LICENCE NO.

WELL NAME & NO.
**Anadarko Arrowhead F-56**

OPERATOR
**ANADARKO CANADA CORP.**

CONTRACTOR NAME
**AKITA DRILLING LTD.**

SURFACE LOCATION
**60:34:30.00 N 122:55:46.13 W**

UNIQUE ID

SIGNATURE OF OPERATOR'S REPRESENTATIVE
**BRIAN PREECE**

SIGNATURE OF CONTRACTOR'S RIG MANAGER
**ROLF REULE**

**DAILY CHECKS**

| | O/P | R.M. |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | BP | RR |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3 ) H2S Signs Posted if Required | BP | RR |
| ( 4 ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5 ) Flare Lines Staked | BP | RR |
| ( 6 ) BOP Drills Performed | BP | RR |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3 ) Mast Inspection before Raising or Lowering | | RR |
| ( 4 ) Crown Saver Checked | | RR |
| ( 5 ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 2 DAY 6

RIG NO. 37

FUEL @ 08:00 HRS

RIG 41 BOILER

WEATHER: TEMPERATURE; CURRENT CONDITIONS; WIND DIRECTION; ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |
| | 114.3 | 101.6 | 17.20 | TIANJAN | L80 | 36 | 440.38 | 2604.12 | 2846.50 |

| DC / DP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 311 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC

PASON DATAHUB

**HOURS**

CODE NO.

| | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | | | | | | | 4.50 | | | 3.25 | 0.25 | | | | | | | | | | | | 8.00 |
| DAY | 1.75 | | | | | | | | | | | | | 2.00 | 0.25 | | | | | | | | | | | | 4.00 |
| EVE | | | | | | | | | | | | | | | | | | | | | | | | | | | 12.00 |
| TOTAL | 1.75 | | | | | | | | | | 4.50 | | | 5.25 | 0.50 | | | | | | | | | | | | |

**SHALE SHAKER(S)**

NO. | TYPE SWACO | TYPE | SCREENS CHANGED | NEW/ USED | TOP | MIDDLE | BOTTOM

**RENTALS / SERVICES**

LOADER

| | MORN | DAY | EVE |
|---|---|---|---|
| | 14050 | 14068 | 14092 |
| | 14116 | 14140 | 14164 |
| | 14188 | | |

**DRILLING CREW PAYROLL DATA**

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.

PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## MORNING TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH

BIT | O.D.

D.P. STANDS

D.P. SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | J&L |
| TYPE | HT09XP |
| SERIAL NO. | MO3495 |
| JETS | O P / E N |
| DEPTH OUT (m) | 2406.00 |
| DEPTH IN (m) | 2281.00 |
| TOTAL DRILLED (m) | 125.00 |
| TOTAL HRS RUN | 5.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | |
|---|---|
| TIME | |
| DENSITY (kg/m3) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3) | |
| pH | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 240 | STACK TEMP | |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED

@ | @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

MARC LEVESQUE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 430 | 4.50 | 11 | SET BRIDGE PLUG WITH WIRELINE SERVICE TRUCK |
| 430 | 445 | 0.25 | 15 | PRESSURE TEST BRIDGE PLUG TO 15000 KPA FOR 10 MIN. OK |
| 445 | 800 | 3.25 | 14 | CHANGE LOWER PIPE RAMS TO 4 1/2 + TEAR DOWN B.O.P. |

NOTES : REVIEW JSA ON TEARING OUT BOP

BLOW BOTH BOILERS DOWN 2 X = 160L

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC: TEAR OUT BOP | MEHL | MACP

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## DAY TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH

BIT | O.D.

D.P. STANDS

D.P. SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | |
|---|---|
| TIME | |
| DENSITY (kg/m3) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3) | |
| pH | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 8.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 240 | STACK TEMP | |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED

@ | @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 845 | 0.75 | 14 | NIPPLE DOWN BOP |
| 845 | 1000 | 1.25 | 14 | BLOW WATER F/ 7 IN CASG FILL W/ HT40 NU TREE |
| 1000 | 1015 | 0.25 | 15 | TEST TREE TO 7000 KPA 15 MIN |
| 1015 | 1200 | 1.75 | 1 | CLEAN MUD TANKS |
| 1200 | | | | |
| | | | | RIG RELEASED 1200 FEB 6 2004 |

NOTES :

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH

BIT | O.D.

D.P. STANDS

D.P. SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | |
|---|---|
| TIME | |
| DENSITY (kg/m3) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3) | |
| pH | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 0.00 | HRS RUN | |
| BOILER pH | | BOILER pH | |
| STACK TEMP | | STACK TEMP | |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED

@ | @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| | | | | |

NOTES :

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

LICENCE NO.

WELL NAME & NO.
**Anadarko Arrowhead F-56**

OPERATOR
**ANADARKO CANADA CORP.**

CONTRACTOR NAME
**AKITA DRILLING LTD.**

SURFACE LOCATION
**60:34:30.00 N 122:55:46.13 W**

UNIQUE ID

SIGNATURE OF OPERATOR'S REPRESENTATIVE
**BRIAN PREECE**

SIGNATURE OF CONTRACTOR'S RIG MANAGER
**ROLF REULE**

**DAILY CHECKS**
( 1 ) Daily Walk Around Inspection
( 2 ) Detailed Inspection - Weekly ( Using Check List )
( 3 ) H2S Signs Posted if Required
( 4 ) Well Licence & Stick Diagram Posted
( 5 ) Flare Lines Staked
( 6 ) BOP Drills Performed
( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines

| | OPR | R.M. |
|---|---|---|
| 1 | BP | RR |
| 2 | BP | RR |
| 3 | BP | RR |
| 4 | BP | RR |
| 5 | BP | RR |
| 6 | BP | RR |
| 7 | BP | RR |

( 1 ) Rig Site Health & Safety Meeting ( one/crew/month )
( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month )
( 3 ) Mast Inspection before Raising or Lowering
( 4 ) Crown Saver Checked
( 5 ) Motor Kills Checked

| | RR |
|---|---|
| | RR |
| | RR |
| | RR |
| | RR |

YEAR 2004 MONTH 2 DAY 5
RIG NO. 37
FUEL @ 08:00 HRS
RIG BOILER
63
TEMPERATURE
CURRENT CONDITIONS
WIND DIRECTION
ROAD CONDITION

| | O.D. (mm) | MIN ID. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| LAST CASING | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |
| TUBING OR LINER | 114.3 | 101.6 | 17.20 | TIANJIAN | L80 | 36 | 440.38 | 2604.12 | 2846.50 |

| | DC/ DP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|---|
| 1 | | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 311 |
| 2 | | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 |
| 3 | | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTORS JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC
**PASON DATAHUB**

TIME BREAKDOWN

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 CLEAN TANK | 23 BREAK DOWN KELLY | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | 5.75 | | 0.25 | | 0.25 | | | | | | | | 0.25 | | | | | | | 1.50 | | | | | 8.00 |
| DAY | | | | | | 4.00 | 0.25 | | | | | | | | | | | | | | | 3.25 | 0.50 | | | | 8.00 |
| EVE | | | | | | 7.00 | 0.25 | | | | 0.75 | | | | | | | | | | | | | | | | 8.00 |
| TOTAL | | | 5.75 | | 0.25 | 11.00 | 0.75 | | | | 0.75 | | | | 0.25 | | | | | | | 4.75 | 0.50 | | | | 24.00 |

SHALE SHAKER(S) RENTALS / SERVICES

| NO. | TYPE SWACO | TYPE | |
|---|---|---|---|
| | SCREENS CHANGED | NEW/ USED | |
| TOP | 175 | TOP | 110 |
| MIDDLE | | MIDDLE | |
| BOTTOM | 175 | BOTTOM | 110 |

RENTALS / SERVICES: LOADER

| | MORN | DAY | EVE |
|---|---|---|---|
| | 14050 | 14068 | 14092 |
| | 14116 | 14140 | 14164 |
| | 14188 | | |

**DRILLING CREW PAYROLL DATA**

WELL NAME & NO. | YEAR | MONTH | DAY
OPERATOR | CONTRACTOR NAME
RIG MANAGER | RIG NO.
PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.19 | |
| 1 | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 118 | 55.01 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 118 | 55.10 |
| 10 | H.W.D.P. | 118 | 92.25 |
| 114 | D.P. | STANDS | 2174.84 |
| 1 | D.P. | SINGLES | 9.72 |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2406.94 |
| WT. OF D.C. | 10 | | |
| WT. OF STRING | 62 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | J&L |
| TYPE | HT09XP |
| SERIAL NO. | MO3495 |
| JETS | O P / E N |
| DEPTH OUT (m) | 2406.00 |
| DEPTH IN (m) | 2281.00 |
| TOTAL DRILLED (m) | 125.00 |
| TOTAL HRS RUN | 5.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 0 |
| TORQUE AT BOTTOM | 200 |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

MUD TYPE | WATER BASED ☐ OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | | | |
| DENSITY (kg/m3) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3) | | | |
| pH | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 120 | 0.0 | |

REDUCED PUMP SPEED: @ @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: MARC LEVESQUE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2291.00 | | R | 70 | 6 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE ( FUNCTION LOWER PIPE RAMS + ANNULAR ) |
| 15 | 600 | 5.75 | 3 | REAM F / 2291m - 2406m |
| 600 | 615 | 0.25 | 5 | CIRCULATE |
| 615 | 630 | 0.25 | 15 | TEST LINER TO 10000 KPA FOR 15 MIN. OK |
| 630 | 800 | 1.50 | 22 | CLEAN MUD TANK AND FILL WITH WATER TO DISPLACE TO |
| 800 | | | | INHIBITED WATER |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE
INSPECT BRAKES & LINKAGES
REVIEW JSA ON LOADER OPERATION
BLOW BOTH BOILERS DOWN 2 X = 160L

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | LOADER USE | 65 | 19557 |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | J&L |
| TYPE | HT09XP |
| SERIAL NO. | MO3495 |
| JETS | O P / E N |
| DEPTH OUT (m) | 2406.00 |
| DEPTH IN (m) | 2281.00 |
| TOTAL DRILLED (m) | 125.00 |
| TOTAL HRS RUN | 5.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

MUD TYPE | WATER BASED ☐ OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | | | |
| DENSITY (kg/m3) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3) | | | |
| pH | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 230 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 0.0 | |

REDUCED PUMP SPEED: @ @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1115 | 3.25 | 22 | CLEAN TANKS FILL WITH WATER TO DISPLACE HOLE TO |
| 1115 | | | | INHIBITED WATER DISPLACE HOLE TO INHIBATED WATER |
| 1115 | 1130 | 0.25 | 7 | RIG SERVICE FUNCTION ANNULAR 20 SEC |
| 1130 | 1530 | 4.00 | 6 | FLOW CHECK POOH W/ FLOW CHECKS LAYING DOWN DRILL STRING |
| 1515 | | | | FLOW CHECK @ 2310, |
| 1530 | 1600 | 0.50 | 23 | PICK UP KELLY & BREAK QUILL,SAVER,LOWER KELLYCOCK SUBS |
| 1600 | | | | |

NOTES: FUNCTION CROWN SAVER/SWACO CHOKE
REVIEW J.S.A. L/D DRILL STRING
BLOW DOWN BOILER 2X EACH 160 LITRES

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | L/D DRILL STRING | 65 | 19557 |

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | J&L |
| TYPE | HT09XP |
| SERIAL NO. | MO3495 |
| JETS | O P / E N |
| DEPTH OUT (m) | 2406.00 |
| DEPTH IN (m) | 2281.00 |
| TOTAL DRILLED (m) | 125.00 |
| TOTAL HRS RUN | 5.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | | | | 0.00 | | TD | 23.00 |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

MUD TYPE | WATER BASED ☐ OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | | | |
| DENSITY (kg/m3) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3) | | | |
| pH | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 230 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED: @ @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: MARC LEVESQUE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 7 | RIG SERVICE ( FUNCTION LOWER PIPE RAMS + ANNULAR ) |
| 1615 | 2315 | 7.00 | 6 | FINISH LAY DOWN DRILL STRING FLOW CHECK @1250, 209, |
| 2315 | | | | OUT OF HOLE ( FUNCTION BLIND RAMS ) |
| 2315 | 2400 | 0.75 | 11 | SET BRIDGE PLUG WITH WIRELINE SERVICE TRUCK |
| 2400 | | | | |
| | | | | TRIP FLUID MEASURED = 9.18 / CALCULATED = 8.85 / DIFF = .33m3 |

NOTES: FUNCTION CROWN SAVER/SWACO CHOKE
REVIEW JSA ON LAYING OUT DRILL PIPE , WIRELINE TO SET BRIDGE PLUG
BLOW DOWN BOILER 2X EACH 160 LITRES

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | LAY OUT DRILL PIPE | 40 | 21013 |

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | BP | RR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3. ) H2S Signs Posted if Required | BP | RR |
| ( 4. ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5. ) Flare Lines Staked | BP | RR |
| ( 6. ) BOP Drills Performed | BP | RR |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3. ) Mast Inspection before Raising or Lowering | | RR |
| ( 4. ) Crown Saver Checked | | RR |
| ( 5. ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 2 DAY 4

RIG NO. 37

RIG 95 | BOILER

FUEL @ 08:00 HRS

WEATHER: TEMPERATURE; CURRENT CONDITIONS; WIND DIRECTION; ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN ID. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |
| | 114.3 | 101.6 | 17.20 | TIANJAN | L80 | 36 | 440.38 | 2604.12 | 2846.50 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 311 | 8P80 | NATIONAL | 216 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 | | | |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 | | | |

| SPUD DATE | 2004/01/20 | TIME | 23:59 |
|---|---|---|---|
| RIG RELEASE | 2004/02/06 | TIME | 12:00 |
| WELL TYPE | | RE-ENTRY | |
| OPERATOR'S AFE | | | |
| KELLY BSHG | | OP FUEL | |
| CONTRACTORS JOB NUM | | | |
| TOUR SHEET SERIAL NUM | | | |
| VENDOR SOFTWARE VERSION | | | |

CAODC

PASON DATAHUB

CODE NO.: 1 RIGUP & TEARDOWN; 2 DRILL ACTUAL; 3 REAMING; 4 CORING; 5 COND MUD & CIRC; 6 TRIPS; 7 RIG SERVICE; 8 REPAIR RIG; 9 CUT OFF DRILL LINE; 10 DEV. SURVEY; 11 WIRELINE LOGS; 12 RUN CSG & CEMENT; 13 WAIT ON CEMENT; 14 NIPPLE UP B.O.P.; 15 TEST B.O.P.; 16 DRILLSTEM TEST; 17 PLUG BACK; 18 SQUEEZE CEMENT; 19 FISHING; 20 DIR. WORK; 21 SAFETY MEETING; 22 RIG UP TOOLS; 23 BACK OFF LINER; 24 BOP DRILL; 25 SHALE SHAKER(S); 26 RENTALS / SERVICES

| TOUR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | 1.50 | 3.00 | 0.25 | | | | | 1.00 | | | | | | | | | 0.25 | 1.75 | 0.25 | | | | 8.00 |
| DAY | | | | | | 0.75 | 0.25 | | | | | 6.75 | | | | | | | | | | | | 0.25 | | | 8.00 |
| EVE | | | 1.00 | | 0.25 | 5.50 | 0.25 | | 1.00 | | | | | | | | | | | | | | | | | | 8.00 |
| TOTAL | | | 1.00 | | 1.75 | 9.25 | 0.75 | | 1.00 | | | 7.75 | | | | | | | | | 0.25 | 1.75 | 0.25 | 0.25 | | | 24.00 |

SHALE SHAKER(S): NO. | TYPE SWACO | TYPE | SCREENS CHANGED | NEW USED | TOP | MIDDLE | BOTTOM

RENTALS / SERVICES: LOADER

| | MORN | DAY | EVE |
|---|---|---|---|
| | 14050 | 14068 | 14092 |
| | 14116 | 14140 | 14164 |
| | 14188 | | |

TOP 175 | MIDDLE 110 | BOTTOM 175 | BOTTOM 110

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.

PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

BIT RECORD: BIT NO.; SIZE; IADC CODE; MANUFACTURER; TYPE; SERIAL NO.; JETS; DEPTH OUT (m); DEPTH IN (m); TOTAL DRILLED (m); TOTAL HRS RUN

CUTTING STRUCTURE: T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

HOLE CONDITION: HOLE DRAG: 2000 UP + DOWN; TORQUE AT BOTTOM; FILL ON BOTTOM (m): 0.25

MUD RECORD: MUD TYPE; WATER BASED ☐ OIL BASED ☐; TIME; DENSITY (kg/m3); FUNNEL VISCOSITY; FLUID LOSS (cm3); pH

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL: CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

CIRCULATION PRESSURE kPa | PUMP NO. 1: LINER SIZE | SPM | PUMP NO. 2: LINER SIZE | SPM

REDUCED PUMP SPEED

DEVIATION SURVEYS: DEPTH ( m ) | DEVIATION | DIRECTION

BOILERS: 1 | 2; HRS RUN 16.00 | HRS RUN; BOILER pH 10.5 | BOILER pH; STACK TEMP 240 | STACK TEMP

DRILLER SIGNATURE: MARC LEVESQUE

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE ( FUNCTION LOWER PIPE RAMS + ANNULAR ) |
| 15 | 145 | 1.50 | 6 | TRIP RUN IN HOLE TO 2440m |
| 145 | 215 | 0.50 | 5 | CIRCULATE |
| 215 | 345 | 1.50 | 6 | TRIP RUN IN HOLE TO 2847m |
| 345 | 530 | 1.75 | 22 | RIG UP PUP JOINTS TAG BOTTOM / RIG UP CIRCULATING TOOLS |
| 530 | | | | BLOW OUT KELLY TO CIRCULATE 2 " |
| 530 | 630 | 1.00 | 5 | CIRCULATE |
| 630 | 645 | 0.25 | 21 | SAFETY MTG. TO CEMENT LINER |
| 645 | 700 | 0.25 | 23 | BACK OUT OF LINER |
| 700 | 800 | 1.00 | 12 | CEMENT CASING |
| 800 | | | | |
| | | | | PUMP 3 M3 TUNED SPACER 6.7 TON CLASS G CMT +40%SSA-1+.6% HALAD-344+.5% |
| | | | | LAD-344 .5%CFR-3 +.3%HR-12 DISPLACE W/3.4 M3 WATER 8.2 M3 |
| | | | | MUD BUMPED PLUG FLOATS HED OK |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
INSPECT BRAKES & LINKAGES
REVIEW JSA ON HANDLING TUBULARS
BLOW BOTH BOILERS DOWN 2 X = 160L

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC: PIPE SPINNER USE | MEHL: 60 | MACP: 19557

MORNING TOUR FROM 0 TO 800 INJURIES

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | 0.19 | |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 118 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 118 | 55.10 |
| 10 | H.W.D.P. | 118 | 92.25 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | |
| | TOTAL | | 209.46 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

BIT RECORD: BIT NO. 4; SIZE 156.0; IADC CODE 4 3 7; MANUFACTURER J&L; TYPE HT09XP; SERIAL NO. MO3495; JETS O P E N

CUTTING STRUCTURE

HOLE CONDITION: HOLE DRAG; TORQUE AT BOTTOM; FILL ON BOTTOM (m)

MUD RECORD: MUD TYPE; WATER BASED ☐ OIL BASED ☐; TIME; DENSITY (kg/m3); FUNNEL VISCOSITY; FLUID LOSS (cm3); pH

MUD MATERIALS ADDED

SOLIDS CONTROL: CENTRIFUGE

CIRCULATION PRESSURE kPa | PUMP NO. 1 | PUMP NO. 2

REDUCED PUMP SPEED

DEVIATION SURVEYS

BOILERS: 1 | 2; HRS RUN 16.00 | HRS RUN; BOILER pH 10.5 | BOILER pH; STACK TEMP 230 | STACK TEMP

DRILLER SIGNATURE: DAN PERRY

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 845 | 0.75 | 12 | PULL OUT OF LINER BACK FLOW 1M3 L/D CMT HEAD |
| 845 | 1445 | 6.00 | 12 | POOH W/ FLOW CHECKS L/D RUNNING TOOL |
| 1445 | 1500 | 0.25 | 7 | RIG SERVICE FUNCTION BLIND RAMS 6 SEC |
| 1500 | 1515 | 0.25 | 24 | BOP DRILL |
| 1515 | 1600 | 0.75 | 6 | M/U BIT AND BHA |

NOTES: FUNCTION CROWN SAVER/SWACO CHOKE
REVIEW J.S.A. ON POOH
BLOW DOWN BOILERS 2X EACH 160 LITRES

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC: POOH | MEHL | MACP: 19557

DAY TOUR FROM 800 TO 1600 INJURIES

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.19 | |
| 1 | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 118 | 55.01 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 118 | 55.10 |
| 10 | H.W.D.P. | 118 | 92.25 |
| 114 | D.P. STANDS | | 2174.84 |
| 1 | D.P. SINGLES | | 9.72 |
| | KELLY DOWN | | 12.92 |
| | TOTAL | | 2406.94 |
| | WT. OF D.C. | 10 | |
| | WT. OF STRING | 62 | |

BIT RECORD: BIT NO. 4; SIZE 156.0; IADC CODE 4 3 7; MANUFACTURER J&L; TYPE HT09XP; SERIAL NO. MO3495; JETS O P E N; DEPTH IN (m) 2281.00; TOTAL DRILLED (m) 10.00; TOTAL HRS RUN 1.00

CUTTING STRUCTURE

HOLE CONDITION: HOLE DRAG 0; TORQUE AT BOTTOM 150; FILL ON BOTTOM (m)

MUD RECORD: MUD TYPE; WATER BASED ☐ OIL BASED ☐; TIME; DENSITY (kg/m3); FUNNEL VISCOSITY; FLUID LOSS (cm3); pH

MUD MATERIALS ADDED

SOLIDS CONTROL: CENTRIFUGE

CIRCULATION PRESSURE kPa: 13000 | PUMP NO. 1: LINER SIZE 127.0 | SPM 120 | PUMP NO. 2: LINER SIZE 0.0 | SPM

REDUCED PUMP SPEED: @ 0 @

DEVIATION SURVEYS

BOILERS: 1 | 2; HRS RUN 16.00 | HRS RUN; BOILER pH 10.5 | BOILER pH; STACK TEMP 230 | STACK TEMP

DRILLER SIGNATURE: MARC LEVESQUE

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2281.00 | 2291.00 | R | 70 | 6 |

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1700 | 1.00 | 6 | RUN IN D/C& HWDP&1 SINGLE 0F DP FLOW CHECK |
| 1700 | 1800 | 1.00 | 9 | CUT & SLIP 25 M DRILL LINE |
| 1800 | 1815 | 0.25 | 7 | RIG SERVICE ( FUNCTION LOWER PIPE RAMS + ANNULAR ) |
| 1815 | 2015 | 2.00 | 6 | RUN IN TO 1000m |
| 2015 | 2030 | 0.25 | 5 | FILL PIPE + FLOW CHECK |
| 2030 | 2300 | 2.50 | 6 | TRIP RIH TO 2281m |
| 2300 | 2400 | 1.00 | 3 | REAM F / 2281m - 2291m |
| 2400 | | | | |

NOTES: FUNCTION CROWN SAVER/SWACO CHOKE
REVIEW J.S.A. ON LAYING OUT SINGLES
BLOW DOWN BOILERS 2X EACH 160 LITRES
INSPECT BRAKES & LINKAGES

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC: TRIPPING | MEHL: 65 | MACP: 19557

EVENING TOUR FROM 1600 TO 2400 INJURIES

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

LICENCE NO.

WELL NAME & NO.
**Anadarko Arrowhead F-56**

OPERATOR
**ANADARKO CANADA CORP.**

CONTRACTOR NAME
**AKITA DRILLING LTD.**

SURFACE LOCATION
**60:34:30.00 N 122:55:46.13 W**

UNIQUE ID

SIGNATURE OF OPERATOR'S REPRESENTATIVE
**BRIAN PREECE**

SIGNATURE OF CONTRACTOR'S RIG MANAGER
**ROLF REULE**

**DAILY CHECKS**
( 1 ) Daily Walk Around Inspection
( 2 ) Detailed Inspection - Weekly ( Using Check List )
( 3 ) H2S Signs Posted if Required
( 4 ) Well Licence & Stick Diagram Posted
( 5 ) Flare Lines Staked
( 6 ) BOP Drills Performed
( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines

( 1 ) Rig Site Health & Safety Meeting ( one/crew/month )
( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month )
( 3 ) Mast Inspection before Raising or Lowering
( 4 ) Crown Saver Checked
( 5 ) Motor Kills Checked

| | OPR | S.M. |
|---|---|---|
| | BP | RR |
| | BP | RR |
| | BP | RR |
| | BP | RR |
| | BP | RR |
| | BP | RR |
| | BP | RR |
| | | RR |
| | | RR |
| | | RR |

PRINT-WORK

YEAR 2004 MONTH 2 DAY 3
RIG NO. 37
FUEL @ 08.00 HRS
RIG 10343 BOILER 95
TEMPERATURE
CURRENT CONDITIONS
WIND DIRECTION
ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T..INT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 311 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| DP FUEL | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC

**PASON DATAHUB**

**TIMES**

| CODE NO: | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 RIG OUT L/D TRUCK | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | 0.50 | 7.25 | 0.25 | | | | | | | | | | | | | | | | | | | | 8.00 |
| DAY | | | | | | 2.00 | | | | | | 1.75 | | | | | | | | | 0.25 | 1.00 | 3.00 | | | | 8.00 |
| EVE | | | | | 1.25 | 3.75 | 0.25 | | | | | 1.75 | | | | | | | | | 0.25 | | 0.75 | | | | 8.00 |
| TOTAL | | | | | 1.75 | 13.00 | 0.50 | | | | | 3.50 | | | | | | | | | 0.50 | 1.00 | 3.75 | | | | 24.00 |

**SHALE SHAKER(S)**

| NO. | TYPE SWACO | TYPE | |
|---|---|---|---|
| | SCREENS CHANGED | NEW/ USED | |
| TOP 175 | | TOP 110 | |
| MIDDLE | | MIDDLE | |
| BOTTOM 175 | | BOTTOM 110 | |

**RENTALS / SERVICES**

| | MORN | DAY | EVE |
|---|---|---|---|
| LOADER | 14050 | 14068 | 14092 |
| | 14116 | 14140 | 14164 |
| | 14188 | | |

**DRILLING CREW PAYROLL DATA**

WELL NAME & NO. | YEAR | MONTH | DAY
OPERATOR | CONTRACTOR NAME
RIG MANAGER | RIG NO.
PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.13 | |
| 1 | BIT SUB | 188 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 135 | D.P. STANDS | | 2578.79 |
| | D.P. SINGLES | | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2801.11 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | UD 51MD3503 |
| SERIAL NO. | 207HTO9XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED [X] | OIL BASED ☐

| | |
|---|---|
| TIME | |
| DENSITY (kg/m3) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 220 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 0.0 | |

**REDUCED PUMP SPEED**

@ | @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**
CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE(FUNCTION TOP+BOTTOM PIPE-RAMS,ANNULAR) |
| 15 | 45 | 0.50 | 5 | COND MUD & CIRCULATE BOTTOMS UP/FLOW CHECK@ |
| 45 | 100 | 0.25 | 6 | TRIPS/P.O.O.H. 5 STANDS/FLOW CHECK @ 2837m |
| 100 | 130 | 0.50 | 6 | TRIPS/PUMP PILL/P.O.O.H./ FLOW CHECK@2742m |
| 130 | 800 | 6.50 | 6 | TRIPSP.O.O.H./ FLOW CHECKS@ 1885m, 940m,210m, |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE/MONITORS BY D.D.A
REVIEW J.S.A. ON P.O.O.H./PIPE-SPINNER USE
BLOW BOILER DOWN 2 X = 80 LITERS (EACH BOILER)

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | PIPE-SPINNER USE | 65 | 19557 |

| MORNING TOUR | FROM 0 | TO 800 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.13 | |
| 1 | BIT SUB | 188 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 222.32 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | UD 51MD3503 |
| SERIAL NO. | 207HTO9XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | |
|---|---|
| TIME | 1430 |
| DENSITY (kg/m3) | 1060 |
| FUNNEL VISCOSITY | 50 |
| FLUID LOSS (cm3) | |
| pH | 11.0 |
| PVT. | 66.10 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 0.0 | |

**REDUCED PUMP SPEED**

@ | @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**
MARC LEVESQUE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1000 | 2.00 | 6 | TRIP POOH / FLOW OUT OF HOLE ( FUNCTION BLIND RAMS ) |
| 1000 | 1100 | 1.00 | 22 | PULL WEAR BUSHING |
| 1100 | 1400 | 3.00 | 23 | CHANGE UPPER RAMS TO 4 1/2 TEST BONNET SEALS TO 10000 KPA |
| 1400 | 1415 | 0.25 | 21 | SAFETY MTG. TO RIG UP AND RUN TUBING |
| 1415 | 1600 | 1.75 | 12 | RIG UP AND RUN F/S 1 X JT 114.3 MM 17.36 KG/M CASG F/C 35 JTS 114.3 MM L80 |
| 1600 | | | | .3 MM 17.36 KG/M CASG LINER HANGER TOTAL LENTH 440.38 M |
| | | | | TRIP MUD MEASURED = 9.88 / CALCULATED = 8.83 / DIFF. = 1.05m3 |
| | | | | PIPE STRAP = 2628.99M / TALLY = 2627.06 / DIFF. = 1.93m |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
REVIEW JSA ON TRIPPING, RUNNING TUBING
BLOW BOTH BOILERS DOWN 2 X = 160L

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | HOUSEKEEPING | 65 | 19557 |

| DAY TOUR | FROM 800 | TO 1600 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | |
|---|---|
| TIME | |
| DENSITY (kg/m3) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 230 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

**REDUCED PUMP SPEED**

@ | @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**
DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 21 | SAFETY MTG. WITH TONG HAND & L/D TRUCK |
| 1615 | 1800 | 1.75 | 12 | FINISH RUNNING CSG.& MAKE UP CSG. HANGER |
| 1800 | 1845 | 0.75 | 23 | RIG OUT TONGS L/D TRUCK |
| 1845 | 1900 | 0.25 | 7 | RIG SERVICE FUNCTION ANN. PIPE RAMS |
| 1900 | 1930 | 0.50 | 6 | RUN IN 2 STDS D/P & TEST ON/OFF TOOL FOR LINER |
| 1930 | 2045 | 1.25 | 6 | RUN IN TO 1010 FLOW CHECK |
| 2045 | 2130 | 0.75 | 5 | PICK UP KELLY & FILL PIPE |
| 2130 | 2230 | 1.00 | 6 | RUN IN TO 1502 |
| 2230 | 2300 | 0.50 | 5 | PICK UP KELLY & FILL PIPE |
| 2300 | 2400 | 1.00 | 6 | RUN IN TO 1993 FLOW CHECK |
| 2400 | | | | |
| | | | | NEB RIG CHECK BY RICK TURNER |

NOTES: FUNCTION CROWN SAVER/SWACO CHOKE
REVIEW J.S.A. ON RUNNING IN HOLE,PIPE SPINNER
BLOW DOWN BOILER 2X EACH 160 LITRES

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | PIPE SPINNER | | 19557 |

| EVENING TOUR | FROM 1600 | TO 2400 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

( 1. ) Daily Walk Around Inspection
( 2. ) Detailed Inspection - Weekly ( Using Check List )
( 3. ) H2S Signs Posted if Required
( 4. ) Well Licence & Stick Diagram Posted
( 5. ) Flare Lines Staked
( 6. ) BOP Drills Performed
( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines

( 1. ) Rig Site Health & Safety Meeting ( one/crew/month )
( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month )
( 3. ) Mast Inspection before Raising or Lowering
( 4. ) Crown Saver Checked
( 5. ) Motor Kills Checked

| OPR | R.M. |
|---|---|
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| | RR |
| | RR |
| | RR |
| | RR |

YEAR 2004 MONTH 2 DAY 2

RIG NO. 37

FUEL @ 08.00 HRS

RIG 14517 BOILER 125

TEMPERATURE

CURRENT CONDITIONS

WIND DIRECTION

ROAD CONDITION

PRINT - JOINTS

| | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| LAST CASING TUBING OR LINER | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 311 | 8P80 | NATIONAL | 216 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 | | | |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 | | | |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| RIG RELEASE | 2004/02/06 |
| WELL TYPE | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |
| TIME | 23:59 |
| TIME | 12:00 |
| RE-ENTRY | |
| OF FUEL | |

CAODC

PASON DATAHUB

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS | MORN | DAY | EVE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | 7.75 | | 0.25 | | | | | | | | | | | | | | | | | | | | 8.00 | 14050 | 14068 | 14092 |
| DAY | | | | | 1.25 | 6.50 | 0.25 | | | | | | | | | | | | | | | | | | | | 8.00 | 14116 | 14140 | 14164 |
| EVE | | | 1.00 | | 2.25 | 4.75 | | | | | | | | | | | | | | | | | | | | | 8.00 | | | |
| TOTAL | | | 1.00 | | 11.25 | 11.25 | 0.50 | | | | | | | | | | | | | | | | | | | | 24.00 | | | |

**SHALE SHAKER(S) / RENTALS / SERVICES**

| NO. | TYPE SWACO | TYPE | |
|---|---|---|---|
| | | | LOADER |
| SCREENS CHANGED | | NEW/ USED | |
| TOP | 175 | TOP | 110 |
| MIDDLE | | MIDDLE | |
| BOTTOM | 175 | BOTTOM | 110 |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | | YEAR | MONTH | DAY |
|---|---|---|---|---|
| OPERATOR | CONTRACTOR NAME | | | |
| RIG MANAGER | | RIG NO. | | |
| PROVINCE | CAMP YES NO | RIG SAFETY DAYS | | |

## MORNING TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. 0.13 | |
| 1 | SCRAPER | 165 | 0.81 |
| 1 | BIT SUB | 188 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 118 | D.P. | STANDS | 2252.08 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2475.21 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | UD 51MD3503 |
| SERIAL NO. | 207HTO9XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE: T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

| MUD TYPE | | WATER BASED ☐ | OIL BASED ☐ |
|---|---|---|---|
| TIME | 200 | 400 | 600 |
| DENSITY (kg/m3) | 1060 | 1060 | 1060 |
| FUNNEL VISCOSITY | 50 | 49 | 51 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 10.5 | 10.5 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| 0.00 | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 220 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 0.0 | 60 |

**REDUCED PUMP SPEED**

3000 @ 60 @

**DEVIATION SURVEYS**

| DEPTH (m) | DEVIATION | DIRECTION |
|---|---|---|

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

DRILLER SIGNATURE: CURTIS VICKERS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 345 | 3.75 | 5 | CIRCULATE AND WAIT ON ORDERS FROM OFFICE |
| 345 | 400 | 0.25 | 7 | RIG SERVICE(FUNCTIONANNULAR,BOTH SETS OF PIPE-RAMS) |
| 400 | 800 | 4.00 | 5 | CIRCULATE AND WAIT ON ORDERS FROM OFFICE |

NOTES: FUNCTION SWACO CHOKE / MONITORS BY D.D.A.
REVIEW J.S.A. ON HOUSEKEEPING/ DE-ICING MATTING
BLOW BOILER DOWN 2 X = 80 LITERS ( EACH BOILER)
INSPECT BRAKES , LINKAGES,BANDS,

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | HOUSEKEEPING | 60 | 19557 |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## DAY TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. 0.13 | |
| 1 | BIT SUB | 188 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 135 | D.P. | STANDS | 2578.79 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2801.11 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | UD 51MD3503 |
| SERIAL NO. | 207HTO9XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE: T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

| MUD TYPE | | WATER BASED X | OIL BASED ☐ |
|---|---|---|---|
| TIME | 800 | | |
| DENSITY (kg/m3) | 1060 | | |
| FUNNEL VISCOSITY | 50 | | |
| FLUID LOSS (cm3) | | | |
| pH | 10.5 | | |
| PVT. | 73.20 | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 325 | 72 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 8 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 0.0 | 60 |

**REDUCED PUMP SPEED**

3000 @ 60 @

**DEVIATION SURVEYS**

| DEPTH (m) | DEVIATION | DIRECTION |
|---|---|---|

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

DRILLER SIGNATURE: MARC LEVESQUE

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE ( FUNCTION UPPER + LOWER PIPE RAMS + ANNULAR ) |
| 815 | 930 | 1.25 | 5 | CIRCULATE AND WAIT ON ORDERS |
| 930 | 1530 | 6.00 | 6 | TRIP POOH / FLOW CHECKS @ 2460m, 2365m, 1263m, 691m, |
| | | | | FLOW CHECK OUT OF HOLE + FUNCTION BLIND RAMS |
| 1530 | 1600 | 0.50 | 6 | TRIP RIH |
| 1600 | | | | |
| | | | | TRIP MUD MEASURED = 8.82 / CALCULATED = 8.74 / DIFF = .08m3 |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
INSPECT BRAKES & LINKAGES
REVIEW JSA ON LAYING DOWN DRILL PIPE
BLOW BOILERS DOWN 2 X = 160 L

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | LAY OUT PIPE | 60 | 19557 |

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. 0.13 | |
| 1 | BIT SUB | 188 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 135 | D.P. | STANDS | 2578.79 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2801.11 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | UD 51MD3503 |
| SERIAL NO. | 207HTO9XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE: T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**

HOLE DRAG 2000UP / DOWN
TORQUE AT BOTTOM 450
FILL ON BOTTOM (m)

**MUD RECORD**

| MUD TYPE | | WATER BASED X | OIL BASED ☐ |
|---|---|---|---|
| TIME | | | |
| DENSITY (kg/m3) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3) | | | |
| pH | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 325 | 70 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 0.0 | |

**REDUCED PUMP SPEED**

@ 0 @

**DEVIATION SURVEYS**

| DEPTH (m) | DEVIATION | DIRECTION |
|---|---|---|

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

DRILLER SIGNATURE: CURTIS VICKERS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1800 | 2.00 | 6 | TRIP RIH TO 1000m |
| 1800 | 1815 | 0.25 | 5 | FILL PIPE + FLOW CHECK |
| 1815 | 2100 | 2.75 | 6 | TRIP RIH TO 2475m/FLOWCHECK@2460m |
| 2100 | 2230 | 1.50 | 5 | COND MUD & CIRC/FILL PIPE/FLOW CHECK@2801m |
| 2230 | 2330 | 1.00 | 3 | WASH 5 SINGLES TO BOTTOM/FR.2801m-2848m |
| 2330 | 2400 | 0.50 | 5 | COND MUD & CIRCULATE BOTTOMS UP |
| 2400 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
REVIEW JSA ON RUNNING IN HOLE
BLOW BOILERS DOWN 2 X = 160L

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | PICK UP DRILL PIPE | 64 | 19557 |

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

(1.) Daily Walk Around Inspection
(2.) Detailed Inspection - Weekly ( Using Check List )
(3.) H2S Signs Posted if Required
(4.) Well Licence & Stick Diagram Posted
(5.) Flare Lines Staked
(6.) BOP Drills Performed
(7.) Visually Inspect BOPs- Flare Lines & Degasser Lines

(1.) Rig Site Health & Safety Meeting ( one/crew/month )
(2.) CAODC Rig Safet Inspection Checklist ( one/rig/month )
(3.) Mast Inspection before Raising or Lowering
(4.) Crown Saver Checked
(5.) Motor Kills Checked

| OPR | R.M. |
|---|---|
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| BP | RR |
| | RR |
| | RR |
| | RR |
| | RR |

YEAR 2004 MONTH 2 DAY 1
RIG NO. 37
FUEL @ 08:00 HRS
RIG 16011 BOILER 135
WEATHER: TEMPERATURE; CURRENT CONDITIONS; WIND DIRECTION; ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T..INT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 311 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

PASON DATAHUB

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 WAIT ON ORDERS | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME-HRS MORN | | | | | | | | | | | 8.00 | | | | | | | | | | | | | | | |
| DAY | | | | | 0.25 | 3.00 | 0.25 | | 0.75 | | 3.00 | | | | | | | | | | | 0.75 | | | | |
| EVE | | | | | 2.75 | 5.00 | 0.25 | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | 3.00 | 8.00 | 0.50 | | 0.75 | | 11.00 | | | | | | | | | | | 0.75 | | | | |

| TOTALS | MORN | DAY | EVE |
|---|---|---|---|
| 8.00 | 14050 | 14068 | 14092 |
| 8.00 | 14116 | 14140 | |
| 8.00 | | | |
| 24.00 | | | |

SHALE SHAKER(S) NO. TYPE SWACO TYPE SCREENS CHANGED NEW: USED: TOP 175 MIDDLE BOTTOM TOP 110 MIDDLE BOTTOM 110

RENTALS / SERVICES: LOADER

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. | YEAR | MONTH | DAY
OPERATOR | CONTRACTOR NAME
RIG MANAGER | RIG NO.
PROVINCE | CAMP YES NO | RIG SAFETY DAYS

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.13 |
| 1 | SCRAPER | 165 | 0.81 |
| 1 | BIT SUB | 118 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 118 | D.P. | STANDS | 2252.08 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2475.21 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | MD3503 |
| SERIAL NO. | HT09XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**: HOLE DRAG; TORQUE AT BOTTOM; FILL ON BOTTOM (m)

**MUD RECORD**

| MUD TYPE | | WATER BASED | X | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | 200 | 400 | 600 | |
| DENSITY (kg/m3) | | 1060 | 1060 | 1060 | |
| FUNNEL VISCOSITY | | 48 | 50 | 48 | |
| FLUID LOSS (cm3) | | | | | |
| pH | | 11.0 | 11.0 | 11.0 | |

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL — CENTRIFUGE: HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | SPM | PUMP NO. 2 LINER SIZE | SPM
127.0 | 0.0

REDUCED PUMP SPEED: @ @

**DEVIATION SURVEYS**: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: CURTIS VICKERS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 700 | 7.00 | 11 | WIRE LINE LOGS/(1#)STI, SPED, CNT, GR, MDA, HMI, CAL |
| 700 | 800 | 1.00 | 11 | WIRE LINE LOG RUN # 2 STI , SPED, CNT, GR, CAL |
| 800 | | | | |
| | | | | CONTINUOSLY MONITOR WELL FOR GAIN OR LOSSES |

NOTES:
REVIEW JSA ON LOCK-OUT WORK ON PUMP
BLOW BOILER DOWN 2 X = 80 LITERS ( EACH BOILER)

| SPECIAL EVENT | | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|---|
| TIME / DEPTH | | | | WORK ON 8 P 80 PUMP | | 19557 |

| MORNING TOUR | FROM 0 | TO 800 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.13 |
| 1 | SCRAPER | 165 | 0.81 |
| 1 | BIT SUB | 188 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 118 | D.P. | STANDS | 2252.08 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2475.21 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | UD 51MD3503 |
| SERIAL NO. | 207HTO9XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**: HOLE DRAG; TORQUE AT BOTTOM; FILL ON BOTTOM (m)

**MUD RECORD**

| MUD TYPE | | WATER BASED | | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | | | | |
| DENSITY (kg/m3) | | | | | |
| FUNNEL VISCOSITY | | | | | |
| FLUID LOSS (cm3) | | | | | |
| pH | | | | | |

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL — CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 240 | STACK TEMP | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | SPM | PUMP NO. 2 LINER SIZE | SPM
127.0 | 0.0

REDUCED PUMP SPEED: @ 0 @

**DEVIATION SURVEYS**: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: MARC LEVESQUE

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1100 | 3.00 | 11 | WIRE LINE LOG # 2 |
| 1100 | 1115 | 0.25 | 7 | RIG SERVICE ( FUNCTION BLIND RAMS ,UPPER + LOWER PIPE RAMS , |
| 1115 | | | | + ANNULAR ) |
| 1115 | 1245 | 1.50 | 6 | TRIP RUN IN BHA |
| 1245 | 1330 | 0.75 | 9 | CUT OFF DRLL LINE |
| 1330 | 1415 | 0.75 | 22 | WAIT ON ORDERS |
| 1415 | 1530 | 1.25 | 6 | TRIP RUN IN HOLE TO 550m |
| 1530 | 1545 | 0.25 | 5 | FILL PIPE + FLOW CHECK |
| 1545 | 1600 | 0.25 | 6 | TRIP RIH |

NOTES: FUNCTION CROWN SAVER / PASON CHOKE / GAS MONITORS BY D.D.A.
REVIEW JSA ON LOCKOUT PROCEDURE , TRIPPING
BLOW BOTH BOILERS DOWN 2 X = 180L
INSPECT BRAKES & LINKAGES

| SPECIAL EVENT | | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|---|
| TIME / DEPTH | | | | TRIPPING | 50 | 19557 |

| DAY TOUR | FROM 800 | TO 1600 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.13 |
| 1 | SCRAPER | 165 | 0.81 |
| 1 | BIT SUB | 188 | 0.77 |
| 6 | D.C. | 120 | 54.74 |
| 1 | JAR | 125 | 6.14 |
| 6 | D.C. | 120 | 55.37 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 118 | D.P. | STANDS | 2252.08 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.92 |
| TOTAL | | | 2475.21 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | BAKER HUGHES |
| TYPE | UD 51MD3503 |
| SERIAL NO. | 207HTO9XP |
| JETS | O P / E N |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2847.00 |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**: HOLE DRAG; TORQUE AT BOTTOM; FILL ON BOTTOM (m)

**MUD RECORD**

| MUD TYPE | | WATER BASED | | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | | | | |
| DENSITY (kg/m3) | | | | | |
| FUNNEL VISCOSITY | | | | | |
| FLUID LOSS (cm3) | | | | | |
| pH | | | | | |

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL — CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 240 | STACK TEMP | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | SPM | PUMP NO. 2 LINER SIZE | SPM
127.0 | 40 | 0.0

REDUCED PUMP SPEED: @ 60 @ 2470

**DEVIATION SURVEYS**: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: CURTIS VICKERS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1730 | 1.50 | 6 | TRIP RUN IN HOLE TO 1500m |
| 1730 | 1745 | 0.25 | 5 | FILL PIPE + FLOW CHECK |
| 1745 | 2015 | 2.50 | 6 | TRIP RIH TO2330mDOUBLE SCRATCH CASINGTO 2460m |
| 2015 | 2115 | 1.00 | 6 | TRIPS/ SCRATCH CASING UP TO 2475m |
| 2115 | 2130 | 0.25 | 7 | RIG SERVICE( FUNCTIONTOP/BOTTOMPIPE-RAMS,ANNULAR) |
| 2130 | 2400 | 2.50 | 5 | CIRCULATE/ WAIT ON ORDERS |
| 2400 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
REVIEW JSA ON TRIPPING
INSPECT BRAKES AND LINKAGES

| SPECIAL EVENT | | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|---|
| TIME / DEPTH | | | | TRIPPING | 50 | 19557 |

| EVENING TOUR | FROM 1600 | TO 2400 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

LICENCE NO. | WELL NAME & NO.: **Anadarko Arrowhead F-56**

OPERATOR: **ANADARKO CANADA CORP.** | CONTRACTOR NAME: **AKITA DRILLING LTD.**

SURFACE LOCATION: **60:34:30.00 N 122:55:46.13 W** | UNIQUE ID

SIGNATURE OF OPERATOR'S REPRESENTATIVE: **BRIAN PREECE** | SIGNATURE OF CONTRACTOR'S RIG MANAGER: **ROLF REULE**

DAILY CHECKS

| | OPR | R.M. |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | BP | RR |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3 ) H2S Signs Posted if Required | BP | RR |
| ( 4 ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5 ) Flare Lines Staked | BP | RR |
| ( 6 ) BOP Drills Performed | BP | RR |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3 ) Mast Inspection before Raising or Lowering | | RR |
| ( 4 ) Crown Saver Checked | | RR |
| ( 5 ) Motor Kills Checked | | RR |

YEAR 2004 | MONTH 1 | DAY 31

RIG NO. 37

FUEL @ 08:00 HRS: RIG 21069 | BOILER 170

TEMPERATURE | CURRENT CONDITIONS | WIND DIRECTION | ROAD CONDITION

2m 1-4-panel

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN ID. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T..INT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 311 | 8P80 | NATIONAL | 216 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 | | | |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 | | | |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OF FUEL | |
| CONTRACTORS JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC

PASON DATAHUB

TIMES

| CODE NO: | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 HOLE TOOLS | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 1.25 | | | 3.75 | 3.00 | | | | | | | | | | | | | | | | | | | | | 8.00 |
| DAY | | | | | 0.50 | 7.25 | 0.25 | | | | | | | | | | | | | | | | | | | | 8.00 |
| EVE | | | | | | 2.00 | 0.25 | | | | 4.00 | | | | | | | | | | | 2.00 | | | | | 8.25 |
| TOTAL | | 1.25 | | | 4.25 | 12.25 | 0.50 | | | | 4.00 | | | | | | | | | | | 2.00 | | | | | 24.25 |

SHALE SHAKER(S) | RENTALS / SERVICES

| NO. | TYPE | TYPE | | MORN | DAY | EVE |
|---|---|---|---|---|---|---|
| | SWACO | | LOADER | 14050 | 14068 | 14092 |
| SCREENS CHANGED | | NEW/ USED | | 14116 | | |
| TOP | 175 | TOP | 110 | | | |
| MIDDLE | | MIDDLE | | | | |
| BOTTOM | 175 | BOTTOM | 110 | | | |

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.

PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

### MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. 0.13 | |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 135 | D.P. STANDS | | 2578.79 |
| 1 | D.P. SINGLES | | 9.44 |
| KELLY DOWN | | | 9.82 |
| TOTAL | | | 2847.00 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X |
| | 12.7 |
| DEPTH OUT (m) | 2847.00 |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 362.00 |
| TOTAL HRS RUN | 69.75 |

CUTTING STRUCTURE

| T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000UP / DOWN |
| TORQUE AT BOTTOM | 300 |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

| MUD TYPE | | WATER BASED | X | OIL BASED | |
|---|---|---|---|---|---|
| TIME | 230 | 430 | 600 | | |
| DENSITY (kg/m3) | 1045 | 1045 | 1050 | | |
| FUNNEL VISCOSITY | 46 | 47 | 48 | | |
| FLUID LOSS (cm3) | | | | | |
| pH | 11.0 | 11.0 | 10.0 | | |
| PVTM3 | 76.20 | 75.60 | 76.00 | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 325 | 125 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

**BOILERS**

| | 1 | | 2 |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 13500 | 127.0 | 108 | 0.0 | |

**REDUCED PUMP SPEED**

3850 @ 60 @ 2847

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2846.00 | 2847.00 | D | 50 | 8 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 115 | 1.25 | 2 | DRILL FR / 2846m- 2847m (T.D.) |
| 115 | 145 | 0.50 | 5 | COND MUD & CIRC/FLOW CHECK @ 2837m |
| 145 | 315 | 1.50 | 6 | WIPER TRIP /FLOW CHECK @2743m,/FLOW INDICATED |
| 315 | 345 | 0.50 | 6 | TRIPSRUN BACK TO BOTTOM / |
| 345 | 700 | 3.25 | 5 | CIRCULATE / WEIGHT UP SYSTEM /FLOW CHECK@ |
| 700 | 800 | 1.00 | 6 | TRIPS/P.O.O.H. TO LOG/FLOWCHECK@ 2835m, |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
REVIEW J.S.A. ON DONNING S.C.B.A./TRIPPING
BLOW BOILERS DOWN 2 X = 80 LITERS EACH BOILER
JAR HOURS==93.25

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | S.C.B.A. | 65 | 20042 |

**MORNING TOUR** FROM 0 TO 800 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

### DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. 0.13 | |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 135 | D.P. STANDS | | 2578.79 |
| 1 | D.P. SINGLES | | 9.44 |
| KELLY DOWN | | | 9.82 |
| TOTAL | | | 2847.00 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X |
| | 12.7 |
| DEPTH OUT (m) | 2847.00 |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 362.00 |
| TOTAL HRS RUN | 69.75 |

CUTTING STRUCTURE

| T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

| MUD TYPE | | WATER BASED | | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | | | | |
| DENSITY (kg/m3) | | | | | |
| FUNNEL VISCOSITY | | | | | |
| FLUID LOSS (cm3) | | | | | |
| pH | | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 325 | 70 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| | 1 | | 2 |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 240 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 13600 | 127.0 | 105 | 0.0 | |

**REDUCED PUMP SPEED**

3850 @ 60 @ 2847

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: MARC LEVESQUE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE ( FUNCTION UPPER + LOWER PIPE RAMS + ANNULAR ) |
| 815 | 900 | 0.75 | 6 | TRIPS POOH / FLOW CHECKS @ 2753m, 2659m, |
| 900 | 930 | 0.50 | 5 | CIRCULATE / MIX PILL / PUMP PILL |
| 930 | 1600 | 6.50 | 6 | TRIP POOH FLOW CHECKS @ 2162m, 1385m |
| 1600 | | | | |

NOTES: FUNCTION CROWN SAVER / PASON CHOKE / GAS MONITORS BY D.D.A.
REVIEW JSA ON TRIPPING
INSPECT BRAKES & LINKAGES / BLOW BOTH BOILERS DOWN 2 X = 160L

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | TRIPPING | 70 | 20042 |

**DAY TOUR** FROM 800 TO 1600 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

### EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. 0.13 | |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 135 | D.P. STANDS | | 2578.79 |
| 1 | D.P. SINGLES | | 9.44 |
| KELLY DOWN | | | 9.82 |
| TOTAL | | | 2847.00 |
| WT. OF D.C. | 6 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X |
| | 12.7 |
| DEPTH OUT (m) | 2847.00 |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 362.00 |
| TOTAL HRS RUN | 69.75 |

CUTTING STRUCTURE

| T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

| MUD TYPE | | WATER BASED | | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | | | | |
| DENSITY (kg/m3) | | | | | |
| FUNNEL VISCOSITY | | | | | |
| FLUID LOSS (cm3) | | | | | |
| pH | | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| | 1 | | 2 |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 127.0 | | 0.0 | |

**REDUCED PUMP SPEED**

@ @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1800 | 2.00 | 6 | TRIP POOH FLOW CHECKS @ 248m , |
| 1800 | 2000 | 2.00 | 22 | LAY OUT DIRECTIONAL TOOLS,B.H.A./FLOWCHECK OUT OF HOLE |
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE (FUNCTION BLINDRAMS,BOTHPIPERAMS,ANNULAR) |
| 2000 | 2400 | 4.00 | 11 | RIG UP AND LOGS.#1)STI,SPED,CNT,GR,MDA,HMI,CAL |
| 2400 | | | | MONITOR HOLE FOR GAINS OR LOSSES |
| | | | | |
| | | | | |
| | | | |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | OPR | RIG |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | BP | RR |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3 ) H2S Signs Posted if Required | BP | RR |
| ( 4 ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5 ) Flare Lines Staked | BP | RR |
| ( 6 ) BOP Drills Performed | BP | RR |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2 ) CACDC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3 ) Meet Inspection before Raising or Lowering | | RR |
| ( 4 ) Crown Saver Checked | | |
| ( 5 ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 1 DAY 30

RIG NO: 37

FUEL @ 08:00 HRS

| RIG | BOILER |
|---|---|
| 16754 | 140 |

TEMPERATURE

CURRENT CONDITIONS

WIND DIRECTION

ROAD CONDITION

**LAST CASING TUBING OR LINER**

| | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 310 | 8P80 | NATIONAL | 216 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 | | | |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 | | | |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTORS JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

PASON DATAHUB

**TIME BREAKDOWN**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 REPLACE POP VALVE | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.00 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | 0.25 | | | | |
| DAY | | 7.25 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | | | | | |
| EVE | | 7.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| TOTAL | | 21.75 | | | | | 0.75 | | | 1.25 | | | | | | | | | | | | 0.25 | | | | |

| TOTALS | SHALE SHAKER(S) NO. | TYPE SWACO | TYPE | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|---|---|
| 8.00 | SCREENS CHANGED | NEW/ USED | | LOADER | 14050 | 14068 | 14092 |
| 8.00 | TOP 175 | TOP 110 | | | | | |
| 8.00 | MIDDLE | MIDDLE | | | | | |
| 24.00 | BOTTOM 175 | BOTTOM 110 | | | | | |

**DRILLING CREW PAYROLL DATA**

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| OPERATOR | CONTRACTOR NAME | | |
| RIG MANAGER | RIG NO. | | |
| PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS | |

## MORNING TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.13 | |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 131 | D.P. STANDS | | 2502.57 |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 12.48 |
| | TOTAL | | 2764.00 |
| | WT. OF D.C. | 6 | |
| | WT. OF STRING | 63 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X 12.7 |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 279.00 |
| TOTAL HRS RUN | 53.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000 dAN UP / DOWN |
| TORQUE AT BOTTOM | 350 |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

MUD TYPE: | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 200 | 400 | 600 |
| DENSITY (kg/m3) | 1030 | 1035 | 1035 |
| FUNNEL VISCOSITY | 47 | 46 | 52 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |
| | 81.60 | 81.20 | 81.10 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| N-VIS-P-PLUS | 4 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 220 | STACK TEMP |

**CIRCULATION PRESSURE kPa**: 11300

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 107 | 0.0 | |

**REDUCED PUMP SPEED**: 4280 @ 60 @ 2715

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2699.37 | 8.40 | 120.5 |
| 2728.21 | 8.80 | 120.2 |

DRILLER SIGNATURE: CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2697.00 | 2764.00 | D | 50 | 7 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 100 | 1.00 | 2 | DRILL FR./ 2697m-2706m |
| 100 | 115 | 0.25 | 22 | REPLACE POP VALVE PIN # 2 PUMP |
| 115 | 215 | 1.00 | 2 | DRILLFR./ 2706m-2716m |
| 215 | 230 | 0.25 | 10 | DEV. SURVEY@ 2699.37m INC. 8.4/ AZI. 120.5 |
| 230 | 245 | 0.25 | 7 | RIG SERVICE(FUNCTION ANNULAR;BOTH SETS OF PIPE-RAMS) |
| 245 | 600 | 3.25 | 2 | DRILL FR./ 2716m- 2745m |
| 600 | 615 | 0.25 | 10 | DEV. SURVEY@ 2728.21m INC. 8.8 / AZI. 120.2 |
| 615 | 800 | 1.75 | 2 | DRILL FR./ 2745m- 2764m |
| 800 | | | | |
| | | | | FUNCTION MOTOR KILLS ( MOTOR STOPPED IN 3 SECONDS) |
| | | | | INSPECT BRAKES,LINKAGES,BANDS ,DEAD-MAN ANCHOR BOLTS |

NOTES: FUNCTION CROWN SAVER/ SWACO CHOKE / MONITORS BY D.D.A.
REVIEW J.S.A. ON WORKING @ HEIGHTS
BLOW BOILER DOWN 2 X = 80 LITERS (EACH BOILER)
JAR HOURS= 72.25

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | HEIGHTS | 65 | 20163 |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

| RATE SCHEDULE | | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

CREW SAFETY DAYS | DRIVERS

## DAY TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.13 | |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 133 | D.P. STANDS | | 2540.28 |
| 1 | D.P. SINGLES | | 9.60 |
| | KELLY DOWN | | 12.17 |
| | TOTAL | | 2811.00 |
| | WT. OF D.C. | 6 | |
| | WT. OF STRING | 64 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X 12.7 |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 326.00 |
| TOTAL HRS RUN | 61.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000 UP + DOWN |
| TORQUE AT BOTTOM | 450 |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

MUD TYPE: | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 1000 | 1300 | 1700 |
| DENSITY (kg/m3) | 1030 | 1035 | 1040 |
| FUNNEL VISCOSITY | 48 | 48 | 48 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |
| PVT. | 79.70 | 79.60 | 78.40 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| N-VIS-P-PLUS | 4 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

**CIRCULATION PRESSURE kPa**: 14000

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 105 | 0.0 | |

**REDUCED PUMP SPEED**: 3700 @ 60 @ 2782

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2756.85 | 9.10 | 120.2 |
| 2785.15 | 9.00 | 129.5 |

DRILLER SIGNATURE: MARC LEVESQUE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2764.00 | 2811.00 | D | 50 | 7 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 945 | 1.75 | 2 | DRILL F / 2764m - 2773m |
| 945 | 1000 | 0.25 | 10 | DEV. SURVEY @ 2756.85m - INC 9.1 - 120.2 |
| 1000 | 1115 | 1.25 | 2 | DRILL F /2773m - 2783m |
| 1115 | 1130 | 0.25 | 7 | RIG SERVICE ( FUNCTION UPPER + LOWER PIPE RAMS + ANNULAR ) |
| 1130 | 1400 | 2.50 | 2 | DRILL F / 2783m - 2802m |
| 1400 | 1415 | 0.25 | 10 | DEV. SURVEY @ 2785.15m - INC 9.0 - AZ 129.5 |
| 1415 | 1600 | 1.75 | 2 | DRILL F / 2802m -2811m |
| 1600 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
INSPECT BRAKES & LINKAGES / REVIEW JSA ON LOCKOUT PROCEDURE
BLOW BOTH BOILERS DOWN 2 X = 160L
JAR HRS 79.5

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | LOCKOUT PROCEDURE | 70 | 20163 |

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

| RATE SCHEDULE | | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.13 | |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 135 | D.P. STANDS | | 2578.79 |
| 1 | D.P. SINGLES | | 9.44 |
| | KELLY DOWN | | 8.82 |
| | TOTAL | | 2846.00 |
| | WT. OF D.C. | 6 | |
| | WT. OF STRING | 64 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X 12.7 |
| DEPTH OUT (m) | 2846.00 |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 361.00 |
| TOTAL HRS RUN | 68.50 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000 UP + DOWN |
| TORQUE AT BOTTOM | 300 |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

MUD TYPE: | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 1800 | 2030 | 2330 |
| DENSITY (kg/m3) | 1040 | 1040 | 1040 |
| FUNNEL VISCOSITY | 48 | 48 | 47 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 10.5 | 10.5 |
| PVT. | 77.80 | 77.20 | 75.70 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

**CIRCULATION PRESSURE kPa**: 13000

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 105 | 0.0 | |

**REDUCED PUMP SPEED**: 4540 @ 60 @ 2829

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2813.95 | 9.50 | 134.3 |

DRILLER SIGNATURE: CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2811.00 | 2846.00 | D | 50 | 8 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 2030 | 4.50 | 2 | DRILL F / 2811m -2830m |
| 2030 | 2045 | 0.25 | 7 | RIG SERVICE ( FUNCTION UPPER AND LOWER PIPE RAMS + ANNULAR ) |
| 2045 | 2100 | 0.25 | 10 | DEV. SURVEY @ 2813.95m AZI. 134.3 / INC. 9.5 |
| 2100 | 2400 | 3.00 | 2 | DRILL F / 2830m - 2846m |
| 2400 | | | | |
| | | | | FUNCTION MOTOR KILLS(ENGINES STOPPED IN 3 SECONDS) |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.
INSPECT BRAKES & LINKAGES / BLOW BOTH BOILERS DOWN 2 X = 160L
REVIEW JSA ON MIXING MUD PRODUCTS/
JAR HOURS = 87.25

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | MIXING | 70 | 20042 |

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

| RATE SCHEDULE | | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | CIR | R.M. |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | BP | RR |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3 ) H2S Signs Posted if Required | BP | RR |
| ( 4 ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5 ) Flare Lines Staked | BP | RR |
| ( 6 ) BOP Drills Performed | BP | RR |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3 ) Mast Inspection before Raising or Lowering | | RR |
| ( 4 ) Crown Saver Checked | | RR |
| ( 5 ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 1 DAY 29

RIG NO. 37

FUEL @ 08:00 HRS

RIG 22417 BOILER 180

TEMPERATURE

CURRENT CONDITIONS

WIND DIRECTION

ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DRILL STRING | DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T.JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|---|
| | | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 310 |
| | | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 |
| | | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | | | |
|---|---|---|---|
| SPUD DATE | 2004/01/20 | TIME | 23:59 |
| RIG RELEASE | 2004/02/06 | TIME | 12:00 |
| WELL TYPE | | RE-ENTRY | |
| OPERATOR'S AFE | | | |
| KELLY BSHG | | OP FUEL | |
| CONTRACTOR'S JOB NUM | | | |
| TOUR SHEET SERIAL NUM | | | |
| VENDOR SOFTWARE VERSION | | | |

CAODC

PASON DATAHUB

CODE NO. 1 RIGUP & TEARDOWN; 2 DRILL ACTUAL; 3 REAMING; 4 CORING; 5 COND MUD & CIRC; 6 TRIPS; 7 RIG SERVICE; 8 REPAIR RIG; 9 CUT OFF DRILL LINE; 10 DEV. SURVEY; 11 WIRELINE LOGS; 12 RUN CSG & CEMENT; 13 WAIT ON CEMENT; 14 NIPPLE UP B.O.P.; 15 TEST B.O.P.; 16 DRILLSTEM TEST; 17 PLUG BACK; 18 SQUEEZE CEMENT; 19 FISHING; 20 DIR. WORK; 21 SAFETY MEETING; 22 23 24 25 26

| SUMMARY | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.25 | | | | | 0.50 | | | 0.25 | | | | | | | | | | | | | | | | | 8.00 |
| DAY | | 7.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | | 8.00 |
| EVE | | 7.25 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | | | | | | 8.00 |
| TOTAL | | 22.00 | | | | | 1.00 | | | 1.00 | | | | | | | | | | | | | | | | | 24.00 |

| SHALE SHAKER(S) NO. | TYPE (SWACO) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| | TYPE | LOADER | 14050 | 14068 | |

SCREENS CHANGED YES NEW/USED

TOP 175 TOP 110

MIDDLE MIDDLE

BOTTOM 175 BOTTOM 110

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.:

PROVINCE | CAMP YES NO | RIG SAFETY DAYS

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 120 | 0.13 |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFFSUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 123 | D.P. STANDS | | 2348.42 |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 12.63 |
| | TOTAL | | 2610.00 |
| | WT. OF D.C. | | |
| | WT. OF STRING | 62 | |

### BIT RECORD

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X 12.7 |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 125.00 |
| TOTAL HRS RUN | 31.25 |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

### HOLE CONDITION

HOLE DRAG 2000dAN UP / DOWN

TORQUE AT BOTTOM 200

FILL ON BOTTOM (m)

## MORNING TOUR

### MUD RECORD

MUD TYPE | WATER BASED X | OIL BASED

| | | | |
|---|---|---|---|
| TIME | 200 | 430 | 630 |
| DENSITY (kg/m3) | 1025 | 1025 | 1025 |
| FUNNEL VISCOSITY | 45 | 50 | 48 |
| FLUID LOSS (cm3) | | | |
| pH | 10.5 | 11.0 | 11.0 |
| PVTM3 | 81.20 | 83.30 | 84.00 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BARABUF | 3 | SX |
| FILTER CHECK | 20 | SX |
| N-VIS-P-PLUS | 4 | SX |

SOLIDS CONTROL

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 220 | STACK TEMP |

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2590.00 | 2610.00 | D | 50 | 3 |

CIRCULATION PRESSURE kPa: 10570

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 110 | 0.0 | |

REDUCED PUMP SPEED: 3680 @ 60 @ 2590

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2583.62 | 5.70 | 120.3 |
| 2593.29 | 5.80 | 121.1 |

DRILLER SIGNATURE: CURTIS VICKERS

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 2 | DRILL FR / 2590m- 2590.89m |
| 15 | 45 | 0.50 | 7 | RIG SERVICE(FUNCTION BOTH SETS OF PIPE-RAMS;ANNULAR) |
| 45 | 415 | 3.50 | 2 | DRILLFR / 2590m-2600m |
| 415 | 430 | 0.25 | 10 | SURVEY @ 2583.62m INC. 5.7 / AZI. 120.3 |
| 430 | 800 | 3.50 | 2 | DRILL FR / 2600m-2610m |
| 800 | | | | |
| | | | | INSPECT BRAKES,LINKAGES,PADS,/DRIVE-SHAFT BOLTS |
| | | | | FUNCTION MOTOR KILLS(ENGINES STOPPED IN 3 SECONDS) |
| | | | | ENVIRONMENTAL MEETING ON GARBAGE DISPOSAL |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE/GAS MONITORS BY D.D.A.

REVIEW J.S.A ON RIG SERVICE / MAN-RIDER USE

BLOW DOWN BOTH BOILERS2 X = 80 LITERS

JAR HOURS= 50.

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | RIG SERVICE | 65 | 20284 |

### MORNING TOUR CREW

FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 120 | 0.13 |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFFSUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 123 | D.P. STANDS | | 2386.70 |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 12.35 |
| | TOTAL | | 2648.00 |
| | WT. OF D.C. | 6 | |
| | WT. OF STRING | 62 | |

### BIT RECORD

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X 12.7 |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 163.00 |
| TOTAL HRS RUN | 38.75 |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

### HOLE CONDITION

HOLE DRAG 2000 UP + DOWN

TORQUE AT BOTTOM 300

FILL ON BOTTOM (m)

## DAY TOUR

### MUD RECORD

MUD TYPE | WATER BASED X | OIL BASED

| | | | |
|---|---|---|---|
| TIME | 900 | 1200 | 1700 |
| DENSITY (kg/m3) | 1030 | 1030 | 1030 |
| FUNNEL VISCOSITY | 48 | 48 | 48 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |
| PVT. | 83.80 | 83.80 | 86.60 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| SODIUM SULPHATE | 1 | SX |
| N-VIS-P-PLUS | 7 | SX |
| FILTER CHECK | 6 | SX |
| SOULUFLAKE MEDIUM | 5 | SX |
| SOULUFLAKE FINE | 2 | SX |

SOLIDS CONTROL

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| 0.00 | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2610.00 | 2648.00 | D | 50 | 5 |

CIRCULATION PRESSURE kPa: 12000

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 110 | 0.0 | |

REDUCED PUMP SPEED: 3740 @ 60 @ 2628

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2612.52 | 6.10 | 120.5 |

DRILLER SIGNATURE: MARC LEVESQUE

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1115 | 3.25 | 2 | DRILL F / 2610m - 2629m |
| 1115 | 1130 | 0.25 | 7 | RIG SERVICE ( FUNCTION UPPER + LOWER PIPE RAMS + ANNULAR ) |
| 1130 | 1145 | 0.25 | 10 | DEV. SURVEY @ 2612.52m - INC 6.1 - AZ 120.5 |
| 1145 | 1600 | 4.25 | 2 | DRILL F / 2629m - 2648m |
| 1600 | | | | |
| | | | | HELD ENVIRONMENTAL MEETING ON LEASE AND ROAD CONDITIONS |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.

INSPECT BRAKES & LINKAGES / BLOW BOTH BOILERS DOWN 2 X = 80L

REVIEW JSA ON STEAM USE / METHANOL LABELLING

JAR HRS =57.5

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | STEAM USE | 65 | 20284 |

### DAY TOUR CREW

FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 120 | 0.13 |
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFFSUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| 128 | D.P. STANDS | | 2444.72 |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 3.33 |
| | TOTAL | | 2697.00 |
| | WT. OF D.C. | 6 | |
| | WT. OF STRING | 62 | |

### BIT RECORD

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X 12.7 |
| DEPTH OUT (m) | 2697.00 |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 212.00 |
| TOTAL HRS RUN | 46.00 |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

### HOLE CONDITION

HOLE DRAG 2000 UP + DOWN

TORQUE AT BOTTOM 300

FILL ON BOTTOM (m)

## EVENING TOUR

### MUD RECORD

MUD TYPE | WATER BASED X | OIL BASED

| | | | |
|---|---|---|---|
| TIME | 1800 | 2030 | 2330 |
| DENSITY (kg/m3) | 1030 | 1030 | 1030 |
| FUNNEL VISCOSITY | 47 | 47 | 48 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |
| PVT. | 85.90 | 84.60 | 85.00 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| 0.00 | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2648.00 | 2697.00 | D | 50 | 6 |

CIRCULATION PRESSURE kPa: 12300

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 110 | 0.0 | |

REDUCED PUMP SPEED: 3740 @ 60 @ 2628

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2641.17 | 6.90 | 120.9 |
| 2670.19 | 7.70 | 120.7 |

DRILLER SIGNATURE: CURTIS VICKERS

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1730 | 1.50 | 2 | DRILL F / 2648m - 2658m |
| 1730 | 1745 | 0.25 | 7 | RIG SERVICE ( FUNCTION UPPER + LOWER PIPE RAMS + ANNULAR ) |
| 1745 | 1800 | 0.25 | 10 | DEV. SURVEY @ 2641.17m -INC 6.9 - AZ 120.9 |
| 1800 | 2230 | 4.50 | 2 | DRILL F / 2658m - 2687m |
| 2230 | 2245 | 0.25 | 10 | DEV. SURVEY@ 2670.19m |
| 2245 | 2400 | 1.25 | 2 | DRILL FR / 2687m- 2697.m |
| 2400 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE / GAS MONITORS BY D.D.A.

BLOW BOTH BOILERS DOWN 2 X = 80L

REVIEW J.S.A. ON USING STEAM / LOCKOUT-PROCEDURE

JAR HOURS= 65.

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | STEAM USE | 65 | 20284 |

### EVENING TOUR CREW

FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

LICENCE NO.

WELL NAME & NO.
**Anadarko Arrowhead F-56**

OPERATOR
**ANADARKO CANADA CORP.**

CONTRACTOR NAME
**AKITA DRILLING LTD.**

SURFACE LOCATION
**60:34:30.00 N 122:55:46.13 W**

UNIQUE ID

SIGNATURE OF OPERATOR'S REPRESENTATIVE
**BRIAN PREECE**

SIGNATURE OF CONTRACTOR'S RIG MANAGER
**ROLF REULE**

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | BP | RR |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3 ) H2S Signs Posted if Required | BP | RR |
| ( 4 ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5 ) Flare Lines Staked | BP | RR |
| ( 6 ) BOP Drills Performed | BP | RR |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3 ) Meet Inspection before Raising or Lowering | | RR |
| ( 4 ) Crown Saver Checked | | RR |
| ( 5 ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 1 DAY 28
RIG NO. 37
FUEL @ 08:00 HRS
RIG 17493 BOILER 145
TEMPERATURE
CURRENT CONDITIONS
WIND DIRECTION
ROAD CONDITION

**LAST CASING TUBING OR LINER**

| | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/ DP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|---|
| | 89 | 24.07 | E / X-95 | 65 | 121 | 3.5 IF | 310 | 8P80 | NATIONAL | 216 |
| | 89 | 35.35 | HWDP | 57 | 121 | 3.5 IF | 31 | | | |
| | 121 | 58.76 | DC | 57 | 121 | 3.5 IF | 12 | | | |

SPUD DATE 2004/01/20 TIME 23:59
RIG RELEASE 2004/02/06 TIME 12:00
WELL TYPE RE-ENTRY
OPERATOR'S AFE
KELLY BSHG GP FUEL
CONTRACTOR'S JOB NUM
TOUR SHEET SERIAL NUM
VENDOR SOFTWARE VERSION

CAODC

**PASON DATAHUB**

**TIME - HRS**

| CODE NO | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN. | | 7.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| DAY | | 7.25 | | | | | 0.50 | | | 0.25 | | | | | | | | | | | | | | | | |
| EVE | | 7.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| TOTAL | | 22.25 | | | | | 1.00 | | | 0.75 | | | | | | | | | | | | | | | | |

| TOTALS | SHALE SHAKER(S) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. / TYPE SWACO / TYPE | LOADER | 14050 | | |
| 8.00 | SCREENS CHANGED YES / NEW/USED | | | | |
| 8.00 | TOP 50 / TOP 110 | | | | |
| 24.00 | MIDDLE / MIDDLE | | | | |
| | BOTTOM 50 / BOTTOM 110 | | | | |

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. YEAR MONTH DAY
OPERATOR CONTRACTOR NAME
RIG MANAGER RIG NO.
PROVINCE CAMP ☐ YES ☐ NO RIG SAFETY DAYS

---

| NO. | DRILLING ASSEMBLY AT END OF TOUR | LENGTH |
|---|---|---|
| 1 | BIT O.D. | 0.13 |
| 1 | MOTOR 120 | 7.09 |
| 1 | DUMP SUB 120 | 0.51 |
| 1 | DOUBLE PIN SUB 117 | 0.51 |
| 1 | FLOAT SUB 120 | 0.75 |
| 1 | XO SUB 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB 121 | 9.51 |
| 2 | MONEL 120 | 18.85 |
| 1 | PBL SUB 118 | 2.40 |
| 6 | D.C. 120 | 55.01 |
| 1 | JAR 121 | 6.14 |
| 6 | D.C. 120 | 55.10 |
| 10 | H.W.D.P. 119 | 92.25 |
| | | |
| | | |
| | | |
| | | |
| | | |
| 119 | D.P. STANDS | 2271.43 |
| | D.P. SINGLES | |
| | KELLY DOWN | 7.62 |
| | TOTAL | 2528.00 |
| | WT. OF D.C. | |
| | WT. OF STRING | 53 |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X |
| | 12.7 |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 43.00 |
| TOTAL HRS RUN | 9.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000 UP + DOWN |
| TORQUE AT BOTTOM | 260 |
| FILL ON BOTTOM (m) | |

**MORNING TOUR**

**MUD RECORD**

MUD TYPE WATER BASED X OIL BASED ☐

| | | |
|---|---|---|
| TIME | 230 | 530 |
| DENSITY (kg/m3) | 1025 | 1025 |
| FUNNEL VISCOSITY | 50 | 51 |
| FLUID LOSS (cm3) | | |
| pH | 11.0 | 11.0 |
| PVT | 62.40 | 62.00 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 220 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 9580 | 127.0 | 108 | 0.0 |

**REDUCED PUMP SPEED**

3600 @ 60 @ 2513

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2496.00 | 2.40 | 131.6 |

DRILLER SIGNATURE
CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2489.00 | 2528.00 | D | 30 | 5 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 530 | 5.50 | 2 | DRILL / FR / 2489m- 2513m |
| 530 | 545 | 0.25 | 7 | RIG SERVICE{FUNCTION UPPER PIPE-RAMS,ANNULAR} |
| 545 | 600 | 0.25 | 10 | SURVEY @ 2496 M 2.4 DEGREES |
| 600 | 800 | 2.00 | 2 | DRILL FR / 2513m - 2528m |
| 800 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE
REVIEW J.S.A ON WORKING WITH MUD MOTOR/CONNECTIONS
BLOW BOILER DOWN 2 X = 80 LITERS EACH BOILER
JAR HOURS=7.5

| SPECIAL EVENT | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|
| TIME / DEPTH | | CONNECTIONS | 63 | 20527 |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

INJURIES

RATE SCHEDULE REGULAR REPAIR INVERT
CREW SAFETY DAYS DRIVERS

---

| NO. | DRILLING ASSEMBLY AT END OF TOUR | LENGTH |
|---|---|---|
| 1 | BIT O.D. | 0.13 |
| 1 | MOTOR 120 | 7.09 |
| 1 | DUMP SUB 120 | 0.51 |
| 1 | DOUBLE PIN SUB 117 | 0.51 |
| 1 | FLOAT SUB 120 | 0.75 |
| 1 | XO SUB 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB 121 | 9.51 |
| 2 | MONEL 120 | 18.85 |
| 1 | PBL SUB 118 | 2.40 |
| 6 | D.C. 120 | 55.01 |
| 1 | JAR 121 | 6.14 |
| 6 | D.C. 120 | 55.10 |
| 10 | H.W.D.P. 119 | 92.25 |
| | | |
| | | |
| | | |
| | | |
| | | |
| 121 | D.P. STANDS | 2309.78 |
| | D.P. SINGLES | |
| | KELLY DOWN | 6.27 |
| | TOTAL | 2565.00 |
| | WT. OF D.C. | |
| | WT. OF STRING | 62 |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X |
| | 12.7 |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 80.00 |
| TOTAL HRS RUN | 16.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000 UP + DOWN |
| TORQUE AT BOTTOM | 260 |
| FILL ON BOTTOM (m) | |

**DAY TOUR**

**MUD RECORD**

MUD TYPE WATER BASED ☐ OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 1100 | 1300 | 1600 |
| DENSITY (kg/m3) | 1025 | 1025 | 1025 |
| FUNNEL VISCOSITY | 51 | 51 | 50 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |
| PVT. | 59.50 | 70.50 | 73.00 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 10500 | 127.0 | 110 | 0.0 |

**REDUCED PUMP SPEED**

3700 @ 60 @ 2541

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2525.87 | 3.70 | 128.1 |

DRILLER SIGNATURE
MARC LEVESQUE

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2528.00 | 2565.00 | D | 30 | 5 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1045 | 2.75 | 2 | DRILL F / 2528m - 2542m |
| 1045 | 1115 | 0.50 | 7 | RIG SERVICE ( FUNCTION UPPER + LOWER PIPE RAMS + ANNULAR ) |
| 1115 | 1130 | 0.25 | 10 | DEV. SURVEY @ 2525.87m - INC 3.7 - AZ 128.1 |
| 1130 | 1600 | 4.50 | 2 | DRILL F / 2542m - 2565m |
| 1600 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE
REVIEW JSA ON CONNECTIONS
BLOW BOTH BOILERS DOWN 2 X = 160L
JAR HRS =16.25

| SPECIAL EVENT | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|
| TIME / DEPTH | | CONNECTIONS | 63 | 20284 |

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

INJURIES

RATE SCHEDULE REGULAR REPAIR INVERT
CREW SAFETY DAYS DRIVERS

---

| NO. | DRILLING ASSEMBLY AT END OF TOUR | LENGTH |
|---|---|---|
| 1 | BIT O.D. | 0.13 |
| 1 | MOTOR 120 | 7.09 |
| 1 | DUMP SUB 120 | 0.51 |
| 1 | DOUBLE PIN SUB 117 | 0.51 |
| 1 | FLOAT SUB 120 | 0.75 |
| 1 | XO SUB 120 | 0.70 |
| 1 | NON MAGHANGOFF SUB 121 | 9.51 |
| 2 | MONEL 120 | 18.85 |
| 1 | PBL SUB 118 | 2.40 |
| 6 | D.C. 120 | 55.01 |
| 1 | JAR 121 | 6.14 |
| 6 | D.C. 120 | 55.10 |
| 10 | H.W.D.P. 119 | 92.25 |
| | | |
| | | |
| | | |
| | | |
| | | |
| 122 | D.P. STANDS | 2329.02 |
| 1 | D.P. SINGLES | 9.73 |
| | KELLY DOWN | 2.30 |
| | TOTAL | 2590.00 |
| | WT. OF D.C. | |
| | WT. OF STRING | 62 |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 156.0 |
| IADC CODE | |
| MANUFACTURER | UNITED DIAMOND |
| TYPE | UD 513 |
| SERIAL NO. | 2071 |
| JETS | 5 X |
| | 12.7 |
| DEPTH OUT (m) | 2590.00 |
| DEPTH IN (m) | 2485.00 |
| TOTAL DRILLED (m) | 105.00 |
| TOTAL HRS RUN | 24.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000 UP + DOWN |
| TORQUE AT BOTTOM | 250 |
| FILL ON BOTTOM (m) | |

**EVENING TOUR**

**MUD RECORD**

MUD TYPE WATER BASED X OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 1930 | 2200 | 2330 |
| DENSITY (kg/m3) | 1030 | 1030 | 1030 |
| FUNNEL VISCOSITY | 46 | 47 | 45 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |
| PVT. | 76.00 | 77.30 | 79.40 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| SODIUM SULPHATE | 1 | SX |
| BARABUF | 1 | SX |
| N-VIS-P-PLUS | 3 | SX |
| FILTER CHECK | 2 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

**BOILERS**

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 11000 | 127.0 | 110 | 0.0 |

**REDUCED PUMP SPEED**

3700 @ 60 @ 2541

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| 2571.65 | 5.20 | 124.7 |

DRILLER SIGNATURE
CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2565.00 | 2590.00 | D | 50 | 3 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1730 | 1.50 | 2 | DRILL F/ 2565m -2571m |
| 1730 | 1745 | 0.25 | 7 | RIG SERVICE ( FUNCTION UPPER + LOWER PIPE RAMS + ANNULAR ) |
| 1745 | 1800 | 0.25 | 10 | DEV. SURVEY @ 2554.65m - INC 5.2 - AZ 124.7 |
| 1800 | 2400 | 6.00 | 2 | DRILL F / 2571m - 2590m |
| 2400 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE/ GAS MONITORS BY D.D.A.
BLOW BOTH BOILERS DOWN 2 X = 160L
REVIEW J.S.A. ON WINTER CONDITIONS
JAR HOURS= 42.75

| SPECIAL EVENT | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|
| TIME / DEPTH | | WINTER CONDITIONS | 65 | 20284 |

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

INJURIES

RATE SCHEDULE REGULAR REPAIR INVERT
CREW SAFETY DAYS DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| **OPERATOR** | **CONTRACTOR NAME** |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:30.00 N 122:55:46.13 W | |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | BP | RR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3. ) H2S Signs Posted if Required | BP | RR |
| ( 4. ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5. ) Flare Lines Staked | BP | RR |
| ( 6. ) BOP Drills Performed | BP | RR |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3. ) Mast Inspection before Raising or Lowering | | RR |
| ( 4. ) Crown Saver Checked | | RR |
| ( 5. ) Motor Kills Checked | | RR |

YEAR 2004 | MONTH 1 | DAY 27

RIG NO. 37

FUEL @ 08:00 HRS

RIG 185 | BOILER 23068

TEMPERATURE

CURRENT CONDITIONS

WIND DIRECTION

ROAD CONDITION

DC/DP | DC/DP SIZE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

DRILL STRING

| MASS | GRADE | MINIMUM I.D. | T..INT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|
| | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| SPUD DATE | 2004/01/20 | TIME | 23:59 |
|---|---|---|---|
| RIG RELEASE | 2004/02/06 | TIME | 12:00 |
| WELL TYPE | | RE-ENTRY | |
| OPERATOR'S AFE | | | |
| KELLY BSHG | | OP FUEL | |
| CONTRACTOR'S JOB NUM | | | |
| TOUR SHEET SERIAL NUM | | | |
| VENDOR SOFTWARE VERSION | | | |

CAODC

PASON DATAHUB

**TIMES**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 PICK UP MU | 23 SID DRILL | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | | | 0.25 | | | | 5.00 | | | | | | | | | | | 2.75 | | | | | 8.00 |
| DAY | | | | | | 4.00 | 0.25 | | 1.25 | | | | | | | | | | | | | 2.50 | | | | | 8.00 |
| EVE | | 1.50 | | | 0.75 | 5.25 | 0.25 | | | | | | | | | | | | | | | | 0.25 | | | | 8.00 |
| TOTAL | | 1.50 | | | 0.75 | 9.25 | 0.75 | | 1.25 | | 5.00 | | | | | | | | | | | 5.25 | 0.25 | | | | 24.00 |

SHALE SHAKER(S) | RENTALS / SERVICES

| NO. | TYPE | TYPE |
|---|---|---|
| SCREENS CHANGED | NO | NEW USED |
| TOP | | TOP |
| MIDDLE | | MIDDLE |
| BOTTOM | | BOTTOM |

| MORN | DAY | EVE |
|---|---|---|
| | | |

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.:

PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## DRILLING ASSEMBLY ( AT END OF TOUR )

| NO. | BIT | O.D. | LENGTH |
|---|---|---|---|
| | MOTOR | 120 | 7.09 |
| | DUMP SUB | 120 | 0.51 |
| | DOUBLE PIN SUB | 117 | 0.51 |
| | FLOAT SUB | 120 | 0.75 |
| | XO SUB | 120 | 0.70 |
| | NON MAGHANGOFFSUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| | | | |
| 192 | 31/2E D/P | 120 | 1831.31 |
| | | | |
| | | | |
| | | | |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 4.15 |
| | TOTAL | | 2084.41 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | 57 |

## BIT RECORD

| | | |
|---|---|---|
| BIT NO. | 1 | 2 |
| SIZE | 156.0 | 156.0 |
| IADC CODE | 4 3 7 | |
| MANUFACTURER | HUGHES | UNITED DIAMOND |
| TYPE | HT09XP | UD 513 |
| SERIAL NO. | MO3503 | 2071 |
| JETS | | 5 X |
| | | 12.7 |
| DEPTH OUT (m) | 2485.00 | |
| DEPTH IN (m) | 2480.00 | 2485.00 |
| TOTAL DRILLED (m) | 5.00 | |
| TOTAL HRS RUN | 1.25 | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

HOLE CONDITION

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

## MORNING TOUR — MUD RECORD

MUD TYPE | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | | | |
| DENSITY (kg/m3) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3) | | | |
| pH | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BARACARB 150 | 26 | SX |
| BARACARB 600 | 26 | SX |
| SODIUM SULPHATE | 2 | SX |
| SOULULFLAKE MEDIUM | 13 | SX |
| SOULULFLAKE FINE | 13 | SX |
| BARABUF | 2 | SX |

SOLIDS CONTROL

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 230 | STACK TEMP |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED

@ | @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

DAN PERRY

## METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

## TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 500 | 5.00 | 11 | RUN VSP LOG MONITOR WLL FOR GAIN OR LOSS |
| 500 | 515 | 0.25 | 7 | RIG SERVICE FUNCTION BLIND RAMS |
| 515 | 800 | 2.75 | 22 | PICK UP MU D MOTOR & MONELS ,MAKE UP BHA,PULSE TEST MWD |
| 800 | | | | |

NOTES : FUNCTION SWACO CHOKE

REVIEW J.S.A.PICK UP MUD MOTOR & MONELS

BLOW DOWN BOILER 2X 80 LITRES EACH BOILER

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | MAKE UYP B.H.A. | | 20527 |

## MORNING TOUR — CREW

FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## DAY TOUR — MUD RECORD

MUD TYPE | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 1000 | 100 | 1500 |
| DENSITY (kg/m3) | 1020 | 1020 | 1020 |
| FUNNEL VISCOSITY | 54 | 56 | 55 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| FILTER CHECK | 4 | SX |
| N-VIS-P-PLUS | 3 | SX |

SOLIDS CONTROL — CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 220 | STACK TEMP |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED

@ | @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

CURTIS VICKERS

## METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

## TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1030 | 2.50 | 22 | RIG UP MONELS , B.H.A. / FLOWCHECK @267m/FILLPIPE |
| 1030 | 1130 | 1.00 | 6 | TRIPS/ RUN IN HOLE/FLOWCHECK @ 606m/FILL PIPE |
| 1130 | 1245 | 1.25 | 9 | SLIP + CUT 20m |
| 1245 | 1300 | 0.25 | 7 | RIG SERVICE/ FUNCTION ANNULAR / UPPERPIPE-RAMS |
| 1300 | 1600 | 3.00 | 6 | TRIPS/ RUN IN HOLE/FLOWCHECK@1044mFILLPIPE |
| | | | | INSPECT BRAKES;LINKAGES;BANDS;DEAD-MAN ANCHOR BOLTS |

NOTES : FUNCTION CROWN SAVER / SWACO CHOKE

REVIEW JSA ON MAKING UP DIR . TOOLS / TRIPPING IN / CUT + SLIP DRILL-LINE

BLOW BOILER DOWN 2 X =80 LITERS EACH BOILER

JAR HOURS=

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | SLIP + CUT | | 20527 |

## DAY TOUR — CREW

FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## EVENING TOUR — MUD RECORD

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 2300 | | |
| DENSITY (kg/m3) | 1020 | | |
| FUNNEL VISCOSITY | 55 | | |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| N-VIS-P-PLUS | 2 | SX |

SOLIDS CONTROL — CENTRIFUGE

| HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |

BOILERS

| | 1 | 2 |
|---|---|---|
| HRS RUN | 16.00 | HRS RUN |
| BOILER pH | 10.5 | BOILER pH |
| STACK TEMP | 240 | STACK TEMP |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 9500 | 127.0 | 105 | 0.0 |

REDUCED PUMP SPEED

3600 | @ | 65 | @ | 2481

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

MARC LEVESQUE

## METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2485.00 | 2489.00 | D | 35 | 5 |

## TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 7 | RIG SERVICE ( FUNCTION BOTTOM + TOP PIPE RAMS , + ANNULAR ) |
| 1615 | 1900 | 2.75 | 6 | TRIP RIH TO 2100m |
| 1900 | 1915 | 0.25 | 5 | FILL PIPE + FLOW CHECK |
| 1915 | 1930 | 0.25 | 23 | BOP DRILL WELL SECURED IN 70 SEC. |
| 1930 | 2200 | 2.50 | 6 | TRIP RIH FILL PIPE @ 2481m |
| 2200 | 2230 | 0.50 | 5 | BREAK CIRCULATION AND CIRCULATE |
| 2230 | 2400 | 1.50 | 2 | DRILL F / 2485m - 2489m |
| 2400 | | | | |

NOTES : FUNCTION CROWN SAVER / SWACO CHOKE

REVIEW JSA ON TRIPPING IN HOLE

BLOW BOILER DOWN 2 X = 80L

1.2 JAR HRS

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | TRIPPING | 60 | 20527 |

## EVENING TOUR — CREW

FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## DRILLING ASSEMBLY ( AT END OF TOUR )

| NO. | BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | MOTOR | 120 | 7.09 |
| 1 | DUMP SUB | 120 | 0.51 |
| 1 | DOUBLE PIN SUB | 117 | 0.51 |
| 1 | FLOAT SUB | 120 | 0.75 |
| 1 | XO SUB | 120 | 0.70 |
| 1 | NON MAGHANGOFFSUB | 121 | 9.51 |
| 2 | MONEL | 120 | 18.85 |
| 1 | PBL SUB | 118 | 2.40 |
| 6 | D.C. | 120 | 55.01 |
| 1 | JAR | 121 | 6.14 |
| 6 | D.C. | 120 | 55.10 |
| 10 | H.W.D.P. | 119 | 92.25 |
| | | | |
| | | | |
| | | | |
| | | | |
| 117 | D.P. STANDS | | 2232.79 |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 7.26 |
| | TOTAL | | 2489.00 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | 53 |

## BIT RECORD

| | | |
|---|---|---|
| BIT NO. | 2 | |
| SIZE | 156.0 | |
| IADC CODE | | |
| MANUFACTURER | UNITED DIAMOND | |
| TYPE | UD 513 | |
| SERIAL NO. | 2071 | |
| JETS | 5 X | |
| | 12.7 | |
| DEPTH OUT (m) | | |
| DEPTH IN (m) | 2485.00 | |
| TOTAL DRILLED (m) | 4.00 | |
| TOTAL HRS RUN | 1.50 | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | 2000 UP + DOWN |
| TORQUE AT BOTTOM | 300 |
| FILL ON BOTTOM (m) | 0.50 |

LICENCE NO.

WELL NAME & NO.
**Anadarko Arrowhead F-56**

OPERATOR
**ANADARKO CANADA CORP.**

CONTRACTOR NAME
**AKITA DRILLING LTD.**

SURFACE LOCATION
**60:34:30.00 N 122:55:46.13 W**

UNIQUE ID

SIGNATURE OF OPERATOR'S REPRESENTATIVE
**BRIAN PREECE**

SIGNATURE OF CONTRACTOR'S RIG MANAGER
**ROLF REULE**

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | BP | RR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3. ) H2S Signs Posted if Required | BP | RR |
| ( 4. ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5. ) Flare Lines Staked | BP | RR |
| ( 6. ) BOP Drills Performed | BP | RR |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3. ) Mast Inspection before Raising or Lowering | | RR |
| ( 4. ) Crown Saver Checked | | RR |
| ( 5. ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 1 DAY 26

RIG NO. 37

FUEL @ 08:00 HRS

RIG 103 BOILER 11361

TEMPERATURE

WEATHER — CURRENT CONDITIONS / WIND DIRECTION / ROAD CONDITION

**LAST CASING TUBING OR LINER**

| O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|
| 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/ DP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

SPUD DATE 2004/01/20 TIME 23:59
RIG RELEASE 2004/02/06 TIME 12:00
WELL TYPE RE-ENTRY
OPERATOR'S AFE
KELLY BSHG UP FUEL
CONTRACTOR'S JOB NUM
TOUR SHEET SERIAL NUM
VENDOR SOFTWARE VERSION

CAODC

**PASON DATAHUB**

**TIME BREAKDOWN**

| CODE NO: | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 BOP DRILL | 23 DRILL OUT | 24 THERMOMETER TEST | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 1.25 | | | 3.75 | | 0.25 | | | | | | | | | | | | | | | 0.25 | 1.00 | 1.50 | | | 8.00 |
| DAY | | | | | 2.25 | 5.00 | 0.25 | | | | | | | | | | | | | | 0.25 | 0.25 | | | | | 8.00 |
| EVE | | | | | | 3.50 | 0.25 | | | | 4.25 | | | | | | | | | | | | | | | | 8.00 |
| TOTAL | | 1.25 | | | 6.00 | 8.50 | 0.75 | | | | 4.25 | | | | | | | | | | 0.25 | 0.50 | 1.00 | 1.50 | | | 24.00 |

**SHALE SHAKER(S)**

NO. | TYPE | TYPE

SCREENS CHANGED | NEW/ USED

TOP | TOP

MIDDLE | MIDDLE

BOTTOM | BOTTOM

**RENTALS / SERVICES**

| | MORN | DAY | EVE |
|---|---|---|---|
| | | | |

**DRILLING CREW PAYROLL DATA**

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.

PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## MORNING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY (AT END OF TOUR) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | 0.19 | |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 192 | 3.5 E D/P | | 1831.31 |
| 46 | 31/5 X95 | | 440.08 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 4.15 |
| | TOTAL | | 2485.00 |
| | WT. OF D.C. | | |
| | WT. OF STRING | 57 | |

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | 2480.00 |
| TOTAL DRILLED (m) | 5.00 |
| TOTAL HRS RUN | 1.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 130 | 345 | 700 |
| DENSITY (kg/m3) | 1010 | 1010 | 1015 |
| FUNNEL VISCOSITY | 46 | 47 | 48 |
| FLUID LOSS (cm3) | | | |
| pH | 12.0 | 11.5 | 11.0 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 325 | 40 | SX |
| BARACARB 150 | 26 | SX |
| BARACARB 600 | 26 | SX |
| SODIUM SULPHATE | 2 | SX |
| BARABUF | 2 | SX |
| SOULUFLAKE FINE | 13 | SX |
| SOULUFLAKE MEDIUM | 13 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 2309 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 7900 | 127.0 | 60 | 127.0 | 60 |

**REDUCED PUMP SPEED**

2370 @ 61 @ 2470

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2480.00 | 2485.00 | D | 60 | 8 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 22 | BOP DRILLWELL SEC 110 SEC |
| 15 | 115 | 1.00 | 23 | DRILL OUT CEMENT & SHOE FR 2470-2480 |
| 115 | 145 | 0.50 | 5 | CIRC HOLE CLEAN OF CEMENT |
| 145 | 200 | 0.25 | 7 | RIG SERVICE FUNCTION PIPE RAMS ,ANN. |
| 200 | 315 | 1.25 | 2 | DRILL FR. 2480-2485 |
| 315 | 400 | 0.75 | 5 | CIRC. UP SAMPLE |
| 400 | 530 | 1.50 | 24 | RACK KELLY DO FORMATION INTEGRETY TEST |
| 530 | 800 | 2.50 | 5 | PICK UP KELLY &CIRC. MIX PILL DID GOOD FLOW CHECK FOR 20 MIN. |
| 800 | | | | INDICATION OF FLOW CONTINUE TO CIRC. & MIX WT. MATERIAL |

NOTES: FUNCTION CROWN SAVER/SWACO CHOKE
REVIEW J.S.A. ON RACKING KELLY
BLOW DOWN BOILER 2X EACH BOILER
JAR HRS6.5

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | RACKING KELLY | 57 | |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## DAY TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY (AT END OF TOUR) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | 0.19 | |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 192 | 3.5 E D/P | | 1831.31 |
| 46 | 31/5 X95 | | 440.08 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 4.15 |
| | TOTAL | | 2485.00 |
| | WT. OF D.C. | | |
| | WT. OF STRING | 57 | |

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | 2485.00 |
| DEPTH IN (m) | 2480.00 |
| TOTAL DRILLED (m) | 5.00 |
| TOTAL HRS RUN | 1.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 900 | 1000 | 200 |
| DENSITY (kg/m3) | 1005 | 1020 | 1020 |
| FUNNEL VISCOSITY | 55 | 53 | 55 |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | 11.0 | 11.0 |
| PVTM3 | 63.40 | 65.30 | 62.60 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 325 | 150 | SX |
| FILTER CHECK | 5 | SX |
| N-VIS-P-PLUS | 5 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | 60 | 127.0 | 60 |

**REDUCED PUMP SPEED**

@ 60 @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1015 | 2.25 | 5 | COND MUD & CIRCULATE/ WEIGHT UP MUD SYSTEM/FLOW INDICATED / |
| 1015 | | | | FLOW CHECK @ 2479mV PUMP PILL |
| 1015 | 1030 | 0.25 | 21 | SAFETY MTG. WITH CREW |
| 1030 | 1130 | 1.00 | 6 | TRIPS / P.O.O.H. 5 STANDS/FLOW CHECH@ 2396m |
| 1130 | 1145 | 0.25 | 22 | B.O.P. DRILL WITH CREW{WELL SECURED IN 100SECONDS} |
| 1145 | 1200 | 0.25 | 7 | RIG SERVICE{FUNCTION PIPE-RAMS,ANNULAR} |
| 1200 | 1600 | 4.00 | 6 | TRIPS/P.O.O.H. TO RUN LOGS/FLOWCHECK@2123m,1355m |
| 1600 | | | | |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE
REVIEW J.S.A. ON MIXING MUD/ TRIPPING / PIPESPINNER USE /
BLOW BOILER S DOWN 2 X = 80 LITERS EACH
HOURS ON JARS=7.25

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | FLOW CHECKS | 60 | 20527 |

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY (AT END OF TOUR) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | 0.19 | |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 192 | 3.5 E D/P | | 1831.31 |
| 46 | 31/5 X95 | | 440.08 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 4.15 |
| | TOTAL | | 2485.00 |
| | WT. OF D.C. | | |
| | WT. OF STRING | 57 | |

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | 2485.00 |
| DEPTH IN (m) | 2480.00 |
| TOTAL DRILLED (m) | 5.00 |
| TOTAL HRS RUN | 1.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG

TORQUE AT BOTTOM

FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED X | OIL BASED ☐

| | | | |
|---|---|---|---|
| TIME | 1730 | | |
| DENSITY (kg/m3) | 1020 | | |
| FUNNEL VISCOSITY | 54 | | |
| FLUID LOSS (cm3) | | | |
| pH | 11.0 | | |
| PVTM3 | 57.50 | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 127.0 | |

**REDUCED PUMP SPEED**

@ 0 @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1930 | 3.50 | 6 | TRIPS P.O.O.H. TO LOG/FLOW CHECK@257m,OUT OF HOLE |
| 1930 | 1945 | 0.25 | 7 | RIG SERVICE FUNCTION BLIND RAMS |
| 1945 | 2400 | 4.25 | 11 | RIG TO RUN VSP LOG MONITOR WELL FOR GAINS& LOSSES |
| | | | | WIRELINE T.D @ 2383 |
| | | | | TRIP MUD |
| | | | | MEASURED=8.87m3 |
| | | | | CALCULATED=7.20m3 |

NOTES: FUNCTION CROWN SAVER / SWACO CHOKE/FUNCTIONED BLIND RAMS
REVIEW JSA ON RIG UP AND LOG
BLOW BOILER DOWN2 X = 80 LITERS EACH BOILER
JAR HOURS

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | RIG TO LOG | 30 | 20527 |

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| **OPERATOR** | **CONTRACTOR NAME** |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:30.00 N 122:55:46.13 W | |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | C/P | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | BP | RR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3. ) H2S Signs Posted if Required | BP | RR |
| ( 4. ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5. ) Flare Lines Staked | BP | RR |
| ( 6. ) BOP Drills Performed | BP | RR |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | BP | RR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3. ) Mast Inspection before Raising or Lowering | | RR |
| ( 4. ) Crown Saver Checked | | RR |
| ( 5. ) Motor Kills Checked | | RR |

Rm 1-4pm W

YEAR 2004 | MONTH 1 | DAY 25

RIG NO. 37

FUEL @ 08:00 HRS

RIG 142 | BOILER 16800

TEMPERATURE

CURRENT CONDITIONS

WIND DIRECTION

ROAD CONDITION

**LAST CASING TUBING OR LINER**

| | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATORS AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTORS JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC

PASON DATAHUB

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 RIG OUT L/D | 23 RIG UP | 24 CUT/SLIP DRILL LINE | 25 PULL OUT | 26 TIGHTEN QI | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | 3.00 | | 0.25 | | | | | | | | | | | | | | | 1.25 | 0.50 | 1.50 | 0.50 | 1.00 | 8.00 |
| DAY | | | 1.75 | | | | 0.25 | 0.50 | | | | | | | | | | | | | | | | | 5.50 | | 8.00 |
| EVE | | | | | 0.75 | | 0.25 | 0.25 | | | | | | | 0.75 | | | | | | | | | | 6.00 | | 8.00 |
| TOTAL | | | 1.75 | | 3.75 | | 0.75 | 0.75 | | | | | | | 0.75 | | | | | | | 1.25 | 0.50 | 1.50 | 12.00 | 1.00 | 24.00 |

SHALE SHAKER(S) | RENTALS / SERVICES | MORN | DAY | EVE

NO. | TYPE | TYPE

SCREENS CHANGED | NEW/ USED

TOP | TOP

MIDDLE | MIDDLE

BOTTOM | BOTTOM

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.

PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## MORNING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY AT END OF TOUR | O.D. | LENGTH |
|---|---|---|---|
| | BIT | 0.19 | |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 192 | 3.5 E D/P | | 1831.31 |
| 30 | 31/5 X95 | | 285.94 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 12.92 |
| | TOTAL | | 2339.63 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | 52 |

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MORNING TOUR** | **MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | |
|---|---|
| TIME | |
| DENSITY (kg/m3) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| | 1 | | 2 |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 230 | STACK TEMP | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 5400 | 127.0 | 60 | 127.0 | 60 |

REDUCED PUMP SPEED

1590 @ 60 @ 2339

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE

DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 115 | 1.25 | 22 | RIG OUT L/D TRUCK |
| 115 | 130 | 0.25 | 7 | RIG SERVICE FUNCTION PIPE RAMS ,ANN |
| 130 | 200 | 0.50 | 23 | RIGS IN H2S MONITORS |
| 200 | 330 | 1.50 | 24 | PULL2 SINGLES OF D/P PICK UP KELLY MAKE & RUN DOWN TO |
| 330 | | | | FLOOR TO TAKE OFF KELLY HOSE TO UN THAW |
| 330 | 430 | 1.00 | 5 | DISPLACE HOLE OVER TO POLYMER MUD |
| 430 | 630 | 2.00 | 5 | CIRC. & GET SHAKERS GOING |
| 630 | 700 | 0.50 | 25 | DRILLOUT CEMEMT |
| 700 | 800 | 1.00 | 26 | RIG UP 41/2 TONGS & TIGHEN QUILL SUB RIG UP 31/2 TONGS |
| 800 | | | | |
| | | | | NOTE VISUALLY INSPECTED ALL CONNECTIONS ON DEGASSER |
| | | | | AND DEGASSER LINES AND FLARELINES AND FLARE TANK ALL OK |

NOTES : FUNCTION CROWN SAVER/SWACO CHOKE GAS MONITERED BY DDA SAFETY

REVIEW J.S.A. ON RIG OUT L/D TRUCK

BLOW DOWN BOILER 2X 80 LITRES EACH BOILER

JAR HOURS4.5 HRS

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | RIG OUT L/D TRUCK | | |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## DAY TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY AT END OF TOUR | O.D. | LENGTH |
|---|---|---|---|
| | BIT | 0.19 | |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 192 | 3.5 E D/P | | 1831.31 |
| 30 | 31/5 X95 | | 285.94 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 12.92 |
| | TOTAL | | 2339.63 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | 57 |

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | 2417.00 |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | 250 |
| FILL ON BOTTOM (m) | |

**DAY TOUR** | **MUD RECORD**

MUD TYPE | WATER BASED X | OIL BASED ☐

| | |
|---|---|
| TIME | |
| DENSITY (kg/m3) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| FILTER CHECK | 30 | SX |
| BARABUF | 5 | SX |
| SODIUM SULPHITE | 5 | SX |
| N-VIS-P | 15 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| | 1 | | 2 |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 5850 | 127.0 | 60 | 127.0 | 60 |

REDUCED PUMP SPEED

2510 @ 60 @ 2413

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE

CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2340.00 | 2417.00 | R | 50 | 6 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1045 | 2.75 | 25 | DRILL OUT CEMENT+PLUG @ 2340m |
| 1045 | 1230 | 1.75 | 3 | WASH SINGLES DOWN TO 2411m |
| 1230 | 1515 | 2.75 | 25 | DRILL OUT CEMENT FR.-2411m- |
| 1515 | 1530 | 0.25 | 7 | RIG SERVICE (FUNCTION PIPE-RAMS , ANNULAR) |
| 1530 | 1600 | 0.50 | 8 | REPAIR SHAKER TROUBLE SHOOT ELECTRICAL ON SHAKER ONE |
| 1600 | | | | |
| | | | | FUNCTION MOTOR KILLS(ENGINES STOPPED IN 3 SECONDS) |

NOTES : FUNCTION CROWN SAVER / SWACO CHOKE GAS MONITERED BY DDA SAFETY

REVIEW JSA ON WORKING WITH STEAM

HOURS ON JARS= 7.25

BLOW BOILER DOWN 2 X = 80 LITERS

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | STEAM USE | 58 | |

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY AT END OF TOUR | O.D. | LENGTH |
|---|---|---|---|
| | BIT | 0.19 | |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 192 | 3.5 E D/P | | 1831.31 |
| 44 | 31/5 X95 | | 420.77 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 8.46 |
| | TOTAL | | 2470.00 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | 57 |

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | 2417.00 |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**EVENING TOUR** | **MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

| | |
|---|---|
| TIME | 2200 |
| DENSITY (kg/m3) | 1000 |
| FUNNEL VISCOSITY | 46 |
| FLUID LOSS (cm3) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| | 1 | | 2 |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 7700 | 127.0 | 60 | 127.0 | 60 |

REDUCED PUMP SPEED

2360 @ 61 @ 2464

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE

DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2417.00 | 2470.00 | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 8 | REPAIR SHAKER TROUBLE SHOOT ELECTRICAL ON SHAKER ONE |
| 1615 | 2145 | 5.50 | 25 | DRILL CEMENT FR2417-2464 |
| 2145 | 2200 | 0.25 | 7 | RIG SERVICE FUNCTION PIPE RAMS ANN |
| 2200 | 2230 | 0.50 | 25 | DRILL CEMENT FR. 2464-2470 |
| 2230 | 2315 | 0.75 | 5 | CIRC. |
| 2315 | 2400 | 0.75 | 15 | PRESSURE TEST CSG |
| 2400 | | | | |

NOTES : FUNCTION CROWN SAVER / SWACO CHOKE GAS MONITERED BY DDA SAFETY

REVIEW J.S.A. ON CONNECTIONS

BLOW DOWN BOILER 2X 80 LITRES EACH BOILER

JAR HRS.7.25

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | CONNECTIONS | 57 | |

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

LICENCE NO.

WELL NAME & NO.
**Anadarko Arrowhead F-56**

OPERATOR
**ANADARKO CANADA CORP.**

CONTRACTOR NAME
**AKITA DRILLING LTD.**

SURFACE LOCATION
**60:34:30.00 N 122:55:46.13 W**

UNIQUE ID

SIGNATURE OF OPERATOR'S REPRESENTATIVE
**BRIAN PREECE**

SIGNATURE OF CONTRACTOR'S RIG MANAGER
**ROLF REULE**

**DAILY CHECKS**
( 1 ) Daily Walk Around Inspection
( 2 ) Detailed Inspection - Weekly ( Using Check List )
( 3 ) H2S Signs Posted if Required
( 4 ) Well Licence & Stick Diagram Posted
( 5 ) Flare Lines Staked
( 6 ) BOP Drills Performed
( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines

| | O/P | R.M. |
|---|---|---|
| BP | | RR |
| BP | | RR |
| BP | | RR |
| BP | | RR |
| | | |
| | | |
| | | RR |

( 1 ) Rig Site Health & Safety Meeting ( one/crew/month )
( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month )
( 3 ) Mast Inspection before Raising or Lowering
( 4 ) Crown Saver Checked
( 5 ) Motor Kills Checked

| | |
|---|---|
| | RR |
| | RR |
| | RR |
| | RR |
| | RR |

YEAR 2004 MONTH 1 DAY 24
RIG NO. 37
FUEL @ 08.00 HRS
RIG 173 BOILER 21067
TEMPERATURE
CURRENT CONDITIONS
WIND DIRECTION
ROAD CONDITION

**LAST CASING TUBING OR LINER**

| | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/ OP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T...JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| CP FUEL | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC
**PASON DATAHUB**

TIME BREAKDOWN

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 RIG IN L/D TRUCK | 23 TRANSFER 139 MM DP STRAP | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | 4.00 | | | | | 2.25 | 0.25 | | | | | | | | | | | | | | 0.25 | 1.25 | | | | | 8.00 |
| DAY | | | | | 0.50 | 5.75 | 0.25 | 1.00 | | | | | | | | | | | | | 0.50 | | | | | | 8.00 |
| EVE | | | | | 0.25 | 4.75 | 0.25 | | | | | | | | | | | | | | | | 2.75 | | | | 8.00 |
| TOTAL | 4.00 | | | | 0.75 | 12.75 | 0.75 | 1.00 | | | | | | | | | | | | | 0.75 | 1.25 | 2.75 | | | | 24.00 |

SHALE SHAKER(S) — RENTALS / SERVICES — MORN | DAY | EVE

| NO. | TYPE | TYPE |
|---|---|---|
| 1 | SWACO | |
| 2 | SWACO | |
| SCREENS CHANGED | | NEW USED |
| TOP | | TOP |
| MIDDLE | | MIDDLE |
| BOTTOM | | BOTTOM |

**DRILLING CREW PAYROLL DATA**

WELL NAME & NO. | YEAR | MONTH | DAY
OPERATOR | CONTRACTOR NAME
RIG MANAGER | RIG NO.
PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.19 |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | 209.46 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐
TIME
DENSITY (kg/m3)
FUNNEL VISCOSITY
FLUID LOSS (cm3)
pH

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL
CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 230 | STACK TEMP | |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED
@ @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE
DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 400 | 4.00 | 1 | FINISH PLUMPING IN STEAM LINES,WORK WITH WELDERON |
| 400 | | | | DEGASSER TANK,MEASURE&I.D. O.D. D/C HWDP RIG UP TO RUN PIPE |
| 400 | 415 | 0.25 | 7 | RIG SERVICE FUNCTION BLIND RAMS PIPE RAMS |
| 415 | 430 | 0.25 | 21 | SAFETY MTG. WITH R&R PIPE HANDLERS |
| 430 | 545 | 1.25 | 22 | RIG IN L/D TRUCK TO PICK UP B.H.A &D/P |
| 545 | 800 | 2.25 | 6 | MAKE UP BIT & PICK UP BHA& PIPE |
| 800 | | | | |

NOTES : REVIEW J.S.A. ON RIG IN L/D MACHINE
FUNCTION CROWN SAVER
BLOW DOWN BOILER 2X

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | RIG IN L/D TRUCK | | |

| MORNING TOUR | FROM 0 | TO 800 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.19 |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | 209.46 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐
TIME
DENSITY (kg/m3)
FUNNEL VISCOSITY
FLUID LOSS (cm3)
pH

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL
CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

REDUCED PUMP SPEED
@ @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE
CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 830 | 0.50 | 21 | SAFETY MTG. WITH LAY DOWN OPERATOR AND CREW |
| 830 | 1200 | 3.50 | 6 | PICK-UP COLLARS/ H.W.D.P. / 3 -1/2 D.P. |
| 1200 | 1215 | 0.25 | 5 | FLOW CHECK / FILL PIPE |
| 1215 | 1430 | 2.25 | 6 | PICK UP PIPE R.I.H. TO 901 M |
| 1430 | 1445 | 0.25 | 5 | FLOW CHECK/ FILL PIPE |
| 1445 | 1500 | 0.25 | 7 | RIG SERVICE AND CHECK UPPER PIPE RAMS AND CROWN SAVER OK |
| 1500 | 1600 | 1.00 | 8 | REMOVE LEAKY PIPE SPINNER HOSE AND CUT HOSE AT LEAK AND |
| 1600 | | | | INSTALL SPLICE AND INSTALL HOSE TO CONTINUE TRIP PIPE IN |

NOTES : FUNCTION CROWN SAVER / FUNCTION SWACO CHOKE
REVIEW JSA ON USING LAYDOWN TRUCK / PICKING UP PIPE
BLOW BOILER DOWN 2 X = 80 LITERS

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | PICKINGUPPIPE | | |

| DAY TOUR | FROM 800 | TO 1600 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.19 |
| | BIT SUB | 120 | 0.77 |
| 6 | D.C. | 117 | 55.01 |
| | JAR | 125 | 6.14 |
| 6 | D.C. | 117 | 55.10 |
| 10 | H.W.D.P. | 120 | 92.25 |
| 192 | 3.5 E D/P | | 1831.31 |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | 2040.77 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 156.0 |
| IADC CODE | 4 3 7 |
| MANUFACTURER | HUGHES |
| TYPE | HT09XP |
| SERIAL NO. | MO3503 |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**
HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐
TIME
DENSITY (kg/m3)
FUNNEL VISCOSITY
FLUID LOSS (cm3)
pH

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL
CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

BOILERS

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

CIRCULATION PRESSURE kPa

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 127.0 | | 127.0 | |

REDUCED PUMP SPEED
@ @

DEVIATION SURVEYS

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE
DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1800 | 2.00 | 6 | PICK UP 3- 1/2 D.P /RUN IN HOLE FR / 901 m-1512m |
| 1800 | 1815 | 0.25 | 5 | FLOWCHECK@ 1512m/ FILL PIPE |
| 1815 | 2000 | 1.75 | 6 | PICK UP 3- 1/2 D.P. / RUN IN NHOLE FR./ 1512m-2040 |
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE FUNCTION PIPE RAMS ANN, |
| 2015 | 2300 | 2.75 | 23 | TRANSFER PIPE TO PIPE RACKS& STRAP,REROUTE STEAM AT WATER |
| | | | | TANK COMBINATION BUILDING TO ELIMINATE FREEZE UPS |
| 2300 | 2400 | 1.00 | 6 | PICK UP 3-1/2 D.P/RUN IN HOLE FR. 2040-2327 |
| 2400 | | | | |

NOTES : FUNCTION CROWN SAVER / SWACO CHOKE
REVIEW JSA ON PICKING UP PIPE
BLOW BOILER DOWN 2 X = 80 LITERS

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | PICKING UP PIPE | | |

| EVENING TOUR | FROM 1600 | TO 2400 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

RATE SCHEDULE | REGULAR | REPAIR | INVERT
CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | BP | RR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3. ) H2S Signs Posted if Required | BP | RR |
| ( 4. ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3. ) Mast Inspection before Raising or Lowering | | RR |
| ( 4. ) Crown Saver Checked | | RR |
| ( 5. ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 1 DAY 23

RIG NO. 37

FUEL @ 08:00 HRS: RIG 230 BOILER 25260

TEMPERATURE

WEATHER: CURRENT CONDITIONS; WIND DIRECTION; ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC

PASON DATAHUB

TIMES

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | | 0.50 | 0.25 | | | | | | | 4.25 | 2.75 | | | | | | 0.25 | | | | | | 8.00 |
| DAY | | | | | | | 0.25 | | | | | | | | 7.50 | | | | | | 0.25 | | | | | | 8.00 |
| EVE | 6.25 | | | | | | 0.25 | | | | | | | | 1.50 | | | | | | | | | | | | 8.00 |
| TOTAL | 6.25 | | | | | 0.50 | 0.75 | | | | | | | 4.25 | 11.75 | | | | | | 0.50 | | | | | | 24.00 |

| SHALE SHAKER(S) | NO. | TYPE | TYPE |
|---|---|---|---|
| SCREENS CHANGED | | NEW/ USED | |
| TOP | | TOP | |
| MIDDLE | | MIDDLE | |
| BOTTOM | | BOTTOM | |

| RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|
| | | | |

**DRILLING CREW PAYROLL DATA**

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| | | | |

| OPERATOR | CONTRACTOR NAME |
|---|---|
| | |

| RIG MANAGER | RIG NO. |
|---|---|
| | |

| PROVINCE | CAMP | RIG SAFETY DAYS |
|---|---|---|
| | YES NO | |

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH |
|---|---|---|
| | BIT O.D. | |
| | | |
| | | |
| |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | BP | RR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | BP | RR |
| ( 3. ) H2S Signs Posted if Required | BP | RR |
| ( 4. ) Well Licence & Stick Diagram Posted | | |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | RR |
| ( 5. ) Motor Kills Checked | | RR |

YEAR 2004 MONTH 1 DAY 22

RIG NO. 37

FUEL @ 08.00 HRS

RIG 134 BOILER 16011

TEMPERATURE

CURRENT CONDITIONS

WIND DIRECTION

ROAD CONDITION

**LAST CASING TUBING OR LINER**

| O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|
| 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC/DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| DP FUEL | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

CAODC

PASON DATAHUB

**TIME-TERMS**

| CODE NO. | 1 RIG/UP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | | | 0.25 | | | | | | | 7.75 | | | | | | | | | | | | | 8.00 |
| DAY | 3.00 | | | | | | 0.25 | | | | | | | 4.75 | | | | | | | | | | | | | 8.00 |
| EVE | 5.75 | | | | | | 0.25 | | | | | | | 2.00 | | | | | | | | | | | | | 8.00 |
| TOTAL | 8.75 | | | | | | 0.75 | | | | | | | 14.50 | | | | | | | | | | | | | 24.00 |

| SHALE SHAKER(S) | | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| NO. | TYPE | TYPE | | | |
| SCREENS CHANGED | NEW USED | | | | |
| TOP | TOP | | | | |
| MIDDLE | MIDDLE | | | | |
| BOTTOM | BOTTOM | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| OPERATOR | CONTRACTOR NAME | | |
| RIG MANAGER | | RIG NO. | |
| PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS | |

## MORNING TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | LENGTH |
|---|---|---|
| | BIT O.D. | |
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| | | |
| | | |
| | D.P. STANDS | |
| | D.P. SINGLES | |
| | KELLY DOWN | |
| | TOTAL | |
| | WT. OF D.C. | |
| | WT. OF STRING | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

| MUD TYPE | WATER BASED ☐ | OIL BASED ☐ |
|---|---|---|
| TIME | | |
| DENSITY (kg/m3) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 230 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

**REDUCED PUMP SPEED**

@ @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE CHECK CROWN SAVER OK |
| 15 | 800 | 7.75 | 14 | NIPPLE UP B.O.P. |

NOTES : REVIEW J.S.A. ON NIPPLE UP BOP

BLOW DOWN BOILER 2X

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | NIPPLE UP BOP | | |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

| RATE SCHEDULE | | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|
| CREW SAFETY DAYS | | DRIVERS | | | | |

## DAY TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | LENGTH |
|---|---|---|
| | BIT O.D. | |
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| | | |
| | D.P. STANDS | |
| | D.P. SINGLES | |
| | KELLY DOWN | |
| | TOTAL | |
| | WT. OF D.C. | |
| | WT. OF STRING | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

| MUD TYPE | WATER BASED ☐ | OIL BASED ☐ |
|---|---|---|
| TIME | | |
| DENSITY (kg/m3) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BARABUF | 6 | SX |
| XCD-POLYMER | 12 | SX |
| FILTER CHECK | 22 | SX |

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

**REDUCED PUMP SPEED**

@ @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

CURTIS VICKERS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE AND CHECK CROWN SAVER OK |
| 815 | 1300 | 4.75 | 14 | RIG UP BOTH BLEED OFF LINES FROM BOPS TO MANIFOLD SHACK |
| 1300 | 1600 | 3.00 | 1 | WORK WITH WELDER TO MODIFY FLOW NIPPLE AND FLOW LINE AND |
| 1600 | | | | RIG UP HYDRAULIC HOSES TO BOP COMPONENTS WORK WITH LOADER |
| | | | | TO POSITION 89 MM DRILL PIPE AND BHA ON DOGHOUSE SIDE OF |
| | | | | LOCATION SO ABLE TO USE LAY DOWN TRUCK TO PICK UP DRILL |
| | | | | STRING |

NOTES : REVIEW JSA ON RIGGING UP FLARE LINES / NIPPLING UP

BLOW BOILER DOWN 3 X = 120 LITERS

NOTE TIM BIRD BRUISED TOP OF LEFT FOOT WHILE HELPING RIG CREW POSITION

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | NIPPLING UP | | |

**DAY TOUR** FROM 800 TO 1600

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

| RATE SCHEDULE | | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|
| CREW SAFETY DAYS | | DRIVERS | | | | |

## EVENING TOUR

| NO. | DRILLING ASSEMBLY AT END OF TOUR | LENGTH |
|---|---|---|
| | BIT O.D. | |
| | | |
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| | D.P. STANDS | |
| | D.P. SINGLES | |
| | KELLY DOWN | |
| | TOTAL | |
| | WT. OF D.C. | |
| | WT. OF STRING | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT (m) | |
| DEPTH IN (m) | |
| TOTAL DRILLED (m) | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (m) | |

**MUD RECORD**

| MUD TYPE | WATER BASED ☐ | OIL BASED ☐ |
|---|---|---|
| TIME | | |
| DENSITY (kg/m3) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | | | |

**REDUCED PUMP SPEED**

@ @

**DEVIATION SURVEYS**

| DEPTH ( m ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

DAN PERRY

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 7 | RIG SERVICE AND CHECK CROWN SAVER OK |
| 1615 | 2200 | 5.75 | 1 | FINISH MOVE 89 MM DRILL PIPE AND BHA TO DOGHOUSE SIDE OF |
| 2200 | | | | LOCATION AND WORK WITH WELDER TO MODIFY FLOW NIPPLE |
| | | | | AND FLOW LINE AND RIG UP HOOK UP HYDRAULIC HOSES ONTO BOP |
| | | | | COMPONENTS |
| 2200 | 2400 | 2.00 | 14 | OPEN UP ALL THREE SETS OF BOP RAM DOORS TO REPOSITION |
| 2400 | | | | BLIND RAMS AND CHANGE PIPE RAM BLOCKS FROM 114MM TO 89 MM |

NOTES : REVIEW JSA ON INSTALL FLOW LINE

BLOW BOILER DOWN 2X 80 LITRES

| SPECIAL EVENT | | | SAFETY TOPIC | MEHL | MACP |
|---|---|---|---|---|---|
| TIME / DEPTH | | | | | |

**EVENING TOUR** FROM 1600 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|

INJURIES

| RATE SCHEDULE | | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|
| CREW SAFETY DAYS | | DRIVERS | | | | |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| OPERATOR | CONTRACTOR NAME |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:30.00 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | BP | RR |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | | RR |
| ( 3 ) H2S Signs Posted if Required | BP | RR |
| ( 4 ) Well Licence & Stick Diagram Posted | BP | RR |
| ( 5 ) Flare Lines Staked | | |
| ( 6 ) BOP Drills Performed | | |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| ( 3 ) Mast Inspection before Raising or Lowering | | |
| ( 4 ) Crown Saver Checked | | |
| ( 5 ) Motor Kills Checked | | |

YEAR 2004 MONTH 1 DAY 21

RIG NO. 37

FUEL @ 08:00 HRS

RIG 18950 BOILER 18950

WEATHER: TEMPERATURE; CURRENT CONDITIONS; WIND DIRECTION; ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 177.8 | 159.4 | 38.70 | ALGOMA | L80 | 184 | 2476.00 | 6.35 | 2472.00 |

| DC/DP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTORS JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

PASON DATAHUB

**TIMES**

| CODE NO | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | 7.75 | | | | | | 0.25 | | | | | | | | | | | | | | | | | | | | 8.00 |
| DAY | 6.75 | | | | | | 0.25 | | | | | | | 1.00 | | | | | | | | | | | | | 8.00 |
| EVE | | | | | | | 0.25 | | | | | | | 7.75 | | | | | | | | | | | | | 8.00 |
| TOTAL | 14.50 | | | | | | 0.75 | | | | | | | 8.75 | | | | | | | | | | | | | 24.00 |

| SHALE SHAKER(S) NO. | TYPE | TYPE |
|---|---|---|
| SCREENS CHANGED | | NEW? USED |
| TOP | | TOP |
| MIDDLE | | MIDDLE |
| BOTTOM | | BOTTOM |

| RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|
| | | | |

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. | YEAR | MONTH | DAY

OPERATOR | CONTRACTOR NAME

RIG MANAGER | RIG NO.

PROVINCE | CAMP ☐ YES ☐ NO | RIG SAFETY DAYS

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## MORNING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH |
|---|---|---|
| | BIT O.D. | |
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| | D.P. STANDS | |
| | D.P. SINGLES | |
| | KELLY DOWN | |
| | TOTAL | |
| | WT. OF D.C. | |
| | WT. OF STRING | |

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL DRILLED (m) | TOTAL HRS RUN

CUTTING STRUCTURE: T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

TIME | DENSITY (kg/m3) | FUNNEL VISCOSITY | FLUID LOSS (cm3) | pH

**MUD MATERIALS ADDED**: PRODUCT | AMOUNT | UNIT

**SOLIDS CONTROL**

CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 8.00 | HRS RUN | |
| BOILER pH | | BOILER pH | |
| STACK TEMP | | STACK TEMP | |

**CIRCULATION PRESSURE kPa**: PUMP NO. 1 (LINER SIZE, SPM) | PUMP NO. 2 (LINER SIZE, SPM)

**REDUCED PUMP SPEED**: @ | @

**DEVIATION SURVEYS**: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: DAN PERRY

**METRES DRILLED**: FROM | TO | D-R-C | RPM | WOB

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE AND CHECK CROWN SAVER OK |
| 15 | 800 | 7.75 | 1 | RIG UP RENTAL EQUIPMENT SUCH AS CHANGE OUT KELLY BAR AND |
| 800 | | | | TRIP IN RATHOLE SOCK RIG UP RENTAL TONGS REDUCE WEIGHT IN |
| | | | | TONG COUNTER WEIGHTS SO ABLE TO OPERATE TONGS IN A SAFE |
| | | | | MANNER AND RIG UP PREMIX TANKS AND ADDITIONAL BOILER |

NOTES :

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**MORNING TOUR** FROM 0 TO 800 | INJURIES

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|
| | | | | | |

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

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## DAY TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH |
|---|---|---|
| | BIT O.D. | |
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| | D.P. STANDS | |
| | D.P. SINGLES | |
| | KELLY DOWN | |
| | TOTAL | |
| | WT. OF D.C. | |
| | WT. OF STRING | |

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL DRILLED (m) | TOTAL HRS RUN

CUTTING STRUCTURE: T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

TIME | DENSITY (kg/m3) | FUNNEL VISCOSITY | FLUID LOSS (cm3) | pH

**MUD MATERIALS ADDED**: PRODUCT | AMOUNT | UNIT

**SOLIDS CONTROL**

CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 12.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 220 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**: PUMP NO. 1 (LINER SIZE, SPM) | PUMP NO. 2 (LINER SIZE, SPM)

**REDUCED PUMP SPEED**: @ | @

**DEVIATION SURVEYS**: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: CURTIS VICKERS

**METRES DRILLED**: FROM | TO | D-R-C | RPM | WOB

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE AND CHECK CROWN SAVER OK |
| 815 | 1500 | 6.75 | 1 | POSITION PIPE RACKS AND BRING PIPE OVER AND PLACE ON RACKS |
| | | | | DISTRIBUTE FLANGED BLEED OFF LINES AND DEGASSER LINES AND |
| | | | | FLARELINES READY FOR NIPPLE UP |
| 1500 | 1600 | 1.00 | 14 | OPEN VALVE ON WELL HEAD TO ENSURE NO PRESSURE ON WELL HEAD |
| 1600 | | | | AND REMOVE WELLHEAD AS REQUESTED (SPUD 1500 HRS JAN 21/2004 |
| | | | | |
| | | | | ADDITIONAL SECOND BOILER FIRED UP AT 1200 HRS JAN 21/2004 |

NOTES : REVIEW JSA ON RIGGING UP / NIPPLING UP

BLOW BOILER DOWN 2 X =- 80 LITERS

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**DAY TOUR** FROM 800 TO 1600 | INJURIES

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|
| | | | | | |

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

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## EVENING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH |
|---|---|---|
| | BIT O.D. | |
| | | |
| | | |
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| | | |
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| | | |
| | D.P. STANDS | |
| | D.P. SINGLES | |
| | KELLY DOWN | |
| | TOTAL | |
| | WT. OF D.C. | |
| | WT. OF STRING | |

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL DRILLED (m) | TOTAL HRS RUN

CUTTING STRUCTURE: T1 | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

**HOLE CONDITION**: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

**MUD RECORD**

MUD TYPE | WATER BASED ☐ | OIL BASED ☐

TIME | DENSITY (kg/m3) | FUNNEL VISCOSITY | FLUID LOSS (cm3) | pH

**MUD MATERIALS ADDED**: PRODUCT | AMOUNT | UNIT

**SOLIDS CONTROL**

CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

HOURS RUN | INTAKE DENSITY ( kg/m3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

**BOILERS**

| 1 | | 2 | |
|---|---|---|---|
| HRS RUN | 16.00 | HRS RUN | |
| BOILER pH | 10.5 | BOILER pH | |
| STACK TEMP | 230 | STACK TEMP | |

**CIRCULATION PRESSURE kPa**: PUMP NO. 1 (LINER SIZE, SPM) | PUMP NO. 2 (LINER SIZE, SPM)

**REDUCED PUMP SPEED**: @ | @

**DEVIATION SURVEYS**: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: DAN PERRY

**METRES DRILLED**: FROM | TO | D-R-C | RPM | WOB

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 7 | RIG SERVICE AND CHECK CROWN SAVER OK |
| 1615 | 2400 | 7.75 | 14 | NIPPLE UP B.O.P. |
| 2400 | | | | |

NOTES : REVIEW J.S.A. ON NIPPLE UP B.O.P.

BLOW DOWN BOILER 2X 2X 80 LITRES

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**EVENING TOUR** FROM 1600 TO 2400 | INJURIES

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|
| | | | | | |

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | Anadarko Arrowhead F-56 |
| **OPERATOR** | **CONTRACTOR NAME** |
| ANADARKO CANADA CORP. | AKITA DRILLING LTD. |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:30.00 N 122:55:46.13 W | |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| BRIAN PREECE | ROLF REULE |

**DAILY CHECKS**

| | OPR | RM |
|---|---|---|
| (1.) Daily Walk Around Inspection | BP | RR |
| (2.) Detailed Inspection - Weekly ( Using Check List ) | | RR |
| (3.) H2S Signs Posted if Required | | |
| (4.) Well Licence & Stick Diagram Posted | | |
| (5.) Flare Lines Staked | | |
| (6.) BOP Drills Performed | | |
| (7.) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| (1.) Rig Site Health & Safety Meeting ( one/crew/month ) | | RR |
| (2.) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | RR |
| (3.) Mast Inspection before Raising or Lowering | | |
| (4.) Crown Saver Checked | | |
| (5.) Motor Kills Checked | | |

YEAR 2004 MONTH 1 DAY 20
RIG NO. 37
FUEL @ 08:00 HRS
RIG BOILER

WEATHER: TEMPERATURE; CURRENT CONDITIONS; WIND DIRECTION; ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | MASS (kg/m3) | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| DC/DP | DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|
| 8P80 | NATIONAL | 216 |

| | |
|---|---|
| SPUD DATE | 2004/01/20 |
| TIME | 23:59 |
| RIG RELEASE | 2004/02/06 |
| TIME | 12:00 |
| WELL TYPE | |
| RE-ENTRY | |
| OPERATOR'S AFE | |
| KELLY BSHG | |
| OP FUEL | |
| CONTRACTOR'S JOB NUM | |
| TOUR SHEET SERIAL NUM | |
| VENDOR SOFTWARE VERSION | |

PASON DATAHUB

**TIME-HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | 7.75 | | | | | | 0.25 | | | | | | | | | | | | | | | | | | | | 8.00 |
| DAY | 7.50 | | | | | | 0.25 | | | | | | | | | | | | | | 0.25 | | | | | | 8.00 |
| EVE | 7.50 | | | | | | 0.25 | | | | | | | | | | | | | | 0.25 | | | | | | 8.00 |
| TOTAL | 22.75 | | | | | | 0.75 | | | | | | | | | | | | | | 0.50 | | | | | | 24.00 |

| SHALE SHAKER(S) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|
| NO. TYPE TYPE | | | | |
| SCREENS CHANGED NEW USED | | | | |
| TOP TOP | | | | |
| MIDDLE MIDDLE | | | | |
| BOTTOM BOTTOM | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| OPERATOR | CONTRACTOR NAME | | |
| RIG MANAGER | RIG NO. | | |
| PROVINCE | CAMP YES NO | RIG SAFETY DAYS | |

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**NO.** | **DRILLING ASSEMBLY : AT END OF TOUR :** | **LENGTH**

BIT | O.D.

D.P. STANDS
D.P. SINGLES
KELLY DOWN
TOTAL
WT. OF D.C.
WT. OF STRING

### BIT RECORD

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT (m) | DEPTH IN (m) | TOTAL DRILLED (m) | TOTAL HRS RUN

CUTTING STRUCTURE: TI | TO | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN m/HR

HOLE CONDITION: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (m)

## MORNING TOUR

MUD RECORD: MUD TYPE | WATER BASED ☐ | OIL BASED ☐ | TIME | DENSITY (kg/m3) | FUNNEL VISCOSITY | FLUID LOSS (cm3) | pH

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL — CENTRIFUGE: HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY

BOILERS: 1 | 2 — HRS RUN 8.00 | BOILER pH | STACK TEMP

METRES DRILLED: FROM | TO | D-R-C | RPM | WOB

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | SPM | PUMP NO. 2 LINER SIZE | SPM

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEYS: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: MARC LEVESQUE

TIME LOG: FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE |
| 15 | 800 | 7.75 | 1 | FINISH RIG UP ELECTRIICAL CORDS HOOK UP ALL AIRLINES FROM |
| 800 | | | | CONTROL PANEL ON DERRICK TO DRAWWORKS SKID PULL CUT WINCH |
| | | | | LINE CABLES FROM DERRICK AND STRING IN NEW REPLACEMENT |
| | | | | WINCH LINE CABLES HEAT AND SERVICE AND FIRE UP DRAWWORKS |
| | | | | SPOOL DRILL LINE ONTO MAIN DRUM ON DRAWWORKS |

NOTES:

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**MORNING TOUR** FROM 0 TO 800 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

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## DAY TOUR

MUD RECORD: MUD TYPE | WATER BASED ☐ | OIL BASED ☐ | TIME | DENSITY (kg/m3) | FUNNEL VISCOSITY | FLUID LOSS (cm3) | pH

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL — CENTRIFUGE: HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY

BOILERS: 1 | 2 — HRS RUN 8.00 | BOILER pH | STACK TEMP

METRES DRILLED: FROM | TO | D-R-C | RPM | WOB

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | SPM | PUMP NO. 2 LINER SIZE | SPM

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEYS: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: DAN PERRY

TIME LOG: FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE |
| 815 | 1345 | 5.50 | 1 | FINISH SPOOL DRILL LINE ONTO MAIN DRUM ON DRAWWORKS |
| 1600 | | | | BLEED HYDRAULIC CYLINDERS DUE TO LINES BEING DISCONNECTED |
| | | | | WHEN DERRICK REMOVED FROM DRAWWORKS SKID HEAT HYDRAULIC |
| | | | | CYLINDERS WITH STEAM HOSES AND PREPARE TO RAISE LOWER |
| | | | | SECTION OF DERRICK TO PIN TO SUB STRUCTURE |
| 1345 | 1400 | 0.25 | 21 | HELD SAFETY MEETING WITH CREW PRIOR TO RAISE BOTTOM |
| 1400 | | | | SECTION OF DERRICK VISUALLY INSPECTED DERRICK AND CHECK |
| | | | | COTTER PINS IN BRAKE BAND PINS PRIOR TO RAISE DERRICK |
| 1400 | 1600 | 2.00 | 1 | RAISE BOTTOM SECTION OF DERRICK AND PIN TO SUB STRUCTURE |

NOTES:

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**DAY TOUR** FROM 800 TO 1600 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

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## EVENING TOUR

MUD RECORD: MUD TYPE | WATER BASED ☐ | OIL BASED ☐ | TIME | DENSITY (kg/m3) | FUNNEL VISCOSITY | FLUID LOSS (cm3) | pH

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL — CENTRIFUGE: HOURS RUN | INTAKE DENSITY (kg/m3) | OVER FLOW DENSITY | UNDER FLOW DENSITY

BOILERS: 1 | 2 — HRS RUN 8.00 | BOILER pH | STACK TEMP

METRES DRILLED: FROM | TO | D-R-C | RPM | WOB

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | SPM | PUMP NO. 2 LINER SIZE | SPM

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEYS: DEPTH ( m ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: CURTIS VICKERS

TIME LOG: FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 7 | RIG SERVICE |
| 1615 | 1630 | 0.25 | 21 | HELD SAFETY MEETING WITH CREW PRIOR TO RAISE TOP SECTION |
| 1630 | | | | OF DERRICK |
| 1630 | 2400 | 7.50 | 1 | RAISE TOP SECTION OF DERRICK AND PIN TOP SECTION OF DERRICK |
| 2400 | | | | TO BOTTOM SECTION OF DERRICK RIG UP FLOOR PREFABS HEAT |
| | | | | AND SERVICE AND FIRE UP PUMP MOTORS AND RIG UP MUD TANK |
| | | | | AND NATIONAL 8P80 PUMPS AND GET CIRCULATING RIG UP FLOOR |
| | | | | AREA |

NOTES:

SPECIAL EVENT | TIME / DEPTH | SAFETY TOPIC | MEHL | MACP

**EVENING TOUR** FROM 1600 TO 2400 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| | | | | | | |

RATE SCHEDULE | REGULAR | REPAIR | INVERT

CREW SAFETY DAYS | DRIVERS

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| OPERATOR | CONTRACTOR |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR KG | R.M. GP |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | | |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | | |
| ( 4. ) Well Licence & Stick Diagram Posted | | |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 27

RIG NO. 5

FUEL @ 08:00 HRS

RIG 60 | BOILER

WEATHER
- TEMPERATURE: -13
- CURRENT CONDITIONS: CLEAR
- WIND DIRECTION: CALM
- ROAD CONDITION: ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |
| | 177.8 | 159.4 | 38.69 | ALGOMA | L-80 | 184 | 2476.00 | 7.30 | 2473.50 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 89 | 23.07 | X-95 | 61 | 126 | 3.5" IF | 349 | PT-1100 | OILWELL | 254 |
| 89 | 38.66 | HWDP | 52 | 124 | 3.5 IF | 27 | PT-1100 | OILWELL | 254 |
| 121 | 83.00 | DC | 58 | 122 | 3.5" IF | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO.

| | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRLG LINE | 10 DEV SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 RIG MOVE | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME HRS MORN | 8.00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| DAY | | | | | | | | | | | | | | | | | | | | | 0.25 | 11.75 | | | | |
| EVE. | | | | | | | | | | | | | | | | | | | | | | 4.00 | | | | |
| TOTAL | 8.00 | | | | | | | | | | | | | | | | | | | | 0.25 | 15.75 | | | | |

| TOTALS | SHALE SHAKER ( S ) | | | | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|---|---|---|
| | NO. 2 | TYPE BRANDIT | | TYPE | | | | |
| 8.00 | SCREENS CHANGED | YES | NO | | | | | |
| 12.00 | 120 | TOP | 140 | TOP | | | | |
| 4.00 | 120 | MIDDLE | 140 | MIDDLE | | | | |
| 24.00 | 120 | BOTTOM | 120 | BOTTOM | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 27 |
| OPERATOR | CONTRACTOR | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| RIG MANAGER | RIG NO. | | |
| Greg Pukas | 5 | | |
| PROVINCE | CAMP | RIG SAFETY DAYS | |
| N.W.T. | X YES NO | 241 | |

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## MORNING TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH

BIT | O.D.

D.P. STANDS

D.P. SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE | WATER BASED | OIL BASED

TIME | DENSITY (KG/M3 ) | FUNNEL VISCOSITY | FLUID LOSS (cm3 ) | pH

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM

0.0 | 0.0

REDUCED PUMP SPEED

@ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 800 | 8.00 | 1 | TEAR OUT RIG F/ TRUCKS LOAD OUT 3.5 TUBULAR. |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 0.00 | | | | | |

MORNING TOUR | FROM 0 | TO 800 | INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SHANE WINTERS | 8.00 | | | SW |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | SHELDON MICHEL | 8.00 | | | SM |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS

24

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## DAY TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH

BIT | O.D.

D.P. STANDS

D.P. SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE | WATER BASED | OIL BASED

TIME | DENSITY (KG/M3 ) | FUNNEL VISCOSITY | FLUID LOSS (cm3 ) | pH

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM

REDUCED PUMP SPEED

@ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 21 | SAFETY MTG. WITH PENTASTAR |
| 815 | 2000 | 11.75 | 22 | LOAD OUT RIG, & STEAM CLEAN DIRTY LOADS |
| | | | | ROAD CLOSED TILL 18:00PM |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 0.00 | | | | | |

DAY TOUR | FROM 800 | TO 2000 | INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 12.00 | | | KF |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | KIT BRINK | 12.00 | | | KB |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS

24

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## EVENING TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | LENGTH

BIT | O.D.

D.P. STANDS

D.P. SINGLES

KELLY DOWN

TOTAL

WT. OF D.C.

WT. OF STRING

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE | WATER BASED | OIL BASED

TIME | DENSITY (KG/M3 ) | FUNNEL VISCOSITY | FLUID LOSS (cm3 ) | pH

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM

REDUCED PUMP SPEED

@ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2400 | 4.00 | 22 | LOAD OUT MATTING & DERRICK |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 0.00 | | | | | |

EVENING TOUR | FROM 2000 | TO 2400 | INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SHANE WINTERS | 4.00 | | | SW |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | SHELDON MICHEL | 4.00 | | | SM |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS

256

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | | |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | | |
| ( 4. ) Well Licence & Stick Diagram Posted | | |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | GP | |
| ( 4. ) Crown Saver Checked | GP | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 26

RIG NO. 5

FUEL @ 08:00 HRS

RIG 122 | BOILER

WEATHER: TEMPERATURE -13 | CURRENT CONDITIONS CLEAR | WIND DIRECTION S.E. | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |
| | 177.8 | 159.4 | 38.69 | ALGOMA | L-80 | 184 | 2476.00 | 7.30 | 2473.50 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 89 | 23.07 | X-95 | 61 | 126 | 3.5" IF | 349 | PT-1100 | OILWELL | 254 |
| 89 | 38.66 | HWDP | 52 | 124 | 3.5 IF | 27 | PT-1100 | OILWELL | 254 |
| 121 | 83.00 | DC | 58 | 122 | 3.5" IF | 21 | | | |

**TIME - HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | 3.50 | | | | | 2.75 | 0.25 | | | | 1.50 | | | | | | | | | | | | | | | |
| DAY | 3.75 | | | | | | 0.25 | | | | 4.00 | | | 3.75 | 0.25 | | | | | | | | | | | |
| EVE. | 3.50 | | | | | | 0.25 | | | | | | | | | | | | | | 0.25 | | | | | |
| TOTAL | 10.75 | | | | | 2.75 | 0.75 | | | | 5.50 | | | 3.75 | 0.25 | | | | | | 0.25 | | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | | | | |
| 12.00 | SCREENS CHANGED ☐ YES ☐ NO | | | | |
| 4.00 | TOP 120 / 140 TOP | | | | |
| 24.00 | MIDDLE 120 / 140 MIDDLE | | | | |
| | BOTTOM 120 / 120 BOTTOM | | | | |

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
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| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | ☐ OIL BASED |
|---|---|---|
| TIME | | |
| DENSITY (KG/M3 ) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2480.00 | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 245 | 2.75 | 6 | CONTINUE TO L/D RILL PIPE H/W D/C.s RIG OUT L/D MACHINE. |
| 245 | 300 | 0.25 | 7 | RIG SERVICE |
| 300 | 630 | 3.50 | 1 | TEAR OUT RIG. |
| 630 | 800 | 1.50 | 11 | RIG IN WIRELINERS SET BRIDGE PLUG. |
| 800 | | | | |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | | TEAROUT | |

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
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| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | ☐ OIL BASED |
|---|---|---|
| TIME | | |
| DENSITY (KG/M3 ) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | | | | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1000 | 2.00 | 11 | RUN WIRELINE BRIDGE PLUG |
| 1000 | 1200 | 2.00 | 11 | WIRE LINE CEMENT DUMP 8 LINEAR METRES, & RIG DOWN SAME |
| 1200 | 1215 | 0.25 | 7 | RIG SERVICE |
| 1215 | 1445 | 2.50 | 14 | NIPPLE DOWN B.O.P. |
| 1445 | 1600 | 1.25 | 14 | INSTALL WELL HEAD |
| 1600 | 1615 | 0.25 | 15 | PRESS. TEST BRIDGE PLUG TO 7000 kpa F/ 15 MIN NO LEAKS |
| 1615 | 2000 | 3.75 | 1 | TEAR OUT & MAKE READY TO LAY OVER DERRICK |
| | | | | |
| | | | | RIG RELEASED @ 16:15hrs; 2003-03-26 KLG |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 12 | TEAR OUT | |

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
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| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | ☐ OIL BASED |
|---|---|---|
| TIME | | |
| DENSITY (KG/M3 ) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 0.0 | | 0.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE |
| 2015 | 2030 | 0.25 | 21 | SAFETY MTG. LOADING OUT RIG TUBULAR ETC. |
| 2030 | 2400 | 3.50 | 1 | RIG OUT TO LAY D/ MAST CONTINUE TO RIG OUT F/ TRUCKS. |
| | | | | |
| | | | | STEAM CLEAN BOILER & MUD TANKS & DEGASSER TANK PRIOR TO |
| | | | | REMOVING THEM OFF MATTING. |
| | | | | |
| | | | | DERRICK DOWN @ 23:00hrs |

NOTES : VISUAL INSPECT MAST PRIOR TO L/D. CHECK ANCHOR ETC.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 0.00 | | | | RIG OUT | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 26 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | **RIG NO.** | | |
| Greg Pukas | 5 | | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES ☐ NO | 240 | |

### MORNING TOUR — FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SHANE WINTERS | 8.00 | | | SW |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | SHELDON MICHEL | 8.00 | | | SM |

RATE SCHEDULE | X REGULAR | ☐ REPAIR | ☐ INVERT

CREW SAFETY DAYS: 23

### DAY TOUR — FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 12.00 | | | KF |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | KIT BRINK | 12.00 | | | KB |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE | X REGULAR | ☐ REPAIR | ☐ INVERT

CREW SAFETY DAYS: 23

### EVENING TOUR — FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SHANE WINTERS | 4.00 | | | SW |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | SHELDON MICHEL | 4.00 | | | SM |

RATE SCHEDULE | X REGULAR | ☐ REPAIR | ☐ INVERT

CREW SAFETY DAYS: 255

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | KG | GP |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | KG | GP |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 25

RIG NO. 5

FUEL @ 08:00 HRS: RIG 180 | BOILER

WEATHER: TEMPERATURE -12 | CURRENT CONDITIONS LITE CLOUD | WIND DIRECTION N.W. | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |
| | 177.8 | 159.4 | 38.69 | ALGOMA | L-80 | 184 | 2476.00 | 7.30 | 2473.50 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 89 | 23.07 | X-95 | 61 | 126 | 3.5" IF | 349 | PT-1100 | OILWELL | 254 |
| 89 | 38.66 | HWDP | 52 | 124 | 3.5 IF | 27 | PT-1100 | OILWELL | 254 |
| 121 | 83.00 | DC | 58 | 122 | 3.5" IF | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC accredited

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRLG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 WAIT ON LAY DOWN MACHINE | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME-HRS MORN | | | | | | 6.75 | 0.25 | | | | | | 1.00 | | | | | | | | | | | | | |
| DAY | | | | | 2.50 | | 0.25 | | | | | | 7.25 | | | | 0.50 | | | | | 1.50 | | | | |
| EVE. | | | | | | 3.50 | 0.25 | | | | | | | | | | | | | | 0.25 | | | | | |
| TOTAL | | | | | 2.50 | 10.25 | 0.75 | | | | | | 8.25 | | | | 0.50 | | | | 0.25 | 1.50 | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | TYPE | | | |
| 12.00 | SCREENS CHANGED [ ] YES [ ] NO | | | | |
| 4.00 | TOP 120 | TOP 140 | | | |
| 24.00 | MIDDLE 120 | MIDDLE 140 | | | |
| | BOTTOM 120 | BOTTOM 120 | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 25 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| Greg Pukas | | 5 | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | [X] YES [ ] NO | 239 | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.18 |
| 1 | BIT SUB | 125 | 0.92 |
| 18 | D.C. | 121 | 169.85 |
| 9 | H.W.D.P. | 128 | 80.38 |
| 73 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 2087.27 |
| | KELLY DOWN | | |
| | TOTAL | | 2338.60 |
| | WT. OF D.C. | | |
| | WT. OF STRING | 65 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 RR. |
| SIZE | 156.0 |
| IADC CODE | 5 1 7 |
| MANUFACTURER | SECURITY |
| TYPE | XS18S |
| SERIAL NO. | 753135 |
| JETS | OPEN |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MORNING TOUR**

**MUD RECORD**

MUD TYPE [X] WATER BASED [ ] OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2480.00 | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 6000 | 140.0 | 60 | 140.0 | |

REDUCED PUMP SPEED: @ @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 245 | 2.75 | 6 | P.O.O.H FLOW CHECK 1240M. ON BANK. |
| 245 | 300 | 0.25 | 7 | RIG SERVICE FT. BLIND RAMS 9 SEC. CLOSE |
| 300 | 700 | 4.00 | 6 | M/U BIT BIT SUB R.I.H B.H.A DRILL PIPE TO TOP PLUG. L/D 10 D/P |
| 700 | | | | NOTE.... IN HOLE 220 JOINTS DRILL PIPE. |
| 700 | 800 | 1.00 | 13 | WAIT ON CEMENT CIRC. |

NOTES : CHECK BRAKE ASSEMBLY SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | | TRIPPING | |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SHANE WINTERS | 8.00 | | | SW |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | SHELDON MICHEL | 8.00 | | | SM |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

**CREW SAFETY DAYS**: 22

**DAY TOUR**

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**DAY TOUR**

**MUD RECORD**

MUD TYPE [ ] WATER BASED [ ] OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| INHIBITOR | 5 | PAILS |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 6200 | 140.0 | 60 | 140.0 | |

REDUCED PUMP SPEED: @ 0 @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE FT. HYDRILL C/ 16 SECS |
| 815 | 1500 | 6.75 | 13 | WAIT ON CEMENT, CIRCULATE |
| 1500 | 1530 | 0.50 | 13 | WAIT ON CEMENT, TAG CEMENT @ 2395m, |
| 1530 | 1600 | 0.50 | 5 | CIRC UP GREEN CEMENT |
| 1600 | 1630 | 0.50 | 17 | WASH/ REAM SOFT CEMENT F/ 2395m - 2408m, |
| 1630 | | | | POLISH PLUG F/ 2408m - 2410m |
| 1630 | 1830 | 2.00 | 5 | CIRC CASING CLEAN, ADD INHIBITOR |
| 1830 | 2000 | 1.50 | 22 | WAIT ON LAY DOWN MACHINE, BREAK KELLY |

NOTES : CHECK BRAKE LINKAGE, TONGS& LINES
TEAR OUT SERVICE SHACKS & EQUIPTMENT

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 68 | POLISH PLUG | 20996 |

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 12.00 | | | KF |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | KIT BRINK | 12.00 | | | KB |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

**CREW SAFETY DAYS**: 22

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**EVENING TOUR**

**MUD RECORD**

MUD TYPE [ ] WATER BASED [ ] OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2480.00 | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE CHECK BRAKE ASSEMBLY. |
| 2015 | 2030 | 0.25 | 21 | SAFETY MTG. W/ CREW L/D HANDS. |
| 2030 | 2400 | 3.50 | 6 | RIG FLOOR L/D MACHINE L/D 3 1/2 DRILL PIPE. |

NOTES : D.W.A R.G CHECK SLIP TONG DIES BACK UP LINES ANCHOR POINTS ETC.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 345 | | L/D MACHINE | |

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SHANE WINTERS | 4.00 | | | SW |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | SHELDON MICHEL | 4.00 | | | SM |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

**CREW SAFETY DAYS**: 254

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | KG | GP |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | GP |
| ( 3. ) Mast Inspection before Raising or Lowering | | GP |
| ( 4. ) Crown Saver Checked | | |
| ( 5. ) Motor Kills Checked | | GP |

YEAR 2003 | MONTH 3 | DAY 24

RIG NO. 5

FUEL @ 08:00 HRS

| RIG | BOILER |
|---|---|
| 100 | |

**WEATHER**

TEMPERATURE -5

CURRENT CONDITIONS CLOUDY

WIND DIRECTION S.E.

ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |
| | 177.8 | 159.4 | 38.69 | ALGOMA | L-80 | 184 | 2476.00 | 7.30 | 2473.50 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 89 | 23.07 | X-95 | 61 | 126 | 3.5" IF | 349 | PT-1100 | OILWELL | 254 |
| 89 | 38.66 | HWDP | 52 | 124 | 3.5 IF | 27 | PT-1100 | OILWELL | 254 |
| 121 | 83.00 | DC | 58 | 122 | 3.5" IF | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

**TIME-HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 W.O.W | 23 WAIT ON BULK TRUCK | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | 1.50 | 6.00 | 0.25 | | | | | | | | | | | | | | 0.25 | | | | | |
| DAY | | | | | | 5.75 | 0.25 | | | | | | | | | | | | | | | 2.00 | | | | |
| EVE. | | | | | 1.50 | 4.50 | 0.25 | | | | | | | | | | 0.50 | | | | 0.25 | | 1.00 | | | |
| TOTAL | | | | | 3.00 | 16.25 | 0.75 | | | | | | | | | | 0.50 | | | | 0.50 | 2.00 | 1.00 | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | TYPE | | | |
| 8.00 | SCREENS CHANGED YES NO | | | | |
| 8.00 | TOP 120 / 140 TOP | | | | |
| 24.00 | MIDDLE 120 / 140 MIDDLE; BOTTOM 120 / 120 BOTTOM | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 24 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | **RIG NO.** | | |
| Greg Pukas | 5 | | |
| **PROVINCE** | **CAMP** X YES NO | **RIG SAFETY DAYS** | |
| N.W.T. | | 238 | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | 0.18 |
| 1 | CASG. SCRAPER | 167 | 1.22 |
| 1 | BIT SUB | 125 | 0.92 |
| 6 | D.C. | 121 | 56.80 |
| 1 | JAR | 120 | 5.03 |
| 12 | D.C. | 121 | 113.05 |
| 9 | H.W.D.P. | 128 | 80.38 |
| | NEW BHA 257.58 | | |
| 77 | D.P. STANDS | | |
| 1 | D.P. SINGLES | | 2201.15 |
| | KELLY DOWN | | 11.07 |
| | TOTAL | | 2469.80 |
| | WT. OF D.C. 13 | | |
| | WT. OF STRING 68 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4RR |
| SIZE | 156.0 |
| IADC CODE | 5 1 7 |
| MANUFACTURER | SECURITY |
| TYPE | XS18S |
| SERIAL NO. | 753135 |
| JETS | O P / E N |
| DEPTH OUT | |
| DEPTH IN | 2480.00 |
| TOTAL M DRILLED | 5.00 |
| TOTAL HRS RUN | 0.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**MORNING TOUR**

**MUD RECORD**

MUD TYPE X WATER BASED OIL BASED

| | |
|---|---|
| TIME | 700 |
| DENSITY (KG/M3 ) | 1010 |
| FUNNEL VISCOSITY | 29 |
| FLUID LOSS (cm3 ) | |
| pH | 8.0 |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2480.00 | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

**CIRCULATION PRESSURE kPa** 11000

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 140.0 | 80 | 140.0 | |

REDUCED PUMP SPEED @ @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 130 | 1.50 | 6 | TRIP O.O.H - FLOW CHECK @ 173.M - O.O.H STATIC WELL FUNCT. BLINDS |
| | | | | TRIP RECORD = CALCU. 7.68m3 / MEAS. 9.99m3 / DIFF. 2.31m3 |
| 130 | 145 | 0.25 | 7 | RIG SERVICE / FT LOWER PIPE RAMS 3 sec C |
| 145 | 200 | 0.25 | 21 | SAFETY MTG. B.O.P DRILL W/CREW WH/TRIPPING WELL SECURD 98 sec |
| 200 | 600 | 4.00 | 6 | TRIPS PICK UP CASG. SCRAPER + JARS RUN BACK IN |
| 600 | 630 | 0.50 | 6 | WASH CASG. FR. 2450.M - 2470.M |
| 630 | 800 | 1.50 | 5 | COND MUD & CIRC. CASG. |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 325 | 70 | SPINNER HOCK | 20996 |

| RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

**CREW SAFETY DAYS**

21

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| 73 | DRILL PIPE | | 2077.78 |
| 18 | D.C. | | 169.85 |
| 9 | H.W.D.P. | | 80.38 |
| 5 | DRILL PIPE | | 142.35 |
| 78 | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | |
| | TOTAL | | 2470.36 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**DAY TOUR**

**MUD RECORD**

MUD TYPE WATER BASED OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2480.00 | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 140.0 | | 140.0 | |

REDUCED PUMP SPEED @ 0 @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE FLOW CHECK FT. HYDRILL 10 SEC. CLOSE. |
| 815 | 1230 | 4.25 | 6 | P.O.O.H W/ SCRACTHER ASSEMBLY. FLOW CHECK 2470M.2373M. 1348M.D/C |
| 1230 | 1430 | 2.00 | 22 | W.O WEATHER. |
| 1430 | 1600 | 1.50 | 6 | RIG FLOOR F/ PLUGS R.I.H OPEN END. |
| 1600 | | | | |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY SLIP TONG DIES PRIOR TO TRIPPING.
GREASE CROWN AND BLOCKS RIG INSPECTION list.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 345 | | TRIPPING | 20966 |

| RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

**CREW SAFETY DAYS**

21

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | SHANE WINTERS | 8.00 | | | SW |
| LEASE HAND | | SHELDON MICHEL | 8.00 | | | SM |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| 221 | DRILL PIPE | | 2096.75 |
| 18 | D.C. | | 169.85 |
| 9 | H.W.D.P. | | 80.38 |
| 14 | DRILL PIPE | | 132.89 |
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| | KELLY DOWN | | |
| | TOTAL | | 2479.87 |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**EVENING TOUR**

**MUD RECORD**

MUD TYPE X WATER BASED OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**CIRCULATION PRESSURE kPa** 9200

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 140.0 | 75 | 140.0 | |

REDUCED PUMP SPEED @ 0 @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1745 | 1.75 | 6 | TRIP IN HOLE TO 2065m, FLOW CHECK |
| 1745 | 1800 | 0.25 | 7 | RIG SERVICE FT. UPPER PIPE RAM C/ 4 SECS |
| 1800 | 1945 | 1.75 | 6 | CONTINUE TRIP IN, FLOW CHECH @ 2479m |
| 1945 | 2045 | 1.00 | 5 | CIRC HOLE CLEAN |
| 2045 | 2145 | 1.00 | 23 | WAIT ON CEMENT BULK TRUCK |
| 2145 | 2200 | 0.25 | 21 | SAFETY MTG. |
| 2200 | 2230 | 0.50 | 17 | PLUG BACK |
| 2230 | 2245 | 0.25 | 6 | RACK BACK 4 STD`s, & LAY DOWN 2 SINGLES |
| 2245 | 2315 | 0.50 | 5 | REVERSE CIRC TILL CLEAN |
| 2315 | 2400 | 0.75 | 6 | TRIP OUT OF HOLE |
| 2400 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES, CROWN SAVER

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 325 | 68 | CEMENT PLUGS | 20996 |

| RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

**CREW SAFETY DAYS**

253

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | Mark Suchy | 8.00 | | | MS |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | KG | GP |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | KG | GP |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 23

RIG NO. 5

FUEL @ 08:00 HRS

RIG 192 | BOILER

WEATHER: TEMPERATURE -7 | CURRENT CONDITIONS LITE SNOW | WIND DIRECTION S.E. | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |
| | 177.8 | 159.4 | 38.69 | ALGOMA | L-80 | 184 | 2476.00 | 7.30 | 2473.50 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 89 | 23.07 | X-95 | 61 | 126 | 3.5" | 349 | PT-1100 | OILWELL | 254 |
| 89 | 38.66 | HWDP | 52 | 124 | 3.5" | 27 | PT-1100 | OILWELL | 254 |
| 121 | 83.00 | DC | 58 | 122 | 3.5" | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO. 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 DRILL OUT | 23 | 24 | 25 | 26

| TIME-HRS | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | | 4.00 | | | 0.75 | | | | | 3.00 | | | | | | 0.25 | | | | | |
| DAY | | 0.75 | | | 0.75 | 7.50 | 0.25 | | | | | | | | | | | | | 0.50 | 2.25 | | | | |
| EVE. | | | | | | 3.00 | 0.25 | | | | | | | 0.75 | | | | | | | | | | | |
| TOTAL | | 0.75 | | | 0.75 | 14.50 | 0.50 | | 0.75 | | | | | 3.75 | | | | | | 0.75 | 2.25 | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | | | | |
| 12.00 | SCREENS CHANGED YES NO | | | | |
| 4.00 | TOP 120 TOP 140 | | | | |
| 24.00 | MIDDLE 120 MIDDLE 140 | | | | |
| | BOTTOM 120 BOTTOM 120 | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 23 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| Greg Pukas | | 5 | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES NO | 237 | |

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | 13 | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | 156.0 |
| IADC CODE | 5 1 7 |
| MANUFACTURER | SECURITY |
| TYPE | XS18S |
| SERIAL NO. | 753135 |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE | WATER BASED | OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2475.00 | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 300 | 3.00 | 15 | PRESS. TEST UPPER + LOWER KELLY COCKS |
| 300 | | | | 1400 LOW - 34,000 KPA HI |
| | | | | HYDRIL 1400 LOW 10500 HI |
| | | | | MANNIFOLD VALVES 1400 LOW - 34000 HI |
| | | | | ACCUM. CHECK START UP 20,600 4-WAY FUNCT . 10,700 |
| | | | | RECHARGE 2 min 58 sec PRECHARGE 8500 |
| 300 | 345 | 0.75 | 9 | CUT OFF DRLL LINE 20.M / BLOW KELLY BACK W/AIR |
| 345 | 445 | 1.00 | 6 | RIG IN LAY DOWN UNIT |
| 445 | 500 | 0.25 | 21 | SAFETY MTG. W/CREW + LAYDOWN UNIT |
| 500 | 800 | 3.00 | 6 | TRIPS - PICK UP D.C - MAKE UP BIT + BIT SUB / RUN FLOAT+TOTCO RING |
| | | | | CONT. PICK UP STRING W/LAYDOWN UNIT |
| | | | | STRAP IN |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
SERVICED TRAVELLING BLOCKS

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 325 | 20 | SLIP + CUT | |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS: 20

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.18 |
| 1 | BIT SUB | 125 | 0.92 |
| 18 | D.C. | 121 | 169.85 |
| 9 | H.W.D.P. | 128 | 80.38 |
| 78 | D.P. | STANDS | 2220.15 |
| | D.P. | SINGLES | 8.52 |
| | KELLY DOWN | | |
| | TOTAL | | 2480.00 |
| | WT. OF D.C. | 13 | |
| | WT. OF STRING | 68 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | 156.0 |
| IADC CODE | 5 1 7 |
| MANUFACTURER | SECURITY |
| TYPE | XS18S |
| SERIAL NO. | 753135 |
| JETS | O P / E N |
| DEPTH OUT | |
| DEPTH IN | 2475.00 |
| TOTAL M DRILLED | 5.00 |
| TOTAL HRS RUN | 0.75 |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM: 564
FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE | X | WATER BASED | OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2475.00 | 2480.00 | D | 60 | 6 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 10000 | 140.0 | 80 | 140.0 | |

REDUCED PUMP SPEED: 4450 @ 50 @ 2475

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 21 | SAFETY MTG. W/ CREW L/D HAND. |
| 815 | 1545 | 7.50 | 6 | P/U DRILL PIPE. TALLY R.I.H TAG CEMENT 2444M. RIG OUT L/D MACHINE. |
| 1545 | 1600 | 0.25 | 7 | RIG SERVICE. FT. HYDRILL 12 SEC. CLOSE. |
| 1600 | 1815 | 2.25 | 22 | DRILL OUT CEMENT FLOAT SHOE. |
| 1815 | 1830 | 0.25 | 21 | SAFETY MTG. HOLD B.O.P DRILL W/ CREW. |
| 1830 | 1915 | 0.75 | 2 | DRILL 156MM. HOLE F/ 2475M.-2480M. |
| 1915 | 2000 | 0.75 | 5 | COND MUD & CIRC SAMPLE SLAVE POINT |

NOTES : D.W.A CHECK BRAKE ASSEMBLY SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 345 | 68 | B.O.P DRILL | |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS: 20

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 12.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 12.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | DAVE GREEN | 12.00 | | | DG |
| FLOOR HAND | | SHANE WINTERS | 12.00 | | | SW |
| LEASE HAND | | SHELDON MICHEL | 12.00 | | | SM |

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.18 |
| 1 | BIT SUB | 125 | 0.92 |
| 18 | D.C. | 121 | 169.85 |
| 9 | H.W.D.P. | 128 | 80.38 |
| 78 | D.P. | STANDS | 2220.15 |
| | D.P. | SINGLES | 8.52 |
| | KELLY DOWN | | |
| | TOTAL | | 2480.00 |
| | WT. OF D.C. | 13 | |
| | WT. OF STRING | 68 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 4 |
| SIZE | 156.0 |
| IADC CODE | 5 1 7 |
| MANUFACTURER | SECURITY |
| TYPE | XS18S |
| SERIAL NO. | 753135 |
| JETS | O E / P N |
| DEPTH OUT | 2480.00 |
| DEPTH IN | 2475.00 |
| TOTAL M DRILLED | 5.00 |
| TOTAL HRS RUN | 0.75 |

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE | WATER BASED | OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 10000 | 140.0 | 80 | 140.0 | |

REDUCED PUMP SPEED: 4450 @ 50 @ 2474

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE / FT. UPPER PIPE RAMS 3 sec C |
| 2015 | 2100 | 0.75 | 15 | LEAK OFF TEST 21,000 KPA |
| 2100 | 2400 | 3.00 | 6 | TRIPS - P.O.O.H to CHANGE BHA |
| 2400 | | | | FLOW CHECKS @ 2471.M - 2328.M - 1332.M - |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 325 | 68 | TRIPPING | |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS: 252

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 4.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 4.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 4.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | DAVID NORN | 4.00 | | | DN |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | DPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 22

RIG NO. 5

FUEL @ 08:00 HRS

RIG 238 | BOILER

WEATHER: TEMPERATURE -9 | CURRENT CONDITIONS SNOW | WIND DIRECTION CALM | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | PT-1100 | OILWELL | 254 |
| | | | | | | | PT-1100 | OILWELL | 254 |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILL LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 install seal | 23 3.5" rams | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME HRS MORN | | | | | 0.50 | | 0.25 | | | | | 7.25 | | | | | | | | | | | | | | | 8.00 |
| DAY | | | | | 2.00 | | 0.25 | | | | | 2.50 | | | | | | | | | 0.25 | 3.00 | 4.00 | | | | 12.00 |
| EVE. | | | | | | | 0.25 | | | | | | | | 3.75 | | | | | | | | | | | | 4.00 |
| TOTAL | | | | | 2.50 | | 0.75 | | | | | 9.75 | | | 3.75 | | | | | | 0.25 | 3.00 | 4.00 | | | | 24.00 |

| SHALE SHAKER ( S ) | | | | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|---|---|
| NO. 2 | TYPE BRANDIT | TYPE | | | | | |
| SCREENS CHANGED | YES | NO | | | | | |
| 120 | TOP | 140 | TOP | | | | |
| 120 | MIDDLE | 140 | MIDDLE | | | | |
| 120 | BOTTOM | 120 | BOTTOM | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 22 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| Greg Pukas | | 5 | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES NO | 236 | |

### MORNING TOUR — DRILLING ASSEMBLY ( AT END OF TOUR )

| NO. | BIT | O.D. | LENGTH |
|---|---|---|---|
| | | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MORNING TOUR — MUD RECORD**

| MUD TYPE | ☐ WATER BASED | ☐ OIL BASED |
|---|---|---|
| TIME | | |
| DENSITY (KG/M3 ) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 3490 | 140.0 | 80 | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE FT/ ANULAR 20 SEC CLOSED |
| 15 | 730 | 7.25 | 12 | RUN CASE / FILL EVERY 20 JOINTS |
| 730 | | | | BREAK CIRCU. 1200.M / 1800.M |
| | | | | MAKE UP LANDING JOINT + PUP JOINTS |
| | | | | LAND CASG. @ 2474.5 M |
| 730 | 800 | 0.50 | 5 | COND MUD & CIRC. HOLE CLEAN / WORK STRING |
| 800 | | | | |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 325 | 90 | LAYDOWN UNIT | 6353 |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

RATE SCHEDULE | ☐ REGULAR | ☐ REPAIR | X INVERT

CREW SAFETY DAYS: 19

### DAY TOUR — DRILLING ASSEMBLY ( AT END OF TOUR )

| NO. | BIT | O.D. | LENGTH |
|---|---|---|---|
| | | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**DAY TOUR — MUD RECORD**

| MUD TYPE | ☐ WATER BASED | X OIL BASED |
|---|---|---|
| TIME | 900 | |
| DENSITY (KG/M3 ) | 950 | |
| FUNNEL VISCOSITY | 62 | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2474.00 | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 3500 | 140.0 | 80 | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE FT. HYDRILL 17 SEC. CLOSE. |
| 815 | 1015 | 2.00 | 5 | COND MUD & CIRC CASING 2474M. TRANSFER INVERT TO TANK FARM. |
| 1015 | 1030 | 0.25 | 12 | PUMP AHEAD 3.5 M/3. HT-40 SPACER. W/ RIG PUMP |
| 1030 | 1045 | 0.25 | 21 | SAFETY MTG. W/ CREW CEMENTERS. PRIOR. |
| 1045 | 1300 | 2.25 | 12 | HEAD UP. PRESS. TEST CEMENT LINES. CEMENT CASING. PLUG D/.. 12:30 |
| 1300 | 1600 | 3.00 | 22 | FLUSH STACK INSTALL MANDROW SEAL. PRESS. TEST 5,000 P.S.I. |
| 1600 | 2000 | 4.00 | 23 | CHANGE RAMS TO 3 1/2" CHANGE OUT KELLY BAR. AND BUSHINGS. |
| | | | | CLEAN TANKS W/ VAC. AND STEAMER TRUCK. P/U 3 1/2" HANDLING EQUIPMENT SUBS ETC. |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 345 | | CEMENTING | 0 |

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 12.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 12.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | DAVE GREEN | 12.00 | | | DG |
| FLOOR HAND | | SHANE WINTERS | 12.00 | | | SW |
| FLOOR HAND | | SHELDON MICHEL | 12.00 | | | SM |

RATE SCHEDULE | ☐ REGULAR | ☐ REPAIR | X INVERT

CREW SAFETY DAYS: 19

### EVENING TOUR — DRILLING ASSEMBLY ( AT END OF TOUR )

| NO. | BIT | O.D. | LENGTH |
|---|---|---|---|
| | | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**EVENING TOUR — MUD RECORD**

| MUD TYPE | ☐ WATER BASED | ☐ OIL BASED |
|---|---|---|
| TIME | | |
| DENSITY (KG/M3 ) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE / FT. BLIND RAMS 3 sec C |
| 2015 | 2400 | 3.75 | 15 | PRESS. TEST W/FALCON PRESS. TESTERS |
| 2400 | | | | CASG, BLINDS 1400 LOW - 14000 kpa HI 10 min each / SET TEST CUP |
| | | | | PIPE RAMS UPPER + LOWER , KILL LINE VALVES , HCR VALVES REMOTE |
| | | | | + MANN. CHECK VALVE-1400 LOW 34,000 HI 10 min EACH |

NOTES : CHECK DWA TONGS ,SLIPPS
CHECK BRAKE LINKAGE

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 325 | | PRESS. TESTING | |

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 4.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 4.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 4.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | DAVID NORN | 4.00 | | | DN |

RATE SCHEDULE | ☐ REGULAR | ☐ REPAIR | X INVERT

CREW SAFETY DAYS: 251

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

( 1. ) Daily Walk Around Inspection
( 2. ) Detailed Inspection - Weekly ( Using Check List )
( 3. ) H2S Signs Posted if Required
( 4. ) Well Licence & Stick Diagram Posted
( 5. ) Flare Lines Staked
( 6. ) BOP Drills Performed
( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines
( 1. ) Rig Site Health & Safety Meeting ( one/crew/month )
( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month )
( 3. ) Mast Inspection before Raising or Lowering
( 4. ) Crown Saver Checked
( 5. ) Motor Kills Checked

| | OPR KG | R.M. GP |
|---|---|---|
| | KG | GP |
| | KG | GP |
| | KG | GP |
| | | |
| | KG | GP |
| | | GP |
| | | GP |
| | | GP |

YEAR 2003 MONTH 3 DAY 21
RIG NO. 5
FUEL @ 08:00 HRS
RIG 124 BOILER

WEATHER: TEMPERATURE -4 · CURRENT CONDITIONS LITE CLOUD · WIND DIRECTION CALM · ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO. 1 RIGUP & TEARDOWN · 2 DRILL ACTUAL · 3 REAMING · 4 CORING · 5 COND MUD & CIRC · 6 TRIPS · 7 RIG SERVICE · 8 REPAIR RIG · 9 CUT OFF DRILG LINE · 10 DEV. SURVEY · 11 WIRELINE LOGS · 12 RUN CSG & CEMENT · 13 WAIT ON CEMENT · 14 NIPPLE UP B.O.P. · 15 TEST B.O.P. · 16 DRILLSTEM TEST · 17 PLUG BACK · 18 SQUEEZE CEMENT · 19 FISHING · 20 DIR. WORK · 21 SAFETY MEETING · 22 W.O.TONGS · 23 · 24 · 25 · 26

TIME - HRS

| | 5 | 6 | 7 | 11 | 12 | 13 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|
| MORN | 2.00 | 3.25 | 0.25 | 2.50 | | | | |
| DAY | | 8.00 | 0.25 | | 1.25 | | 0.50 | 2.00 |
| EVE. | | | 0.25 | | 3.50 | | 0.25 | |
| TOTAL | 2.00 | 11.25 | 0.75 | 2.50 | 4.75 | | 0.75 | 2.00 |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | TYPE | | | |
| 12.00 | SCREENS CHANGED ☐ YES ☐ NO | | | | |
| 4.00 | TOP 120 TOP 140 | | | | |
| 24.00 | MIDDLE 120 MIDDLE 140 | | | | |
| | BOTTOM 120 BOTTOM 120 | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 21 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| Greg Pukas | | 5 | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES ☐ NO | 235 | |

### BHA 196.95

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | 0.25 |
| 1 | BIT SUB | 172 | 0.93 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 79 | D.P. | STANDS | |
| 2 | D.P. | SINGLES | 2269.71 |
| KELLY DOWN | | | 8.34 |
| TOTAL | | | 2475.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 73 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 3 - 7 UP + DOWN |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | 2.00 |

## MORNING TOUR

**MUD RECORD**

| MUD TYPE | X WATER BASED | X OIL BASED |
|---|---|---|
| TIME | 700 | |
| DENSITY (KG/M3 ) | 965 | |
| FUNNEL VISCOSITY | 63 | |
| FLUID LOSS (cm3 ) | | |
| pH | | |
| | 43.50 | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 965 | 955 | 1800 |
| | | | |
| 0.00 | 0 | 0 | 0 |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | 2475.00 | | | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 8310 | 140.0 | 120 | 140.0 |

**REDUCED PUMP SPEED**

1870 @ 54 @ 2450

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 230 | 2.50 | 11 | WIRE LINE LOGS ( SCHLUMBERGER ) FUNCT. BLIND RAMS 3 sec C |
| 230 | 245 | 0.25 | 7 | RIG SERVICE / FT UP PR 4 sec. C |
| 245 | 600 | 3.25 | 6 | TRIPS - MAKE UP BIT + BIT SUB - FLOAT + TOTCO RING |
| | | | | R.I.H - FILL PIPE HALF WAY IN |
| 600 | 800 | 2.00 | 5 | CIRCU. 2 SINGLES TO BTTM. / CIRCU. HOLE CLEAN - WORK STRING |
| | | | | 2.M FILL ON BTTM. |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 325 | 80 | PIPE SPINNER | 6353 |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

**CREW SAFETY DAYS**
18

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

## DAY TOUR

### BHA

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | X OIL BASED |
|---|---|---|
| TIME | 830 | |
| DENSITY (KG/M3 ) | 960 | |
| FUNNEL VISCOSITY | 57 | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BARITE | 15 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | | | |
| | | | |
| 0.00 | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2475.00 | | | | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 7800 | 140.0 | 120 | 140.0 |

**REDUCED PUMP SPEED**

@ @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 21 | SAFETY MTG. W/ CREW L/D MACHINE OPERATORS. |
| 815 | 830 | 0.25 | 7 | RIG SERVICE. FT. HYDRILL 12 SEC. CLOSE. |
| 830 | 1400 | 5.50 | 6 | L/D DRILL PIPE FLOW CHECK 2361M.1328M. 702M. 200M. B.H.A |
| 1400 | 1430 | 0.50 | 6 | P/U BREAK D/ KELLY BAR LOWER KELLY COCK MUD SAVER VALVE. |
| 1430 | 1600 | 1.50 | 6 | L/D H.W D.P D.C.s |
| 1600 | 1630 | 0.50 | 6 | PULL OUT WEAR BUSHING. |
| 1630 | 1830 | 2.00 | 22 | W.O. TONG HAND. |
| 1830 | 1845 | 0.25 | 21 | SAFETY MTG. W/ CREW TONG HAND L/D HANDS. |
| 1845 | 2000 | 1.25 | 12 | M/U SHOE FLOAT COLLAR RUN CASING. |
| | | | | TRIP MUD RECORD. CAL 10.33 M/3 ACTUAL 12.03 M/3 |

NOTES : D.W.A CHECK BRAKE ASSEMBLY SLIP TONG DIES BACK UP LINES ANCHOR POINTS ETC.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 345 | 86 | L/D D/P L/D MACHINE | 6353 |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

**CREW SAFETY DAYS**
18

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 12.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 12.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | DAVE GREEN | 12.00 | | | DG |
| FLOOR HAND | | SHANE WINTERS | 12.00 | | | SW |
| FLOOR HAND | | SHELDON MICHEL | 12.00 | | | SM |

## EVENING TOUR

### BHA

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | ☐ OIL BASED |
|---|---|---|
| TIME | | |
| DENSITY (KG/M3 ) | | |
| FUNNEL VISCOSITY | | |
| FLUID LOSS (cm3 ) | | |
| pH | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| | 140.0 | | 140.0 |

**REDUCED PUMP SPEED**

@ @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

**DRILLER SIGNATURE**

JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE / FT. REMOTE CHOKE |
| 2015 | 2030 | 0.25 | 21 | SAFETY MTG. W/CREW / POWER TONG HAND / LAYDOWN UNIT |
| 2030 | 2400 | 3.50 | 12 | RUN CASE W/HILLS POWER TONGS |
| | | | | FILL EVERY 20 JOINTS |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 325 | 25 | POWER TONGS | 6353 |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

**CREW SAFETY DAYS**
250

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 4.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 4.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 4.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | DAVID NORN | 4.00 | | | DN |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR KG | R.M. GP |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | | |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 20

RIG NO. 5

FUEL @ 08:00 HRS — RIG 183 | BOILER

WEATHER — TEMPERATURE -1 | CURRENT CONDITIONS CLOUDY | WIND DIRECTION CALM | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | PT-1100 | OILWELL | | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**TIME-HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | 7.75 | | | | 0.25 | | | | | | | | | | | | | | | | | | | |
| DAY | | | 2.25 | | 2.25 | 7.00 | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| EVE. | | | | | | | 0.25 | | | | 3.75 | | | | | | | | | | | | | | | |
| TOTAL | | | 10.00 | | 2.25 | 7.00 | 0.75 | | | 0.25 | 3.75 | | | | | | | | | | | | | | | |

| TOTALS | SHALE SHAKER ( S ) NO. 2 TYPE BRANDIT | TYPE |
|---|---|---|
| 8.00 | SCREENS CHANGED ☐ YES ☐ NO | |
| 12.00 | TOP 120 | TOP 140 |
| 4.00 | MIDDLE 120 | MIDDLE 140 |
| 24.00 | BOTTOM 120 | BOTTOM 120 |

RENTALS / SERVICES | MORN | DAY | EVE

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 20 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | **RIG NO.** | | |
| Greg Pukas | 5 | | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES ☐ NO | 234 | |

### BHA 1

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | | | 0.25 |
| 1 | BIT SUB | 172 | 0.93 |
| 1 | REAMER | 170 | 1.35 |
| 1 | SQUARE D.C SHORT | 211 | 4.15 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | B.H.A 202.45 | | |
| 76 | D.P. STANDS | | 2165.35 |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 13.03 |
| | TOTAL | | 2380.83 |
| | WT. OF D.C. | 18 | |
| | WT. OF STRING | 72 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | EHP43-A |
| SERIAL NO. | TC1043 |
| JETS | 3 X 11.1 |
| DEPTH OUT | |
| DEPTH IN | 2475.00 |
| TOTAL M DRILLED | 0.00 |
| TOTAL HRS RUN | 0.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2-4 UP + DOWN |
| TORQUE AT BOTTOM | 700 |
| FILL ON BOTTOM (M) | |

**MORNING TOUR**

**MUD RECORD** — ☐ WATER BASED X OIL BASED

| MUD TYPE | 130 | 430 | 630 |
|---|---|---|---|
| TIME | | | |
| DENSITY (KG/M3 ) | 960 | 960 | 960 |
| FUNNEL VISCOSITY | 57 | 56 | 57 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| | 51.50 | 51.00 | 51.30 |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1990.00 | 2330.00 | R | 75 | 2 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 960 | 950 | 1910 |
| | | | |
| 0.00 | 0 | 0 | 0 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 7580 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 1650 @ 49 @ 2320

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE / FT UP P.R 4 sec. C |
| 15 | 800 | 7.75 | 3 | BREAK DOWN SINGLES + REAM FR. 1990.M - 2330.M |
| 800 | | | | |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 11.0 | 325 | 87 | REAMER | 6353 |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 17

### BHA 2

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | | | 0.25 |
| 1 | BIT SUB | 172 | 0.93 |
| 1 | REAMER | 170 | 1.35 |
| 1 | SQUARE D.C SHORT | 211 | 4.15 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | B.H.A 202.45 | | |
| 79 | D.P. STANDS | | 2260.21 |
| 1 | D.P. SINGLES | | |
| | KELLY DOWN | | 12.34 |
| | TOTAL | | 2475.00 |
| | WT. OF D.C. | 18 | |
| | WT. OF STRING | 72 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | EHP43-A |
| SERIAL NO. | TC1043 |
| JETS | 3 X 11.1 |
| DEPTH OUT | 2475.00 |
| DEPTH IN | 2475.00 |
| TOTAL M DRILLED | 0.00 |
| TOTAL HRS RUN | 0.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**DAY TOUR**

**MUD RECORD** — ☐ WATER BASED X OIL BASED

| MUD TYPE | 900 | 1330 | 1500 |
|---|---|---|---|
| TIME | | | |
| DENSITY (KG/M3 ) | 955 | 960 | 960 |
| FUNNEL VISCOSITY | 56 | 57 | 56 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2330.00 | 2475.00 | R | 100 | 2 |
| | | | | 4 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BARITE | 30 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 960 | 950 | 1850 |
| | | | |
| 8.00 | 960 | 950 | 1860 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8290 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 1720 @ 50 @ 2475

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1015 | 2.25 | 3 | REAMING W/ ROLLER REAMER SQ. D.C ASSEMBLY F/ 2330M.-2475M. |
| 1015 | 1115 | 1.00 | 5 | COND MUD & CIRC @ 2475M. PRIOR TO WIPER TRIP. |
| 1115 | 1330 | 2.25 | 6 | FLOW CHECK PUMP PILL P.O.O.H TO 1863M. FLOW CHECK 2418M. 1863M. R.I.H |
| 1330 | 1445 | 1.25 | 5 | COND MUD & CIRC PRIOR TO WIRELINE LOGS. |
| 1445 | 1500 | 0.25 | 7 | RIG SERVICE. FLOW CHECK FT. HYDRILL 14 SEC. CLOSE. |
| 1500 | 1515 | 0.25 | 10 | DROP GYRO TOOL |
| 1515 | 2000 | 4.75 | 6 | PUMP PILL FLOW CHECK 2475M. P.O.O.H NO ROTATE SURVEY W/ GYRO EV. 30M. |
| 2000 | | | | FLOW CHECK 1292M.D/C 117M. ON BANK FT. BLIND RAMS 9 SEC. CLOSE. |
| | | | | L/D SQ. D/C REAMER GYRO TOOL. |
| | | | | TRIP RECORD CAL. 10.31M/3 |
| | | | | ACTUAL 11.01 |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 350 | 90 | REAMING | 6353 |

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 12.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 12.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | DAVE GREEN | 12.00 | | | DG |
| FLOOR HAND | | SHANE WINTERS | 12.00 | | | SW |
| FLOOR HAND | | SHELDON MICHEL | 12.00 | | | SM |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 17

### BHA 3

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | | | 0.25 |
| 1 | BIT SUB | 172 | 0.93 |
| 1 | REAMER | 170 | 1.35 |
| 1 | SQUARE D.C SHORT | 211 | 4.15 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | B.H.A 202.45 | | |
| 79 | D.P. STANDS | | 2260.21 |
| 1 | D.P. SINGLES | | |
| | KELLY DOWN | | 12.34 |
| | TOTAL | | 2475.00 |
| | WT. OF D.C. | 18 | |
| | WT. OF STRING | 72 | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | EHP43-A |
| SERIAL NO. | TC1043 |
| JETS | 3 11.1 X |
| DEPTH OUT | 2475.00 |
| DEPTH IN | 2475.00 |
| TOTAL M DRILLED | 0.00 |
| TOTAL HRS RUN | 0.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**EVENING TOUR**

**MUD RECORD** — ☐ WATER BASED X OIL BASED

| MUD TYPE | | | |
|---|---|---|---|
| TIME | | | |
| DENSITY (KG/M3 ) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | 2475.00 | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 960 | 950 | 1780 |
| | | | |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

DRILLER SIGNATURE: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE / FT. BLIND RAMS 4 sec C |
| 2015 | 2400 | 3.75 | 11 | RIG IN + RUN LOGGS W/' SCHLUMBERGER |
| | | | | AIT,TLD,CNL,BHC,CALIPER - LOGGS DOWN 2478.M @ 22:53 hrs |
| | | | | W/LOGGING CHECK D.W.A CHAINS / CHECK SEATS + VALVES MUD PUMPS |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES / FUNCT. REMOTE CHOKE

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 335 | | WIRELINE | 6353 |

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 4.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 4.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 4.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | DAVID NORN | 4.00 | | | DN |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 249

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| A[illegible]RKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | KG | GP |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 19

RIG NO. 5

FUEL @ 08:00 HRS — RIG 232 | BOILER

**WEATHER**
TEMPERATURE -3
CURRENT CONDITIONS LITE CLOUD
WIND DIRECTION N.W.
ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H | 21 | | | |

**TIME-HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 5.75 | | | 1.25 | | 0.25 | | | 0.75 | | | | | | | | | | | | | | | | | 8.00 |
| DAY | | 0.75 | | | 1.25 | 7.50 | 0.25 | | 1.00 | 0.25 | | | | | | | | | | 1.00 | | | | | | | 12.00 |
| EVE. | | | 3.25 | | | | 0.50 | 0.25 | | | | | | | | | | | | | | | | | | | 4.00 |
| TOTAL | | 6.50 | 3.25 | | 2.50 | 8.00 | 0.75 | | 1.00 | 1.00 | | | | | | | | | | 1.00 | | | | | | | 24.00 |

**SHALE SHAKER ( S )** — NO. 2 | TYPE BRANDIT | TYPE SCREENS CHANGED ☐ YES ☐ NO

| | TOP | TOP |
|---|---|---|
| | 120 | 140 |
| MIDDLE | 120 | 140 |
| BOTTOM | 120 | 120 |

**RENTALS / SERVICES**

| MORN | DAY | EVE |
|---|---|---|
| | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 19 |

| OPERATOR | CONTRACTOR |
|---|---|
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |

| RIG MANAGER | RIG NO. |
|---|---|
| Greg Pukas | 5 |

| PROVINCE | CAMP | RIG SAFETY DAYS |
|---|---|---|
| N.W.T. | X YES ☐ NO | 233 |

### MORNING TOUR

**DRILLING ASSEMBLY ( AT END OF TOUR )**

| NO. | | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 78 | D.P. STANDS | | |
| 1 | D.P. SINGLES | | 2231.74 |
| | KELLY DOWN | | 12.98 |
| | TOTAL | | 2467.00 |

WT. OF D.C. 18
WT. OF STRING 80

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 X / 14.3 |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 569.00 |
| TOTAL HRS RUN | 61.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**
HOLE DRAG 2-4 UP + DOWN
TORQUE AT BOTTOM 1200
FILL ON BOTTOM (M)

**MUD RECORD** — ☐ WATER BASED ☒ OIL BASED

| MUD TYPE | | | |
|---|---|---|---|
| TIME | 100 | 400 | 600 |
| DENSITY (KG/M3 ) | 960 | 960 | 960 |
| FUNNEL VISCOSITY | 55 | 54 | 53 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| | 60.20 | 58.40 | 55.00 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BAROFIBER | 10 | SX |
| CAL CARB 'O' | 20 | SX |
| DURATONE | 5 | SX |
| LIME | 5 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 960 | 950 | 1790 |
| | | | |
| 800.00 | 960 | 950 | 1720 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8500 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2400 @ 53 @ 2437

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2424.60 | 2.40 | 131.8 |
| 2434.00 | 2.30 | 134.2 |
| 2443.50 | 2.30 | 136.4 |
| 2453.10 | 2.40 | 128.9 |

**DRILLER SIGNATURE**
JOHN BURNS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2425.00 | 2467.00 | D | 35 | 2 |
| | | | | 5 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 30 | 0.50 | 2 | DRILL 2425.M - 2429.M |
| 30 | 45 | 0.25 | 7 | RIG SERVICE / FT. LOW P.R 4 sec. C |
| 45 | 115 | 0.50 | 5 | CIRCU. UP 2429.M SAMPLE |
| 115 | 600 | 4.75 | 2 | DRILL FR. 2429.M - 2462.M |
| 600 | 645 | 0.75 | 5 | CIRCU. UP 2462.M SAMPLE |
| 645 | 715 | 0.50 | 2 | DRILL FR. 2462.M - 2467.M |
| 715 | 800 | 0.75 | 10 | ACUM. SURVEY TIME |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 335 | 84 | TONGS + SLIPPS | 6353 |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 16

### DAY TOUR

**DRILLING ASSEMBLY ( AT END OF TOUR )**

| NO. | | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.25 |
| 1 | BIT SUB | 172 | 0.93 |
| 1 | REAMER | 170 | 0.35 |
| 1 | SQUARE D.C SHORT | 211 | 4.15 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | B.H.A 201.45 | | |
| 78 | D.P. STANDS | | |
| 2 | D.P. SINGLES | | 2241.23 |
| | KELLY DOWN | | 13.03 |
| | TOTAL | | 2455.71 |

WT. OF D.C. 18
WT. OF STRING 80

**BIT RECORD**

| | | |
|---|---|---|
| BIT NO. | 2 | 3RR |
| SIZE | 215.9 | 215.9 |
| IADC CODE | | |
| MANUFACTURER | U/DIMAND | REED |
| TYPE | UD513 | EHP43-A |
| SERIAL NO. | 00561 | TC1043 |
| JETS | 5 X / 14.3 | 3 X / 11.1 |
| DEPTH OUT | 2475.00 | |
| DEPTH IN | 1898.00 | 2475.00 |
| TOTAL M DRILLED | 577.00 | 0.00 |
| TOTAL HRS RUN | 61.75 | 0.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | CT | H | | 1.00 | WT | TD | 9.30 |

**HOLE CONDITION**
HOLE DRAG NIL
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**MUD RECORD** — ☐ WATER BASED ☒ OIL BASED

| MUD TYPE | | | |
|---|---|---|---|
| TIME | 1000 | | |
| DENSITY (KG/M3 ) | 960 | | |
| FUNNEL VISCOSITY | 53 | | |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BARITE | 15 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | | | |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8546 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2500 @ 55 @ 2475

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2461.00 | 2.20 | 139.4 |

**DRILLER SIGNATURE**
ROSS GUYNUP

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2467.00 | 2475.00 | D | 35 | 4 |
| | | | | 9 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 845 | 0.75 | 2 | DRILL F/ 2467M.-2475M. T.D |
| 845 | 1000 | 1.25 | 5 | COND MUD & CIRC 2475M. SAMPLE. |
| 1000 | 1015 | 0.25 | 10 | DEV. SURVEY |
| 1015 | 1445 | 4.50 | 6 | FLOW CHECK P/ PILL P.O.O.H STRAP FLOW CHECK 2368M.D/C ON BANK. |
| 1445 | 1545 | 1.00 | 20 | DIR. WORK L/D DIR. TOOLS MOTOR M.W.D TOOLS. REMOVE BEND F/ MOTOR. |
| 1545 | 1600 | 0.25 | 7 | RIG SERVICE. FLOW CHECK FT. BLIND RAMS 8 SEC. CLOSE. |
| 1600 | 1745 | 1.75 | 6 | M/U BIT B.H.A R.I.H TO 600M. FLOW CHECK. |
| 1745 | 1845 | 1.00 | 9 | CUT OFF DRLL LINE CHECK BRAKE ASSEMBLY. |
| 1845 | 2000 | 1.25 | 6 | CONTINUE TO R.I.H FLOW CHECK |
| 2000 | | | | |
| | | | | CAL. 10.76M/3 ACTUAL 13.00 M/3 TRIP RECORD. |
| | | | | TALLY 2475.00 |
| | | | | STRAP 2475.28 |
| | | | | DIFF. .28 N/C |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY SLIP TONG DIES. PRIOR TO TRIPPING.
P.D.C - 3 CHIPPED 3 WORN. CUTTERS. NOTE..... CHANGED 1 ROLLER ON REAMER.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 345 | 85 | TRIPPING | 6353 |

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 12.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 12.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | DAVE GREEN | 12.00 | | | DG |
| FLOOR HAND | | SHANE WINTERS | 12.00 | | | SW |
| FLOOR HAND | | SHELDON MICHEL | 12.00 | | | SM |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 16

### EVENING TOUR

**DRILLING ASSEMBLY ( AT END OF TOUR )**

| NO. | | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.25 |
| 1 | BIT SUB | 172 | 0.93 |
| 1 | REAMER | 170 | 0.35 |
| 1 | SQUARE D.C SHORT | 211 | 4.15 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | B.H.A 201.45 | | |
| 62 | D.P. STANDS | | |
| 1 | D.P. SINGLES | | 1776.34 |
| | KELLY DOWN | | 13.03 |
| | TOTAL | | 1990.82 |

WT. OF D.C. 18
WT. OF STRING 68

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 3RR |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | EHP43-A |
| SERIAL NO. | TC1043 |
| JETS | 3 11.1 / X |
| DEPTH OUT | |
| DEPTH IN | 2475.00 |
| TOTAL M DRILLED | 0.00 |
| TOTAL HRS RUN | 0.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**
HOLE DRAG
TORQUE AT BOTTOM 450
FILL ON BOTTOM (M)

**MUD RECORD** — ☐ WATER BASED ☒ OIL BASED

| MUD TYPE | | | |
|---|---|---|---|
| TIME | 2100 | 2300 | 2400 |
| DENSITY (KG/M3 ) | 965 | 965 | 965 |
| FUNNEL VISCOSITY | 53 | 54 | 54 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| | 51.50 | 50.50 | 50.70 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 965 | 955 | 1920 |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 7580 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 1650 @ 50 @ 2026

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**
JOHN BURNS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1911.00 | 1990.00 | R | 50 | 2 |
| | | | | 3 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE / FT. HYDRIL 22 sec. C |
| 2015 | 2045 | 0.50 | 6 | TRIPS - R.I.H ( BRIDGE 1939.M ) LAY DOWN 3 DP singles |
| 2045 | 2400 | 3.25 | 3 | KELLY UP REAM FR. 1911.M - 1990.M |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 325 | 80 | REAMING | 6353 |

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 4.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 4.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 4.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | DAVID NORN | 4.00 | | | DN |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 248

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | KG | GP |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3 ) H2S Signs Posted if Required | KG | GP |
| ( 4 ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5 ) Flare Lines Staked | KG | GP |
| ( 6 ) BOP Drills Performed | KG | GP |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3 ) Mast Inspection before Raising or Lowering | | |
| ( 4 ) Crown Saver Checked | | GP |
| ( 5 ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 18

RIG NO. 5

FUEL @ 08:00 HRS — RIG 184 — BOILER

WEATHER — TEMPERATURE -6 — CURRENT CONDITIONS CLEAR — WIND DIRECTION N.W. — ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME-HRS MORN | | 5.75 | | | | | 0.25 | | | 1.50 | | | | | | | | | | | | 0.50 | | | | |
| DAY | | 10.00 | | | | | 0.25 | | | 1.75 | | | | | | | | | | | | | | | | |
| EVE. | | 2.75 | | | | | 0.25 | | | 1.00 | | | | | | | | | | | | | | | | |
| TOTAL | | 18.50 | | | | | 0.75 | | | 4.25 | | | | | | | | | | | | 0.50 | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | TYPE | | | |
| 12.00 | SCREENS CHANGED ☐ YES ☐ NO | | | | |
| 4.00 | TOP 120 TOP 140 | | | | |
| 24.00 | MIDDLE 120 MIDDLE 140 | | | | |
| | BOTTOM 120 BOTTOM 120 | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 18 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| Greg Pukas | | 5 | |
| **PROVINCE** | **CAMP** X YES ☐ NO | **RIG SAFETY DAYS** | |
| N.W.T. | | 232 | |

### MORNING TOUR — FROM 0 TO 800

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 165 | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 71 | D.P. STANDS | | |
| 2 | D.P. SINGLES | | 2041.69 |
| | KELLY DOWN | | 13.03 |
| | TOTAL | | 2277.00 |
| | WT. OF D.C. 18 | | |
| | WT. OF STRING 77 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 X / 14.3 |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 379.00 |
| TOTAL HRS RUN | 42.50 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 3-4 UP + DOWN |
| TORQUE AT BOTTOM | 1200 |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | X OIL BASED |
|---|---|---|
| TIME | 1300 | 430 | 700 |
| DENSITY (KG/M3 ) | 960 | 960 | 960 |
| FUNNEL VISCOSITY | 56 | 57 | 58 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| | 63.00 | 61.60 | 58.20 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 11.00 | 960 | 950 | 1790 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8300 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2050 @ 48 @ 2229

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2196.90 | 5.50 | 172.2 |
| 2215.80 | 5.00 | 168.7 |
| 2234.70 | 4.00 | 165.6 |
| 2253.50 | 4.10 | 169.2 |

DRILLER SIGNATURE: JOHN BURNS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2210.00 | 2277.00 | D | 35 | 3 |
| | | | | 6 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE / FT. UP P.R 4 sec C |
| 15 | 500 | 4.75 | 2 | DRILL - SLIDE - ROTATE FR. 2210.M - 2258.M |
| 500 | 530 | 0.50 | 22 | CONTAIN INVERT SPILL ( 2 m3 LOSS ) |
| 530 | 630 | 1.00 | 2 | DRILL FR 2258.M - 2277.M |
| 630 | 800 | 1.50 | 10 | ACCUM. SURVEY TIME |

NOTES : CHECK BRAK LINKAGE + DEAD LINE ANCHOR
CHECK MANN. VALVES + GAUGES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 335 | 80 | INVERT | 6353 |

| RATE SCHEDULE | ☐ REGULAR | ☐ REPAIR | X INVERT |
|---|---|---|---|

**CREW SAFETY DAYS**: 15

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

### DAY TOUR — FROM 800 TO 2000

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 165 | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 75 | D.P. STANDS | | |
| 2 | D.P. SINGLES | | 2155.85 |
| | KELLY DOWN | | 9.87 |
| | TOTAL | | 2388.00 |
| | WT. OF D.C. 18 | | |
| | WT. OF STRING 80 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 X / 14.3 |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 490.00 |
| TOTAL HRS RUN | 52.50 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2-5 DAN. |
| TORQUE AT BOTTOM | 1100 |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | X OIL BASED |
|---|---|---|
| TIME | 1200 | 1600 | 1830 |
| DENSITY (KG/M3 ) | 960 | 960 | 960 |
| FUNNEL VISCOSITY | 55 | 56 | 56 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 'O' | 20 | SX |
| BAROFIBER | 10 | SX |
| DURATONE | 5 | SX |
| LIME | 5 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 960 | 950 | 1850 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8500 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2370 @ 50 @ 2305

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2263.00 | 4.33 | 171.2 |
| 2272.00 | 4.60 | 168.1 |
| 2282.00 | 4.40 | 164.2 |
| 2291.00 | 4.30 | 158.4 |
| 2310.00 | 3.20 | 156.9 |
| 2320.00 | 2.60 | 152.3 |

DRILLER SIGNATURE: ROSS GUYNUP

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2277.00 | 2388.00 | D | 35 | 2 |
| | | | | 5 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1030 | 2.50 | 2 | DRILL 2277M.-2305M. |
| 1030 | 1045 | 0.25 | 7 | RIG SERVICE. FT. HYDRILL 12 SEC. CLOSE. 4 FT. ACUM. CHECK. |
| 1045 | 1815 | 7.50 | 2 | DRILL F/ 2305M.-2388M. |
| 1815 | 2000 | 1.75 | 10 | DEV. SURVEY TOTAL TIME F/ SURVEYS ORIENT TOOL FACE. |
| 2000 | | | | SAFTEY MEETING W/ CREW AND SAFTEY HAND. |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY SLIP TONG DIES ANCHOR POINTS ETC.
4 FUNTION ACCUM. CHECK 20,500kpa FINISH 10,500kpa
RECHARGED IN 2.55 MINS. PRECHARGE 7,000kpa
TRANSFERED 10 m3 INVERT TO ACTIVE SYSTEM PUMPED OUT SHALE DRYER.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 345 | 84 | AIR PACKS | 6353 |

| RATE SCHEDULE | ☐ REGULAR | ☐ REPAIR | X INVERT |
|---|---|---|---|

**CREW SAFETY DAYS**: 15

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 12.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 12.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 12.00 | | | KB |
| FLOOR HAND | | DAVE GREEN | 12.00 | | | DG |
| FLOOR HAND | | SHANE WINTERS | 12.00 | | | SW |
| FLOOR HAND | | SHELDON MICHEL | 12.00 | | | SM |

### EVENING TOUR — FROM 2000 TO 2400

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 165 | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 77 | D.P. STANDS | | 2193.84 |
| | D.P. SINGLES | | |
| | KELLY DOWN | | 8.88 |
| | TOTAL | | 2425.00 |
| | WT. OF D.C. 18 | | |
| | WT. OF STRING 80 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 2 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 14.3 / X |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 527.00 |
| TOTAL HRS RUN | 55.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 3-5 UP + down |
| TORQUE AT BOTTOM | 1200 |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

| MUD TYPE | ☐ WATER BASED | X OIL BASED |
|---|---|---|
| TIME | 2000 | 2200 | 2400 |
| DENSITY (KG/M3 ) | 965 | 965 | 960 |
| FUNNEL VISCOSITY | 56 | 57 | |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| | 61.50 | 60.30 | 59.30 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 965 | 955 | 1810 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 2.00 | 965 | 955 | 1780 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8500 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2400 @ 53 @ 2390

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2377.20 | 3.60 | 155.1 |
| 2386.70 | 3.30 | 149.2 |
| 2396.20 | 3.40 | 147.2 |
| 2405.70 | 2.80 | 143.1 |

DRILLER SIGNATURE: JOHN BURNS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2388.00 | 2425.00 | D | 35 | 3 |
| | | | | 6 |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE / FT UP. PR 4 sec C |
| 2015 | 2300 | 2.75 | 2 | DRILL - SLIDE - ROTATE - FR. 2388.M - 2425.m |
| 2300 | 2400 | 1.00 | 10 | ACCUM. SURVEY TIME |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 345 | 83 | SLIDING | 6353 |

| RATE SCHEDULE | ☐ REGULAR | ☐ REPAIR | X INVERT |
|---|---|---|---|

**CREW SAFETY DAYS**: 247

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 4.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 4.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 4.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 4.00 | | | SH |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |
| LEASE HAND | | DAVID NORN | 4.00 | | | DN |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANA[redacted]KO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | KG | |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | KG | GP |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CADOC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 MONTH 3 DAY 17

RIG NO. 5

FUEL @ 08:00 HRS

RIG 255 BOILER

**WEATHER**
TEMPERATURE -14
CURRENT CONDITIONS CLEAR
WIND DIRECTION N.W.
ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO. 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26

| TIME-HRS | RIGUP & TEARDOWN | DRILL ACTUAL | REAMING | CORING | COND MUD & CIRC | TRIPS | RIG SERVICE | REPAIR RIG | CUT OFF DRILG LINE | DEV. SURVEY | WIRELINE LOGS | RUN CSG & CEMENT | WAIT ON CEMENT | NIPPLE UP B.O.P. | TEST B.O.P. | DRILLSTEM TEST | PLUG BACK | SQUEEZE CEMENT | FISHING | DIR. WORK | SAFETY MEETING | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 6.50 | | | | | 0.25 | | | 1.00 | | | | | | | | | | | 0.25 | 8.00 |
| DAY | | 7.50 | | | | | 0.25 | | | | | | | | | | | | | | 0.25 | 8.00 |
| EVE. | | 6.50 | | | | | 0.25 | | | 1.00 | | | | | | | | | | | 0.25 | 8.00 |
| TOTAL | | 20.50 | | | | | 0.75 | | | 2.00 | | | | | | | | | | | 0.75 | 24.00 |

| SHALE SHAKER ( S ) | | | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|---|
| NO. 2 | TYPE BRANDIT | TYPE | | | | |
| SCREENS CHANGED | YES | NO | | | | |
| TOP 120 | | TOP 140 | | | | |
| MIDDLE 120 | | MIDDLE 140 | | | | |
| BOTTOM 120 | | BOTTOM 120 | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 17 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| Greg Pukas | | 5 | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES NO | 231 | |

### BIT RECORD

| BIT NO. | 2 |
|---|---|
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 X 14.3 |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 199.00 |
| TOTAL HRS RUN | 22.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

### HOLE CONDITION

| HOLE DRAG | 2UP<>2DOWN |
|---|---|
| TORQUE AT BOTTOM | 900 |
| FILL ON BOTTOM (M) | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 65 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 1861.89 |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 2097.20 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 74 | | |

### MORNING TOUR — MUD RECORD

| MUD TYPE | | WATER BASED | X | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | 130 | 430 | 630 | |
| DENSITY (KG/M3 ) | | 960 | 960 | 960 | |
| FUNNEL VISCOSITY | | 58 | 58 | 57 | |
| FLUID LOSS (cm3 ) | | | | | |
| pH | | | | | |
| PVT | | 61.80 | 60.00 | 61.60 | |

### MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 'O' | 20 | SX |
| BAROFIBER | 10 | SX |
| DURATONE | 5 | SX |
| LIME | 5 | SX |
| INVERT | 10 | M3 |

### SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 960 | 950 | 1830 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 9400 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2400 @ 55 @ 2049

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2035.00 | 2.60 | 188.6 |
| 2045.00 | 3.50 | 183.1 |
| 2054.00 | 4.00 | 176.3 |
| 2064.00 | 4.70 | 173.5 |
| 2073.00 | 4.50 | 171.4 |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2040.00 | 2097.00 | D | 45 | 4 |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE FT. HYDRILL C/ 16 SECS |
| 15 | 30 | 0.25 | 21 | BOP DRILL WELL SECURE IN 1 MIN 36 SECS, SAFETY MTG. |
| 30 | 700 | 6.50 | 2 | DIRECTIONAL DRILL F/ 2040m - 2097m |
| 700 | 800 | 1.00 | 10 | ACCUMULATIVE SURVEY TIME |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES, ESCAPE LINE ANCHOR
OFF BTM PRESSURE 7900kpa
SLIDE/ ROTATE W/ 1500 kpa DIFF.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 76 | BOP DRILL | 6353 |

### MORNING TOUR CREW

FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 8.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |

RATE SCHEDULE | REGULAR | REPAIR | X INVERT

CREW SAFETY DAYS: 14

### DAY TOUR — MUD RECORD

| MUD TYPE | | WATER BASED | X | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | 800 | 1200 | 1530 | |
| DENSITY (KG/M3 ) | | 960 | 960 | 960 | |
| FUNNEL VISCOSITY | | 61 | 61 | 60 | |
| FLUID LOSS (cm3 ) | | | | | |
| pH | | | | | |
| | | 66.60 | 65.40 | 63.00 | |

### BIT RECORD

| BIT NO. | 2 |
|---|---|
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 X 14.3 |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 265.00 |
| TOTAL HRS RUN | 30.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

### HOLE CONDITION

| HOLE DRAG | 2 UP + DOWN |
|---|---|
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 67 | D.P. | STANDS | |
| 2 | D.P. | SINGLES | 1928.18 |
| KELLY DOWN | | | 12.54 |
| TOTAL | | | 2163.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 75 | | |

### MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 'O' | 20 | SX |
| BAROFIBER | 10 | SX |
| LIME | 5 | SX |
| DURATONE | 6 | SX |

### SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 960 | 950 | 1810 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8300 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 1960 @ 49 @ 2106

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2092.70 | 3.70 | 170.1 |
| 2111.50 | 3.70 | 164.7 |
| 2130.50 | 4.50 | 168.3 |
| 2140.00 | 4.40 | 169.4 |

DRILLER SIGNATURE: JOHN BURNS

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2097.00 | 2163.00 | D | 35 | 4 |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE / FT. U. P.R 4 sec. C |
| 815 | 1330 | 5.25 | 2 | DRILL - SLIDE - ROTATE FR. 2097.M - 2144.M |
| 1330 | 1345 | 0.25 | 21 | SAFETY MTG. / B.O.P. DRILL W/CREW - WELL SECURD 98 sec. |
| 1345 | 1600 | 2.25 | 2 | DRILL - SLIDE - ROTATE FR. 2144.M - 2163.M |
| 1600 | | | | |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + FUNCT. REMOTE CHOKE

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 11.0 | 325 | 77 | BOP DRILL | 6353 |

### DAY TOUR CREW

FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | DP |
| FLOOR HAND | | SEAN HERDMAN | 8.00 | | | SH |
| LEASE HAND | | DAVID NORN | 8.00 | | | DN |

RATE SCHEDULE | REGULAR | REPAIR | X INVERT

CREW SAFETY DAYS: 14

### EVENING TOUR — MUD RECORD

| MUD TYPE | | WATER BASED | X | OIL BASED | |
|---|---|---|---|---|---|
| TIME | | 1800 | 2200 | 2300 | |
| DENSITY (KG/M3 ) | | 960 | 960 | 960 | |
| FUNNEL VISCOSITY | | 56 | 55 | 55 | |
| FLUID LOSS (cm3 ) | | | | | |
| pH | | | | | |

### BIT RECORD

| BIT NO. | 2 |
|---|---|
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 14.3 X |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 312.00 |
| TOTAL HRS RUN | 36.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

### HOLE CONDITION

| HOLE DRAG | 2-4 DAN. |
|---|---|
| TORQUE AT BOTTOM | 998 |
| FILL ON BOTTOM (M) | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 69 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 1975.62 |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 2210.93 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 77 | | |

### MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 'O' | 20 | SX |
| BAROFIBER | 10 | SX |
| DURATONE | 5 | SX |
| LIME | 5 | SX |

### SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 960 | 950 | 1870 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8500 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2120 @ 49 @ 2201

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 2149.00 | 4.30 | 165.5 |
| 2159.00 | 4.25 | 166.1 |
| 2168.00 | 4.24 | 167.6 |
| 2177.00 | 4.33 | 166.0 |
| 2187.00 | 4.80 | 170.5 |

DRILLER SIGNATURE: ROSS GUYNUP

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2163.00 | 2210.00 | D | 35 | 2 |
| | | | | 6 |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1715 | 1.25 | 2 | DRILL F/ 2163M.-2172M. |
| 1715 | 1730 | 0.25 | 21 | SAFETY MTG. HOLD B.O.P DRILL W/ CREW. FT. REMOTE CHOKE. |
| 1730 | 2230 | 5.00 | 2 | DRILL F/ 2172M.-2201M. |
| 2230 | 2245 | 0.25 | 7 | RIG SERVICE. FT. HYDRILL 14 SEC. CLOSE. |
| 2245 | 2300 | 0.25 | 2 | DRILL F/ 2201M.-2210M. |
| 2300 | 2400 | 1.00 | 10 | DEV. SURVEY TOTAL TIME F/ SURVEYS ORIENT TOOL FACE. |

NOTES : D.W.A CHECK BRAKE ASSEMBLY SLIP TONG DIES.
ADDED 1 m3 WATER TO ACTIVE SYSTEM .

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | 79 | B.O.P DRILL | 6353 |

### EVENING TOUR CREW

FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | | KB |
| FLOOR HAND | | DAVE GREEN | 8.00 | | | DG |
| FLOOR HAND | | SHANE WINTERS | 8.00 | | | SW |
| LEASE HAND | | SHELDON MICHEL | 8.00 | | | SM |

RATE SCHEDULE | REGULAR | REPAIR | X INVERT

CREW SAFETY DAYS: 246

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| OPERATOR | CONTRACTOR |
| ANA[redacted]KO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | KG | GP |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | KG | GP |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 16

RIG NO. 5

FUEL @ 08:00 HRS

RIG 201 | BOILER

WEATHER: TEMPERATURE -13 | CURRENT CONDITIONS SNOW | WIND DIRECTION CALM | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

**TIME - HRS**

CODE NO. 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 3.00 | | | 0.25 | 3.50 | 0.25 | | | 0.25 | | | | | | | | | 0.75 | | | | | | |
| DAY | | 10.25 | | | | | 0.25 | | | 1.50 | | | | | | | | | | | | | | | |
| EVE. | | 3.00 | | | | | 0.25 | | | 0.75 | | | | | | | | | | | | | | | |
| TOTAL | | 16.25 | | | 0.25 | 3.50 | 0.75 | | | 2.50 | | | | | | | | | 0.75 | | | | | | |

| SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|
| TOTALS 24.00 | NO. 2 TYPE BRANDIT | | | |
| 8.00 | SCREENS CHANGED [ ] YES [ ] NO TYPE | | | |
| 12.00 | 120 TOP 140 TOP | | | |
| 4.00 | 120 MIDDLE 140 MIDDLE | | | |
| 24.00 | 120 BOTTOM 120 BOTTOM | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 16 |
| OPERATOR | CONTRACTOR | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| RIG MANAGER | RIG NO. | | |
| Greg Pukas | 5 | | |
| PROVINCE | CAMP [X] YES [ ] NO | RIG SAFETY DAYS | |
| N.W.T. | | 230 | |

### BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 59 | D.P. STANDS | | |
| | D.P. SINGLES | | 1681.28 |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 1916.59 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 71 | | |

| BIT RECORD | |
|---|---|
| BIT NO. | 2 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 X |
| | 14.3 |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 18.00 |
| TOTAL HRS RUN | 3.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

| HOLE CONDITION | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 800 |
| FILL ON BOTTOM (M) | 0.00 |

### MORNING TOUR — MUD RECORD

| MUD TYPE | [ ] WATER BASED | [X] OIL BASED |
|---|---|---|
| TIME | 530 | 700 |
| DENSITY (KG/M3 ) | 960 | 960 |
| FUNNEL VISCOSITY | 57 | 58 |
| FLUID LOSS (cm3 ) | | |
| pH | | |
| | 60.70 | 66.80 |

| MUD MATERIALS ADDED | AMOUNT | UNIT |
|---|---|---|
| BARITE | 15 | SX |
| INVERT | 9 | M3 |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 3.00 | 960 | 950 | 1860 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 9600 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2200 @ 54 @ 1893

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1893.00 | 1.90 | 3.7 |
| 1902.60 | 1.90 | 352. |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1898.00 | 1916.00 | D | 35 | 6 |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE CLOSE BLIND RAM OUT OF HOLE C/ 4 SECS |
| 15 | 100 | 0.75 | 6 | LAY DOWN SQUARE MOTOR |
| 100 | 145 | 0.75 | 20 | PICK UP DIR. MOTOR, SCRIBE SET ANGLE, INSTALL MWD |
| 145 | 430 | 2.75 | 6 | RUN IN HOLE, FLOW CHECK & FILL PIPE @ 663m, 1275m & 1874m |
| 430 | 445 | 0.25 | 5 | WASH F/ 1874m - 1898m |
| 445 | 745 | 3.00 | 2 | DIRECTIONAL DRILL F/ 1898m - 1916m |
| 745 | 800 | 0.25 | 10 | ACCUMULATIVE SURVEY TIME |
| 800 | | | | |

NOTES: CHECK BRAKE LINKAGE, TONGS& LINES, CROWN SAVER
OFF BTM PRESSURE 8000 kpa
DRILL W/ 1500 - 2500 kpa DIFF

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 72 | SLIDING | 6418 |

### MORNING TOUR — CREW

FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO | INJURIES |
|---|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR | |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF | |
| MOTOR HAND | | DAVE GREEN | 8.00 | | | DG | |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB | |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS | |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 13

### DAY TOUR — BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 62 | D.P. STANDS | | |
| 1 | D.P. SINGLES | | 1776.34 |
| KELLY DOWN | | | 12.38 |
| TOTAL | | | 2011.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 71 | | |

| BIT RECORD | |
|---|---|
| BIT NO. | 2 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 X |
| | 14.3 |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 113.00 |
| TOTAL HRS RUN | 13.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

| HOLE CONDITION | |
|---|---|
| HOLE DRAG | 2 UP + DOWN |
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

### DAY TOUR — MUD RECORD

| MUD TYPE | [ ] WATER BASED | [X] | [X] OIL BASED | |
|---|---|---|---|---|
| TIME | 800 | 1300 | 1800 | |
| DENSITY (KG/M3 ) | 960 | 960 | 960 | |
| FUNNEL VISCOSITY | 59 | 58 | 59 | |
| FLUID LOSS (cm3 ) | | | | |
| pH | | | | |
| | 69.10 | 66.80 | 64.30 | |

| MUD MATERIALS ADDED | AMOUNT | UNIT |
|---|---|---|
| CAL CARB `O` | 20 | SX |
| LIME | 10 | SX |
| BAROFIBER | 10 | SX |
| DURATONE | 5 | SX |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 960 | 950 | 1810 |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8200 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2380 @ 56 @ 1954

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1921.60 | 1.70 | 3.5 |
| 1940.70 | 1.20 | 21.5 |
| 1959.60 | 1.00 | 42.5 |
| 1978.60 | 0.90 | 33.3 |
| 1988.10 | 0.40 | 355.2 |

DRILLER SIGNATURE: JOHN BURNS

### DAY TOUR — METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1916.00 | 2011.00 | D | 35 | 4 |
| | | | | 7 |

### DAY TOUR — TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE / FT. U.P.R 4 sec C |
| 815 | 1830 | 10.25 | 2 | DRILL - SLIDE - ROTATE FR. 1916.M - 2011.M |
| 1830 | 2000 | 1.50 | 10 | ACCUM. SURVEY TIME |

NOTES: SERVICE CROWN SHIVES + TRAVELLING BLOCKS
FUNCT. ALARM + CROWN SAVER
CHECK BRAKE LINKAGE + DEADLINE ANCHOR

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 11.0 | 325 | 74 | BACK TORQUE | 6353 |

### DAY TOUR — CREW

FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO | INJURIES |
|---|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 12.00 | | | JB | |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD | |
| MOTOR HAND | | DARCY PUKAS | 12.00 | | | DP | |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS | |
| FLOOR HAND | | SEAN HERDMAN | 12.00 | | | SH | |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN | |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 13

### EVENING TOUR — BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | | 0.15 |
| 1 | MOTOR | 165 | 7.24 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.28m | | |
| 63 | D.P. STANDS | | |
| 1 | D.P. SINGLES | | 1804.85 |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 2040.16 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 72 | | |

| BIT RECORD | |
|---|---|
| BIT NO. | 2 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | U/DIMAND |
| TYPE | UD513 |
| SERIAL NO. | 00561 |
| JETS | 5 14.3 |
| | X |
| DEPTH OUT | |
| DEPTH IN | 1898.00 |
| TOTAL M DRILLED | 142.00 |
| TOTAL HRS RUN | 16.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

| HOLE CONDITION | |
|---|---|
| HOLE DRAG | 2UP<>2DOWN |
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

### EVENING TOUR — MUD RECORD

| MUD TYPE | [ ] WATER BASED | [X] OIL BASED | |
|---|---|---|---|
| TIME | 2000 | 2200 | 2330 |
| DENSITY (KG/M3 ) | 960 | 960 | 960 |
| FUNNEL VISCOSITY | 57 | 58 | 57 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| PVT | 62.90 | 63.50 | 63.00 |

| MUD MATERIALS ADDED | AMOUNT | UNIT |
|---|---|---|

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 960 | 950 | 1820 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 9600 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2220 @ 54 @ 2011

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1997.00 | 0.10 | 236.2 |
| 2007.00 | 0.20 | 228.9 |
| 2016.00 | 0.90 | 210.2 |
| 2026.00 | 1.70 | 193.0 |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

### EVENING TOUR — METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 2011.00 | 2040.00 | D | 35 | 4 |

### EVENING TOUR — TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE FT. LOWER PIPE RAM C/ 4 SECS |
| 2015 | 2315 | 3.00 | 2 | DIRECTIONAL DRILL F/ 2011m - 2040m |
| 2315 | 2400 | 0.75 | 10 | ACCUMULATIVE SURVEY TIME |
| 2400 | | | | |

NOTES: CHECK BRAKE LINKAGE, TONGS & LINES
OFF BTM. PRESSURE 7900 kpa
SLIDE/ROTATE W/ 1500 kpa DIFF.
1m3 INVERT PUMPED BACK F/ SHALE DRYER

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 325 | 74 | HORSEPLAY | 6353 |

### EVENING TOUR — CREW

FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO | INJURIES |
|---|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 4.00 | | | DR | |
| DERRICK HAND | | KEVIN FINNING | 4.00 | | | KF | |
| MOTOR HAND | | DAVE GREEN | 4.00 | | | DG | |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB | |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS | |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 245

LICENCE NO. 1978 | WELL NAME & NO. ANADARKO ARROWHEAD RIVER F-56

OPERATOR: ANA[redacted]KO CANADA ENERGY | CONTRACTOR: SHEHTAH-WILSON PARTNERSHIP

SURFACE LOCATION: 60:34:29.99 N 122:55:46.13 W | UNIQUE ID: 300F566040122450

SIGNATURE OF OPERATOR'S REPRESENTATIVE: K.Genest | SIGNATURE OF CONTRACTOR'S RIG MANAGER: Greg Pukas

**DAILY CHECKS**

| | OPR KG | R.M. GP |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | | |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3 ) H2S Signs Posted if Required | KG | GP |
| ( 4 ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5 ) Flare Lines Staked | KG | GP |
| ( 6 ) BOP Drills Performed | | |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3 ) Mast Inspection before Raising or Lowering | | |
| ( 4 ) Crown Saver Checked | | GP |
| ( 5 ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 15

RIG NO. 5

FUEL @ 08:00 HRS: RIG 180 | BOILER

WEATHER: TEMPERATURE -21 | CURRENT CONDITIONS CLEAR | WIND DIRECTION CALM | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | PT-1100 | OILWELL | | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

**TIME - HRS**

CODE NO. 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 LEV. RIG | 23 | 24 | 25 | 26

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| DAY | | 6.75 | | | 0.75 | 1.50 | 0.25 | | | | | | | | | | | | | | | 2.75 | | | | |
| EVE. | | | | | | 3.75 | 0.25 | | | | | | | | | | | | | | | | | | | |
| TOTAL | | 14.25 | | | 0.75 | 5.25 | 0.75 | | | 0.25 | | | | | | | | | | | | 2.75 | | | | |

| TOTALS | SHALE SHAKER ( S ) NO | TYPE | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|---|
| 8.00 | 2 | BRANDIT | | | | |
| | SCREENS CHANGED [ ] YES [ ] NO | | | | | |
| 12.00 | TOP 120 | TOP 140 | | | | |
| 4.00 | MIDDLE 120 | MIDDLE 140 | | | | |
| 24.00 | BOTTOM 120 | BOTTOM 120 | | | | |

## BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.22 |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 57 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 1633.80 |
| KELLY DOWN | | | 8.21 |
| TOTAL | | | 1865.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 70 | | |

| BIT RECORD | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BIT NO. | 1 | | | | | | | | |
| SIZE | 215.9 | | | | | | | | |
| IADC CODE | | | | | | | | | |
| MANUFACTURER | SMITH | | | | | | | | |
| TYPE | S73EHPX | | | | | | | | |
| SERIAL NO. | JS2536 | | | | | | | | |
| JETS | 7X | 11.1 | | | | | | | |
| | 1X | 12.7 | | | | | | | |
| DEPTH OUT | | | | | | | | | |
| DEPTH IN | 663.00 | | | | | | | | |
| TOTAL M DRILLED | 1203.00 | | | | | | | | |
| TOTAL HRS RUN | 72.75 | | | | | | | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|

HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | 2UP<>2DOWN |
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

## MORNING TOUR

MUD RECORD: MUD TYPE | [ ] WATER BASED [X] OIL BASED

| | | | |
|---|---|---|---|
| TIME | 130 | 330 | 630 |
| DENSITY (KG/M3 ) | 945 | 950 | 950 |
| FUNNEL VISCOSITY | 52 | 54 | 54 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| PVT | 69.80 | 68.90 | 66.70 |

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1793.00 | 1865.00 | D | 40 | 6 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| GELTONE V | 10 | SX |
| LIME | 10 | SX |
| DURATONE | 5 | SX |
| SUSPENDTONE | 5 | SX |
| RM63 | 1 | BBL |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 945 | 935 | 1860 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 9800 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2250 @ 54 @ 1803

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1788.00 | 1.40 | 357.5 |
| 1845.00 | 1.70 | 355.5 |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE FT. HYDRILL C/ 16 SECS |
| 15 | 745 | 7.50 | 2 | DRILL F/ 1793m - 1865m |
| 745 | 800 | 0.25 | 10 | ACCUMULATIVE SURVEY TIME |
| 800 | | | | |

NOTES: CHECK BRAKE LINKAGE, TONGS & LINES
OFF BTM PRESSURE 9700 kpa
DRILL W/ UP TO 3500 kpa DIFF.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 72 | SHAKERS | 6418 |

## DAY TOUR

BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.22 |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 58 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 1662.25 |
| KELLY DOWN | | | 12.76 |
| TOTAL | | | 1898.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 70 | | |

| BIT RECORD | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BIT NO. | 1 | | | | | | | | |
| SIZE | 215.9 | | | | | | | | |
| IADC CODE | | | | | | | | | |
| MANUFACTURER | SMITH | | | | | | | | |
| TYPE | S73EHPX | | | | | | | | |
| SERIAL NO. | JS2536 | | | | | | | | |
| JETS | 7X | 11.1 | | | | | | | |
| | 1X | 12.7 | | | | | | | |
| DEPTH OUT | | | | | | | | | |
| DEPTH IN | 663.00 | | | | | | | | |
| TOTAL M DRILLED | 1235.00 | | | | | | | | |
| TOTAL HRS RUN | 79.50 | | | | | | | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|

HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | 2 UP + DOWN |
| TORQUE AT BOTTOM | 1200 |
| FILL ON BOTTOM (M) | |

## DAY TOUR

MUD RECORD: MUD TYPE | [ ] WATER BASED [X] OIL BASED

| | | | |
|---|---|---|---|
| TIME | 800 | 1130 | 1500 |
| DENSITY (KG/M3 ) | 950 | 950 | 950 |
| FUNNEL VISCOSITY | 52 | 53 | 52 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| | 65.50 | 64.70 | 64.10 |

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1865.00 | 1898.00 | D | 35 | 3 |
| | | | | 7 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB `O` | 35 | SX |
| BAROFIBER | 10 | SX |
| DURATONE | 5 | SX |
| SUSPENDTONE | 5 | SX |
| GELTONE V | 10 | SX |
| LIME | 10 | SX |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 7.00 | 950 | 940 | 1780 |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 7900 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2100 @ 53 @ 1878

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1883.30 | 1.90 | 4.3 |

DRILLER SIGNATURE: JOHN BURNS

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE / FT. U.P.R 4 sec. C |
| 815 | 1500 | 6.75 | 2 | DRILL FR. 1865.M - 1898.M |
| 1500 | 1545 | 0.75 | 5 | PUMP UP SURVEY / CIRCU. UP BTTM. HOLE SAMPLE |
| 1545 | 1645 | 1.00 | 6 | TRIP CHANGE OUT MUD MOTOR - PUMP PILL FLOW CHECK @ 1884.M |
| | | | | CHAIN OUT - STRAP OUT / PULL 5 stnds FLOW CHECK @ 1741.M |
| 1645 | 1830 | 1.75 | 22 | LEVELL RIG W/ CAMS RIG JACKING |
| 1830 | 1900 | 0.50 | 6 | TRIPS - RUN 5 stnds BACK TO BTTM |
| 1900 | 2000 | 1.00 | 22 | LEVELL RIG W/ CAMS RIG JACKING |
| 2000 | | | | |

NOTES: CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 325 | 76 | RIG LEVELING | 6418 |

## EVENING TOUR

BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.22 |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 58 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 1662.25 |
| KELLY DOWN | | | 12.76 |
| TOTAL | | | 1898.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 70 | | |

| BIT RECORD | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| BIT NO. | 1 | | 2 | | | | | | |
| SIZE | 215.9 | | 215.9 | | | | | | |
| IADC CODE | | | | | | | | | |
| MANUFACTURER | SMITH | | U/DIMAND | | | | | | |
| TYPE | S73EHPX | | UD513 | | | | | | |
| SERIAL NO. | JS2536 | | 00561 | | | | | | |
| JETS | 7X | 1X | 5 | 14.3 | | | | | |
| | 11.1 | 12.7 | X | | | | | | |
| DEPTH OUT | 1898.00 | | | | | | | | |
| DEPTH IN | 663.00 | | 1898.00 | | | | | | |
| TOTAL M DRILLED | 1235.00 | | | | | | | | |
| TOTAL HRS RUN | 79.50 | | | | | | | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| 5 | 8 | BT | A | X | 1.00 | WT | PR | 15.50 |

HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

## EVENING TOUR

MUD RECORD: MUD TYPE | [ ] WATER BASED [ ] OIL BASED

| | | | |
|---|---|---|---|
| TIME | | | |
| DENSITY (KG/M3 ) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1898.00 | | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ 0 @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE FT. LOWER PIPE RAM C/ 4 SECS |
| 2015 | 2400 | 3.75 | 6 | TRIP OUT, STRAP OUT, FLOW CHECK @ 1884m, 1741m, 1043m |
| 2400 | | | | 139m & OOH |
| | | | | TRIP RECORD CALC. 8.79 m3 STRAP CALC. 1898.27 |
| | | | | ACT. 9.91 m3 MEAS. 1897.69 |
| | | | | DIFF. 1.11 m3 DIFF. .58 |

NOTES: CHECK BRAKE LINKAGE, TONGS & LINES, CROWN SAVER
CHECK WEAR BUSHING

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 325 | 70 | WEAR BUSHING | 6418 |

## DRILLING CREW PAYROLL DATA

WELL NAME & NO. ANADARKO ARROWHEAD RIVER F-56 | YEAR 2003 | MONTH 3 | DAY 15

OPERATOR: ANADARKO CANADA ENERGY | CONTRACTOR: SHEHTAH-WILSON PARTNERSHIP

RIG MANAGER: Greg Pukas | RIG NO. 5

PROVINCE: N.W.T. | CAMP [X] YES [ ] NO | RIG SAFETY DAYS 229

### MORNING TOUR — FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 8.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |

RATE SCHEDULE | [ ] REGULAR | [ ] REPAIR | [X] INVERT

CREW SAFETY DAYS: 12

### DAY TOUR — FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 12.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 12.00 | | | DP |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | SEAN HERDMAN | 12.00 | | | SH |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE | [ ] REGULAR | [ ] REPAIR | [X] INVERT

CREW SAFETY DAYS: 12

### EVENING TOUR — FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 4.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 4.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 4.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |

RATE SCHEDULE | [ ] REGULAR | [ ] REPAIR | [X] INVERT

CREW SAFETY DAYS: 244

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 14

RIG NO. 5

FUEL @ 08:00 HRS

RIG 84 | BOILER

WEATHER: TEMPERATURE -25 | CURRENT CONDITIONS CLEAR | WIND DIRECTION CALM | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

**TIME HRS**

| CODE NO. | 1 RIG UP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| DAY | | 11.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| EVE. | | 3.75 | | | | | 0.25 | | | | | | | | | | | | | | | | | | | |
| TOTAL | | 22.75 | | | | | 0.75 | | | 0.50 | | | | | | | | | | | | | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | TYPE | | | |
| 12.00 | SCREENS CHANGED YES NO | | | | |
| 4.00 | TOP 120 / 140 | TOP | | | |
| 24.00 | MIDDLE 120 / 140 | MIDDLE | | | |
| | BOTTOM 120 / 120 | BOTTOM | | | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.22 | |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 53 | D.P. STANDS | | 1510.27 |
| | D.P. SINGLES | | |
| KELLY DOWN | | | 6.00 |
| TOTAL | | | 1739.26 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 68 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 11.1 | |
| | 1X | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 1076.00 | | |
| TOTAL HRS RUN | 50.00 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2UP<>2DOWN |
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

**MORNING TOUR** — MUD RECORD — METRES DRILLED

| MUD TYPE | WATER BASED | OIL BASED |
|---|---|---|
| | [ ] | [X] |
| TIME | 100 | 330 | 630 |
| DENSITY (KG/M3 ) | 940 | 940 | 940 |
| FUNNEL VISCOSITY | 52 | 52 | 50 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| PVT | 66.60 | 63.30 | 61.70 |

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1672.00 | 1739.00 | D | 35 | 4 |
| | | | | 6 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BAROFIBER | 10 | SX |
| CAL CARB 325 | 12 | SX |
| CAL CARB `O` | 20 | SX |
| INVERMUL | 1 | BBL |
| DURATONE | 5 | SX |
| LIME | 10 | SX |
| GELTONE V | 5 | SX |
| SUSPENDTONE | 5 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 940 | 930 | 1860 |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 10000 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2100 @ 54 @ 1680

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1674.00 | 1.30 | 354 |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE FT. HYDRILL C/ 16 SECS |
| 15 | 745 | 7.50 | 2 | DRILL F/ 1672m - 1739 |
| 745 | 800 | 0.25 | 10 | ACCUMULATIVE SURVEY TIME |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES
OFF BTM. PRESSURE 7500 kpa
DRILL W/ UP TO 3500 kpa DIFF.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 70 | SLINGS | 6483 |

**DRILLING CREW PAYROLL DATA**

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 14 |
| OPERATOR: ANADARKO CANADA ENERGY | CONTRACTOR: SHEHTAH-WILSON PARTNERSHIP | | |
| RIG MANAGER: Greg Pukas | RIG NO. 5 | | |
| PROVINCE: N.W.T. | CAMP [X] YES [ ] NO | RIG SAFETY DAYS 228 | |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 8.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 11

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.22 | |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 54 | D.P. STANDS | | 1538.82 |
| | D.P. SINGLES | | |
| KELLY DOWN | | | 7.19 |
| TOTAL | | | 1769.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 68 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 11.1 | |
| | 1X | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 1106.00 | | |
| TOTAL HRS RUN | 61.50 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2000 UP + DOWN |
| TORQUE AT BOTTOM | 1500 |
| FILL ON BOTTOM (M) | |

**DAY TOUR** — MUD RECORD — METRES DRILLED

| MUD TYPE | WATER BASED | OIL BASED |
|---|---|---|
| | [X] | [ ] |
| TIME | 900 | 1230 | 1700 |
| DENSITY (KG/M3 ) | 940 | 940 | 940 |
| FUNNEL VISCOSITY | 50 | 50 | 50 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| | 62.00 | 61.20 | 60.90 |

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1739.00 | 1769.00 | D | 35 | 5 |
| | | | | 7 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| DURATONE | 5 | SX |
| GELTONE V | 5 | SX |
| SUSPENDTONE | 5 | SX |
| LIME | 10 | SX |
| CAL CARB `O` | 30 | SX |
| BAROFIBER | 10 | SX |
| RM63 | 1 | BBL |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 940 | 930 | 1780 |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 7500 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 1670 @ 48 @ 1745

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1731.30 | 1.40 | 355.6 |

DRILLER SIGNATURE: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE / FT. UPPER PIPE RAMS 4 sec C |
| 815 | 1945 | 11.50 | 2 | DRILL FR. 1739.M - 1769.M |
| | | | | DRILL W/ 1000 - 1500 kpa DIFF. ( HARD STRINGERS ) |
| 1945 | 2000 | 0.25 | 10 | DEV. SURVEY |
| 2000 | | | | |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES FT. REMOTE CHOKE

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 335 | 70 | STEAM | 6483 |

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 12.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 12.00 | | | DP |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | SEAN HERDMAN | 12.00 | | | SH |
| | | | | | | |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 11

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.22 | |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 54 | D.P. STANDS | | 1557.84 |
| 2 | D.P. SINGLES | | |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 1793.86 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 69 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 1X | |
| | 11.1 | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 1130.00 | | |
| TOTAL HRS RUN | 65.25 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2UP<>2DOWN |
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

**EVENING TOUR** — MUD RECORD — METRES DRILLED

| MUD TYPE | WATER BASED | OIL BASED |
|---|---|---|
| | [ ] | [X] |
| TIME | 2030 | 2230 | 2330 |
| DENSITY (KG/M3 ) | 945 | 945 | 945 |
| FUNNEL VISCOSITY | 51 | 50 | 50 |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |
| PVT | 63.40 | 71.70 | 70.70 |

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1769.00 | 1793.00 | D | 40 | 6 |
| | | | | 8 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| INVERT | 10 | M3 |
| CAL CARB `O` | 20 | SX |
| BAROFIBER | 10 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 945 | 935 | 1870 |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 9800 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2070 @ 54 @ 1774

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE FT. LOWER PIPE RAM C/ 4 SECS |
| 2015 | 2400 | 3.75 | 2 | DRILL F/ 1769m - 1793m |
| 2400 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES
OFF BTM 7500 kpa
DRILL W/ UP T 3500 kpa DIFF.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 325 | 71 | TUBULARS | 6483 |

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 4.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 4.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 4.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 243

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANA[redacted]KO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | GP | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 13

RIG NO. 5

FUEL @ 08:00 HRS

RIG 165 | BOILER

WEATHER: TEMPERATURE -25 | CURRENT CONDITIONS SNOW | WIND DIRECTION N.W. | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | PT-1100 | OILWELL | | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

**TIME-HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.25 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | | | | | 8.00 |
| DAY | | 11.25 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | | | | | 12.00 |
| EVE. | | 3.75 | | | | | 0.25 | | | | | | | | | | | | | | | | | | | 4.00 |
| TOTAL | | 22.25 | | | | | 0.75 | | | 1.00 | | | | | | | | | | | | | | | | 24.00 |

**SHALE SHAKER ( S )**

| NO. | TYPE | | | |
|---|---|---|---|---|
| 2 | BRANDIT | | | |
| SCREENS CHANGED | | YES | | NO |
| TOP | 120 | TOP | 140 | |
| MIDDLE | 120 | MIDDLE | 140 | |
| BOTTOM | 120 | BOTTOM | 120 | |

**RENTALS / SERVICES** | MORN | DAY | EVE

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 13 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | **RIG NO.** | | |
| Greg Pukas | 5 | | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES NO | 227 | |

### MORNING TOUR — FROM 0 TO 800

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.22 |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 42 | D.P. | STANDS | 1196.80 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 1432.82 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 61 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 11.1 | |
| | 1X | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 769.00 | | |
| TOTAL HRS RUN | 27.50 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2UP |
| TORQUE AT BOTTOM | 1100 |
| FILL ON BOTTOM (M) | |

**MUD RECORD** — MUD TYPE: ☐ WATER BASED ☒ OIL BASED

| | | | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 200 | 400 | 630 | 1261.00 | 1315.00 | D | 35 | 8 |
| DENSITY (KG/M3 ) | 925 | 925 | 925 | 1315.00 | 1432.00 | D | 35 | 6 |
| FUNNEL VISCOSITY | 50 | 51 | 51 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | | | | | | | | |
| | 64.20 | 61.00 | 57.30 | | | | | |

**METRES DRILLED**

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BAROFIBER | 5 | SX |
| LIME | 10 | SX |
| SUSPENDTONE | 5 | SX |
| INVERT | 10 | M3 |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 930 | 920 | 1760 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 10300 | 0.0 | 120 | 0.0 | |

REDUCED PUMP SPEED: 2150 @ 54 @ 1290

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1275.00 | 1.60 | 359.2 |
| 1332.00 | 1.80 | 356.9 |
| 1389.00 | 1.40 | 0.3 |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE FT. HYDRILL C/ 16 SECS |
| 15 | 730 | 7.25 | 2 | DRILL F/ 1261m - 1432m |
| 730 | 800 | 0.50 | 10 | ACCUMULATIVE SURVEY TIME |
| 800 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES, ESCAPE LINE
DRILL W/ 3000 - 3500 kpa DIFF.
OFF BTM. PRESSURE 7300 kpa
SERVICE EYEWASH STATIONS, CHECK FIRE EXTINGUISHERS

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 62 | STEAM | 6548 |

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 8.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 10

### DAY TOUR — FROM 800 TO 2000

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.22 |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 49 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 1405.98 |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 1642.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 64 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 11.1 | |
| | 1X | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 979.00 | | |
| TOTAL HRS RUN | 38.75 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | 1500 |
| FILL ON BOTTOM (M) | |

**MUD RECORD** — MUD TYPE: ☐ WATER BASED ☒ OIL BASED

| | | | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 800 | 1300 | 1900 | 1432.00 | 1642.00 | D | 35 | 4 |
| DENSITY (KG/M3 ) | 925 | 925 | 940 | | | | | 7 |
| FUNNEL VISCOSITY | 51 | 50 | 49 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | | | | | | | | |
| | 57.20 | 62.50 | 57.20 | | | | | |

**METRES DRILLED**

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| BAROFIBER | 5 | SX |
| CAL CARB 'O' | 10 | SX |
| CAL CARB 325 | 10 | SX |
| LIME | 10 | SX |
| DURATONE | 5 | SX |
| SUSPENDTONE | 5 | SX |
| EZMUL | 1 | BBL |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 940 | 930 | 1750 |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 7300 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2100 @ 54 @ 1460

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1446.30 | 1.40 | 2.2 |
| 1503.40 | 1.10 | 354.9 |
| 1560.50 | 1.20 | 349.1 |
| 1617.00 | 1.10 | 350.9 |

DRILLER SIGNATURE: JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE / FT UPPER PIPE RAMS 4 sec. C |
| 815 | 1930 | 11.25 | 2 | DRILL FR 1432.M - 1642.M |
| 1930 | 2000 | 0.50 | 10 | ACCUM. SURVEY TIME |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES FUNCT. REMOTE CHOKE

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 325 | 65 | MUD MOTOR | 6548 |

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 12.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 12.00 | | | DP |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | SEAN HERDMAN | 12.00 | | | SH |
| | | | | | | |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 10

### EVENING TOUR — FROM 2000 TO 2400

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.22 |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 50 | [redacted] | STANDS | |
| 2 | D.P. | SINGLES | 1444.04 |
| KELLY DOWN | | | 4.97 |
| TOTAL | | | 1672.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 67 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 1X | |
| | 11.1 | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 1009.00 | | |
| TOTAL HRS RUN | 42.50 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2UP |
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

**MUD RECORD** — MUD TYPE: ☐ WATER BASED ☒ OIL BASED

| | | | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 2030 | 2230 | 2330 | 1642.00 | 1660.00 | D | 35 | 4 |
| DENSITY (KG/M3 ) | 935 | 935 | 935 | 1660.00 | 1672.00 | D | 35 | 8 |
| FUNNEL VISCOSITY | 53 | 53 | 53 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | | | | | | | | |
| PVT | 57.50 | 66.70 | 66.50 | | | | | |

**METRES DRILLED**

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| INVERT | 12 | M3 |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 935 | 925 | 1780 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 9700 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: 2100 @ 54 @ 1642

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE FT. LOWER PIPE RAM C/ 4 SECS |
| 2015 | 2400 | 3.75 | 2 | DRILL F/ 1642m - 1672m |
| 2400 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES
OFF BTM PRESSURE 7300kpa
DRILL W/ UP TO 3500 DIFF.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 3250 | 68 | MUD MOTOR | 6548 |

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 4.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 4.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 4.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 242

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | KG | GP |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | KG | GP |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | GP |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 12

RIG NO. 5

FUEL @ 08:00 HRS — RIG 240 — BOILER

WEATHER — TEMPERATURE -29 — CURRENT CONDITIONS CLOUDY — WIND DIRECTION CALM — ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H. | 21 | | | |

**TIME - HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILD LINE | 10 DEV. SURVEY | 11 W/RELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 6.00 | | | 0.25 | | 0.25 | | | 0.25 | | | | | 1.00 | | | | | | 0.25 | | | | | |
| DAY | | 10.75 | | | | | 0.25 | | | 0.75 | | | | | | | | | | | 0.25 | | | | | |
| EVE. | | 3.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | |
| TOTAL | | 20.25 | | | 0.25 | | 0.75 | | | 1.25 | | | | | 1.00 | | | | | | 0.50 | | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | TYPE | | | |
| 12.00 | SCREENS CHANGED YES NO | | | | |
| 4.00 | TOP 120 MIDDLE 120 | TOP 140 MIDDLE 140 | | | |
| 24.00 | BOTTOM 120 | BOTTOM 120 | | | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.22 | |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 20 | D.P. STANDS | | |
| 1 | D.P. SINGLES | | 579.40 |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 815.42 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 46 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 11.1 | |
| | 1X | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 152.00 | | |
| TOTAL HRS RUN | 6.00 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 1000 |
| FILL ON BOTTOM (M) | |

**MORNING TOUR**

**MUD RECORD**

MUD TYPE — WATER BASED [ ] — OIL BASED [X]

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TIME | 100 | 400 | 600 | 663.00 | 691.00 | D | 35 | 3 |
| DENSITY (KG/M3 ) | 945 | 935 | 930 | 691.00 | 815.00 | D | 35 | 8 |
| FUNNEL VISCOSITY | 58 | 54 | 53 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | | | | | | | | |
| PVT | 48.30 | 67.50 | 64.20 | | | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 663.00 | 691.00 | D | 35 | 3 |
| 691.00 | 815.00 | D | 35 | 8 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| INVERT | 22 | M3 |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 9900 | 0.0 | 120 | 0.0 |

**REDUCED PUMP SPEED**

1870 @ 54 @ 691

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 695.00 | 2.00 | 337.5 |
| 753.00 | 1.80 | 338.2 |

**DRILLER SIGNATURE**

DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE FT. HYDRILL C/ 16 SECS |
| 15 | 30 | 0.25 | 21 | BOP DRILL WELL SECURE IN 1 MIN 35 SECS. SAFETY MTG. |
| 30 | 100 | 0.50 | 2 | DRILL F/ 663m - 668m |
| 100 | 115 | 0.25 | 5 | CIRC HOLE CLEAN |
| 115 | 215 | 1.00 | 15 | FORMATION INTEGRITY TEST |
| 215 | 745 | 5.50 | 2 | DRILL F/ 668m - 815m |
| 745 | 800 | 0.25 | 10 | ACCUMULATIVE SURVEY TIME |

NOTES : OFF BTM PRESSURE 6950 kpa
CHECK BRAKE LINKAGE, TONGS & LINES, CROWN SAVER
DRILL W/ 3000 - 3500 kpa DIFF.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | 47 | BOP DRILL | 6517 |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.22 | |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 1 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 32 | D.P. STANDS | | 911.64 |
| | D.P. SINGLES | | |
| KELLY DOWN | | | 12.37 |
| TOTAL | | | 1147.00 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 11.1 | |
| | 1X | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 484.00 | | |
| TOTAL HRS RUN | 16.75 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | 1200 |
| FILL ON BOTTOM (M) | |

**DAY TOUR**

**MUD RECORD**

MUD TYPE — WATER BASED [ ] — OIL BASED [X]

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TIME | 900 | 1300 | 1830 | 815.00 | 1147.00 | D | 35 | 8 |
| DENSITY (KG/M3 ) | 920 | 915 | 920 | | | | | |
| FUNNEL VISCOSITY | 53 | 53 | 50 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | | | | | | | | |
| | 61.60 | 57.00 | 60.60 | | | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 815.00 | 1147.00 | D | 35 | 8 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 'O' | 10 | SX |
| CAL CARB 325 | 10 | SX |
| DURATONE | 5 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 9.00 | 920 | 910 | 1870 |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 7200 | 0.0 | 120 | 0.0 |

**REDUCED PUMP SPEED**

1950 @ 54 @ 824

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 809.90 | 1.80 | 348.7 |
| 876.40 | 1.60 | 353. |
| 933.40 | 1.50 | 350.3 |
| 990.40 | 1.60 | 345.5 |
| 1104.20 | 2.20 | 358.8 |

**DRILLER SIGNATURE**

JOHN BURNS

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE / FT. UPPER P.RAMS 4 sec. C |
| 815 | 1030 | 2.25 | 2 | DRILL 815.M - 881.M |
| 1030 | 1045 | 0.25 | 21 | SAFETY MTG. BOP DRILL W/CREW - WELL SHUT IN 98 sec |
| 1045 | 1915 | 8.50 | 2 | DRILL FR. 881.M - 1147.M |
| 1915 | 2000 | 0.75 | 10 | ACUM. SURVEY TIME |
| 2000 | | | | |

NOTES : CHECK BRAKE LINKAGE + DEADLINE ANCHOR
CHECK MANN. VALVES + GAUGES FUNCT. REMOTE CHOKE
TRANSFER 12 m3 INVERT FROM TANK FARM TO MAIN SYSTEM
N.E.B CHECKED OUT RIG @ 12:30

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.5 | 325 | 52 | BOP DRILL | 6613 |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.22 | |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 36 | D.P. STANDS | | 1025.57 |
| | D.P. SINGLES | | |
| KELLY DOWN | | | 13.03 |
| TOTAL | | | 1261.59 |
| WT. OF D.C. | 18 | | |
| WT. OF STRING | 56 | | |

**BIT RECORD**

| | | | |
|---|---|---|---|
| BIT NO. | 1 | | |
| SIZE | 215.9 | | |
| IADC CODE | | | |
| MANUFACTURER | SMITH | | |
| TYPE | S73EHPX | | |
| SERIAL NO. | JS2536 | | |
| JETS | 7X | 1X | |
| | 11.1 | 12.7 | |
| DEPTH OUT | | | |
| DEPTH IN | 663.00 | | |
| TOTAL M DRILLED | 598.00 | | |
| TOTAL HRS RUN | 20.25 | | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 3UP |
| TORQUE AT BOTTOM | 1100 |
| FILL ON BOTTOM (M) | |

**EVENING TOUR**

**MUD RECORD**

MUD TYPE — WATER BASED [ ] — OIL BASED [X]

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TIME | 2000 | 2300 | 2345 | 1147.00 | 1261.00 | D | 35 | 8 |
| DENSITY (KG/M3 ) | 930 | 930 | 930 | | | | | |
| FUNNEL VISCOSITY | 50 | 51 | 51 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | | | | | | | | |
| PVT | 59.60 | 59.60 | 65.40 | | | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 1147.00 | 1261.00 | D | 35 | 8 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| CAL CARB 325 | 10 | SX |
| CAL CARB 'O' | 10 | SX |
| DURATONE | 5 | SX |
| INVERT | 11 | M3 |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 930 | 920 | 1720 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**CIRCULATION PRESSURE kPa**

| PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|
| 10500 | 0.0 | 120 | 0.0 |

**REDUCED PUMP SPEED**

2250 @ 54 @ 1175

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 1161.00 | 1.80 | 357.7 |
| 1218.00 | 1.70 | 359.1 |

**DRILLER SIGNATURE**

DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE FT. LOWER PIPE RAM C/ 4 SECS |
| 2015 | 2345 | 3.50 | 2 | DRILL F/ 1147m - 1261m |
| 2345 | 2400 | 0.25 | 10 | ACCUMULATIVE SURVEY TIME |
| 2400 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES
DRILL W/ 3000 - 3500 kpa DIFF.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 325 | 57 | ICY CONDITIONS | 6613 |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

**DRILLING CREW PAYROLL DATA**

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 12 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | **RIG NO.** | | |
| Greg Pukas | 5 | | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES NO | 226 | |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 8.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 9

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 12.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 12.00 | | | DP |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | SEAN HERDMAN | 12.00 | | | SH |
| | | | | | | |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 9

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 4.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 4.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 4.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |

RATE SCHEDULE [ ] REGULAR [ ] REPAIR [X] INVERT

CREW SAFETY DAYS: 241

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | Greg Pukas |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | GP |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | KG | GP |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | GP | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 11

RIG NO. 5

FUEL @ 08:00 HRS

RIG 139 | BOILER

**WEATHER**

TEMPERATURE: -18

CURRENT CONDITIONS: CLOUDY

WIND DIRECTION: CALM

ROAD CONDITION: ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H. | 251 | PT-1100 | OILWELL | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H. | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRLG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 WEAR BUSH (rost plug | 23 | 24 DRILL OUT | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | | | 0.25 | | | | | | | 7.00 | 0.75 | | | | | | | | | | | | 8.00 |
| DAY | | | | | | 2.50 | | | | | | | | | 6.00 | | | | | 2.50 | | 1.00 | | | | | 12.00 |
| EVE. | | | | | 0.25 | 1.75 | 0.25 | | | | | | | | | | | | | | | | 1.00 | 0.75 | | | 4.00 |
| TOTAL | | | | | 0.25 | 4.25 | 0.50 | | | | | | | 7.00 | 6.75 | | | | | 2.50 | | 1.00 | 1.00 | 0.75 | | | 24.00 |

| SHALE SHAKER ( S ) | | | | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|---|---|
| NO. 2 | TYPE BRANDIT | TYPE | | | | | |
| SCREENS CHANGED X YES NO | TOP 120 | TOP 140 | | | | | |
| | MIDDLE 120 | MIDDLE 140 | | | | | |
| | BOTTOM 120 | BOTTOM 120 | | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 11 |

| OPERATOR | CONTRACTOR |
|---|---|
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |

| RIG MANAGER | RIG NO. |
|---|---|
| Greg Pukas | 5 |

| PROVINCE | CAMP | RIG SAFETY DAYS |
|---|---|---|
| N.W.T. | X YES NO | 225 |

## BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

| BIT RECORD | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

HOLE CONDITION

| |
|---|
| HOLE DRAG |
| TORQUE AT BOTTOM |
| FILL ON BOTTOM (M) |

## MORNING TOUR

MUD RECORD — MUD TYPE ☐ WATER BASED ☐ OIL BASED

| | |
|---|---|
| TIME | 663.00 |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 215 | 2.25 | 14 | NIPPLE UP BOP/ INSTALL 4.5" UPPER & LOWER PIPE RAMS |
| 215 | 300 | 0.75 | 15 | TEST TEST ALL MANIFOLD VALVES, CHOKE LINES |
| 300 | 315 | 0.25 | 7 | RIG SERVICE FT. UPPER PIPE RAM C/ 4 SECS |
| 315 | 800 | 4.75 | 14 | NIPPLE UP B.O.P., INSTALL HYDRILL, KILL LINES |

NOTES : CHANGE PIPE RAM BLOCKS F/ 3 1/2 - 4 1/2

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | | PRESSURE TEST | |

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 8.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 8

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | 13.00 |
| | TOTAL | | 663.49 |
| | WT. OF D.C. | 18 | |
| | WT. OF STRING | 42 | |

| BIT RECORD | |
|---|---|
| BIT NO. | 1 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | SMITH |
| TYPE | S73EHPX |
| SERIAL NO. | JS2536 |
| JETS | 7X 11.1 / 1X 12.7 |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

## DAY TOUR

MUD RECORD — MUD TYPE ☐ WATER BASED ☐ OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: JOHN BURNS

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1400 | 6.00 | 15 | PPT. CASG. 1400 LOW - 14000 HI ( INLAND PRESS. TESTING ) |
| | | | | INSTALL TEST PLUG |
| | | | | P.T BLIND RAMS - UPPER + LOWER PIPE RAMS HCR+MANN. |
| | | | | KILL LINE VALVES - CHECK VALVE - UPPER + LOWER KELLY COCKS |
| | | | | 1400 LOW - 21,000 kpa HI |
| | | | | ANNULAR PT. 1400 LOW - 21000 kpa HI |
| 1400 | 1500 | 1.00 | 22 | INSTALL WEAR BUSHING / INSTALL MUD SAVER ON KELLY |
| 1500 | 1730 | 2.50 | 20 | DIR. WORK - PICK + MAKE UP TOOLS |
| 1730 | 2000 | 2.50 | 6 | TRIPS - RIH LAY DOWN DP HW |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 11.0 | 325 | | DIR. TOOLS | |

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 12.00 | | | JB |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | DARCY PUKAS | 12.00 | | | DP |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | SEAN HERDMAN | 12.00 | | | SH |
| LEASE HAND | | DAVID NORN | 12.00 | | | DN |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 8

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| 1 | SQUARE MOTOR | 171 | 7.88 |
| 1 | FLOAT SUB | 167 | 0.77 |
| 1 | UBHO | 168 | 0.67 |
| 2 | MONEL | 165 | 17.68 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT DC | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 1 | X.O. | 159 | 0.53 |
| 9 | H.W.D.P. | 159 | 82.65 |
| | BHA 222.99m | | |
| 15 | D.P. | STANDS | 427.50 |
| | D.P. | SINGLES | |
| | KELLY DOWN | | 13.00 |
| | TOTAL | | 663.49 |
| | WT. OF D.C. | 18 | |
| | WT. OF STRING | 42 | |

| BIT RECORD | |
|---|---|
| BIT NO. | 1 |
| SIZE | 215.9 |
| IADC CODE | |
| MANUFACTURER | SMITH |
| TYPE | S73EHPX |
| SERIAL NO. | JS2536 |
| JETS | 7X 1X / 11.1 12.7 |
| DEPTH OUT | |
| DEPTH IN | 663.00 |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 500 |
| FILL ON BOTTOM (M) | |

## EVENING TOUR

MUD RECORD — MUD TYPE ☐ WATER BASED ☒ OIL BASED

| | |
|---|---|
| TIME | 663.00 |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 5700 | 0.0 | 1000 | 0.0 | |

REDUCED PUMP SPEED: @ 0 @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2145 | 1.75 | 6 | TRIP IN HOLE, LAY DOWN SINGLES |
| 2145 | 2200 | 0.25 | 7 | RIG SERVICE FT. LOWER PIPE RAM C/ 4 SECS |
| 2200 | 2300 | 1.00 | 23 | UHTHAW FROST PLUGS, ( KELLY HOSE & STAND PIPE ) |
| 2300 | 2315 | 0.25 | 5 | DISPLACE TO INVERT |
| 2315 | 2400 | 0.75 | 24 | DRILL CEMENT F/ 648m - 653m, FLOAT COLLAR |
| 2400 | | | | |

NOTES : OFF BTM PRESS 4700 kpa
2 NEW 140 mesh shaker screens installed

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 325 | 43 | DRILL OUT | |

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 4.00 | | | DR |
| DERRICK HAND | | KEVIN FINNING | 4.00 | | | KF |
| MOTOR HAND | | DAVE GREEN | 4.00 | | | DG |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | RICK SONFRERE | 4.00 | | | RS |

RATE SCHEDULE ☐ REGULAR ☐ REPAIR X INVERT

CREW SAFETY DAYS: 240

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANA[redacted]KO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | Greg Pukas |

**DAILY CHECKS**

| | OPR KG | R.M. GP |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | | |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | GP |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | GP |
| ( 5. ) Flare Lines Staked | KG | GP |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | GP |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | GP |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | GP |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 10

RIG NO. 5

FUEL @ 08:00 HRS

RIG 183 | BOILER

WEATHER: TEMPERATURE -23 | CURRENT CONDITIONS | WIND DIRECTION NORTH | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | PT-1100 | OILWELL | | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO.: 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 WELD BOWL | 23 | 24 | 25 | 26

| TIME-HRS | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | 1.25 | | 0.25 | | | | | 2.50 | 3.75 | | | | | | | 0.25 | | | | | | |
| DAY | | | | | | | 0.25 | | | | | 2.25 | 2.25 | | | | | | | | 3.25 | | | | | |
| EVE. | | | | | | | 0.25 | | | | | | | 7.50 | | | | | | 0.25 | | | | | | |
| TOTAL | | | | | 1.25 | | 0.75 | | | | | 4.75 | 6.00 | 7.50 | | | | | | 0.50 | 3.25 | | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | | | | |
| 8.00 | SCREENS CHANGED [ ] YES [ ] NO | | | | |
| 8.00 | TOP 110 TOP 110 | | | | |
| 24.00 | MIDDLE 110 MIDDLE 110 | | | | |
| | BOTTOM 110 BOTTOM 110 | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 10 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| Greg Pukas | | 5 | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | [X] YES [ ] NO | 7 | |

### MORNING TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH

D.P. STANDS
D.P. SINGLES
KELLY DOWN
TOTAL
WT. OF D.C.
WT. OF STRING

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR

**HOLE CONDITION**: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE [X] WATER BASED [ ] OIL BASED

| | |
|---|---|
| TIME | 200 |
| DENSITY (KG/M3 ) | 1190 |
| FUNNEL VISCOSITY | 47 |
| FLUID LOSS (cm3 ) | |
| pH | 8.5 |

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL

DESILTER: HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |
| | | | |
| 0.00 | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 2600 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEYS: DEPTH ( M ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: ROSS GUYNUP

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 663.00 | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 115 | 1.25 | 5 | HEAD UP CIRC. CASING PRIOR TO CEMENTING. |
| 115 | 130 | 0.25 | 21 | SAFETY MTG. |
| 130 | 400 | 2.50 | 12 | RIG IN CEMENTERS DIPLACE CASING TO WATER PRESS. TEST CEMENT LINES CEMENT. |
| 400 | 415 | 0.25 | 7 | RIG SERVICE FLUSH DIVERTER. |
| 415 | 630 | 2.25 | 13 | W.O.C HOIST PIPE RACK IN DERRICK. LOAD OUT INPORT HAND. |
| 630 | 800 | 1.50 | 13 | W.O.C RIG OUT DIVERTER FLOW T- ETC. CLEAN MUD TANK |
| 800 | | | | |
| | | | | CEMENT SURFACE CASING WITH: 5.0 M3 WATER AHEAD, 37.0 tonne |
| | | | | 0:1:0 "G" NEAT. DISPLACE W/ 4.95 M3 WATER THRU DRILL PIPE, DID NOT |
| | | | | OVER DISPLACE. DID NOT BUMP PLUG, CHECK FLOATS OK. 4 M3 GOOD |
| | | | | CEMENT RETURNS TO SURFACE. FULL RETURNS THRU-OUT CEMENTING. |

NOTES: D.W.A.R.G

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | | CEMENTING | |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 7

| MORNING TOUR FROM 0 TO 800 | | | | | INJURIES |
|---|---|---|---|---|---|
| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
| DRILLER | | ROSS GUYNUP | 8.00 | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | KB |
| FLOOR HAND | | KIT BRINK | 8.00 | | KB |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | SM |
| LEASE HAND | | SHANE WINTERS | 8.00 | | SW |

### DAY TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH

D.P. STANDS
D.P. SINGLES
KELLY DOWN
TOTAL
WT. OF D.C.
WT. OF STRING

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR

**HOLE CONDITION**: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE [ ] WATER BASED [ ] OIL BASED

| | |
|---|---|
| TIME | 663.00 |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL

DESILTER: HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | @

DEVIATION SURVEYS: DEPTH ( M ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 663.00 | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1015 | 2.25 | 13 | W.O.C. , RIG OUT DIVERTER HRC, GUT LINE |
| 1015 | 1230 | 2.25 | 12 | CUT CASING, LAY DOWN CONDUCTOR & DIVERTER |
| 1230 | 1245 | 0.25 | 7 | RIG SERVICE |
| 1245 | 1600 | 3.25 | 22 | CUT & DRESS CASING, FIT & WELD CASING BOWL |
| 1600 | | | | |

NOTES: INSTALL CHOKE LINES
CLEAN TANKS, INSTALL SERVICE EQUIPTMENT

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 325 | | NIPPLE UP | |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 7

| DAY TOUR FROM 800 TO 2000 | | | | | INJURIES |
|---|---|---|---|---|---|
| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | DR |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | BD |
| MOTOR HAND | | KEVIN FINNING | 8.00 | | KF |
| FLOOR HAND | | Mark Suchy | 12.00 | | MS |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | RS |
| LEASE HAND | | SEAN HERDMAN | 8.00 | | SH |
| FLOOR HAND | | SEAN HERDMAN | 4.00 | | SH |

### EVENING TOUR

NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH

D.P. STANDS
D.P. SINGLES
KELLY DOWN
TOTAL
WT. OF D.C.
WT. OF STRING

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE: TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR

**HOLE CONDITION**: HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE [ ] WATER BASED [ ] OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

MUD MATERIALS ADDED: PRODUCT | AMOUNT | UNIT

SOLIDS CONTROL

DESILTER: HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

CENTRIFUGE: HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | 0 | @

DEVIATION SURVEYS: DEPTH ( M ) | DEVIATION | DIRECTION

DRILLER SIGNATURE: JOHN BURNS

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 1615 | 0.25 | 7 | RIG SERVICE |
| 1615 | 1800 | 1.75 | 14 | RIG IN FLARE LINES + SWEEP LINES WHILE BOWL COOLED DOWN |
| 1800 | 1815 | 0.25 | 21 | SAFETY MTG. W/CREW ON PICKING UP BOPS |
| 1815 | 2400 | 5.75 | 14 | PT. CASG. BOWL @ 7000 kpa 10 min |
| | | | | NIPPLE UP STACK |

NOTES: CHECK BRAKE LINKAGE

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 11.0 | 325 | | B.O.P | |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 239

| EVENING TOUR FROM 2000 TO 2400 | | | | | INJURIES |
|---|---|---|---|---|---|
| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
| DRILLER | | JOHN BURNS | 8.00 | | JB |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | BD |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | DP |
| FLOOR HAND | | DAVE GREEN | 4.00 | | DG |
| FLOOR HAND | | KIT BRINK | 4.00 | | KB |
| LEASE HAND | | DAVID NORN | 8.00 | | DN |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | BOB ROGERS |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | BR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | BR |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | BR |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | BR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | BR |
| ( 4. ) Crown Saver Checked | | BR |
| ( 5. ) Motor Kills Checked | | BR |

YEAR 2003 MONTH 3 DAY 9

RIG NO. 5

FUEL @ 08:00 HRS

RIG 245 BOILER

WEATHER: TEMPERATURE -16; CURRENT CONDITIONS; WIND DIRECTION CALM; ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | 244.5 | 224.4 | 59.50 | ALGOMA | L-80 | 51 | 663.94 | 7.70 | 663.00 |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | PT-1100 | OILWELL | | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO. 1 RIGUP & TEARDOWN; 2 DRILL ACTUAL; 3 REAMING; 4 CORING; 5 COND MUD & CIRC; 6 TRIPS; 7 RIG SERVICE; 8 REPAIR RIG; 9 CUT OFF DRILG LINE; 10 DEV. SURVEY; 11 W/RELINE LOGS; 12 RUN CSG & CEMENT; 13 WAIT ON CEMENT; 14 NIPPLE UP B.O.P.; 15 TEST B.O.P.; 16 DRILLSTEM TEST; 17 PLUG BACK; 18 SQUEEZE CEMENT; 19 FISHING; 20 DIR. WORK; 21 SAFETY MEETING; 22 23 24 25 26

| TIME HRS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 1.50 | | | | 5.75 | 0.25 | | 0.50 | | | | | | | | | | | | | | | | | |
| DAY | | | | | 2.00 | 3.25 | 0.25 | | | 0.25 | | 6.00 | | | | | | | | | 0.25 | | | | | |
| EVE. | | | | | 0.50 | 3.25 | 0.25 | | | | | | | | | | | | | | | | | | | |
| TOTAL | | 1.50 | | | 2.50 | 12.25 | 0.75 | | 0.50 | 0.25 | | 6.00 | | | | | | | | | 0.25 | | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | | | | |
| 12.00 | SCREENS CHANGED YES X NO | | | | |
| 4.00 | TOP 110 TOP 110 | | | | |
| 24.00 | MIDDLE 110 MIDDLE 110 | | | | |
| | BOTTOM 110 BOTTOM 110 | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 9 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| BOB ROGERS | | 5 | |
| **PROVINCE** | **CAMP** X YES NO | **RIG SAFETY DAYS** | |
| N.W.T. | | 6 | |

### BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| 1 | | | 0.35 |
| 1 | BIT SUB | 231 | 0.84 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | D.P. STANDS | | |
| 15 | D.P. SINGLES | | 427.50 |
| KELLY DOWN | | | 10.40 |
| TOTAL | | | 663.00 |
| WT. OF D.C. | 30 | | |
| WT. OF STRING | 46 | | |

| BIT RECORD | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X |
| | 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 663.00 |
| TOTAL HRS RUN | 57.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| 3 | 4 | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | 2200 |
| FILL ON BOTTOM (M) | 1.00 |

### MORNING TOUR — MUD RECORD

MUD TYPE ☐ WATER BASED ☐ OIL BASED

| | | | |
|---|---|---|---|
| TIME | 200 | 400 | 600 |
| DENSITY (KG/M3 ) | 1190 | 1185 | 1185 |
| FUNNEL VISCOSITY | 87 | 85 | 85 |
| FLUID LOSS (cm3 ) | | | |
| pH | 8.5 | 8.5 | 8.5 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 1185 | 1170 | 1880 |

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

**DRILLER SIGNATURE**: ROSS GUYNUP

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 646.00 | 663.00 | D | 120 | 12 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 11432 | 140.0 | 110 | 140.0 | 110 |

REDUCED PUMP SPEED: @ @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 30 | 0.50 | 9 | CUT OFF DRLL LINE |
| 30 | 230 | 2.00 | 6 | M/U BIT R.I.H B.H.A FLOW CHECK |
| 230 | 615 | 3.75 | 6 | P/U 39 JOINTS 20.0 KG/ M3 DRILL PIPE. R.I.H REAM BRIDGE 530M.558M.-646M. |
| 615 | 630 | 0.25 | 7 | RIG SERVICE CHECK BRAKE ASSEMBLY |
| 630 | 800 | 1.50 | 2 | DRILL F/ 646M.-663M. |
| 800 | | | | |

NOTES: D.W.A.R.G

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | 70 | REAMING | |

| RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

**CREW SAFETY DAYS**: 6

### MORNING TOUR — CREW

FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 8.00 | | | SW |

### DAY TOUR — BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

| BIT RECORD | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X |
| | 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 663.00 |
| TOTAL HRS RUN | 57.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| 3 | 4 | WT | A | F | 4.00 | BT | TD | 11.48 |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | 1.50 |

### DAY TOUR — MUD RECORD

MUD TYPE X WATER BASED ☐ OIL BASED

| | | | |
|---|---|---|---|
| TIME | 800 | 1900 | |
| DENSITY (KG/M3 ) | 1190 | 1190 | |
| FUNNEL VISCOSITY | 93 | 97 | |
| FLUID LOSS (cm3 ) | | | |
| pH | 8.5 | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| DESCO | 4 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

**DRILLER SIGNATURE**: DAVID RUSCHEINSKI

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 663.00 | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 1830 | 140.0 | 120 | 140.0 | |

REDUCED PUMP SPEED: @ 0 @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 649.00 | 1.80 | 203 |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 830 | 0.50 | 5 | CIRC HOLE CLEAN |
| 830 | 845 | 0.25 | 7 | RIG SERVICE |
| 845 | 900 | 0.25 | 10 | DEV. SURVEY |
| 900 | 1115 | 2.25 | 6 | TRIP OUT OF HOLE TO RUN CASING, FLOW CHECK @ 649m & 233m |
| 1115 | 1215 | 1.00 | 6 | LAY DOWN 9" COLLARS |
| 1215 | 1230 | 0.25 | 21 | SAFETY MTG. |
| 1230 | 1830 | 6.00 | 12 | RIG UP TO & RUN CASING, TAC FLOAT & SHOE |
| 1830 | 2000 | 1.50 | 5 | CIRCULATE CASING, CONDITION MUD |
| | | | | RAN: 51 JOINTS OF 244.5 MM, 59.5 KG/M, L-80, NEW ALGOMA CASING |
| | | | | TOTAL LENGTH: 663.94 M. LANDED ON BOTTOM @ 663.0 M. FLOAT |
| | | | | COLLAR @ 648.92 M. |

NOTES: CHECK BRAKE LINKAGE, TONGS & LINES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.0 | 325 | 55 | RUN CASING | |

| RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

**CREW SAFETY DAYS**: 6

### DAY TOUR — CREW

FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | KEVIN FINNING | 12.00 | | | KF |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | RICK SONFRERE | 12.00 | | | RS |
| LEASE HAND | | SEAN HERDMAN | 12.00 | | | SH |

### EVENING TOUR — BIT RECORD

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) BIT | O.D. | LENGTH |
|---|---|---|---|
| | D.P. STANDS | | |
| | D.P. SINGLES | | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

| BIT RECORD | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

### EVENING TOUR — MUD RECORD

MUD TYPE ☐ WATER BASED ☐ OIL BASED

| | | | |
|---|---|---|---|
| TIME | | | |
| DENSITY (KG/M3 ) | | | |
| FUNNEL VISCOSITY | | | |
| FLUID LOSS (cm3 ) | | | |
| pH | | | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

**DRILLER SIGNATURE**: ROSS GUYNUP

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 636.00 | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ 0 @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2030 | 0.50 | 5 | COND MUD & CIRC CASING AT 663M. |
| 2030 | 2345 | 3.25 | 6 | P/U PIPE F/ DERRICK R.I.H STRAP , RUN IN DP TO 646 M. |
| 2345 | 2400 | 0.25 | 7 | RIG SERVICE. SAFTEY MEETINHG HEAD UP. |
| 2400 | | | | |

NOTES:

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 325 | | | |

| RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT |
|---|---|---|---|---|---|---|

**CREW SAFETY DAYS**: 238

### EVENING TOUR — CREW

FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | INJURIES NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 4.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 4.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 4.00 | | | SW |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANA[redacted]KO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | BOB ROGERS |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | BR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | BR |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | BR |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | BR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | BR |
| ( 4. ) Crown Saver Checked | | BR |
| ( 5. ) Motor Kills Checked | | BR |

YEAR 2003 | MONTH 3 | DAY 8

RIG NO. 5

FUEL @ 08:00 HRS

RIG 94 | BOILER

WEATHER
TEMPERATURE -21
CURRENT CONDITIONS
WIND DIRECTION CALM
ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | PT-1100 | OILWELL | | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO. 1 RIG/UP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 WORK TIGHT HOLE | 23 | 24 | 25 | 26

| TIME HRS | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.25 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | | | | |
| DAY | | | | | 0.50 | 0.25 | 0.25 | | | | | | | | | | | | | | 11.00 | | | | |
| EVE. | | | | | | 3.00 | 0.25 | | 0.50 | | | | | | | | | | | 0.25 | | | | | |
| TOTAL | | 7.25 | | | 0.50 | 3.25 | 0.75 | | 0.50 | 0.50 | | | | | | | | | | 0.25 | 11.00 | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | | | | |
| 12.00 | SCREENS CHANGED [X] YES [ ] NO | | | | |
| 4.00 | TOP 110 TOP | | | | |
| 24.00 | MIDDLE 110 MIDDLE | | | | |
| | BOTTOM BOTTOM | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 8 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | **RIG NO.** | | |
| BOB ROGERS | 5 | | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | [X] YES [ ] NO | 5 | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.35 | |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| | D.P. STANDS | | |
| 14 | D.P. SINGLES | | 400.17 |
| | KELLY DOWN | | 12.80 |
| | TOTAL | | 646.21 |
| | WT. OF D.C. | 30 | |
| | WT. OF STRING | 47 | |

### BIT RECORD

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X |
| | 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 570.00 |
| TOTAL HRS RUN | 56.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

### HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 1234 |
| FILL ON BOTTOM (M) | |

## MORNING TOUR

### MUD RECORD

MUD TYPE [X] WATER BASED [ ] OIL BASED

| | | | |
|---|---|---|---|
| TIME | 200 | 430 | 630 |
| DENSITY (KG/M3 ) | 1175 | 1170 | 1170 |
| FUNNEL VISCOSITY | 74 | 73 | 73 |
| FLUID LOSS (cm3 ) | | | |
| pH | 8.5 | 8.5 | 8.5 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 1170 | 1155 | 1865 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 11800 | 140.0 | 110 | 140.0 | 110 |

REDUCED PUMP SPEED

@ @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 572.00 | 2.00 | 336.9 |
| 619.00 | 1.75 | 364.9 |

DRILLER SIGNATURE

ROSS GUYNUP

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 570.00 | 646.00 | D | 45 | 12 |
| | | | | 14 |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 130 | 1.50 | 2 | DRILL F/ 570M.-589M. |
| 130 | 145 | 0.25 | 10 | DEV. SURVEY DIR. SINGLE SHOT |
| 145 | 200 | 0.25 | 7 | RIG SERVICE |
| 200 | 615 | 4.25 | 2 | DRILL F/ 589M.- 636M. |
| 615 | 630 | 0.25 | 10 | DEV. SURVEY DIR. SINGLE SHOT. |
| 630 | 800 | 1.50 | 2 | DRILL F/ 636M.-646M. |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | 56 | TRIPPING | |

| RATE SCHEDULE | [X] REGULAR | [ ] REPAIR | [ ] INVERT |
|---|---|---|---|

CREW SAFETY DAYS: 5

| MORNING TOUR | FROM 0 | TO 800 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 8.00 | | | SW |

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.35 | |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| | D.P. STANDS | | |
| 14 | D.P. SINGLES | | 400.17 |
| | KELLY DOWN | | 12.80 |
| | TOTAL | | 646.21 |
| | WT. OF D.C. | 30 | |
| | WT. OF STRING | 47 | |

### BIT RECORD

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X |
| | 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 570.00 |
| TOTAL HRS RUN | 56.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

### HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | 1200 |
| FILL ON BOTTOM (M) | |

### MUD RECORD

MUD TYPE [X] WATER BASED [ ] OIL BASED

| | | | |
|---|---|---|---|
| TIME | 800 | 1300 | 1830 |
| DENSITY (KG/M3 ) | 1170 | 1175 | 1200 |
| FUNNEL VISCOSITY | 76 | 88 | 83 |
| FLUID LOSS (cm3 ) | | | |
| pH | 8.5 | 8.5 | 8.5 |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 1200 | 1190 | 1880 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 12000 | 140.0 | 110 | 140.0 | 110 |

REDUCED PUMP SPEED

@ 0 @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

DAVID RUSCHEINSKI

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 646.00 | | | | |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 830 | 0.50 | 5 | CIRC HOLE CLEAN |
| 830 | 845 | 0.25 | 6 | WIPER TRIP ,BLOW KELLY, STRAP OUT, |
| 845 | 1200 | 3.25 | 22 | PULL TIHGT HOLE TO 436m |
| 1200 | 1215 | 0.25 | 7 | RIG SERVICE |
| 1215 | 2000 | 7.75 | 22 | PULL TIGHT HOLE F/ 436m - 230m |
| 2000 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES, CROWN SAVER

THE DERRICK HAND SLIPPED WHILE SNIPING LINER IN

PUMP HITTING HIMSELF IN FACE

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.0 | 325 | 75 | TIGHT HOLE | |

| RATE SCHEDULE | [X] REGULAR | [ ] REPAIR | [ ] INVERT |
|---|---|---|---|

CREW SAFETY DAYS: 5

| DAY TOUR | FROM 800 | TO 2000 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | BD | |
| MOTOR HAND | | KEVIN FINNING | 12.00 | | | KF |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | RICK SONFRERE | 12.00 | | | RS |
| LEASE HAND | | SEAN HERDMAN | 12.00 | | | SH |

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| 1 | BIT | 0.35 | |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| | D.P. STANDS | | |
| 14 | D.P. SINGLES | | 400.17 |
| | KELLY DOWN | | 12.80 |
| | TOTAL | | 646.21 |
| | WT. OF D.C. | 30 | |
| | WT. OF STRING | 47 | |

### BIT RECORD

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 15.9 |
| | X |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 570.00 |
| TOTAL HRS RUN | 56.25 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

### HOLE CONDITION

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

### MUD RECORD

MUD TYPE [X] WATER BASED [ ] OIL BASED

| | | | |
|---|---|---|---|
| TIME | 2000 | | |
| DENSITY (KG/M3 ) | 1190 | | |
| FUNNEL VISCOSITY | 60 | | |
| FLUID LOSS (cm3 ) | | | |
| pH | 8.5 | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 4.00 | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED

@ 0 @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

ROSS GUYNUP

### METRES DRILLED

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 646.00 | | | | |

### TIME LOG

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 21 | SAFETY MTG. W/ CREW TIGHT HOLE TABLE TOURQE W/ MOTOR. |
| 2015 | 2230 | 2.25 | 6 | CONTINUE P.O.O.H F/ 230M. KELYY UP F/ TIGHT SPOTS. |
| 2230 | 2245 | 0.25 | 7 | RIG SERVICE. FLOW CHECK. CHECK BIT O.K |
| 2245 | 2330 | 0.75 | 6 | L/D MUD MOTOR. STRAP PIPE L/D F/ TRIP. STRAP PIPE TO BE P/U. |
| 2330 | 2400 | 0.50 | 9 | CUT OFF DRLL LINE |
| | | | | TALLY 646.21M. |
| | | | | STRAP 646.52M. |
| | | | | DIFF..31M. N/C |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 345 | | TIGHT HOLE | |

| RATE SCHEDULE | [X] REGULAR | [ ] REPAIR | [ ] INVERT |
|---|---|---|---|

CREW SAFETY DAYS: 237

| EVENING TOUR | FROM 2000 | TO 2400 | INJURIES |
|---|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 4.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 4.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 4.00 | | | SW |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | BOB ROGERS |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | BR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | BR |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | BR |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | BR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | BR |
| ( 4. ) Crown Saver Checked | | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 7

RIG NO. 5

FUEL @ 08:00 HRS

RIG 209 | BOILER

WEATHER: TEMPERATURE -29 | CURRENT CONDITIONS | WIND DIRECTION CALM | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | | PT-1100 | OILWELL | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO.: 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRLG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26

TIME - HRS

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.25 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | | | | |
| DAY | | 10.75 | | | 0.25 | | 0.25 | | | 0.75 | | | | | | | | | | | | | | | |
| EVE. | | 3.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | |
| TOTAL | | 21.50 | | | 0.25 | | 0.75 | | | 1.50 | | | | | | | | | | | | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| 8.00 | NO. 2 TYPE BRANDIT | | | | |
| 12.00 | SCREENS CHANGED [ ] YES [X] NO | | | | |
| 4.00 | TOP 84 / 84 TOP | | | | |
| 24.00 | MIDDLE 84 / 84 MIDDLE | | | | |
| | BOTTOM 84 / 84 BOTTOM | | | | |

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.35 |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| 5 | D.P. | STANDS | |
| 2 | D.P. | SINGLES | 161.87 |
| KELLY DOWN | | | 12.80 |
| TOTAL | | | 407.91 |
| WT. OF D.C. | 30 | | |
| WT. OF STRING | 41 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X / 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 407.00 |
| TOTAL HRS RUN | 34.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 1334 |
| FILL ON BOTTOM (M) | |

**MORNING TOUR**

**MUD RECORD**

| MUD TYPE | [X] WATER BASED | [ ] OIL BASED | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 200 | 400 | 630 | 331.00 | 407.00 | D | 45 | 10 |
| DENSITY (KG/M3 ) | 1125 | 1125 | 1125 | | | | | 12 |
| FUNNEL VISCOSITY | 55 | 55 | 55 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | 8.5 | 8.5 | 8.5 | | | | | |

**METRES DRILLED**

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| DETERGENT | 1 | PAILS |

**SOLIDS CONTROL**

**DESILTER**

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

**CENTRIFUGE**

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 1125 | 1105 | 1795 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 8.00 | 1125 | 1105 | 1870 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 11200 | 140.0 | 110 | 140.0 | 110 |

**REDUCED PUMP SPEED**

| @ | | @ | |
|---|---|---|---|

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 333.00 | 1.25 | 349.9 |
| 381.00 | 1.25 | 325.9 |

**DRILLER SIGNATURE**

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 200 | 2.00 | 2 | DRILL F/ 331M.-350M |
| 200 | 215 | 0.25 | 10 | DEV. SURVEY |
| 215 | 615 | 4.00 | 2 | DRILL F/ 350M.- 398M. |
| 615 | 630 | 0.25 | 7 | RIG SERVICE CHECK BRAKE ASSEMBLY. |
| 630 | 645 | 0.25 | 10 | DEV. SURVEY |
| 645 | 800 | 1.25 | 2 | DRILL F/ 398M.-407M. |

NOTES: D.W.A R.G CHECK BRAKE ASSEMBLY SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | 54 | CONECTIONS | |

**DRILLING CREW PAYROLL DATA**

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 7 |
| OPERATOR: ANADARKO CANADA ENERGY | CONTRACTOR: SHEHTAH-WILSON PARTNERSHIP | | |
| RIG MANAGER: BOB ROGERS | RIG NO.: 5 | | |
| PROVINCE: N.W.T. | CAMP [X] YES [ ] NO | RIG SAFETY DAYS: 4 | |

**MORNING TOUR** FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 8.00 | | | SW |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 4

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.35 |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| 10 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 295.32 |
| KELLY DOWN | | | 12.80 |
| TOTAL | | | 541.36 |
| WT. OF D.C. | 30 | | |
| WT. OF STRING | 45 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X / 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 541.00 |
| TOTAL HRS RUN | 45.50 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | 2UP |
| TORQUE AT BOTTOM | 1200 |
| FILL ON BOTTOM (M) | |

**DAY TOUR**

**MUD RECORD**

| MUD TYPE | [X] WATER BASED | [ ] OIL BASED | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 800 | 1230 | 1900 | 407.00 | 532.00 | D | 45 | 12 |
| DENSITY (KG/M3 ) | 1125 | 1125 | 1140 | 532.00 | 541.00 | D | 45 | 14 |
| FUNNEL VISCOSITY | 52 | 46 | 57 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | 8.5 | 8.5 | 9.5 | | | | | |
| PVT | 38.60 | 38.40 | 38.30 | | | | | |

**METRES DRILLED**

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| GEL | 5 | SX |
| CAUSTIC | 1 | SX |
| BARAZAN D | 2 | SX |

**SOLIDS CONTROL**

**DESILTER**

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

**CENTRIFUGE**

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 1140 | 1130 | 1900 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 9.50 | 1140 | 1130 | 1890 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 11000 | 140.0 | 110 | 140.0 | 110 |

**REDUCED PUMP SPEED**

| @ | 0 | @ |
|---|---|---|

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 427.00 | 2.00 | 63 |
| 474.00 | 1.75 | 235 |

**DRILLER SIGNATURE**

DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1045 | 2.75 | 2 | DRILL F/ 407m - 446m |
| 1045 | 1100 | 0.25 | 7 | RIG SERVICE |
| 1100 | 1115 | 0.25 | 10 | SURVEY |
| 1115 | 1500 | 3.75 | 2 | DRILL F/ 446m - 493m |
| 1500 | 1515 | 0.25 | 10 | DEV. SURVEY MISRUN |
| 1515 | 1530 | 0.25 | 5 | COND MUD & CIRC |
| 1530 | 1545 | 0.25 | 10 | DEV. SURVEY |
| 1545 | 2000 | 4.25 | 2 | DRILL F/ 493m - 541m |
| 2000 | | | | |

NOTES: CHECK BRAKE LINKAGE, TONGS& LINES
OFF BTM PRESS. 9760 kpa

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.0 | 325 | 46 | ICY SURFACES | |

**DAY TOUR** FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | KEVIN FINNING | 12.00 | | | KF |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | RICK SONFRERE | 12.00 | | | RS |
| LEASE HAND | | SEAN HERDMAN | 12.00 | | | SH |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 4

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| 1 | BIT | O.D. | 0.35 |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| 11 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 323.96 |
| KELLY DOWN | | | 12.80 |
| TOTAL | | | 570.00 |
| WT. OF D.C. | 30 | | |
| WT. OF STRING | 45 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 15.9 / X |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 570.00 |
| TOTAL HRS RUN | 49.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 1500 |
| FILL ON BOTTOM (M) | |

**EVENING TOUR**

**MUD RECORD**

| MUD TYPE | [X] WATER BASED | [ ] OIL BASED | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 2000 | 2200 | 2400 | 541.00 | 570.00 | D | 45 | 14 |
| DENSITY (KG/M3 ) | 1150 | 1155 | 1160 | | | | | 15 |
| FUNNEL VISCOSITY | 58 | 58 | 59 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | 8.5 | 8.5 | 8.5 | | | | | |

**METRES DRILLED**

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| DETERGENT | 1 | PAILS |
| BARAZAN D | 2 | SX |

**SOLIDS CONTROL**

**DESILTER**

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

**CENTRIFUGE**

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 1160 | 1140 | 1860 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 12000 | 140.0 | 110 | 140.0 | 110 |

**REDUCED PUMP SPEED**

| @ | 0 | @ |
|---|---|---|

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 524.00 | 1.75 | 159.9 |

**DRILLER SIGNATURE**

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 7 | RIG SERVICE CHECK BRAKE ASSEMBLY. |
| 2015 | 2030 | 0.25 | 10 | DEV. SURVEY DIR. SINGLE SHOT. |
| 2030 | 2400 | 3.50 | 2 | DRILL F/ 541M.-570M. |

NOTES: D.W.A R.G CHECK SLIP TONG DIES. BACK UP LINES ANCHOR POINTS.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 345 | 47 | COLD WEATHER | 0 |

**EVENING TOUR** FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 4.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 4.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 4.00 | | | SW |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 236

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANA[redacted]KO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | BOB ROGERS |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1 ) Daily Walk Around Inspection | KG | BR |
| ( 2 ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3 ) H2S Signs Posted If Required | KG | BR |
| ( 4 ) Well Licence & Stick Diagram Posted | KG | BR |
| ( 5 ) Flare Lines Staked | | |
| ( 6 ) BOP Drills Performed | | |
| ( 7 ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | BR |
| ( 1 ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2 ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3 ) Mast Inspection before Raising or Lowering | | BR |
| ( 4 ) Crown Saver Checked | | BR |
| ( 5 ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 6

RIG NO. 5

FUEL @ 08:00 HRS — RIG 85 | BOILER

WEATHER — TEMPERATURE -23 | CURRENT CONDITIONS | WIND DIRECTION CALM | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X.H.251 | PT-1100 | OILWELL | | 254 |
| 114 | 20.00 | SS-95 | 73 | 158 | 4.5" X.H.125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X.H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CODE NO.

| TIME HRS | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | 7.25 | | | | | 0.25 | | | 0.50 | | | | | | | | | | | | | | | | | 8.00 |
| DAY | | 10.75 | | | | | 0.25 | | | 1.00 | | | | | | | | | | | | | | | | | 12.00 |
| EVE. | | 3.50 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | | 4.00 |
| TOTAL | | 21.50 | | | | | 0.75 | | | 1.75 | | | | | | | | | | | | | | | | | 24.00 |

SHALE SHAKER ( S ) — NO. 2 | TYPE BRANDIT | TYPE

SCREENS CHANGED [ ] YES [X] NO

| TOP | | TOP | |
|---|---|---|---|
| 84 | | 84 | |
| MIDDLE | | MIDDLE | |
| 84 | | 84 | |
| BOTTOM | | BOTTOM | |
| 84 | | 84 | |

RENTALS / SERVICES

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.35 |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 5 | D.C. | 165 | 46.61 |
| 1 | X.O. | 168 | 0.53 |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.80 |
| TOTAL | | | 135.48 |
| WT. OF D.C. | 27 | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X |
| | 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 135.00 |
| TOTAL HRS RUN | 10.00 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MORNING TOUR** — MUD RECORD — METRES DRILLED

| MUD TYPE | [X] WATER BASED | [ ] OIL BASED | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 200 | 400 | 630 | 69.00 | 135.00 | D | 45 | 5 |
| DENSITY (KG/M3 ) | 1085 | 1090 | 1090 | | | | | 6 |
| FUNNEL VISCOSITY | 42 | 42 | 40 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | 9.0 | 9.0 | 9.0 | | | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| GEL | 10 | SX |
| DETERGENT | 1 | PAILS |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 8.00 | 1090 | 1075 | 1760 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 0.00 | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 6700 | 140.0 | 110 | 140.0 | 110 |

REDUCED PUMP SPEED — @ | @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 90.00 | 0.25 | 19.9 |

DRILLER SIGNATURE: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 415 | 4.25 | 2 | DRILL F/ 69M.-98M. |
| 415 | 430 | 0.25 | 7 | RIG SERVICE FT. DIVERTER 9 SEC. CLOSE. |
| 430 | 445 | 0.25 | 10 | DEV. SURVEY SINGLE SHOT DIR. MISS. RUN. |
| 445 | 530 | 0.75 | 2 | DRILL F/ 98M.-107M. |
| 530 | 545 | 0.25 | 10 | DEV. SURVEY |
| 545 | 800 | 2.25 | 2 | DRILL F/ 107M.-135M. |
| | | | | SHELDON MICHEL SLIPPED AS HE WAS CARYING FLOAT COLLAR IN DOGHOUSE. |
| | | | | CUTTING LEFT MIDDLE.AND RING FINGER ALSO BRUISING LEFT KNEE. |
| | | | | S.M |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY, SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 345 | 28 | P/U D/C.s | |

**DRILLING CREW PAYROLL DATA**

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 6 |
| OPERATOR: ANADARKO CANADA ENERGY | CONTRACTOR: SHEHTAH-WILSON PARTNERSHIP | | |
| RIG MANAGER: BOB ROGERS | RIG NO.: 5 | | |
| PROVINCE: N.W.T. | CAMP [X] YES [ ] NO | RIG SAFETY DAYS: 3 | |

**MORNING TOUR** FROM 0 TO 800 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | SM | |
| LEASE HAND | | SHANE WINTERS | 8.00 | | | SW |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 3

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.35 |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| 1 | D.P. | STANDS | |
| 1 | D.P. | SINGLES | 38.08 |
| KELLY DOWN | | | 12.80 |
| TOTAL | | | 284.12 |
| WT. OF D.C. | 30 | | |
| WT. OF STRING | 38 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X |
| | 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 284.00 |
| TOTAL HRS RUN | 20.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 1200 |
| FILL ON BOTTOM (M) | |

**DAY TOUR** — MUD RECORD — METRES DRILLED

| MUD TYPE | [X] WATER BASED | [ ] OIL BASED | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 800 | 1230 | 1730 | 135.00 | 231.00 | D | 45 | 6 |
| DENSITY (KG/M3 ) | 1100 | 1120 | 1120 | 231.00 | 247.00 | D | 45 | 7 |
| FUNNEL VISCOSITY | 43 | 43 | 46 | 247.00 | 268.00 | D | 45 | 9 |
| FLUID LOSS (cm3 ) | | | | 268.00 | 284.00 | D | 45 | 10 |
| pH | 10.0 | 9.5 | 9.0 | | | | | |
| | 39.60 | 38.40 | 37.40 | | | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| GEL | 5 | SX |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 12.00 | 1120 | 1110 | 1880 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 1.00 | 1120 | 1110 | 1880 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 8400 | 140.0 | 110 | 140.0 | 110 |

REDUCED PUMP SPEED — @ | @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 137.00 | 1.00 | 19.9 |
| 183.00 | 1.25 | 307 |
| 238.00 | 1.00 | 74 |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE |
| 815 | 1900 | 10.75 | 2 | DRILL F/135m - 284m |
| 1900 | 2000 | 1.00 | 10 | ACCUMULATIVE SURVEY TIME |
| 2000 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.0 | 350 | 39 | DIVERTER | |

**DAY TOUR** FROM 800 TO 2000 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | KEVIN FINNING | 12.00 | | | KF |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | RICK SONFRERE | 12.00 | | | RS |
| LEASE HAND | | SEAN HERDMAN | 12.00 | | | SH |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 3

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | 0.35 |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 3 | D.C. | 165 | 28.27 |
| 1 | SHORT D/C | 179 | 5.06 |
| 1 | JAR | 175 | 4.74 |
| 8 | D.C. | 165 | 74.52 |
| 9 | H.W.D.P. | 159 | 82.65 |
| 1 | X.O. | 168 | 0.53 |
| | BHA 233.24 | | |
| 3 | D.[redacted] | STANDS | 85.67 |
| | D.P. | SINGLES | |
| KELLY DOWN | | | 12.80 |
| TOTAL | | | 331.71 |
| WT. OF D.C. | 30 | | |
| WT. OF STRING | 40 | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 15.9 |
| | X |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 331.00 |
| TOTAL HRS RUN | 27.50 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | NIL |
| TORQUE AT BOTTOM | 1300 |
| FILL ON BOTTOM (M) | |

**EVENING TOUR** — MUD RECORD — METRES DRILLED

| MUD TYPE | [X] WATER BASED | [ ] OIL BASED | | FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|---|---|---|---|
| TIME | 2100 | 2200 | 2400 | 284.00 | 331.00 | D | 45 | 10 |
| DENSITY (KG/M3 ) | 1130 | 1130 | 1130 | | | | | |
| FUNNEL VISCOSITY | 45 | 46 | 46 | | | | | |
| FLUID LOSS (cm3 ) | | | | | | | | |
| pH | 8.5 | 9.0 | 9.0 | | | | | |

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| GEL | 5 | SX |
| DETERGENT | 1 | PAILS |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 4.00 | 1130 | 1110 | 1825 |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| 4.00 | 1130 | 1110 | 1840 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 10500 | 140.0 | 110 | 140.0 | 110 |

REDUCED PUMP SPEED — @ | @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 286.00 | 1.25 | 150.9 |

DRILLER SIGNATURE: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2130 | 1.50 | 2 | DRILL 284M.- 303M. |
| 2130 | 2145 | 0.25 | 7 | RIG SERVICE. FT. DIVERTER |
| 2145 | 2200 | 0.25 | 10 | DEV. SURVEY DIR. SINGLE SHOT. |
| 2200 | 2400 | 2.00 | 2 | DRILL F/ 303M.-331M. |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 345 | 41 | STEAM | 0 |

**EVENING TOUR** FROM 2000 TO 2400 — INJURIES

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 4.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 4.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 4.00 | | | SW |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

CREW SAFETY DAYS: 235

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | BOB ROGERS |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | KG | BR |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | KG | BR |
| ( 4. ) Well Licence & Stick Diagram Posted | KG | BR |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | KG | BR |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | BR |
| ( 4. ) Crown Saver Checked | | BR |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 5

RIG NO. 5

FUEL @ 08:00 HRS

RIG 142 | BOILER

WEATHER: TEMPERATURE -23 | CURRENT CONDITIONS | WIND DIRECTION NORTH | ROAD CONDITION ICE

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X/H 251 | PT-1100 | OILWELL | | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X/H 125 | PT-1100 | OILWELL | | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X/H 21 | | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

**TIME-HRS**

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRLG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | 7.75 | | | | | | 0.25 | | | | | | | | | | | | | | | | | | | 8.00 |
| DAY | 5.75 | 2.75 | | | 0.25 | 2.75 | 0.25 | | | | | | | | 0.25 | | | | | | 0.25 | | | | | 12.00 |
| EVE. | | 3.25 | | | | | 0.25 | | | 0.25 | | | | | | | | | | | | | | | | 4.00 |
| TOTAL | 13.50 | 6.00 | | | 0.25 | 2.75 | 0.75 | | | 0.25 | | | | | 0.25 | | | | | | 0.25 | | | | | 24.00 |

**SHALE SHAKER ( S )**

NO. 2 | TYPE | TYPE

SCREENS CHANGED [X] YES [ ] NO

| | TOP | TOP |
|---|---|---|
| | 84 | 84 |
| MIDDLE | 84 | 84 |
| BOTTOM | 84 | 84 |

**RENTALS / SERVICES**

| | MORN | DAY | EVE |
|---|---|---|---|
| | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 5 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | **RIG NO.** | | |
| BOB ROGERS | 5 | | |
| **PROVINCE** | **CAMP** [X] YES [ ] NO | **RIG SAFETY DAYS** | |
| N.W.T. | | 2 | |

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## MORNING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |

D.P. STANDS
D.P. SINGLES
KELLY DOWN
**TOTAL**
WT. OF D.C.
WT. OF STRING

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE [ ] WATER BASED [ ] OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 7 | RIG SERVICE |
| 15 | 800 | 7.75 | 1 | RIG UP . RIG IN DIVERTER DIVERTER LINES. FLARE TANK. RIG TO SPUD. |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.5 | 340 | | | |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

**CREW SAFETY DAYS**: 2

**INJURIES**

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | KB |
| FLOOR HAND | | KIT BRINK | 8.00 | | KB |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | SM |
| LEASE HAND | | SHANE WINTERS | 8.00 | | SW |

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## DAY TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 1 | D.C. | 229 | 8.94 |
| 1 | BELL SUB | 216 | 0.94 |
| 1 | X.O. | 168 | 0.53 |

D.P. STANDS
D.P. SINGLES
KELLY DOWN 6.16
**TOTAL** 35.00
WT. OF D.C. 25
WT. OF STRING 25

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 X / 15.9 |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 35.00 |
| TOTAL HRS RUN | 2.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE [X] WATER BASED [ ] OIL BASED

| | | | |
|---|---|---|---|
| TIME | | 1900 | 1930 |
| DENSITY (KG/M3 ) | 1030 | 1035 | 1040 |
| FUNNEL VISCOSITY | 46 | 45 | 43 |
| FLUID LOSS (cm3 ) | | | |
| pH | 10.5 | 10.5 | 10.5 |
| | | | 37.00 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| GEL | 59 | SX |
| CAUSTIC | 1 | SX |
| SODA ASH | 1 | SX |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 0.00 | 35.00 | D | 35 | 3 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 2120 | 140.0 | 125 | 140.0 | |

REDUCED PUMP SPEED: @ | 0 | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

**DRILLER SIGNATURE**

DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE |
| 815 | 1130 | 3.25 | 1 | WELD FLOW NIPPLE, INSTALL FLOW NIPPLE, FLOW LINE |
| 1130 | 1400 | 2.50 | 1 | PICK UP SWIVEL, KELLY BAR & SOCK, MOUSE HOLE |
| 1400 | 1645 | 2.75 | 6 | MAKE UP BHA |
| 1645 | 1700 | 0.25 | 5 | BREAK CIRC CHECK SYSTEM |
| 1700 | 1715 | 0.25 | 15 | PRESSURE TEST DIVERTER TO 1400 kpa |
| 1715 | 2000 | 2.75 | 2 | DRILL F/ 0m - 35m |
| 2000 | | | | |

NOTES : CHECK BRAKE LINKAGE, TONGS & LINES
FUNTION DIVERTER C/ 14 SECS

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.0 | 350 | 25 | PRE SPUD | 0 |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

**CREW SAFETY DAYS**: 2

**INJURIES**

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | DR |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | BD |
| MOTOR HAND | | KEVIN FINNING | 12.00 | | KF |
| FLOOR HAND | | Mark Suchy | 12.00 | | MS |
| FLOOR HAND | | RICK SONFRERE | 12.00 | | RS |
| LEASE HAND | | SEAN HERDMAN | 12.00 | | SH |

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## EVENING TOUR

**BIT RECORD**

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | O.D. | LENGTH |
|---|---|---|---|
| | BIT | | |
| 1 | SQUARE MOTOR | 307 | 8.51 |
| 1 | FLOAT SUB | 220 | 0.47 |
| 1 | MONEL | 232 | 9.10 |
| 2 | D.C. | 229 | 18.10 |
| 1 | BELL SUB | 216 | 0.94 |
| 2 | D.C. | 165 | 18.80 |
| 1 | X.O. | 168 | 0.53 |

D.P. STANDS
D.P. SINGLES
KELLY DOWN 12.80
**TOTAL** 69.60
WT. OF D.C. 23
WT. OF STRING

| | |
|---|---|
| BIT NO. | 1 |
| SIZE | 311.0 |
| IADC CODE | |
| MANUFACTURER | REED |
| TYPE | HB22 |
| SERIAL NO. | RR0555 |
| JETS | 3 15.9 / X |
| DEPTH OUT | |
| DEPTH IN | 0.00 |
| TOTAL M DRILLED | 69.00 |
| TOTAL HRS RUN | 2.75 |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG
TORQUE AT BOTTOM
FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE [X] WATER BASED [ ] OIL BASED

| | | | |
|---|---|---|---|
| TIME | 2000 | 2200 | 2400 |
| DENSITY (KG/M3 ) | 1060 | 1065 | 1070 |
| FUNNEL VISCOSITY | 43 | 41 | 41 |
| FLUID LOSS (cm3 ) | | | |
| pH | 9.0 | 9.0 | 9.0 |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| GEL | 5 | SX |
| DETERGENT | 1 | PAILS |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| 0.00 | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| 35.00 | 69.00 | D | 45 | 4 |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| 4300 | 140.0 | 100 | 140.0 | 100 |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| 41.00 | 0.75 | |

**DRILLER SIGNATURE**

ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 21 | SAFETY MTG. PRE. SPUD MEETING. |
| 2015 | 2200 | 1.75 | 2 | DRILL F/ 35M.-50M. TIME DRILL. |
| 2200 | 2215 | 0.25 | 7 | RIG SERVICE. FT. DIVERTER. |
| 2215 | 2230 | 0.25 | 10 | DEV. SURVEY WIRELINE TOCO |
| 2230 | 2400 | 1.50 | 2 | DRILL F/ 50M.- 69M. TIME DRILL |

NOTES : D.W.A R.G CHECK BRAKE ASSEMBLY .SLIP TONG DIES.

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.5 | 345 | 25 | PRE. SPUD | 0 |

RATE SCHEDULE [X] REGULAR [ ] REPAIR [ ] INVERT

**CREW SAFETY DAYS**: 234

**INJURIES**

| CREW | SOC INS. NO. | NAME | HRS | YES | NO |
|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | AB |
| MOTOR HAND | | KIRK BJORNSON | 4.00 | | KB |
| FLOOR HAND | | KIT BRINK | 4.00 | | KB |
| FLOOR HAND | | SHELDON MICHEL | 4.00 | | SM |
| LEASE HAND | | SHANE WINTERS | 4.00 | | SW |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| 1978 | ANADARKO ARROWHEAD RIVER F-56 |
| **OPERATOR** | **CONTRACTOR** |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| **SURFACE LOCATION** | **UNIQUE ID** |
| 60:34:29.99 N 122:55:46.13 W | 300F566040122450 |
| **SIGNATURE OF OPERATOR'S REPRESENTATIVE** | **SIGNATURE OF CONTRACTOR'S RIG MANAGER** |
| K.Genest / B.Goodrich | BOB ROGERS |

**DAILY CHECKS**

| | OPR | R.M. |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | | |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | | |
| ( 4. ) Well Licence & Stick Diagram Posted | | |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | BR |
| ( 4. ) Crown Saver Checked | | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 4

RIG NO. 5

FUEL @ 08:00 HRS

RIG | BOILER

WEATHER: TEMPERATURE | CURRENT CONDITIONS | WIND DIRECTION | ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X/H | 251 | PT-1100 | OILWELL | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X/H | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X/H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME HRS MORN | 7.50 | | | | | | 0.25 | | | | | | | | | | | | | | 0.25 | | | | | | 8.00 |
| DAY | 10.50 | | | | | | 0.25 | | 1.00 | | | | | | | | | | | | 0.25 | | | | | | 12.00 |
| EVE. | 3.50 | | | | | | 0.25 | | | | | | | | | | | | | | 0.25 | | | | | | 4.00 |
| TOTAL | 21.50 | | | | | | 0.75 | | 1.00 | | | | | | | | | | | | 0.75 | | | | | | 24.00 |

SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE

NO. 2 | TYPE BRANDIT | TYPE

SCREENS CHANGED | YES | NO

TOP | TOP

MIDDLE | MIDDLE

BOTTOM | BOTTOM

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD RIVER F-56 | 2003 | 3 | 4 |
| **OPERATOR** | **CONTRACTOR** | | |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP | | |
| **RIG MANAGER** | | **RIG NO.** | |
| BOB ROGERS | | 5 | |
| **PROVINCE** | **CAMP** | **RIG SAFETY DAYS** | |
| N.W.T. | X YES ☐ NO | 1 | |

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
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| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

MUD TYPE | ☐ WATER BASED | ☐ OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: ROSS GUYNUP

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 0 | 15 | 0.25 | 21 | SAFETY MTG. W/ CREW |
| 15 | 30 | 0.25 | 7 | RIG SERVICE |
| 30 | 800 | 7.50 | 1 | RIG UP BRAID DRILL LINE W/ WELDER STRING 8 LINE BLOCKS RIG TO RAISE MAST. |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 8.00 | 10.0 | 345 | | STRING BLOCKS. | |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS: 1

| FROM 0 | TO 800 | INJURIES |
|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 8.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 8.00 | | | SW |

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
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| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

MUD TYPE | ☐ WATER BASED | ☐ OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | | | 0.0 | |

REDUCED PUMP SPEED: @ | 0 | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 815 | 0.25 | 7 | RIG SERVICE |
| 815 | 830 | 0.25 | 21 | SAFETY MTG. |
| 830 | 900 | 0.50 | 1 | RIG UP TO RAISE DERRICK, RAISE DERRICK |
| 900 | 1830 | 9.50 | 1 | RIG UP FLOOR, INSTALL PREFABS |
| 1830 | 1930 | 1.00 | 9 | SLIP LINE |
| 1930 | 2000 | 0.50 | 1 | RIG UP FLOOR |
| 2000 | | | | |

NOTES : VISUALLY INSPECT DERRICK BEFORTE RAISING

RAISE DERRICK @ 8.45

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 12.00 | 10.0 | 350 | 60 | RAISE DERRICK | |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS: 1

| FROM 800 | TO 2000 | INJURIES |
|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 12.00 | | | DR |
| DERRICK HAND | | BRUCE DEJONG | 12.00 | | | BD |
| MOTOR HAND | | KEVIN FINNING | 12.00 | | | KF |
| FLOOR HAND | | Mark Suchy | 12.00 | | | MS |
| FLOOR HAND | | RICK SONFRERE | 12.00 | | | RS |
| LEASE HAND | | SEAN HERDMAN | 12.00 | | | SH |

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
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| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| KELLY DOWN | | | |
| TOTAL | | | |
| WT. OF D.C. | | | |
| WT. OF STRING | | | |

**BIT RECORD**

| | |
|---|---|
| BIT NO. | |
| SIZE | |
| IADC CODE | |
| MANUFACTURER | |
| TYPE | |
| SERIAL NO. | |
| JETS | |
| DEPTH OUT | |
| DEPTH IN | |
| TOTAL M DRILLED | |
| TOTAL HRS RUN | |

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

| | |
|---|---|
| HOLE DRAG | |
| TORQUE AT BOTTOM | |
| FILL ON BOTTOM (M) | |

**MUD RECORD**

MUD TYPE | ☐ WATER BASED | ☐ OIL BASED

| | |
|---|---|
| TIME | |
| DENSITY (KG/M3 ) | |
| FUNNEL VISCOSITY | |
| FLUID LOSS (cm3 ) | |
| pH | |

**MUD MATERIALS ADDED**

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

**SOLIDS CONTROL**

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

| CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM |
|---|---|---|---|---|
| | 140.0 | | 140.0 | |

REDUCED PUMP SPEED: @ | @

**DEVIATION SURVEYS**

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: ROSS GUYNUP

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 2000 | 2015 | 0.25 | 21 | SAFETY MTG. P/U DIVERTER. |
| 2015 | 2030 | 0.25 | 7 | RIG SERVICE CHECK BRAKE ASSEMBLY. |
| 2030 | 2400 | 3.50 | 1 | RIG UP CUT CONDUCRTOR. WELD ON FLANGE. |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 11.0 | 345 | | P/U DIVERTER | 0 |

RATE SCHEDULE | X | REGULAR | | REPAIR | | INVERT

CREW SAFETY DAYS: 1

| FROM 2000 | TO 2400 | INJURIES |
|---|---|---|

| CREW | SOC INS. NO. | NAME | HRS | | YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 4.00 | | | RG |
| DERRICK HAND | | ALBERT BROWN | 4.00 | | | AB |
| MOTOR HAND | | KIRK BJORNSON | 4.00 | | | KB |
| FLOOR HAND | | KIT BRINK | 4.00 | | | KB |
| FLOOR HAND | | SHELDON MICHEL | 4.00 | | | SM |
| LEASE HAND | | SHANE WINTERS | 4.00 | | | SW |

| LICENCE NO. | WELL NAME & NO. |
|---|---|
| | ANADARKO ARROWHEAD F-56 |
| OPERATOR | CONTRACTOR |
| ANADARKO CANADA ENERGY | SHEHTAH-WILSON PARTNERSHIP |
| SURFACE LOCATION | UNIQUE ID |
| 60:34:29.99 N 122:55:46.13 W | |
| SIGNATURE OF OPERATOR'S REPRESENTATIVE | SIGNATURE OF CONTRACTOR'S RIG MANAGER |
| K.Genest / B.Goodrich | BOB ROGERS |

**DAILY CHECKS**

| | OPR KG | R.M. BR |
|---|---|---|
| ( 1. ) Daily Walk Around Inspection | | |
| ( 2. ) Detailed Inspection - Weekly ( Using Check List ) | | |
| ( 3. ) H2S Signs Posted if Required | | |
| ( 4. ) Well Licence & Stick Diagram Posted | | |
| ( 5. ) Flare Lines Staked | | |
| ( 6. ) BOP Drills Performed | | |
| ( 7. ) Visually Inspect BOPs- Flare Lines & Degasser Lines | | |
| ( 1. ) Rig Site Health & Safety Meeting ( one/crew/month ) | | |
| ( 2. ) CAODC Rig Safet Inspection Checklist ( one/rig/month ) | | |
| ( 3. ) Mast Inspection before Raising or Lowering | | |
| ( 4. ) Crown Saver Checked | | |
| ( 5. ) Motor Kills Checked | | |

YEAR 2003 | MONTH 3 | DAY 3

RIG NO. 5

FUEL @ 08:00 HRS

RIG | BOILER

WEATHER: TEMPERATURE | CURRENT CONDITIONS | WIND DIRECTION | ROAD CONDITION

| LAST CASING TUBING OR LINER | O.D. (mm) | MIN I.D. (mm) | kg/m | MAKE | GRADE | NO. of JOINTS | TOTAL LENGTH | KB TO CSG HEAD | SET AT (m) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

| DC / DP SIZE | MASS | GRADE | MINIMUM I.D. | T. JNT. O.D. | TYPE THREAD | NO. of JOINTS | PUMP TYPE | PUMP MANUFACTURER | STROKE LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 114 | 24.70 | SS-95 | 73 | 158 | 4.5" X/H | 251 | PT-1100 | OILWELL | 254 |
| 114 | 29.00 | SS-95 | 73 | 158 | 4.5" X/H | 125 | PT-1100 | OILWELL | 254 |
| 114 | 62.40 | HWDP | 73 | 156 | 4.5" X/H | 21 | | | |

**PASON *DATAHUB***
Shehtah 5
Job 6
AFE 4
CDN 3422-2-011204

CAODC

TIME HRS

| CODE NO. | 1 RIGUP & TEARDOWN | 2 DRILL ACTUAL | 3 REAMING | 4 CORING | 5 COND MUD & CIRC | 6 TRIPS | 7 RIG SERVICE | 8 REPAIR RIG | 9 CUT OFF DRILG LINE | 10 DEV. SURVEY | 11 WIRELINE LOGS | 12 RUN CSG & CEMENT | 13 WAIT ON CEMENT | 14 NIPPLE UP B.O.P. | 15 TEST B.O.P. | 16 DRILLSTEM TEST | 17 PLUG BACK | 18 SQUEEZE CEMENT | 19 FISHING | 20 DIR. WORK | 21 SAFETY MEETING | 22 | 23 | 24 | 25 | 26 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MORN | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DAY | 2.00 | | | | | | | | | | | | | | | | | | | | 6.00 | | | | | |
| EVE. | 8.00 | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | 10.00 | | | | | | | | | | | | | | | | | | | | 6.00 | | | | | |

| TOTALS | SHALE SHAKER ( S ) | RENTALS / SERVICES | MORN | DAY | EVE |
|---|---|---|---|---|---|
| | NO. 2 TYPE BRANDT | | | | |
| | SCREENS CHANGED ☐ YES ☐ NO | | | | |
| 8.00 | 84 TOP 110 TOP | | | | |
| 8.00 | 84 MIDDLE 110 MIDDLE | | | | |
| 16.00 | 84 BOTTOM 110 BOTTOM | | | | |

## DRILLING CREW PAYROLL DATA

| WELL NAME & NO. | YEAR | MONTH | DAY |
|---|---|---|---|
| ANADARKO ARROWHEAD F-56 | 2003 | 3 | 3 |
| OPERATOR: ANADARKO CANADA ENERGY | CONTRACTOR: SHEHTAH-WILSON PARTNERSHIP | | |
| RIG MANAGER: BOB ROGERS | RIG NO.: 5 | | |
| PROVINCE: N.W.T. | CAMP: X YES ☐ NO | RIG SAFETY DAYS: 217 | |

### MORNING TOUR

FROM 0 TO 800

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | JOHN BURNS | 8.00 | | | |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | |
| MOTOR HAND | | DARCY PUKAS | 8.00 | | | |
| FLOOR HAND | | DAVE GREEN | 8.00 | | | |
| FLOOR HAND | | SHELDON MICHEL | 8.00 | | | |
| LEASE HAND | | SHANE WINTERS | 8.00 | | | |

RATE SCHEDULE | X REGULAR | ☐ REPAIR | ☐ INVERT

STEAM BURN TOP OF CREW SAFETY DAYS: 217 | RIGHT HAND

### DAY TOUR

FROM 800 TO 2000

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | ROSS GUYNUP | 8.00 | | | RG |
| DERRICK HAND | | KEVIN FINNING | 8.00 | | | KF |
| MOTOR HAND | | KIRK BJORNSON | 8.00 | | | KB |
| FLOOR HAND | | ALBERT BROWN | 8.00 | | | AB |
| FLOOR HAND | | KIT BRINK | 8.00 | | | KB |
| LEASE HAND | | PAUL JENSEN | 8.00 | | | PJ |

RATE SCHEDULE | X REGULAR | ☐ REPAIR | ☐ INVERT

CREW SAFETY DAYS: 217

### EVENING TOUR

FROM 2000 TO 2400

| CREW | SOC INS. NO. | NAME | HRS | | INJURIES YES | NO |
|---|---|---|---|---|---|---|
| DRILLER | | DAVID RUSCHEINSKI | 8.00 | | | DR |
| DERRICK HAND | | BRUCE DEJONG | 8.00 | | | BD |
| MOTOR HAND | | KEVIN FINNING | 8.00 | | | KF |
| FLOOR HAND | | Mark Suchy | 8.00 | | | MS |
| FLOOR HAND | | RICK SONFRERE | 8.00 | | | RS |
| LEASE HAND | | SEAN HERDMAN | 8.00 | | | SH |

RATE SCHEDULE | X REGULAR | ☐ REPAIR | ☐ INVERT

CREW SAFETY DAYS: 217

## MORNING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE ☐ WATER BASED ☐ OIL BASED

TIME | DENSITY (KG/M3 ) | FUNNEL VISCOSITY | FLUID LOSS (cm3 ) | pH

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM

REDUCED PUMP SPEED @ @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| | | | | |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 0.00 | | | | | |

## DAY TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE ☐ WATER BASED ☐ OIL BASED

TIME | DENSITY (KG/M3 ) | FUNNEL VISCOSITY | FLUID LOSS (cm3 ) | pH

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM

REDUCED PUMP SPEED @ @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: ROSS GUYNUP

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 800 | 1400 | 6.00 | 22 | CONTINUE TO SPOT RIG SHALE TANKS ETC. |
| 1400 | 1600 | 2.00 | 1 | RIG UP POWER CORDS ETC. |
| 1600 | | | | |

NOTES :

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 0.00 | | | | | |

## EVENING TOUR

| NO. | DRILLING ASSEMBLY ( AT END OF TOUR ) | | LENGTH |
|---|---|---|---|
| | BIT | O.D. | |
| | D.P. | STANDS | |
| | D.P. | SINGLES | |
| | KELLY DOWN | | |
| | TOTAL | | |
| | WT. OF D.C. | | |
| | WT. OF STRING | | |

**BIT RECORD**

BIT NO. | SIZE | IADC CODE | MANUFACTURER | TYPE | SERIAL NO. | JETS | DEPTH OUT | DEPTH IN | TOTAL M DRILLED | TOTAL HRS RUN

CUTTING STRUCTURE

| TI | To | MDC | LOC | BRG | GAGE | ODC | REASON PULLED | TOTAL RUN M/HR |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

**HOLE CONDITION**

HOLE DRAG | TORQUE AT BOTTOM | FILL ON BOTTOM (M)

**MUD RECORD**

MUD TYPE ☐ WATER BASED ☐ OIL BASED

TIME | DENSITY (KG/M3 ) | FUNNEL VISCOSITY | FLUID LOSS (cm3 ) | pH

MUD MATERIALS ADDED

| PRODUCT | AMOUNT | UNIT |
|---|---|---|
| | | |

SOLIDS CONTROL

DESILTER

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |

CENTRIFUGE

| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
|---|---|---|---|
| | | | |
| HOURS RUN | INTAKE DENSITY ( KG/M3 ) | OVER FLOW DENSITY | UNDER FLOW DENSITY |
| | | | |

**METRES DRILLED**

| FROM | TO | D-R-C | RPM | WOB |
|---|---|---|---|---|
| | | | | |

CIRCULATION PRESSURE kPa | PUMP NO. 1 LINER SIZE | PUMP NO. 1 SPM | PUMP NO. 2 LINER SIZE | PUMP NO. 2 SPM

REDUCED PUMP SPEED @ @

DEVIATION SURVEYS

| DEPTH ( M ) | DEVIATION | DIRECTION |
|---|---|---|
| | | |

DRILLER SIGNATURE: DAVID RUSCHEINSKI

**TIME LOG**

| FROM | TO | ELAPSED TIME | CODE | DETAILS OF OPERATIONS IN SEQUENCE & REMARKS |
|---|---|---|---|---|
| 1600 | 2400 | 8.00 | 1 | RIG UP POWER CORDS, INSTALL STEAM & WATER LINES |
| 2400 | | | | CIRCULATE STEAM & WATER, |

NOTES : WELD POCKETS FOR AGGITATORS IN MUD TANKS
GAURD ON MIXING MOTOR & DRAWWORKS SKID

| HRS RUN | BOILER pH | STACK TEMP | MAXIMUM EXPERIENCED HOOK LOAD | SAFETY TOPIC | MACP |
|---|---|---|---|---|---|
| 4.00 | 10.0 | 350 | | RIG UP | |