	
S	9.547	38.203	2715.056	2848.221	2848.221									
D	9.543		2724.599	2857.764	2857.764									
T	9.562		2734.161	2867.326	2867.326									
72	9.551		2743.712	2876.877	2876.877	2876.68	0.20		5:25 AM		1.45		17.25	
S	9.554	38.244	2753.266	2886.431	2886.431									
D	9.553		2762.819	2895.984	2895.984									
T	9.565		2772.384	2905.549	2905.549									
73	9.572		2781.956	2915.121	2915.121	2914.93	0.19		10:16 AM	29-Jun-09	7.89		17.25	
S	9.561	38.214	2791.517	2924.682	2924.682									
D	9.551		2801.068	2934.233	2934.233									
T	9.559		2810.627	2943.792	2943.792									
74	9.543		2820.170	2953.335	2953.335	2953.13	0.21		1:04 PM		13.64		14.90	KD=0.34, PL=38.38
S	9.569	38.207	2829.739	2962.904	2962.904									
D	9.552		2839.291	2972.456	2972.456									
T	9.549		2848.840	2982.005	2982.005									

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CHS Depth Tracking Data Sheet

Well /Field			NT2-11B/Nankai-Kumano		**Date in**		27-Jun-09			**BHA no**		3			
Client			Jamstec		**Date out**		3-Jul-09			**D&M Run no**		3			
Hole Section			12.25inch		**Start Depth**		2798.00			**D&M Tools**		TeleScope8 + PowerV			
BHA Length			133.165 m		**End Depth**		3592.00			**BHA Type**		Rotary Steerable System			
Stick-up			0.000 m		**Length Unit**		Meters			**Cell Manager**		William/Ito			

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
75	9.537		2858.377	2991.542	2991.542	2991.31	0.23		3:24 PM		16.36		14.90	KD=0.21, PL=38.38
S	9.547	38.246	2867.924	3001.089	3001.089									
D	9.566		2877.490	3010.655	3010.655									
T	9.569		2887.059	3020.224	3020.224									
76	9.564		2896.623	3029.788	3029.788	3029.72	0.07		5:14 PM		20.95		14.90	
S	9.550	38.224	2906.173	3039.338	3039.338									
D	9.551		2915.724	3048.889	3048.889									
T	9.564		2925.288	3058.453	3058.453									
77	9.559		2934.847	3068.012	3068.012	3067.74	0.27		8:12 PM		12.82		14.90	KD=0.59, PL=38.21
S	9.552	38.220	2944.399	3077.564	3077.564									
D	9.550		2953.949	3087.114	3087.114									
T	9.558		2963.507	3096.672	3096.672									
78	9.560		2973.067	3106.232	3106.232	3105.97	0.26		8:48 AM	30-Jun-09	3.03		14.90	KD=11.32, PL=37.59
S	9.556	38.201	2982.623	3115.788	3115.788									
D	9.556		2992.179	3125.344	3125.344									
T	9.554		3001.733	3134.898	3134.898									
79	9.535		3011.268	3144.433	3144.433	3144.18	0.25		10:58 AM		17.64		16.47	KD=12.27, PL=38.38
S	9.562	38.212	3020.830	3153.995	3153.995									
D	9.553		3030.383	3163.548	3163.548									
T	9.550		3039.933	3173.098	3173.098									
80	9.547		3049.480	3182.645	3182.645	3182.45	0.20		1:18 PM		16.40		16.47	KD=11.32, PL=38.39
S	9.566	38.228	3059.046	3192.211	3192.211									
D	9.560		3068.606	3201.771	3201.771									
T	9.558		3078.164	3211.329	3211.329									
81	9.544		3087.708	3220.873	3220.873	3220.79	0.08		3:40 PM		16.20		16.47	KD=11.39, PL=38.41
S	9.558	38.242	3097.266	3230.431	3230.431									
D	9.541		3106.807	3239.972	3239.972									
T	9.568		3116.375	3249.540	3249.540									
82	9.575		3125.950	3259.115	3259.115	3258.90	0.22		7:19 PM		10.44		16.47	KD=10.86, PL=38.42
S	9.561	38.240	3135.511	3268.676	3268.676									
D	9.566		3145.077	3278.242	3278.242									
T	9.547		3154.624	3287.789	3287.789									
83	9.566		3164.190	3297.355	3297.355	3297.11	0.25		10:45 PM		11.13		16.47	KD=10.42, PL=38.48
S	9.562	38.235	3173.752	3306.917	3306.917									
D	9.541		3183.293	3316.458	3316.458									
T	9.565		3192.858	3326.023	3326.023									
84	9.567		3202.425	3335.590	3335.590	3335.34	0.25		12:56 AM		-1.75		16.47	KD=12.26, PL=37.1
S	9.532	38.168	3211.957	3345.122	3345.122									
D	9.523		3221.480	3354.645	3354.645									
T	9.556		3231.036	3364.201	3364.201									
85	9.557		3240.593	3373.758	3373.758	3373.43	0.33		3:29 AM		-1.98		18.01	
S	9.554	38.231	3250.147	3383.312	3383.312									
D	9.552		3259.699	3392.864	3392.864									
T	9.563		3269.262	3402.427	3402.427									
86	9.562		3278.824	3411.989	3411.989	3411.70	0.29		1:21 AM	2-Jul-09	1.44		18.01	
S	9.562	38.237	3288.386	3421.551	3421.551									
D	9.550		3297.936	3431.101	3431.101									
T	9.572		3307.508	3440.673	3440.673									
87	9.553		3317.061	3450.226	3450.226	3450.12	0.11		2:21 AM		38.42		18.01	
S	9.546	38.187	3326.607	3459.772	3459.772									
D	9.543		3336.150	3469.315	3469.315									
T	9.553		3345.703	3478.868	3478.868									
88	9.545		3355.248	3488.413	3488.413	3488.19	0.22		5:02 AM		14.19		18.01	
S	9.573	38.265	3364.821	3497.986	3497.986									
D	9.572		3374.393	3507.558	3507.558									
T	9.555		3383.948	3517.113	3517.113									
89	9.565		3393.513	3526.678	3526.678	3526.35	0.33		7:56 AM		13.16		18.01	
S	9.566	38.232	3403.079	3536.244	3536.244									
D	9.550		3412.629	3545.794	3545.794									
T	9.566		3422.195	3555.360	3555.360									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	27-Jun-09	**BHA no**	3
Client	Jamstec	**Date out**	3-Jul-09	**D&M Run no**	3
Hole Section	12.25inch	**Start Depth**	2798.00	**D&M Tools**	TeleScope8 + PowerV
BHA Length	133.165 m	**End Depth**	3592.00	**BHA Type**	Rotary Steerable System
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
90	9.550		3431.745	3564.910	3564.910	3564.65	0.26		10:39 AM		14.10		18.01	KD= 1.96,PL= 38.43
S	9.557	38.224	3441.302	3574.467	3574.467									
D	9.560		3450.862	3584.027	3584.027									
T	9.544		3460.406	3593.571	3593.571	3592.00	1.57		12:39 PM		13.67			TD@3592.0m
91	9.563		3469.969	3603.134	3603.134									
S	9.544	38.251	3479.513	3612.678	3612.678									
D	9.583		3489.096	3622.261	3622.261									
T	9.562		3498.658	3631.823	3631.823									
92	9.562		3508.220	3641.385	3641.385									

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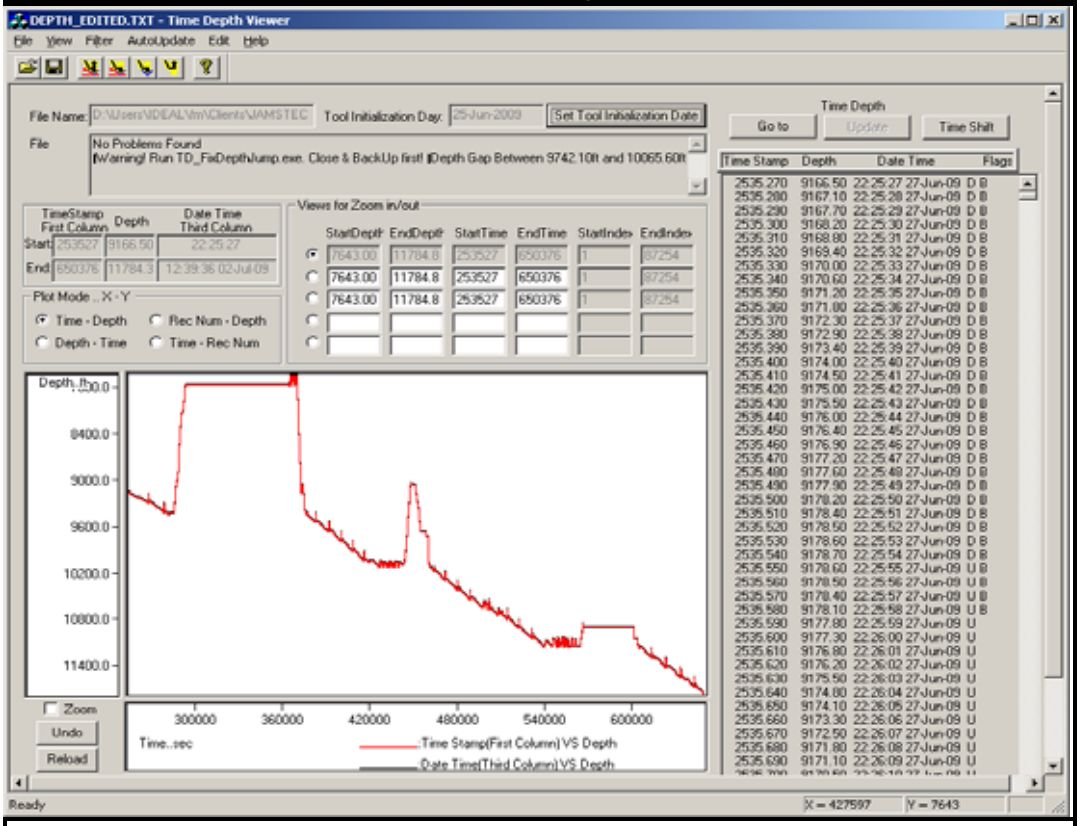
CHS Post-Job Depth Control Report

Job Information	
Date	27-Jun-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Well Profile	Vertical well
Run #	3

Hole Section Information	
Hole Size	12.25" section
Tool Size	8.25in
Services	GR, D&I and IWOB
BHA Type	PowerV
Inclination	0.1
Azimuth	59.4
Start Depth	2798
End Depth	3592

IDEAL DTM Corrected Depth vs. Time Plot



Depth Control Reference	Driller's depth	RT vs. RM Log Discrepancy before Time Shift	no
Time Shift in RM Processing	no	RT vs. RM Log Discrepancy after Time Shift	no

Annotations

This section provides details of editing performed on the raw depth files and time shifting performed on the tool dump files.

RAW DEPTH VS. TIME FILES		
Run no.	Edited Interval	Remarks
3	na	No edited interval in this run. Telescope RM data delivered to client.

TOOL DUMP FILE		
Run no.	Edited Interval	Remarks
3	na	Telescope RM data delivered to client.

Cell Manager: Yu Ito

Engineer Performed Editing: Yu Ito

Depth Acquisition Equipment Details

NOTE:

The Precision Depth Assembly (PDA) is the standard depth system for Drilling & Measurements. The purpose of the PDA is to make an accurate determination of the traveling block altitude on fixed rigs.
The components of the PDA are:

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIOMETER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

JOB RECORD FOR PRECISION DEPTH ASSEMBLY (PDA)		
Equipment Type	Serial no.	Remarks
CLT	2007213008	Sensor was working fine.
Geolograph	na	Sensor was working fine.

As per requirements of the D&M Depth Control Standard, Block Height calibrations are to be carried out at the beginning of the job and after every slip-and-cut operation.

DES CALIBRATION HISTORY			
Calibration Date	**Type**	**Calibration Reason**	**Date**
5/18/2008	Manual	Start Job	18-May-08

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CHS Pre-Job Depth Control Report

Job Information

Date	15-Jul-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Run #	4

Hole Section Information

Hole Size	Open hole to 17in from 12.25in
Tool Size	8.25in
Services	D&I and IWOB
BHA Type	Hole Opener BHA, MWD only
Inclination	0
Azimuth	0

Expected Casing Shoe	20" - 2786.20mbrt

Planned TD / Casing Point	3686.0mbrt

Zones of Interest (As per Geologist Advice)

Open hole through the previous 12.25in hole, high pressure zone expected at 3100mbrt.

Acquisition System

Signal Processor	ASAP-AA
IDEAL Version	ideal14_0c_12
HSPM Version	hspm14_0c_02

Depth Control System

Depth Tracking System	Geolograph
Depth Reference	Drillers depth
Depth Measurement Source	D&M

Depth Calibration Information

Standard Block Height Calibration Equipment is DWC	
DWC Serial No.	n/a
Date of Last Drill Line Slip & Cut	26-Jun-09
Date of Last Calibration	18-May-09
Calibration Status	Valid

Calibration Data

Data Point	BPOS	PPM
1	0	328
2	100	328	

Exemption Request Reference

Fill out an exemption request on QUEST and give its reference in this section if any of the following is true:
1. Depth reference is not Driller's Pipe Tally
2. Depth measurement data is obtained from third party for any reason.

Cell Manager William Barragan _____ July 15th, 2009

Signature Date

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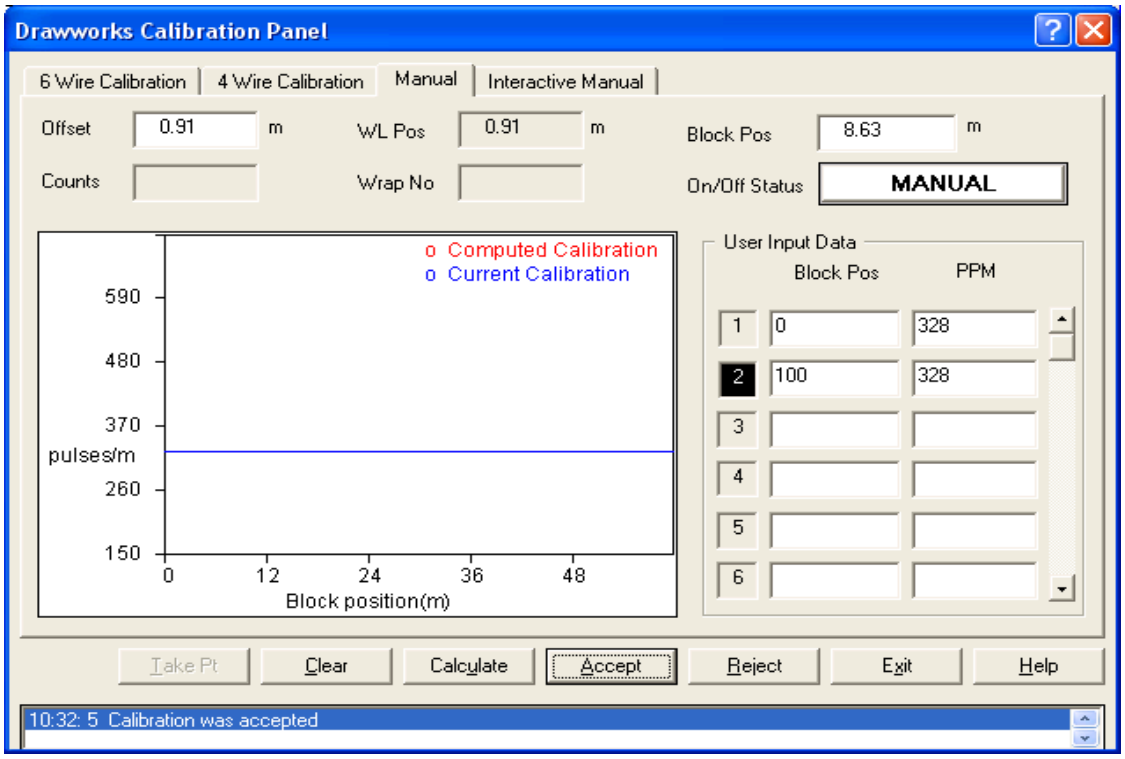
CHS Depth Encoder Calibration Record

Client: JAMSTEC
Rig: DV Chikyu
Well: NT2-11B
Job Number: 09JAP0002

Remark:

Date/Time: 18-May-09
Run: 4



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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	July 15th, 2009	**BHA no**	4
Client	Jamstec	**Date out**	July 20th, 2009	**D&M Run no**	4
Hole Section	Enlarge from 12.25in to 17in	**Start Depth**	2786.00	**D&M Tools**	TeleScope8
BHA Length	144.851 m	**End Depth**	3650.00	**BHA Type**	Rotary BHA, hole opener
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.472	37.928	9.472	154.323	154.323									
D	9.486		18.958	163.809	163.809									
T	9.477		28.435	173.286	173.286									
1	9.493		37.928	182.779	182.779									
S	9.477	37.888	47.405	192.256	192.256									
D	9.470		56.875	201.726	201.726									
T	9.461		66.336	211.187	211.187									
2	9.480		75.816	220.667	220.667									
S	9.460	37.871	85.276	230.127	230.127									
D	9.472		94.748	239.599	239.599									
T	9.467		104.215	249.066	249.066									
3	9.472		113.687	258.538	258.538									
S	9.438	37.862	123.125	267.976	267.976									
D	9.488		132.613	277.464	277.464									
T	9.464		142.077	286.928	286.928									
4	9.472		151.549	296.400	296.400									
S	9.486	37.920	161.035	305.886	305.886									
D	9.487		170.522	315.373	315.373									
T	9.465		179.987	324.838	324.838									
5	9.482		189.469	334.320	334.320									
S	9.476	37.893	198.945	343.796	343.796									
D	9.466		208.411	353.262	353.262									
T	9.483		217.894	362.745	362.745									
6	9.468		227.362	372.213	372.213									
S	9.472	37.892	236.834	381.685	381.685									
D	9.481		246.315	391.166	391.166									
T	9.474		255.789	400.640	400.640									
7	9.465		265.254	410.105	410.105									
S	9.463	37.891	274.717	419.568	419.568									
D	9.480		284.197	429.048	429.048									
T	9.472		293.669	438.520	438.520									
8	9.476		303.145	447.996	447.996									
S	9.483	37.912	312.628	457.479	457.479									
D	9.494		322.122	466.973	466.973									
T	9.455		331.577	476.428	476.428									
9	9.480		341.057	485.908	485.908									
S	9.465	37.827	350.522	495.373	495.373									
D	9.430		359.952	504.803	504.803									
T	9.475		369.427	514.278	514.278									
10	9.457		378.884	523.735	523.735									
S	9.465	37.829	388.349	533.200	533.200									
D	9.456		397.805	542.656	542.656									
T	9.464		407.269	552.120	552.120									
11	9.444		416.713	561.564	561.564									
S	9.454	37.833	426.167	571.018	571.018									
D	9.463		435.630	580.481	580.481									
T	9.444		445.074	589.925	589.925									
12	9.472		454.546	599.397	599.397									
S	9.451	37.843	463.997	608.848	608.848									
D	9.475		473.472	618.323	618.323									
T	9.464		482.936	627.787	627.787									
13	9.453		492.389	637.240	637.240									
S	9.475	37.847	501.864	646.715	646.715									
D	9.477		511.341	656.192	656.192									
T	9.445		520.786	665.637	665.637									
14	9.450		530.236	675.087	675.087									
S	9.440	37.868	539.676	684.527	684.527									
D	9.475		549.151	694.002	694.002									
T	9.472		558.623	703.474	703.474									
15	9.481		568.104	712.955	712.955									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	July 15th, 2009	**BHA no**	4
Client	Jamstec	**Date out**	July 20th, 2009	**D&M Run no**	4
Hole Section	Enlarge from 12.25in to 17in	**Start Depth**	2786.00	**D&M Tools**	TeleScope8
BHA Length	144.851 m	**End Depth**	3650.00	**BHA Type**	Rotary BHA, hole opener
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.475	37.890	577.579	722.430	722.430									
D	9.455		587.034	731.885	731.885									
T	9.477		596.511	741.362	741.362									
16	9.483		605.994	750.845	750.845									
S	9.445	37.852	615.439	760.290	760.290									
D	9.461		624.900	769.751	769.751									
T	9.480		634.380	779.231	779.231									
17	9.466		643.846	788.697	788.697									
S	9.475	37.894	653.321	798.172	798.172									
D	9.480		662.801	807.652	807.652									
T	9.462		672.263	817.114	817.114									
18	9.477		681.740	826.591	826.591									
S	9.466	37.889	691.206	836.057	836.057									
D	9.474		700.680	845.531	845.531									
T	9.467		710.147	854.998	854.998									
19	9.482		719.629	864.480	864.480									
S	9.475	37.902	729.104	873.955	873.955									
D	9.484		738.588	883.439	883.439									
T	9.467		748.055	892.906	892.906									
20	9.476		757.531	902.382	902.382									
S	9.462	37.851	766.993	911.844	911.844									
D	9.474		776.467	921.318	921.318									
T	9.451		785.918	930.769	930.769									
21	9.464		795.382	940.233	940.233									
S	9.482	37.917	804.864	949.715	949.715									
D	9.481		814.345	959.196	959.196									
T	9.480		823.825	968.676	968.676									
22	9.474		833.299	978.150	978.150									
S	9.474	37.872	842.773	987.624	987.624									
D	9.448		852.221	997.072	997.072									
T	9.485		861.706	1006.557	1006.557									
23	9.465		871.171	1016.022	1016.022									
S	9.485	37.868	880.656	1025.507	1025.507									
D	9.455		890.111	1034.962	1034.962									
T	9.475		899.586	1044.437	1044.437									
24	9.453		909.039	1053.890	1053.890									
S	9.447	38.430	918.486	1063.337	1063.337									
D	9.465		927.951	1072.802	1072.802									
T	9.453		937.404	1082.255	1082.255									
25	10.065		947.469	1092.320	1092.320									XO S-140 to S150
S	9.545	38.259	957.014	1101.865	1101.865									
D	9.570		966.584	1111.435	1111.435									
T	9.577		976.161	1121.012	1121.012									
26	9.567		985.728	1130.579	1130.579									
S	9.555	38.167	995.283	1140.134	1140.134									
D	9.556		1004.839	1149.690	1149.690									
T	9.536		1014.375	1159.226	1159.226									
27	9.520		1023.895	1168.746	1168.746									
S	9.555	38.249	1033.450	1178.301	1178.301									
D	9.557		1043.007	1187.858	1187.858									
T	9.574		1052.581	1197.432	1197.432									
28	9.563		1062.144	1206.995	1206.995									
S	9.560	38.244	1071.704	1216.555	1216.555									
D	9.567		1081.271	1226.122	1226.122									
T	9.545		1090.816	1235.667	1235.667									
29	9.572		1100.388	1245.239	1245.239									
S	9.543	38.205	1109.931	1254.782	1254.782									
D	9.532		1119.463	1264.314	1264.314									
T	9.565		1129.028	1273.879	1273.879									
30	9.565		1138.593	1283.444	1283.444									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	July 15th, 2009	**BHA no**	4
Client	Jamstec	**Date out**	July 20th, 2009	**D&M Run no**	4
Hole Section	Enlarge from 12.25in to 17in	**Start Depth**	2786.00	**D&M Tools**	TeleScope8
BHA Length	144.851 m	**End Depth**	3650.00	**BHA Type**	Rotary BHA, hole opener
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.570	38.229	1148.163	1293.014	1293.014									
D	9.565		1157.728	1302.579	1302.579									
T	9.530		1167.258	1312.109	1312.109									
31	9.564		1176.822	1321.673	1321.673									
S	9.563	38.244	1186.385	1331.236	1331.236									
D	9.555		1195.940	1340.791	1340.791									
T	9.572		1205.512	1350.363	1350.363									
32	9.554		1215.066	1359.917	1359.917									
S	9.540	38.226	1224.606	1369.457	1369.457									
D	9.555		1234.161	1379.012	1379.012									
T	9.576		1243.737	1388.588	1388.588									
33	9.555		1253.292	1398.143	1398.143									
S	9.550	38.225	1262.842	1407.693	1407.693									
D	9.560		1272.402	1417.253	1417.253									
T	9.567		1281.969	1426.820	1426.820									
34	9.548		1291.517	1436.368	1436.368									
S	9.554	38.277	1301.071	1445.922	1445.922									
D	9.570		1310.641	1455.492	1455.492									
T	9.580		1320.221	1465.072	1465.072									
35	9.573		1329.794	1474.645	1474.645									
S	9.557	38.231	1339.351	1484.202	1484.202									
D	9.573		1348.924	1493.775	1493.775									
T	9.550		1358.474	1503.325	1503.325									
36	9.551		1368.025	1512.876	1512.876									
S	9.548	38.196	1377.573	1522.424	1522.424									
D	9.554		1387.127	1531.978	1531.978									
T	9.558		1396.685	1541.536	1541.536									
37	9.536		1406.221	1551.072	1551.072									
S	9.545	38.256	1415.766	1560.617	1560.617									
D	9.575		1425.341	1570.192	1570.192									
T	9.563		1434.904	1579.755	1579.755									
38	9.573		1444.477	1589.328	1589.328									
S	9.555	38.216	1454.032	1598.883	1598.883									
D	9.559		1463.591	1608.442	1608.442									
T	9.544		1473.135	1617.986	1617.986									
39	9.558		1482.693	1627.544	1627.544									
S	9.560	38.253	1492.253	1637.104	1637.104									
D	9.573		1501.826	1646.677	1646.677									
T	9.560		1511.386	1656.237	1656.237									
40	9.560		1520.946	1665.797	1665.797									
S	9.546	38.209	1530.492	1675.343	1675.343									
D	9.558		1540.050	1684.901	1684.901									
T	9.560		1549.610	1694.461	1694.461									
41	9.545		1559.155	1704.006	1704.006									
S	9.540	38.224	1568.695	1713.546	1713.546									
D	9.565		1578.260	1723.111	1723.111									
T	9.555		1587.815	1732.666	1732.666									
42	9.564		1597.379	1742.230	1742.230									
S	9.560	38.242	1606.939	1751.790	1751.790									
D	9.559		1616.498	1761.349	1761.349									
T	9.546		1626.044	1770.895	1770.895									
43	9.577		1635.621	1780.472	1780.472									
S	9.564	38.223	1645.185	1790.036	1790.036									
D	9.546		1654.731	1799.582	1799.582									
T	9.566		1664.297	1809.148	1809.148									
44	9.547		1673.844	1818.695	1818.695									
S	9.547	38.220	1683.391	1828.242	1828.242									
D	9.562		1692.953	1837.804	1837.804									
T	9.567		1702.520	1847.371	1847.371									
45	9.544		1712.064	1856.915	1856.915									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	July 15th, 2009	**BHA no**	4
Client	Jamstec	**Date out**	July 20th, 2009	**D&M Run no**	4
Hole Section	Enlarge from 12.25in to 17in	**Start Depth**	2786.00	**D&M Tools**	TeleScope8
BHA Length	144.851 m	**End Depth**	3650.00	**BHA Type**	Rotary BHA, hole opener
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.556	38.206	1721.620	1866.471	1866.471									
D	9.541		1731.161	1876.012	1876.012									
T	9.576		1740.737	1885.588	1885.588									
46	9.533		1750.270	1895.121	1895.121									
S	9.551	38.257	1759.821	1904.672	1904.672									
D	9.572		1769.393	1914.244	1914.244									
T	9.570		1778.963	1923.814	1923.814									
47	9.564		1788.527	1933.378	1933.378									
S	9.545	38.199	1798.072	1942.923	1942.923									
D	9.542		1807.614	1952.465	1952.465									
T	9.549		1817.163	1962.014	1962.014									
48	9.563		1826.726	1971.577	1971.577									
S	9.560	38.241	1836.286	1981.137	1981.137									
D	9.579		1845.865	1990.716	1990.716									
T	9.550		1855.415	2000.266	2000.266									
49	9.552		1864.967	2009.818	2009.818									
S	9.532	38.156	1874.499	2019.350	2019.350									
D	9.553		1884.052	2028.903	2028.903									
T	9.534		1893.586	2038.437	2038.437									
50	9.537		1903.123	2047.974	2047.974									
S	9.558	38.264	1912.681	2057.532	2057.532									
D	9.576		1922.257	2067.108	2067.108									
T	9.568		1931.825	2076.676	2076.676									
51	9.562		1941.387	2086.238	2086.238									
S	9.543	38.176	1950.930	2095.781	2095.781									
D	9.556		1960.486	2105.337	2105.337									
T	9.538		1970.024	2114.875	2114.875									
52	9.539		1979.563	2124.414	2124.414									
S	9.555	38.212	1989.118	2133.969	2133.969									
D	9.574		1998.692	2143.543	2143.543									
T	9.549		2008.241	2153.092	2153.092									
53	9.534		2017.775	2162.626	2162.626									
S	9.557	38.134	2027.332	2172.183	2172.183									
D	9.542		2036.874	2181.725	2181.725									
T	9.521		2046.395	2191.246	2191.246									
54	9.514		2055.909	2200.760	2200.760									
S	9.576	38.202	2065.485	2210.336	2210.336									
D	9.577		2075.062	2219.913	2219.913									
T	9.535		2084.597	2229.448	2229.448									
55	9.514		2094.111	2238.962	2238.962									
S	9.547	38.187	2103.658	2248.509	2248.509									
D	9.547		2113.205	2258.056	2258.056									
T	9.552		2122.757	2267.608	2267.608									
56	9.541		2132.298	2277.149	2277.149									
S	9.543	38.169	2141.841	2286.692	2286.692									
D	9.538		2151.379	2296.230	2296.230									
T	9.541		2160.920	2305.771	2305.771									
57	9.547		2170.467	2315.318	2315.318									
S	9.558	38.234	2180.025	2324.876	2324.876									
D	9.552		2189.577	2334.428	2334.428									
T	9.564		2199.141	2343.992	2343.992									
58	9.560		2208.701	2353.552	2353.552									
S	9.541	38.185	2218.242	2363.093	2363.093									
D	9.538		2227.780	2372.631	2372.631									
T	9.559		2237.339	2382.190	2382.190									
59	9.547		2246.886	2391.737	2391.737									
S	9.544	38.158	2256.430	2401.281	2401.281									
D	9.547		2265.977	2410.828	2410.828									
T	9.538		2275.515	2420.366	2420.366									
60	9.529		2285.044	2429.895	2429.895									

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	July 15th, 2009	**BHA no**	4
Client	Jamstec	**Date out**	July 20th, 2009	**D&M Run no**	4
Hole Section	Enlarge from 12.25in to 17in	**Start Depth**	2786.00	**D&M Tools**	TeleScope8
BHA Length	144.851 m	**End Depth**	3650.00	**BHA Type**	Rotary BHA, hole opener
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.534	38.146	2294.578	2439.429	2439.429									
D	9.550		2304.128	2448.979	2448.979									
T	9.514		2313.642	2458.493	2458.493									
61	9.548		2323.190	2468.041	2468.041									
S	9.530	38.239	2332.720	2477.571	2477.571									
D	9.561		2342.281	2487.132	2487.132									
T	9.581		2351.862	2496.713	2496.713									
62	9.567		2361.429	2506.280	2506.280									
S	9.548	38.225	2370.977	2515.828	2515.828									
D	9.557		2380.534	2525.385	2525.385									
T	9.566		2390.100	2534.951	2534.951									
63	9.554		2399.654	2544.505	2544.505									
S	9.557	38.239	2409.211	2554.062	2554.062									
D	9.545		2418.756	2563.607	2563.607									
T	9.561		2428.317	2573.168	2573.168									
64	9.576		2437.893	2582.744	2582.744									
S	9.564	38.159	2447.457	2592.308	2592.308									
D	9.578		2457.035	2601.886	2601.886									
T	9.561		2466.596	2611.447	2611.447									
65	9.456		2476.052	2620.903	2620.903									
S	9.451	38.069	2485.503	2630.354	2630.354									
D	9.562		2495.065	2639.916	2639.916									
T	9.541		2504.606	2649.457	2649.457									
66	9.515		2514.121	2658.972	2658.972									
S	9.572	38.115	2523.693	2668.544	2668.544									
D	9.566		2533.259	2678.110	2678.110									
T	9.424		2542.683	2687.534	2687.534									
67	9.553		2552.236	2697.087	2697.087									
S	9.566	38.228	2561.802	2706.653	2706.653									
D	9.557		2571.359	2716.210	2716.210									
T	9.561		2580.920	2725.771	2725.771									
68	9.544		2590.464	2735.315	2735.315									
S	9.562	38.244	2600.026	2744.877	2744.877									
D	9.571		2609.597	2754.448	2754.448									
T	9.551		2619.148	2763.999	2763.999									
69	9.560		2628.708	2773.559	2773.559	2773.56	0.00		6:00 AM	16-Jul-09	0.00			
S	9.561	38.244	2638.269	2783.120	2783.120									
D	9.550		2647.819	2792.670	2792.670									
T	9.558		2657.377	2802.228	2802.228									
70	9.575		2666.952	2811.803	2811.803									
S	9.546	38.221	2676.498	2821.349	2821.349									
D	9.557		2686.055	2830.906	2830.906									
T	9.569		2695.624	2840.475	2840.475									
71	9.549		2705.173	2850.024	2850.024	2850.07	0.05		7:52 AM		40.99		15.69	
S	9.562	38.210	2714.735	2859.586	2859.586									
D	9.558		2724.293	2869.144	2869.144									
T	9.547		2733.840	2878.691	2878.691									
72	9.543		2743.383	2888.234	2888.234	2888.05	0.18		10:32 AM		14.24		15.69	
S	9.562	38.220	2752.945	2897.796	2897.796									
D	9.551		2762.496	2907.347	2907.347									
T	9.554		2772.050	2916.901	2916.901									
73	9.553		2781.603	2926.454	2926.454	2926.19	0.26		1:59 PM		11.06		15.69	KD=1.96, PL=38.14
S	9.565	38.249	2791.168	2936.019	2936.019									
D	9.572		2800.740	2945.591	2945.591									
T	9.561		2810.301	2955.152	2955.152									
74	9.551		2819.852	2964.703	2964.703	2964.54	0.16		4:43 PM		14.03		15.69	KD=1.82, PL=38.10
S	9.559	38.223	2829.411	2974.262	2974.262									
D	9.543		2838.954	2983.805	2983.805									
T	9.569		2848.523	2993.374	2993.374									
75	9.552		2858.075	3002.926	3002.926	3002.84	0.09		10:11 PM		7.01		15.69	

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CHS Depth Tracking Data Sheet

Well /Field			NT2-11B/Nankai-Kumano		**Date in**		July 15th, 2009			**BHA no**		4		
Client			Jamstec		**Date out**		July 20th, 2009			**D&M Run no**		4		
Hole Section			Enlarge from 12.25in to 17in		**Start Depth**		2786.00			**D&M Tools**		TeleScope8		
BHA Length			144.851 m		**End Depth**		3650.00			**BHA Type**		Rotary BHA, hole opener		
Stick-up			0.000 m		**Length Unit**		Meters			**Cell Manager**		William/Ito		

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.549	38.199	2867.624	3012.475	3012.475									
D	9.537		2877.161	3022.012	3022.012									
T	9.547		2886.708	3031.559	3031.559									
76	9.566		2896.274	3041.125	3041.125	3040.92	0.21		1:03 AM	17-Jul-09	13.28		16.47	KD=1.87, PL=38.05
S	9.569	38.234	2905.843	3050.694	3050.694									
D	9.564		2915.407	3060.258	3060.258									
T	9.550		2924.957	3069.808	3069.808									
77	9.551		2934.508	3079.359	3079.359	3079.12	0.24		4:45 AM		10.32		17.25	KD=1.03, PL=38.07
S	9.564	38.225	2944.072	3088.923	3088.923									
D	9.559		2953.631	3098.482	3098.482									
T	9.552		2963.183	3108.034	3108.034									
78	9.550		2972.733	3117.584	3117.584	3117.35	0.23		2:54 PM		3.77		15.69	KD=2.13, PL=38.08
S	9.558	38.230	2982.291	3127.142	3127.142									
D	9.560		2991.851	3136.702	3136.702									
T	9.556		3001.407	3146.258	3146.258									
79	9.556		3010.963	3155.814	3155.814	3155.63	0.18		6:10 PM		11.72		16.47	KD=2.18, PL=37.87
S	9.554	38.204	3020.517	3165.368	3165.368									
D	9.535		3030.052	3174.903	3174.903									
T	9.562		3039.614	3184.465	3184.465									
80	9.553		3049.167	3194.018	3194.018	3194.00	0.02		11:00 PM		7.94		16.47	PL=37.92
S	9.550	38.223	3058.717	3203.568	3203.568									
D	9.547		3068.264	3213.115	3213.115									
T	9.566		3077.830	3222.681	3222.681									
81	9.560		3087.390	3232.241	3232.241	3232.23	0.01		3:15 AM	18-Jul-09	9.00		17.25	KD=1.98, PL=36.87
S	9.558	38.201	3096.948	3241.799	3241.799									
D	9.544		3106.492	3251.343	3251.343									
T	9.558		3116.050	3260.901	3260.901									
82	9.541		3125.591	3270.442	3270.442	3270.34	0.10		7:30 AM		8.97		17.25	
S	9.568	38.270	3135.159	3280.010	3280.010									
D	9.575		3144.734	3289.585	3289.585									
T	9.561		3154.295	3299.146	3299.146									
83	9.566		3163.861	3308.712	3308.712	3308.44	0.27		12:18 PM		7.94		17.25	KD=1.77, PL=32.87
S	9.547	38.216	3173.408	3318.259	3318.259									
D	9.566		3182.974	3327.825	3327.825									
T	9.562		3192.536	3337.387	3337.387									
84	9.541		3202.077	3346.928	3346.928	3346.68	0.25		3:42 PM		11.25		17.25	KD=1.86
S	9.565	38.187	3211.642	3356.493	3356.493									
D	9.567		3221.209	3366.060	3366.060									
T	9.532		3230.741	3375.592	3375.592									
85	9.523		3240.264	3385.115	3385.115	3385.09	0.03		7:14 PM		10.87		17.25	KD=1.36, PL=36.92
S	9.556	38.219	3249.820	3394.671	3394.671									
D	9.557		3259.377	3404.228	3404.228									
T	9.554		3268.931	3413.782	3413.782									
86	9.552		3278.483	3423.334	3423.334	3423.23	0.10		9:37 PM		16.00		18.82	KD=1.53, PL=36.96
S	9.563	38.237	3288.046	3432.897	3432.897									
D	9.562		3297.608	3442.459	3442.459									
T	9.562		3307.170	3452.021	3452.021									
87	9.550		3316.720	3461.571	3461.571	3461.30	0.27		11:50 PM		17.17		18.82	KD=1.55, PL=36.95
S	9.572	38.214	3326.292	3471.143	3471.143									
D	9.553		3335.845	3480.696	3480.696									
T	9.546		3345.391	3490.242	3490.242									
88	9.543		3354.934	3499.785	3499.785	3499.55	0.24		2:10 AM	19-Jul-09	16.39		18.82	KD=1.72, PL=36.93
S	9.553	38.243	3364.487	3509.338	3509.338									
D	9.545		3374.032	3518.883	3518.883									
T	9.573		3383.605	3528.456	3528.456									
89	9.572		3393.177	3538.028	3538.028	3537.92	0.11		4:39 AM		15.45		19.61	KD=1.89, PL=36.90
S	9.555	38.236	3402.732	3547.583	3547.583									
D	9.565		3412.297	3557.148	3557.148									
T	9.566		3421.863	3566.714	3566.714									
90	9.550		3431.413	3576.264	3576.264	3575.97	0.29		7:21 AM		14.09		19.61	KD=1.89, PL=37.32

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CHS Depth Tracking Data Sheet

Well /Field	NT2-11B/Nankai-Kumano	**Date in**	July 15th, 2009	**BHA no**	4
Client	Jamstec	**Date out**	July 20th, 2009	**D&M Run no**	4
Hole Section	Enlarge from 12.25in to 17in	**Start Depth**	2786.00	**D&M Tools**	TeleScope8
BHA Length	144.851 m	**End Depth**	3650.00	**BHA Type**	Rotary BHA, hole opener
Stick-up	0.000 m	**Length Unit**	Meters	**Cell Manager**	William/Ito

Std	Joint length	Stand Length	DP	Total length DP+BHA	Expected Connection Hole Depth	Actual Connection Hole Depth	Delta	Blk Corr	Time	Date	AV ROP	Depth Offset	Temp	Remark
S	9.566	38.233	3440.979	3585.830	3585.830									
D	9.550		3450.529	3595.380	3595.380									
T	9.557		3460.086	3604.937	3604.937									
91	9.560		3469.646	3614.497	3614.497	3614.28	0.22		10:24 AM		12.56		19.61	KD=1.49, PL=36.98
S	9.544	38.234	3479.190	3624.041	3624.041									
D	9.563		3488.753	3633.604	3633.604									
T	9.544		3498.297	3643.148	3643.148									
92	9.583		3507.880	3652.731	3652.731	3650.24	2.49		12:35 PM		16.47		19.61	TD@3650m
S	9.562	38.240	3517.442	3662.293	3662.293									
D	9.561		3527.003	3671.854	3671.854									
T	9.546		3536.549	3681.400	3681.400									
93	9.571		3546.120	3690.971	3690.971									

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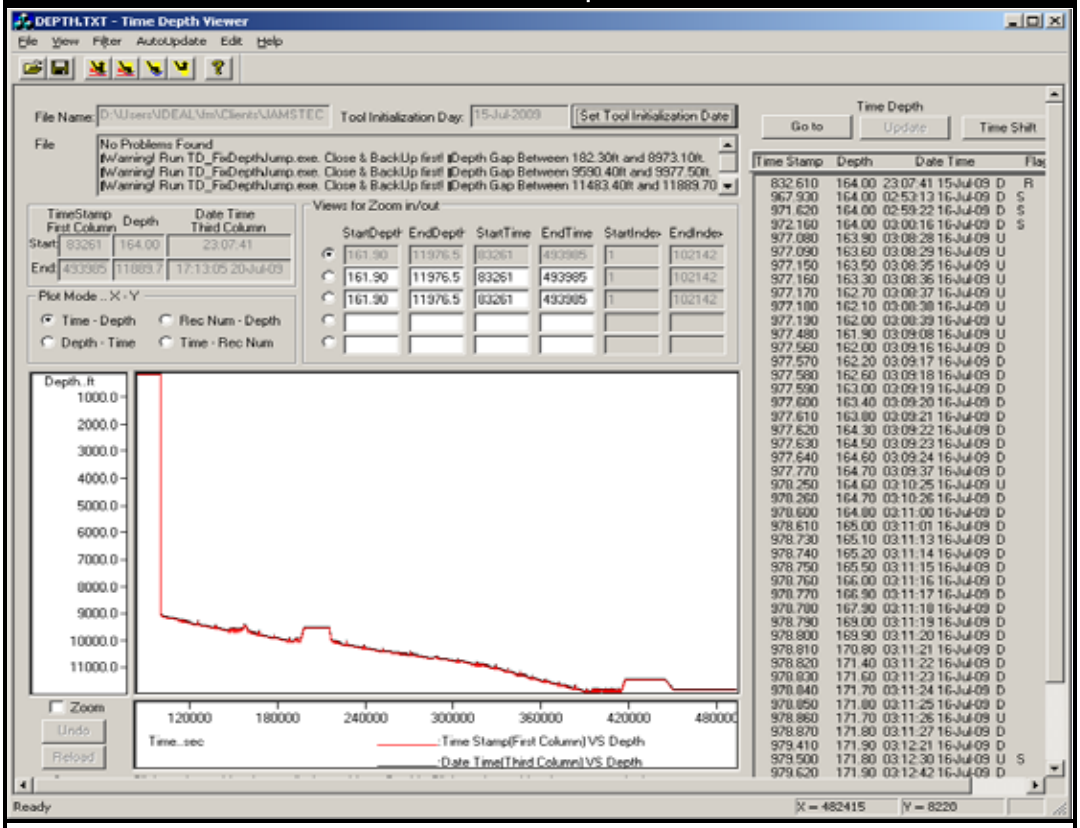
CHS Post-Job Depth Control Report

Job Information	
Date	15-Jul-09
Job no.	09JAP0002
Client	JAMSTEC
Well Name	NT2-11B
Field	Nankai-Kumano
Location	Philippine Sea
Well Profile	Vertical well
Run #	4

Hole Section Information	
Hole Size	Open hole to 17in from 12.25in
Tool Size	8.25in
Services	D&I and IWOB
BHA Type	Hole Opener BHA, MWD only
Inclination	0.1
Azimuth	244.46
Start Depth	2786
End Depth	3650

IDEAL DTM Corrected Depth vs. Time Plot



Depth Control Reference	Driller's depth	**RT vs. RM Log Discrepancy before Time Shift**	no
Time Shift in RM Processing	no	**RT vs. RM Log Discrepancy after Time Shift**	no

Annotations

This section provides details of editing performed on the raw depth files and time shifting performed on the tool dump files.

RAW DEPTH VS. TIME FILES		
Run no.	Edited Interval	Remarks
4	na	No edited interval in this run. No RM data delivered to clients.

TOOL DUMP FILE		
Run no.	Edited Interval	Remarks
4	na	No RM data delivered to clients.

Cell Manager: William Barragan

Engineer Performed Editing: William Barragan

NOTE:

The Precision Depth Assembly (PDA) is the standard depth system for Drilling & Measurements. The purpose of the PDA is to make an accurate determination of the traveling block altitude on fixed rigs.
The components of the PDA are:

DEPTH ENCODER SYSTEM (DES): Driven directly by the drawworks drum.

DEPTH WIRE CALIBRATOR (DWC): Provides calibration data to correct the DES signal with respect to true block displacement. In the event of such an equipment not available at the rigsite, a manual calibration is performed after prior approval from the Drilling & Measurements management.

CLAMP LINE TENSIOMETER (CLT): Used to automate the depth tracking by providing a link between the traveling block motion and the bit motion.

JOB RECORD FOR PRECISION DEPTH ASSEMBLY (PDA)		
Equipment Type	Serial no.	Remarks
CLT	2007213008	Sensor was working fine
Geolograph	na	Sensor was working fine

As per requirements of the D&M Depth Control Standard, Block Height calibrations are to be carried out at the beginning of the job and after every slip-and-cut operation.

DES CALIBRATION HISTORY			
Calibration Date	**Type**	**Calibration Reason**	**Date**
5/18/2009	Manual	Job start	5/18/2009

Document Owner: CHS D&M SQC

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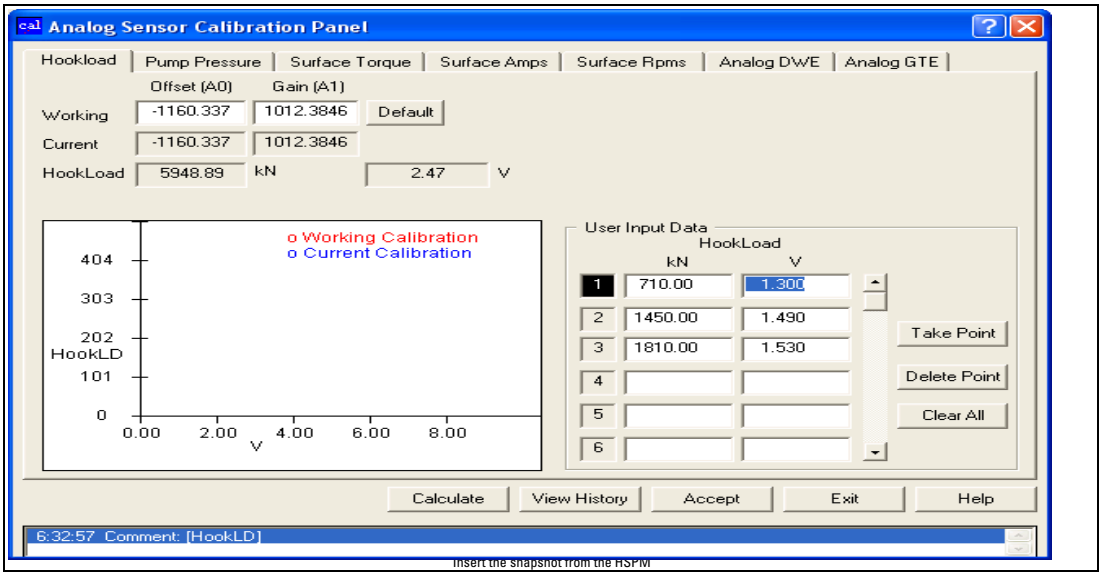
Surface Sensor Calibration Record: Clamp-Line Tensiometer

Client JAMSTEC
Rig Chikyu
Unit
Date / Time **18-May-09**
Job no 09JAP0002
Well NT2-11B

Sensor Series Number OLU-KC-0504

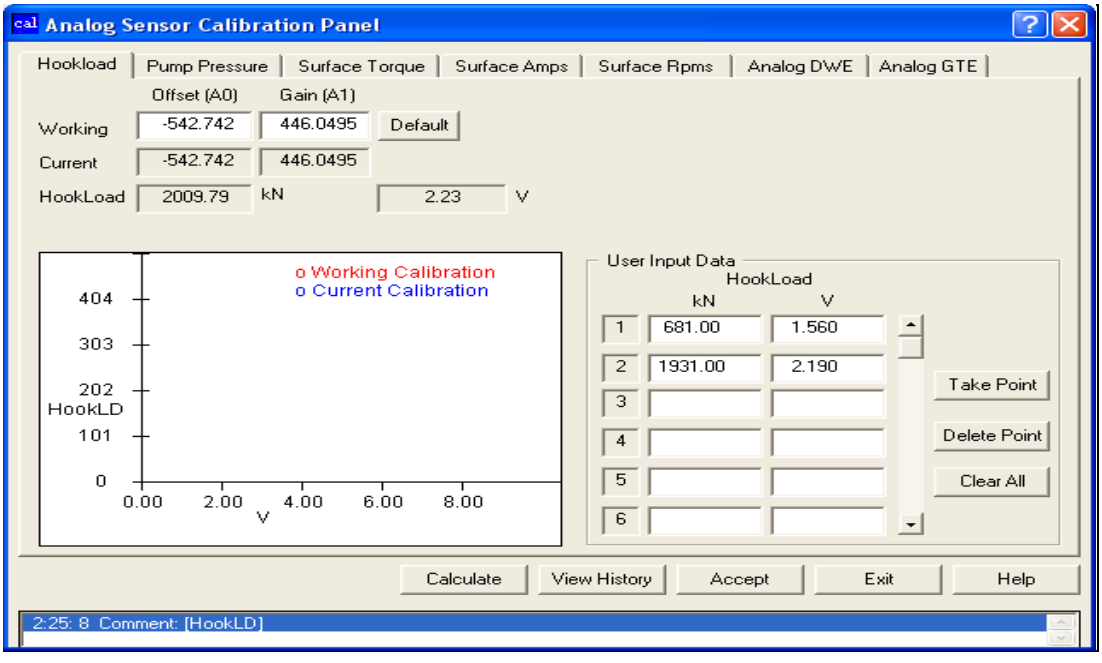
Remarks: Good sensor calibration



Insert the snapshot from the HSPM

Remarks: Calibration after slip and cut. Good sensor calibration.

Date / Time 15-Jul-09



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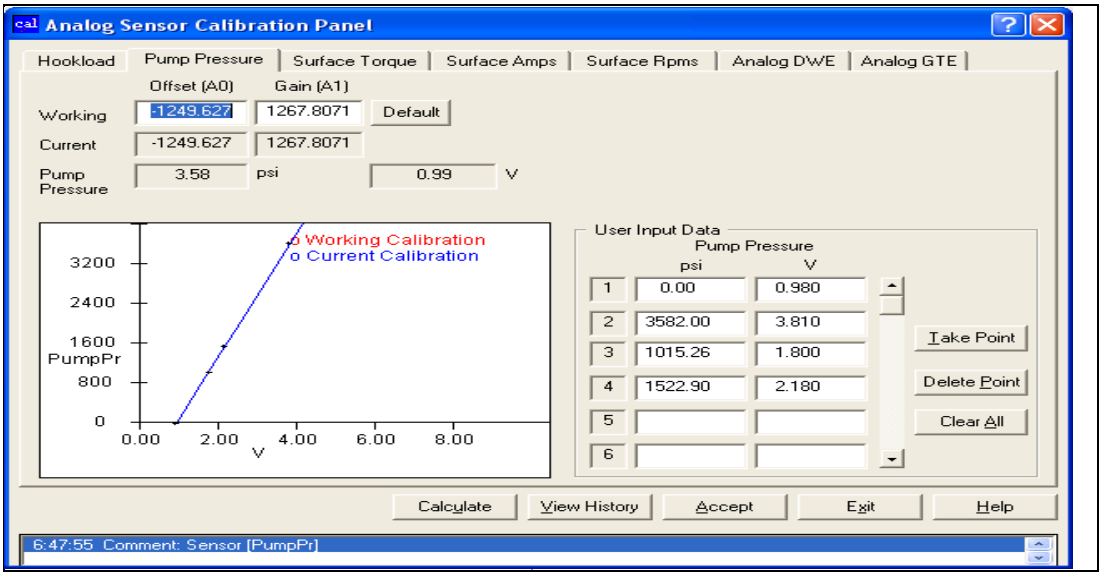
Surface Sensor Calibration Record: Pressure Sensor SPT-HB Static

Client JAMSTEC
Rig Chikyu
Unit OLU-KC-0504
Sensor Series Number

Date / Time **18-May-09**
Job no 09JAP0002
Well NT2-11B

Remarks: Good sensor calibration.



Remarks:

Date / Time

Insert the snapshot from the HSPM

8. GLOSSARY

Glossary

ABBREVIATION	DEFINITION
ARC	LWD Gamma Ray and Resistivity Tool
ADN	LWD Porosity and Density Tool (Azimuthal Density Neutron)
GST	Geosteering Tool
MWD	Measurement While Drilling
LWD	Logging While Drilling
IWOB	Integrated Weight On Bit, Supplies Downhole Weight on Bit (DWOB) and Downhole Torque (DTOR)
APWD	Annular Pressure While Drilling
ECD	Equivalent Circulating Density
BPSK	Binary Phase Shift Keying
MSK	Mimimum Shift Keying