EXLOG

GEMDAS LOGGING REPORT NO. 1

COMPANY AMOCO PRODUCTION Co. WELL OCS Y-0302 #1 (MAFS)

DATE MARCH 12, 1986 TIME 2400

DEPTH 124 ft LAST REPORT DEPTH —

RIG OPERATIONS DRILLING - OUT 30" CONDUCTOR

REPORT BY RICHARD WIFFEN REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: 1 Type: SMITH SDS Size: 17½" Jets: 20/20/20

On Bit: Footage: 49 Hours: 3.5 ROP: 14 ft/hr WOB: 0-5 kks RPM: 60-70

Pump Press: 170 psi SPM: 132 Torque: — TBR: _____ CP I: $ _____ CP B: $ _____

HYDRAULICS REPORT

Mud Density In: 8.9-9.0 Mud Density Out: 8.9 - 9.4 ppg ECD: 9.0 ppg PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: 92 bbl Annular Volume: 85 bbl Tubing Volume: 1 bbl Displaced Volume: 7 bbl

~~Carbide Lag~~ Calculated Lag: 810 strokes = 5.8 mins @ Flowrate: 605 gal/min

Drillpipe Annular Vel (Max. Dia. Sec.): — Drillpipe Annular Vel (Open Hole): —

Drill Collar Annular Vel (Open Hole): 20.6 ft/min Critical Vel: 350 ft/min

Pressure Loss System: 107 psi Pressure Loss Bit: 22 psi % Pressure Loss: 21

Nozzel Vel: _____ Jet Impact Force: _____ HHP: 7.9 hp

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: 53° F

Shale Density: _____ Shale Factor: _____

Background Gas: 1 unit Max. Formation Gas: 1 unit @ — Trip Gas: —

Other Gas: —

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

Received @ OCS District Office
MAR 17 1986
Minerals Management Service
Anchorage, Alaska

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: — Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: 8.4 lb/gal Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): 8.4 lb/gal @ _____ Estimated Fracture Pressure at TD: _____

Comments:

DRILLED OUT ICE IN 30" CONDUCTOR PIPE TO SEA BED @ 75 ft. & CONTINUED DRILLING IN 30" PIPE w/ NB #1 & 26" HOLE-OPENER (JET: 3x20),

AT 2400 hrs DRILLING-OUT 30" CONDUCTOR @ 124 ft - 13 ft ABOVE SPUD DEPTH @ 137 ft.

LITHOLOGY - 100% CLAY

GEMDAS LOGGING REPORT NO. 2

Y AMOCO PRODUCTION CO. WELL OCS Y-0302 #1 (MARS)
MARCH 13TH 1986 TIME 2400 hrs
1001 ft LAST REPORT DEPTH 124 ft
RATIONS DRILLING
BY RICHARD WHIFFEN REPORT RECEIVED BY _____ SIGNED (OPERATOR)

G REPORT
Type: SMITH SDS Size: 12¼" Jets: 16/16/18
e: 854 Hours: 7.5 ROP: 113.8 ft/hr WOB: 5-20 RPM: 110-150
1100-1400 SPM: 148 Torque: — TBR: 51,620 CP I: $ 31.4 CP B: $ 36.6

LICS REPORT
In: 9.2 #/gal Mud Density Out: 9.2-9.4 ECD: 9.6 #/gal PV/YP: 7/29
136 Salinity: 4100 PPM Cl Solids: 7 %
231 bbl Annular Volume: 202 bbl Tubing Volume: 8 bbl Displaced Volume: 30 bbl
-Calculated Lag: 1874 STROKES = 12.7 mins @ Flowrate: 644 gal/min
ular Vel (Max. Dia. Sec.): 20.7 ft/min Drillpipe Annular Vel (Open Hole): 121.6 ft/min
nular Vel (Open Hole): 183.4 ft/min DC Critical Vel: 494.5 ft/min
s System: 1190 psi Pressure Loss Bit: 852 psi % Pressure Loss: 72
322.2 ft/sec Jet Impact Force: 988.2 lb HHP: 320.5 hp

RE PARAMETERS
nent: 0.66 - 0.96 Flowline Temperature: 69° F
Shale Factor:
Gas: 10 - 20 u Max. Formation Gas: _____ @ _____ Trip Gas: 0 @ 147 ft
Tight Hole:
%: Average Size:

TED PORE AND FRACTURE PRESSURE
e: Min. Estimated Fracture Pressure (Open Hole):
re Pressure: 8.4 #/gal Min. Estimated Pore Pressure (Open Hole):
ed Pore Pressure (Open Hole): 8.4 #/gal @ _____ Estimated Fracture Pressure at TD:

Received
OCS District Office
MAR 17
Minerals Management Service
Anchorage, Alaska

ts: DRILLED-OUT 30" CONDUCTOR PIPE & POOH @ 147 ft
CHANGE BIT + P/U MUD COLLAR & STABS
#1 CUT 73 ft IN 6.6 hrs ; DRILLING AHEAD W/ NB #2
0925 hrs - P/U 8" DC, 6½" DC & HWDP
? hrs DRILLING 12¼" HOLE W/ NB # 2 @ 1001 ft @
ft/hr

EXLOG — GEMDAS LOGGING REPORT NO. 3

COMPANY: AMOCO PRODUCTION CO. WELL OCSY-0302 #1

DATE: MARCH 14TH 1986 TIME 2400

DEPTH 350 ft (1550 ft) LAST REPORT DEPTH 1001 ft

LOG OPERATIONS: OPENING HOLE

REPORT BY RICHARD WHIFFEN REPORT RECEIVED BY _____ SIGNED _____ (OPERATOR)

DRILLING REPORT

Bit No: RR #1 Type: SMITH SDS Size: 17½" Jets: 20/20/20

Bit: Footage: 207 Hours: 7.6 ROP: 27.2 WOB: 5-20 RPM: 130

Pump Press: 670 SPM: 196 Torque: — TBR: 51,670 CP I: $ 163.4 CP B: $ 150.9

HYDRAULICS REPORT

Mud Density In: 9.4 Mud Density Out: 9.4-9.6 ECD: 9.5 lb/gal PV/YP: 5/29

Gels: 12/12 Salinity: 8200 PPM Cl Solids: — %

Active Volume: 240 bbl Annular Volume: 222 bbl Tubing Volume: 3 bbl Displaced Volume: 195 bbl

Bottoms Up Lag—Calculated Lag: 2110 strokes = 11 mins @ Flowrate: 853 gal/min

Drillpipe Annular Vel (Max. Dia. Sec.): — Drillpipe Annular Vel (Open Hole): —

Drill Collar Annular Vel (Open Hole): 34.2 ft/min DC Critical Vel: 413 ft/min

Pressure Loss System: 217 psi Pressure Loss Bit: 46 % Pressure Loss: 21

Nozzel Vel: Jet Impact Force: HHP:

PRESSURE PARAMETERS

Drilling Exponent: 0.30 – 0.80 (NB#2) Flowline Temperature: 81.1°F

Shale Density: Shale Factor:

Background Gas: 15-25 u Max. Formation Gas: @ Trip Gas: @

Other Gas:

Fill: Tight Hole: WORKED/REAMED PIPE @ 203 ft (1.7 hr) / BOULDERS IN HOLE

Cavings: Est %: Average Size:

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: Min. Estimated Fracture Pressure (Open Hole):

Estimated Pore Pressure: 8.4 lb/gal Min. Estimated Pore Pressure (Open Hole): @

Max. Estimated Pore Pressure (Open Hole): 8.4 lb/gal @ Estimated Fracture Pressure at TD:

Comments:

DRILLED 12¼" HOLE W/ NB#2 TO 1550 ft — NB#2 CUT 1407 ft IN 10.8 hrs

RIH W/ 17½" + 26" HO TO OPEN 12¼" HOLE FOR 20" CASING

@ 2400 hrs OPENING HOLE @ 950 ft @ 30 ft/hr

EL P/N 18429 MAY 1980

EXLOG

GEMDAS LOGGING REPORT NO. 4

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1 (MARS)

DATE MARCH 15TH 1986 TIME 2400 hrs

DEPTH 1569 ft LAST REPORT DEPTH 350ft (H/O)

RIG OPERATIONS PREPARE TO POOH

REPORT BY RICHARD WHITTEN / REPORT RECEIVED BY _____ SIGNED (OPERATOR)

DRILLING REPORT

Bit No.: RR #1 Type: SMITH SDS Size: 17½" w/26"HO Jets: 20/20/20+20/20/20

On Bit: Footage: 1426 Hours: 20.3 ROP: 70.2 ft/hr WOB: 5-35 RPM: 125

Pump Press: 1170 SPM: 164 Torque: _____ TBR: _____ CP I:$ _____ CP B:$ _____

HYDRAULICS REPORT

Mud Density In: 9.5+ Mud Density Out: 9.6 - 9.7 ECD: 9.6+ PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: 1041 bbl Annular Volume: 1009 bbl Tubing Volume: 16 bbl Displaced Volume: 32 bbl

~~Carbide Lag~~ – Calculated Lag: 9580 STROKES = 58.4 MINS Flowrate: 714 gal/min

Drillpipe Annular Vel (Max. Dia. Sec.): 22.9 ft/min Drillpipe Annular Vel (Open Hole): 26.7 ft/min

Drill Collar Annular Vel (Open Hole): 28.6 ft/min Critical Vel: 408.2 ft/min

Pressure Loss System: 389 psi Pressure Loss Bit: 33 psi % Pressure Loss: 9

Nozzel Vel: _____ Jet Impact Force: _____ HHP: _____

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: 69°F

Shale Density: _____ Shale Factor: _____

Background Gas: 20-45 units Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: 8.4 lb/gal Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): 8.4 lb/gal @ _____ Estimated Fracture Pressure at TD: _____

Comments: OPENED 12¼" HOLE TO 26" – DRILLED 19 ft OF NEW HOLE FROM 1550 ft TO 1569 ft

Received
OCS District Office
MAR 18
Minerals Management Service
Anchorage, Alaska

@ 2400 hrs BREAKING OFF KELLY – PREPARING TO POOH TO RUN 20" CASING

EXLOG (SM)

GEMDAS LOGGING REPORT NO. 5

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1 (MARS)

DATE MARCH 16TH 1986 TIME 2400 hrs

DEPTH 1569 ft LAST REPORT DEPTH 1569 ft

RIG OPERATIONS CIRCULATING

REPORT BY RICHARD WHIFFEN REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: — Type: _____ Size: _____ Jets: _____

On Bit: Footage: _____ Hours: _____ ROP: _____ WOB: _____ RPM: _____

Pump Press: 150psi SPM: 70 Torque: _____ TBR: _____ CP I: $ _____ CP B: $ _____

HYDRAULICS REPORT

Mud Density In: 9.6#/gal Mud Density Out: 9.6-9.7#/gal ECD: 9.6#/gal PV/YP: 8/21

Gels: 18/20 Salinity: 13,500 PPM Cl Solids: 8 %

Hole Volume: 534 bbl Annular Volume: 500 bbl Tubing Volume: 22 bbl Displaced Volume: 11.7 bbl

~~Carbide Lag~~—Calculated Lag: 4055 STROKES Flowrate: 305 gal/min

Drillpipe Annular Vel (Max. Dia. Sec.): _____ Drillpipe Annular Vel (Open Hole): _____

Drill Collar Annular Vel (Open Hole): _____ Critical Vel: _____

Pressure Loss System: _____ Pressure Loss Bit: _____ % Pressure Loss: _____

Nozzel Vel: _____ Jet Impact Force: _____ HHP: _____

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: 47.1 °F

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: * @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

Received
OCS District Office
MAR 18 1986
Minerals Management Service
Anchorage, Alaska

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: 8.4 #/gal Min. Estimated Pore Pressure (Open Hole): _____ @

Max. Estimated Pore Pressure (Open Hole): 8.4 #/gal @ _____ Estimated Fracture Pressure at TD: _____

Comments:

RAN 20" CASING, RAN DEDP IN 20" CASING & CIRCULATE IN CASING — PREPARING TO CEMENT SAME

@ 2400 CIRCULATING IN CASING

* MAXIMUM GAS FROM WIPER TRIP @ 1569' = 27 units

EXLOG (SM)

GEMDAS LOGGING REPORT NO. 6

COMPANY AMOCO PRODUCTION CO. WELL OCSY-0302 #1 (MARS)

DATE MARCH 17th 1986 TIME 2400 hrs

DEPTH 1569 ft LAST REPORT DEPTH 1569 ft

RIG OPERATIONS NIPPLE-UP BOPE

REPORT BY RICHARD WHIFFEN REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: — Type: _____ Size: _____ Jets: _____

On Bit: Footage: _____ Hours: _____ ROP: _____ WOB: _____ RPM: _____

Pump Press: _____ SPM: _____ Torque: _____ TBR: _____ CP I: $ _____ CP B: $ _____

HYDRAULICS REPORT

Mud Density In: _____ Mud Density Out: _____ ECD: _____ PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: 534 bbl Annular Volume: 500 bbl Tubing Volume: _____ Displaced Volume: _____

Carbide Lag—Calculated Lag: _____ Flowrate: _____

Drillpipe Annular Vel (Max. Dia. Sec.): _____ Drillpipe Annular Vel (Open Hole): _____

Drill Collar Annular Vel (Open Hole): _____ Critical Vel: _____

Pressure Loss System: _____ Pressure Loss Bit: _____ % Pressure Loss: _____

Nozzel Vel: _____ Jet Impact Force: _____ HHP: _____

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: _____

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: 8.4 lb/gal Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): 8.4 lb/gal @ _____ Estimated Fracture Pressure at TD: _____

Comments: CEMENTED 20" CASING & BEGAN NIPPLING-UP BOPE

0415 CONT NIPPLE-UP

RECEIVED
OCS DISTRICT OFFICE
MAR 26 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

THIS REPORT IS GOVERNED BY THE TERMS ... TOTAL P.02

EXLOG

GEMDAS LOGGING REPORT NO. 7

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1 (MARS)

DATE MARCH 18TH 1986 TIME 2400 hrs

DEPTH 1617 ft LAST REPORT DEPTH 1569

RIG OPERATIONS DRILLING

REPORT BY RICHARD WHIFFEN REPORT RECEIVED BY _____ SIGNED (OPERATOR)

DRILLING REPORT

Bit No.: 3 Type: SDS Size: 17½ Jets: OPEN

On Bit: Footage: 48 Hours: 2.6 ROP: 18.5 ft/hr WOB: 10 RPM: 100

Pump Press: 1320 SPM: 208 Torque: _____ TBR: 13,091 CP I: $ 24.5 CP B: $ 449.6

HYDRAULICS REPORT

Mud Density In: 9.05 lb/gal Mud Density Out: 9.1 lb/gal ECD: 9.1 lb/gal PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: 548 bbl Annular Volume: _____ Tubing Volume: 18 bbl Displaced Volume: 26 bbl

~~Carbide Lag~~ Calculated Lag: 486 strokes = 23½ min @ Flowrate: 905 gal/min

Drillpipe Annular Vel (Max. Dia. Sec.): 67.0 ft/min Drillpipe Annular Vel (Open Hole): —

Drill Collar Annular Vel (Open Hole): 91.6 ft/min Critical Vel: DC 1820 ft/min

Pressure Loss System: 1315 Pressure Loss Bit: 123 psi % Pressure Loss: 9

Nozzel Vel: 123.2 ft/sec Jet Impact Force: 523.7 lb HHP: 65 hp

PRESSURE PARAMETERS

Drilling Exponent: 0.62 Flowline Temperature: 67°F

Shale Density: _____ Shale Factor: _____

Background Gas: 15 u Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: 8.4 lb/gal Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): 8.4 lb/gal @ _____ Estimated Fracture Pressure at TD: _____

Comments:

COMPLETED NIPPLING-UP
RAN IN HOLE, TESTED CASING
DRILLED OUT CEMENT SHOE, TESTED SAME, DRILLED
TO 1573 ft & PERFORMED FORMATION LEAK-OFF TEST
- CONTINUED DRILLING

@ 2400 REAMING FILL IN HOLE @ CONNECTION (1617')

EXLOG

GEMDAS LOGGING REPORT NO. 8

COMPANY AMOCO PRODUCTION CO WELL OCS Y-0302 #1
DATE MAR 19th 1986 TIME 2400
DEPTH 2186 LAST REPORT DEPTH 1617'
RIG OPERATIONS Drilling Ahead —
REPORT BY R. MANSHER REPORT RECEIVED BY _____ (SIGNED) (OPERATO

DRILLING REPORT

Bit No.: 3RI Type: SDS Size: 17½" Jets: OPEN
On Bit: Footage: 537 Hours: 10.4 ROP: _____ WOB: 20-30 RPM: 125
Pump Press: 1500-1650 SPM: 171 Torque: 50-300 TBR: 54383 CP I: $ 69 CP B: $ 93

HYDRAULICS REPORT

Mud Density In: 9.2 ppg Mud Density Out: 9.3+ ppg ECD: 9.3 ppg PV/YP: 17/17
Gels: _____ Salinity: 3406 PPM Cl Solids: 6.5
Hole Volume: 719 661 Annular Volume: 661 661 Tubing Volume: 25 551 Displaced Volume: 3866
Carbide Lag—Calculated Lag: 6359 strks / 6382 strks Flowrate: 750 gpm / 172 spm
Drillpipe Annular Vel (Max. Dia. Sec.): 55.5 fpm Drillpipe Annular Vel (Open Hole): 64.3 fpm
Drill Collar Annular Vel (Open Hole): 75.2 fpm Critical Vel: 258.5 fpm
Pressure Loss System: 1038 psi CALC Pressure Loss Bit: 86 psi % Pressure Loss: 8%
Nozzel Vel: 102 fps Jet Impact Force: 365 165 HHP: 38 hp

PRESSURE PARAMETERS

Drilling Exponent: .56 - 1.53, erratic in sand Flowline Temperature: 84.7 °F
Shale Density: _____ Shale Factor: _____
Background Gas: 27u Max. Formation Gas: 142u @ ~1810' Trip Gas: — @ —
Other Gas: No connection gas noted
Fill: ~1-2' — Tight Hole: Slight — probably due to fill
Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.0 ppg w/ 0.5 ppg S.F. Min. Estimated Fracture Pressure (Open Hole): 11.0 ppg @ shoe
Estimated Pore Pressure: 8.4 - 8.5 ppg Min. Estimated Pore Pressure (Open Hole): 8.4 ppg @ shoe
Max. Estimated Pore Pressure (Open Hole): 8.5 ppg @ present Estimated Fracture Pressure at TD: _____

Comments:

Drilled to 1649 ft w/ slick BHA — C.B.U.
POOH to pickup New BHA & MWD tool
RIH w/ No problems — Ream ~38' to bottom
Start drilling @ 0946, Made two ft reverse
connections due to fill — No further problems —

Reverse Connections: 1758', 1989' due to fill in hole

EXLOG (SM) GEMDAS LOGGING REPORT NO. 9

COMPANY AMOCO PRODUCTION CO. WELL OCSY-0302 #1

DATE MAR 20, 1986 TIME 2400

DEPTH 2516' LAST REPORT DEPTH 2186'

RIG OPERATIONS drilling ahead

REPORT BY R. MANSKIER REPORT RECEIVED BY _____ (OPERATOR SIGNED)

DRILLING REPORT

Bit No.: 5 Type: SMTH SDS Size: 12¼" Jets: 3 X 14

On Bit: Footage: 291 Hours: 2.6 ROP: 112 fph WOB: 36 RPM: 132

Pump Press: 2900 SPM: 192 Torque: 100-200 TBR: 22346 CP I: $ 21 CP B: $ 68

HYDRAULICS REPORT

Mud Density In: 9.1 ppg Mud Density Out: 9.2+ ppg ECD: 9.42 ppg PV/YP: 12/8

Gels: 0/4/14 Salinity: 3200 PPM Cl Solids: 6 %

Hole Volume: 771 bbls Annular Volume: 707 bbls Tubing Volume: 305 bbls Displaced Volume: 345 bbls

Carbide Lag—Calculated Lag: 9441 strks / 9476 strks Flowrate: 579 gpm / 191 spm

Drillpipe Annular Vel (Max. Dia. Sec.): 45 fpm 6¼" DC Drillpipe Annular Vel (Open Hole): 135 fpm

Drill Collar Annular Vel (Open Hole): 172 fpm Critical Vel: 246 fpm

Pressure Loss System: 2250 psi (CALC) Pressure Loss Bit: 1505 psi % Pressure Loss: 66%

Nozzel Vel: 430 fps Jet Impact Force: 1227 lbs HHP: 531 hp

PRESSURE PARAMETERS

Drilling Exponent: .98 - 1.03, erratic due to Lith Flowline Temperature: 81.2° F

Shale Density: _____ Shale Factor: _____

Background Gas: 30 u Max. Formation Gas: 48u @ ~2340 Trip Gas: 2-5u @ 2223'

Other Gas: No connection gas no ped

Fill: REAM 1 single to bottom Tight Hole: FREE OUT — UP TO 25k overpull, SPO #1

Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 0.87 ppg w/ 0.5 ppg S.F. = Min. Estimated Fracture Pressure (Open Hole): 11.0 ppg @ shoe

Estimated Pore Pressure: 8.5-8.6 ppg Min. Estimated Pore Pressure (Open Hole): 8.4 ppg @ shoe

Max. Estimated Pore Pressure (Open Hole): 8.6 ppg @ present Estimated Fracture Pressure at TD: —

Comments: @ 2202'

Pulled 3R1 due to slow drill rate / balling bit

RFH w NB #4 — 17½ 1-1-4 w/ 3 x 20 JETS.

Slow drill rate still persisted — POOH to reduce bit size. RFH w 12¼" 1-1-4 w/ 3 x 14 jets. Change liners in pumps to allow higher pump pressure.

1922 — Begin drilling @ 2223' w/ 12¼" hole

Bits: 3R1 - 552' / 10.5 hrs, 4 - 21' / 1.9 hrs,

EL P/N 18429 MAY 1980

EXLOG

GEMDAS LOGGING REPORT NO. 10

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1

DATE MARCH 21, 1986 TIME 2400

DEPTH 3322' LAST REPORT DEPTH 2516

RIG OPERATIONS Working on Rig (presently waiting to ream @ ~1603')

REPORT BY R. MANSKER REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: 5 Type: SDS Size: 12¼" Jets: 3 x 14

On Bit: Footage: 1099 Hours: 8.4 ROP: 131 WOB: 30 RPM: 135

Pump Press: 2900 SPM: 186 Torque: 100-300 TBR: 69139 CP I: $ 28 CP B: $ 39

HYDRAULICS REPORT For 2.99 in² TFA — @ 2300'

Mud Density In: 9.3 ppg Mud Density Out: 9.3+ ppg ECD: 9.44 ppg PV/YP: 17/9

Gels: 0/2/4 Salinity: 3300 PPM Cl Solids: 6.5 %

Hole Volume: 757 bbl Annular Volume: 692 bbl Tubing Volume: 28 bbl Displaced Volume: 32 bbl

Carbide Lag—Calculated Lag: ——— / 2313 strks Flowrate: 528 spm GPM

Drillpipe Annular Vel (Max. Dia. Sec.): 61 fpm Drillpipe Annular Vel (Open Hole): 71 fpm

Drill Collar Annular Vel (Open Hole): 82 fpm Critical Vel: 150 fpm

Pressure Loss System: 1274 psi CALC Pressure Loss Bit: 63 psi % Pressure Loss: 5 %

Nozzel Vel: 87 fps Jet Impact Force: 348 lbs HHP: 31 hp

PRESSURE PARAMETERS

Drilling Exponent: .75-1.67 erratic due to bit Flowline Temperature: 91.7 °F

Shale Density: ——— Shale Factor: ———

Background Gas: 15u CLRG Max. Formation Gas: 229u @ ~3199' Trip Gas: ——— @ ———

Other Gas: No connection gas noted

Fill: ——— Tight Hole: < 15k on trip out

Cavings: Est %: ——— Average Size: ———

RECEIVED
OCS DISTRICT OFFICE
MAR 25 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 0.56 ppg w/ 0.5 ppg S.F. Min. Estimated Fracture Pressure (Open Hole): 16.0 ppg @ shoe

Estimated Pore Pressure: 8.6-8.7 ppg Min. Estimated Pore Pressure (Open Hole): 8.4 ppg @ shoe

Max. Estimated Pore Pressure (Open Hole): 8.7 ppg @ present Estimated Fracture Pressure at TD: ———

Comments:

Presently SRI in hole w/ 17½" hole opener, 3x20 Jets.

Drilled to 3322' w/ Bit #5, CBU 2nd POOH laying down pipe. No problems on TOOH out.

Make up hole opener (17½") on SRI & RIH to ~ 1600', Ream through tight spot. Rig Generators Maintenance replacing one @ 2400 hours.

EL P/N 18429 MAY 1980

EXLOG

GEMDAS LOGGING REPORT NO. 11

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1

DATE MARCH 22, '86 TIME 2400

DEPTH 3322' LAST REPORT DEPTH 3322'

RIG OPERATIONS OPENING 12¼" hole @ 2464'

REPORT BY R. MANSKER REPORT RECEIVED BY _____ (OPERATOR)

RECEIVED
OCS DISTRICT OFFICE
MAR 25 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

DRILLING REPORT

Bit No. 5RI Type: SDS Size: 12¼"x17½" RO Jets: 2.99 in² Eqv.

On Bit Footage: 235' Hours: 11.8 ROP: 23 WOB: 35 RPM: 145

Pump Press: 1500-2000 PSI SPM: 908 gpm Torque: 100-500 TBR: 94043 CP I: S 1111 CR B: S 212

HYDRAULICS REPORT

Mud Density In: 9.3 ppg Mud Density Out: 9.3+ ppg ECD: 9.31 ppg PV/YP: 10/4

Gels: 0/2/4 Salinity: 3300 PPM Cl: Solids: 6 %

Hole Volume: 729 661 Annular Volume: 239 661 Tubing Volume: 30 666 Displaced Volume: 23 665

Carbide Lag—Calculated Lag: —/9867 strks Flowrate: 908 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 602 fpm Drillpipe Annular Vel (Open Hole): 78 fpm

Drill Collar Annular Vel (Open Hole): 90 fpm Critical Vel: 84 fpm

Pressure Loss System: CALC 2956 psi Pressure Loss Bit: 1364 psi % Pressure Loss: 46%

Nozzel Vel: 405 fps Jet Impact Force: 1772 lbs HHP: 723 hp

PRESSURE PARAMETERS

Drilling Exponent: — Flowline Temperature: 103° F

Shale Density: — Shale Factor: —

Background Gas: 25 u Max. Formation Gas: — @ — Trip Gas: — @ —

Other Gas: No Connection Gas no reel

Fill: — Tight Hole: Reamed right spots from shoe to 2223'

Cavings: Est %: — Average Size: —

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 0.56 ppg w/0.5 ppg S.F. Min. Estimated Fracture Pressure (Open Hole): 11.0 ppg @ shoe

Estimated Pore Pressure: 8.6-8.7 ppg Min. Estimated Pore Pressure (Open Hole): 8.4 ppg @ shoe

Max. Estimated Pore Pressure (Open Hole): 8.7 ppg @ previous Estimated Fracture Pressure at TD: —

Comments:

Finish repair on Rig generator, continue REH & ream right spots. Reached approximately 3 hours above top of 12¼" hole section @ 2223'.

Began opening hole @ 0520, continued opening hole to 2462' at which depth the ROP dropped under 7 fph. POOH to Inspect bit — bit extremely balled up —. REH w/ NB #6, 17½" SDS w/ 3x16 & 1x13 jets

EXLOG — GEMDAS LOGGING REPORT NO. 12

COMPANY AMOCO Production Co. WELL OCSY-0302 [redacted]
DATE MARCH 23, '86 TIME 2400 [redacted]
DEPTH 3322' LAST REPORT DEPTH 3322' [redacted]
RIG OPERATIONS POOH to run logs — [redacted]
REPORT BY R. MANSHER REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No. 6 Type: SDS Size: 17½" Jets: 3 x 16 / 1 x 13
On Bit Footage: 860' Hours: 7.21 ROP: 119 fph WOB: 10-20 RPM: 138
Pump Press: 2900 SPM: 195 Torque: 50-200 TBR: 66177 CP I: $ 103 CP B: $ 44

HYDRAULICS REPORT

Mud Density In: 9.4 ppg Mud Density Out: 9.4+ ppg ECD: 9.41 ppg PV/YP: 20/12
Gels: 3/35/45 Salinity: 28000 PPM Cl Solids: 7 %
Hole Volume: 1092 bbls (corrected) Annular Volume: 1011 bbls (corrected) Tubing Volume: 43 bbls Displaced Volume: 38 bbls
Carbide Lag—Calculated Lag: 13537 strks / 13048 strks Flowrate: 670 spm / 215 spm
Drillpipe Annular Vel (Max. Dia. Sec.): 50 fpm Drillpipe Annular Vel (Open Hole): 57 fpm
Drill Collar Annular Vel (Open Hole): 67 fpm Critical Vel: 187 fpm
Pressure Loss System: 1795 psi (calc.) Pressure Loss Bit: 751 psi % Pressure Loss: 42
Nozzel Vel: 299 fps Jet Impact Force: 975 lbs HHP: 294 hp

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: 105.1 °F
Shale Density: _____ Shale Factor: _____
Background Gas: 180 u Max. Formation Gas: ____ @ ____ Trip Gas: 30 u @ 2462'
Other Gas: No connection gas noted, hard to tell if T.G. on adjacent run due to reaming
Fill: see below Tight Hole: Trip out prior to Logging — pulled tight spots #5 & 6
Cavings; Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 0.5 ppg w/ 0.5 ppg S.F. Min. Estimated Fracture Pressure (Open Hole): 14.0 ppg @ shoe
Estimated Pore Pressure: 8.6 - 8.7 ppg Min. Estimated Pore Pressure (Open Hole): 8.4 ppg @ shoe
Max. Estimated Pore Pressure (Open Hole): 8.7 ppg @ present Estimated Fracture Pressure at TD: _____

Comments:

Reached TD of 3322' @ ~1106 C.B.U. & wipe hole to shoe. On RIH, tag several tight spots, began reaming/washing to bottom from 2714'.
Reached TD of 3322' 2300 hrs @ ~1845
Circulated to ~220-7, pump slug & POOH to run logs — Note tight spots on strks #5 & 6.

[redacted]

EXLOG

GEMDAS LOGGING REPORT NO. [redacted]

COMPANY Amoco Production Co. WELL OCS-Y-0302 #1

DATE MARCH 24 '86 TIME 2400

DEPTH 3322' LAST REPORT DEPTH 3322'

LOG OPERATIONS: Running Casing

REPORT BY R. MANSKER REPORT RECEIVED BY: _____ (OPERATOR)

DRILLING REPORT — WIPE HOLE w/ Bit #6

Bit No.: — Type: — Size: — Jets: —

Bit Footage: — Hours: — ROP: — WOB: — RPM: —

Pump Press: — SPM: — Torque: — TBR: — CP I: $ — CP-B: $ —

HYDRAULICS REPORT

Mud Density In: 9.4 ppg Mud Density Out: 9.4 ppg ECD: 9.5 ppg PV/YP: —

Gels: — Salinity: — PPM Cl Solids: — %

Uncorrected Hole Volume: 1030 bbl Annular Volume: 506 bbl Tubing Volume: 492 bbl Displaced Volume: 92 bbl

Corrected

Bubble Lag — Calculated Lag: 6773 strks / 6314 strks Flowrate: 500 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): — Drillpipe Annular Vel (Open Hole): —

Drill Collar Annular Vel (Open Hole): — Critical Vel: —

Pressure Loss System: — Pressure Loss Bit: — % Pressure Loss: —

Nozzle Vel: — Jet Impact Force: — HHP: —

PRESSURE PARAMETERS

Drilling Exponent: — Flowline Temperature: 90-100 °F

Shale Density: — Shale Factor: —

Background Gas: 30 u Max. Formation Gas: — @ — Trip Gas: 480u @ 3322'

Other Gas: None

Reamed 2 stds 6 ft 6 rpm Tight Hole: Minor drag on Trip out

Cavings: Est %: — Average Size: —

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: — Min. Estimated Fracture Pressure (Open Hole): 11.0 ppg @ Shoe

Estimated Pore Pressure: 8.6 - 8.7 ppg Min. Estimated Pore Pressure (Open Hole): 8.4 ppg @ Shoe

Max. Estimated Pore Pressure (Open Hole): 8.7 ppg @ present Estimated Fracture Pressure at TD: —

Comments: Ran E-log, REH to wipe hole in preparation for running casing. Encounter minor tight hole on REA — Circulate for ~ 2 hrs total & POOH. Minor drag on POOH — Rig up & Run Casing

Received
OCS District Office
MAR 27 1986

THIS REPORT IS GOVERNED BY THE TERMS AND CONDITIONS AS SET FORTH ON THE REVERSE SIDE

Minerals Management Service
Anchorage, Alaska

EL P/N 18429 MAY 1980

EXLOG

GEMDAS LOGGING REPORT NO. 14

COMPANY AMOCO Production Co. WELL OCS Y-0302 #1

DATE MARCH 25, '86 TIME 2400

DEPTH 3322' LAST REPORT DEPTH 3322'

RIG OPERATIONS Nipple up on 13 3/8" Casing

REPORT BY R. MANSKER REPORT RECEIVED BY _____ (OPERATOR)

SIGNED

Received
MAR 27 1986
OCS District Office
Minerals Management Service
Anchorage, Alaska

DRILLING REPORT

Bit No.: — Type: — Size: — Jets: —

On Bit: Footage: — Hours: — ROP: — WOB: — RPM: —

Pump Press: — SPM: — Torque: — TBR: — CP 1: $ — CP 2: $ —

HYDRAULICS REPORT

Mud Density In: — Mud Density Out: — ECD: — PV/YP: —

Gels: — Salinity: — PPM Cl: — Solids: — %

Hole Volume: 491 661 Annular Volume: — Tubing Volume: — Displaced Volume: —

Carbide Lag—Calculated Lag: — Flowrate: —

Drillpipe Annular Vel (Max. Dia. Sec.): — Drillpipe Annular Vel (Open Hole): —

Drill Collar Annular Vel (Open Hole): — Critical Vel: —

Pressure Loss System: — Pressure Loss Bit: — % Pressure Loss: —

Nozzel Vel: — Jet Impact Force: — HHP: —

PRESSURE PARAMETERS

Drilling Exponent: — Flowline Temperature: 76.1 °F CIRC CSG

Shale Density: — Shale Factor: —

Background Gas: — Max. Formation Gas: — @ — Trip Gas: — @ —

Other Gas: —

Fill: — Tight Hole: No problems running Csg

Cavings: Est %: — Average Size: —

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: — Min. Estimated Fracture Pressure (Open Hole): —

Estimated Pore Pressure: 8.6-8.7+ ppg Min. Estimated Pore Pressure (Open Hole): 8.7 ppg @ present

Max. Estimated Pore Pressure (Open Hole): 8.7ppg @ present Estimated Fracture Pressure at TD: —

Comments:

Ran 13 3/8" Csg — good returns while running same.

Cement 13 3/8" in hole — Displaced ~568 bbls mud by one pvt.

WOC — Nipple-up well head & BOPE

EXLOG — GEMDAS LOGGING REPORT NO. 15

COMPANY AMOCO PRODUCTION CO. WELL OCS-Y-0302 #1

DATE 26 MARCH 1986 TIME 24.00HRS

DEPTH 3331' (Casing Shoe) LAST REPORT DEPTH 3322 (17½ Hole)

RIG OPERATIONS Testing B.O.P.'s

REPORT BY Michael Sellers REPORT RECEIVED BY _____ SIGNED (OPERATOR)

DRILLING REPORT

Bit No.: 1 Type: _____ Size: _____ Jets: _____

On Bit: Footage: _____ Hours: _____ ROP: _____ WOB: _____ RPM: _____

Pump Press: _____ SPM: _____ Torque: _____ TBR: _____ CP I: $ _____ CP B: $ _____

HYDRAULICS REPORT

Mud Density In: 9.2 Mud Density Out: _____ ECD: _____ PV/YP: 13/4

Gels: 1/3/11 Salinity: 31000ppm PPM Cl Solids: 6 %

Hole Volume: 490BBLS Annular Volume: — Tubing Volume: — Displaced Volume: —

Carbide Lag — Calculated Lag: _____ Flowrate: _____

Drillpipe Annular Vel (Max. Dia. Sec.): _____ Drillpipe Annular Vel (Open Hole): _____

Drill Collar Annular Vel (Open Hole): _____ Critical Vel: _____

Pressure Loss System: _____ Pressure Loss Bit: _____ % Pressure Loss: _____

Nozzel Vel: _____ Jet Impact Force: _____ HHP: _____

RECEIVED MINERALS MANAGEMENT SERVICE APR 1 1986 ALASKA OCS DISTRICT OFFICE

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: _____

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: _____ Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): _____ @ _____ Estimated Fracture Pressure at TD: _____

Comments:

Nipple up. Testing B.O.P.'s.
Hole Volume Circulation = 6567 strokes

EXLOG

GEMDAS LOGGING REPORT NO. 16

COMPANY Amoco Production Co. WELL MAR #1 (OCS-Y-0302 #1)

DATE 27th March 1986 TIME 24.00

DEPTH 3535 LAST REPORT DEPTH 3322 (3315 Casing shoe

RIG OPERATIONS Drilling ahead

REPORT BY Michael Sellers REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: NB#7 / NB#8 (103) Type: SMITH SDS / SMITH SDSCE (TOTAL 3.3 (1% in CMT) Size: 12¼ / 12¼ Jets: 13, 2x14 / 3x13

On Bit: Footage: 105 Hours: 0.8 HRS ROP: 10-140 ft/hr / 96-196 (Ave 120) WOB: 35-40 / 15-30 RPM: 100 / 100

Pump Press: 2150 / 1600-2650 SPM: 157 / 160 Torque: 200-300 / 200-300 TBR: 7793 CP I: $ 19.6 CP B: $ 102

HYDRAULICS REPORT * FOR NB#8

Mud Density In: 9.1+ Mud Density Out: 9.2 ECD: 9.5 PV/YP: 16/7

Gels: 1/18/39 Salinity: 3000 PPM Cl Solids: 6 %

Hole Volume: 531 Annular Volume: 437 Tubing Volume: 44 Displaced Volume: 51

Carbide Lag—Calculated Lag: 5852 st / 39 min Flowrate: 479 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 87.1 ft/min Drillpipe Annular Vel (Open Hole): 209 · N/A

Drill Collar Annular Vel (Open Hole): 133.9 ft/min Critical Vel: 209.7

Pressure Loss System: 1373 Pressure Loss Bit: 50% % Pressure Loss: 689 psi

Nozzel Vel: 290.8 Jet Impact Force: 645 HHP: 188.9

PRESSURE PARAMETERS

Drilling Exponent: .66 - 1.03 AVE 0.85 Flowline Temperature: 80.1°

Shale Density: _____ Shale Factor: _____

Background Gas: 145 units Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 3.67 Min. Estimated Fracture Pressure (Open Hole): 13.3

Estimated Pore Pressure: 8.7 ppg Min. Estimated Pore Pressure (Open Hole): 8.7 @ Csg.

Max. Estimated Pore Pressure (Open Hole): 8.7 @ T.D. Estimated Fracture Pressure at TD: _____

Comments:

Trip Fill = 32 bbls.

* Hole packing off @ 3629'
Circulate to clean hole

EXLOG (SM) GEMDAS LOGGING REPORT NO. 17

COMPANY AMOCO PRODUCTION Co WELL HARS #1 : OCS-Y-0302 #1

DATE 28 MARCH 1986 TIME 24.00

DEPTH 4575' LAST REPORT DEPTH 3535

RIG OPERATIONS DRILLING AHEAD

REPORT BY Michael Sellens REPORT RECEIVED BY _____ (OPERATOR SIGNED)

DRILLING REPORT

Bit No: NB#8 Type: SMITH SDGE Size: 12¼ Jets: 3x13

On Bit: Footage: 1145 Hours: 15.3 ROP: 25 → 130 (Ave 70) WOB: 15-55 RPM: 110

Pump Press: 2700 SPM: 165 Torque: 220 - 410 TBR: _____ CP I: $ 58.6 CP B: $ 61.1

HYDRAULICS REPORT

Mud Density In: 9.8 Mud Density Out: _____ ECD: 9.[illegible] PV/YP: 17/5

Gels: 1/15/30 Salinity: 2900 PPM Cl Solids: 9.5 %

Hole Volume: 675 BBL Annular Volume: 560 Tubing Volume: 58 Displaced Volume: 58

Carbide Lag—Calculated Lag: 7501 / 7833 stks Flowrate: 498 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 92.3 Drillpipe Annular Vel (Open Hole): 94.0

Drill Collar Annular Vel (Open Hole): 141.8 Critical Vel: 167.[illegible]

Pressure Loss System: 1772 Pressure Loss Bit: 47% % Pressure Loss: [illegible]831 psi

Nozzel Vel: 308 Jet Impact Force: 778 HHP: 241.4

PRESSURE PARAMETERS

Drilling Exponent: 1.3 Flowline Temperature: 100.3

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

RECEIVED
APR 1 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA
OCS DISTRICT OFFICE

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 2.77 Min. Estimated Fracture Pressure (Open Hole): 13.3

Estimated Pore Pressure: 9.3 Min. Estimated Pore Pressure (Open Hole): 9.3 @ TD

Max. Estimated Pore Pressure (Open Hole): 9.4 @ TD Estimated Fracture Pressure at TD: _____

Comments:

Abundant Connection Gas prior to rising mud weight

Mud Gain - Small gains in pit level (no change in return flow) ~~at above~~, flow check = negative. Suspect small water leak into pits.

Drill to 4665 with hole angle increasing to 59°

Circulate Bottoms up @ 0230

POOH w/ Bit # 8 @ 0350 hrs

TOTAL P.03

EXLOG GEMDAS LOGGING REPORT NO. 18

COMPANY Amoco Production Co WELL MARSH #1 : OCS-Y-0702

DATE 29 March 86 TIME 24.00

DEPTH 5015 LAST REPORT DEPTH 4575'

RIG OPERATIONS Drilling Ahead

REPORT BY Michael Sellers REPORT RECEIVED BY _____ (OPERATOR SIGNED)

DRILLING REPORT

Bit No. NR#9 Type: Smith SDSCE Size: 12¼ Jets: 4x13

On Bit Footage: 350 Hours: 6.3 ROP: ~~55~~ 55 ft/hr WOB: 50 RPM: 118

Pump Press: 2820 SPM: 176 Torque: 60-80 TBR: 31250 CP I: $ 59.4 CP B: $ 117.4

HYDRAULICS REPORT

Mud Density In: 9.8 Mud Density Out: _____ ECD: _____ PV/YP: 14/4

Gels: 1/6/17 Salinity: 2500 PPM Cl Solids: 10+ %

Hole Volume: 740 Annular Volume: 613 Tubing Volume: 64 Displaced Volume: 63

Carbide Lag—Calculated Lag: CAL 8212 / TAR 8575 Flowrate: 530 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 99.6 ft/min Drillpipe Annular Vel (Open Hole): 101.4

Drill Collar Annular Vel (Open Hole): 152.9 Critical Vel: 167.7

Pressure Loss System: 2093 Pressure Loss Bit: 46% % Pressure Loss: 9.66

Nozzle Vel: 332 Jet Impact Force: 905 HHP: 303

RECEIVED
APR 1 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA
OCS DISTRICT OFFICE

PRESSURE PARAMETERS

Drilling Exponent: 1.14 Flowline Temperature: 103°F

Shale Density: Shale Factor:

Background Gas: Max. Formation Gas: @ Trip Gas: @

Other Gas:

Trip: Tight Hole:

Cavings Est %: Average Size:

ESTIMATED PORE AND FRACTURE PRESSURE

MW Equivalence: 2.519 Min. Estimated Fracture Pressure (Open Hole): 13.3

Estimated Pore Pressure: 9.7# Min. Estimated Pore Pressure (Open Hole): 8.7 @ 5?

Max. Estimated Pore Pressure (Open Hole): 9.4# @ TD Estimated Fracture Pressure at TD:

Comments: LAST SURVEY
5162' 6.65° N2. 24E
* Drilling Ahead @ 0415

EXLOG — GEMDAS LOGGING REPORT NO. 1

COMPANY AMOCO PRODUCTION WELL MARS

DATE 30 MARCH 1986 TIME 24 HRS

DEPTH 5635' LAST REPORT DEPTH 5015'

RIG OPERATIONS DRILLING AHEAD

REPORT BY Michael Selles REPORT RECEIVED BY _____ SIGNED (OPERATOR)

DRILLING REPORT

Bit No: NB#10 Type: TJ1 (HTC) Size: 12 1/4" Jets: 4 x 13

On Bit: Footage: 149' Hours: 3.5 ROP: 40ft/hr WOB: 50-55 RPM: 116

Pump Press: 2880 SPM: 178 Torque: 90-130 TBR: 19600 CP I: $ 82.6 CP B: $ 245

HYDRAULICS REPORT

Mud Density In: 9.8 Mud Density Out: 9.8 ECD: 9.87 PV/YP: 13/6

Gels: 8/26 Salinity: 2200 PPM Cl Solids: 10 %

Hole Volume: 829 Annular Volume: 689 Tubing Volume: 73 Displaced Volume: 67

Carbide Lag: Calculated Lag: 10555 strks/9235 Flowrate: 530 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 98.4 Drillpipe Annular Vel (Open Hole): 119.4

Drill Collar Annular Vel (Open Hole): 151.2 Critical Vel: 173.1

Pressure Loss System: 2004 Pressure Loss Bit: 47% % Pressure Loss: 942 psi

Nozzle Vel: 328.5 ft/sec Jet Impact Force: 882.4 lbs HHP: 291

PRESSURE PARAMETERS

Drilling Exponent: 1.4 → 1.52 Flowline Temperature: 106°F

Shale Density: Shale Factor:

Background Gas: Max. Formation Gas: Trip Gas:

Other Gas:

Fill: Tight Hole:

Cavings: Est %: Average Size:

RECEIVED
OCS DISTRICT OFFICE
APR 1 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 2.126 Min. Estimated Fracture Pressure (Open Hole): 13.3

Estimated Pore Pressure: 9.4 Min. Estimated Pore Pressure (Open Hole): @

Max. Estimated Pore Pressure (Open Hole): 9.4 @ TD Estimated Fracture Pressure at TD: @

Comments:

Hole Fill / during Trip + 56bbls.

Slight Spot when pulling out of hole STD 1-5, 13-17

* Sharp decrease in ROP accompanied by high torque ~ 5715'

EXLOG — GEMDAS LOGGING REPORT NO. 20

COMPANY: AMOCO PRODUCTION CO — WELL: MARSH #1 OCS-Y-1030

DATE: 31st MARCH 1986 — TIME: 24.00

DEPTH: 8040' — LAST REPORT DEPTH: 5635'

RIG OPERATIONS: Drilling ahead

REPORT BY: Michael Sellers — REPORT RECEIVED BY: _____ SIGNED _____ (OPERATOR)

DRILLING REPORT

Bit No: NB#11 — Type: SEC MS 335 — Size: 12¼ — Jets: 3x14, 1x9

On Bit Footage: 298 — Hours: 10.1 hrs — ROP: 30 ft/hr — WOB: 45-50 — RPM: [illegible]

Pump Press: 2920 — SPM: 173 — Torque: 66-90 — TBR: 72269 — CP I: $ 83.05 — CP B: $ [illegible]

HYDRAULICS REPORT

Mud Density In: [illegible] — Mud Density Out: 9.8 — ECD: 9.9 — PV/YP: 17/7

Gels: 11/16/36 — Salinity: 2000 — PPM Cl — Solids: 9%

Hole Volume: [illegible] — Annular Volume: 739 — Tubing Volume: 78 — Displaced Volume: 70

Carbide Lag: [illegible] — Flowrate: 525

Drillpipe Annular Vel (Max. Obtained): [illegible] — Drillpipe Annular Vel (Open Hole): 135.9

Drill Collar Annular Vel (Open Hole): 219.5 — Critical Vel: 200.4

Pressure Loss (System): 2125 — Pressure Loss Bit: 44% — % Pressure Loss: 944

Nozzle Vel: [illegible] — Jet Impact Force: 875.716 — HHP: 289.2

PRESSURE PARAMETERS

Drilling Exponent: 1.6 — Flowline Temperature: 111.3 (MAX = 112°F)

Shale Density: — Shale Factor: OCS District Office

Background Gas: — Max. Formation Gas: — @ — Trip Gas: — @

Chromatograph: — Received

Pit: — Tight Hole: APR 31 1986

Cavings: — Average Size: Minerals Management Service

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 2.00 — Min. Estimated Fracture Pressure (Open Hole): 13.3 AT SHOE

Estimated Pore Pressure: 9.4 — Min. Estimated Pore Pressure (Open Hole): — @

Max. Estimated Pore Pressure (Open Hole): 9.41 — @ TD — Estimated Fracture Pressure at TD:

Comments:

[illegible] 8.2 hours.

	5913	5.0°	Azi 263
	5944	5.1	254
	6038	4.8	253
	6100	4.9	234

NO. 21

EXLOG — GEMDAS LOGGING REPORT NO. 21

COMPANY: AMOCO PRODUCTION CO. WELL: MARS #1 OCS-Y-0702

DATE: 1 APRIL 1986 TIME: 24:00

DEPTH: 6436' LAST REPORT DEPTH: 6040 FT

RIG OPERATIONS: DRILLING AHEAD

REPORT BY: MICHAEL SELLENS REPORT RECEIVED BY: ______ SIGNED (OPERATOR)

DRILLING REPORT

Bit No.: NB #12 Type: MS33S Size: SECURITY Jets: 3x14

On Bit Footage: 53 Hours: 3.1 ROP: 16 WOB: 45-50 RPM: 111

Pump Press: 2930 SPM: 171 Torque: 135A TBR: 23750 CP: 1794

HYDRAULICS REPORT

Mud Density In: 9.8+ Mud Density Out: 9.8+ ECD: 9.9

Gels: 1/4/15 Salinity: 2700 PPM Cl: Solids: 10

Hole Volume: 946 Annular Volume: 789 Tubing Volume: 84 Displaced Volume: 7.2

Carbide Lag—Calculated Lag: 12085/10570 Flowrate: 520 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 96.3 ft/min Drillpipe Annular Vel (Open Hole): 98 ft/min

Drill Collar Annular Vel (Open Hole): 147.9 ft/min Critical Vel: 154.6

Pressure Loss System: 2058 Pressure Loss Bit: 45% % Pressure Loss: 1250

Nozzel Vel: 325 Jet Impact Force: 858 HHP: 280

PRESSURE PARAMETERS

Drilling Exponent: 1.8 Flowline Temperature: 110.8 F

Shale Density: Shale Factor:

Background Gas: Max. Formation Gas: @ Trip Gas:

Other Gas:

Fill: Tight Hole:

Cavings Est %: Average Size:

Received
OCS District Office
APR 3 1986
Minerals Management Service
Anchorage, Alaska

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.85 lb Min. Estimated Fracture Pressure (Open Hole): 13.3 ppg

Estimated Pore Pressure: 9.4+ Min. Estimated Pore Pressure (Open Hole): 9.4

Max. Estimated Pore Pressure (Open Hole): 9.4+ @ TD Estimated Fracture Pressure at TD:

Comments:

TRIP Fill = +4 bbls over calculate

NB #11 Drilled 642 ft in 23 hours.

* Drilling ahead w/ NB #12

* Surveys 6162 4.6° AZ: 231

6226 5.1 226

6351 4.5

ELF/N 18429 MAY 1980

THIS REPORT IS GOVERNED BY THE TERMS AND CONDITIONS AS SET FORTH ON THE REVERSE SIDE

EXLOG (SM) | GEMDAS LOGGING REPORT NO. 22

COMPANY AMOCO PRODUCTION CO WELL OCS Y-0302 #1 (MARS)

DATE 3RD APRIL 1986 TIME 0400

DEPTH 6977 ft LAST REPORT DEPTH

RIG OPERATIONS DRILLING

REPORT BY RICHARD WHIFFEN REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: 12 Type: SEC M S33S Size: 12¼" Jets: 9/14/14/14

On Bit: Footage: 594 Hours: 28.2 ROP: 21.1 ft/hr WOB: 50-60 RPM: 115-120

Pump Press: 2470 SPM: 171 Torque: 120 TBR: _____ CP I: $ 171 CP B: $ 213

HYDRAULICS REPORT

Mud Density In: 9.7+ Mud Density Out: 9.8 ECD: 9.9+ PV/YP: 14/7

Gels: 11/4/15 Salinity: 1600 PPM Cl Solids: 8 %

Hole Volume: 1024 Annular Volume: 857 Tubing Volume: 92 Displaced Volume: 77

Carbide Lag—Calculated Lag: 12984-11359 STROKES Flowrate: 539 gal/min

Drillpipe Annular Vel (Max. Dia. Sec.): 100 ft/min Drillpipe Annular Vel (Open Hole): 101 ft/min

Drill Collar Annular Vel (Open Hole): 153 ft/min Critical Vel: DC 196 ft/min

Pressure Loss System: 2261 psi Pressure Loss Bit: 984 psi % Pressure Loss: 44

Nozzel Vel: 337 Jet Impact Force: 912 HHP: 309

PRESSURE PARAMETERS

Drilling Exponent: 1.70 - 1.90 Flowline Temperature: 122°F

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Si

RECEIVED
OCS DISTRICT OFFICE
APR 7 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.72 lb/gal Min. Estimated Fracture Pressure (Open Hole): 13.3 lb/gal @ SHOE

Estimated Pore Pressure: 9.4 Min. Estimated Pore Pressure (Open Hole): 8.8 @ SHOE

Max. Estimated Pore Pressure (Open Hole): 9.4+ @ TD Estimated Fracture Pressure at TD: _____

Comments:

		°	AZI
SURVEYS	6634	3.4	260
	6730	3.0	250
	6853	2.7	238

@ 0400 hrs DRILLING @ 6977 ft @ 16.8 ft/hr & 21 units gas

EL P/N 18429 MAY 1980

THIS REPORT IS GOVERNED BY THE TERMS AND CONDITIONS AS SET FORTH ON THE REVERSE SIDE

EXLOG GEMDAS LOGGING REPORT NO. 23

COMPANY Amoco Production CO WELL OCS Y 0302 MARS #1
DATE 4/3/86 TIME 2400
DEPTH 7079 LAST REPORT DEPTH 6910
RIG OPERATIONS Drilling
REPORT BY Anderson REPORT RECEIVED BY _____ SIGNED _____ (OPERATOR)

DRILLING REPORT

Bit No.: 13 Type: Smith SDGH CE Size: 12¼ Jets: 11-11-11-9
On Bit: Footage: 22 Hours: 1.7 ROP: 13 WOB: 58-60 RPM: 120
Pump Press: 3020 SPM: 128 Torque: 90-100 TBR: 5860 CP I: $207 CP B: $1847

HYDRAULICS REPORT note possible plug jet!!

Mud Density In: [illegible] Mud Density Out: 9.7+ ECD: 9.8 PV/YP: 17/8
Gels: [illegible] Salinity: 1600 PPM Cl Solids: 9 %
Hole Volume: 1038 bbl Annular Volume: 868 bbl Tubing Volume: 93 bbl Displaced Volume: 77 bbl
Carbide Lag—Calculated Lag: 13295-11630 Flowrate: 395 gpm
Drillpipe Annular Vel (Max. Dia. Sec.): 73 ft/min Drillpipe Annular Vel (Open Hole): 74 ft/min
Drill Collar Annular Vel (Open Hole): 112 ft/min Critical Vel: 194 ft/min
Pressure Loss System: 1955 psi Pressure Loss Bit: 1199 psi % Pressure Loss: 61
Nozzel Vel: 372 ft/sec Jet Impact Force: 738 lbs HHP: 276

PRESSURE PARAMETERS

Drilling Exponent: 1.80 Flowline Temperature: 99°F
Shale Density: _____ Shale Factor: _____
Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____
Other Gas: [illegible]
Fill: _____ Tight Hole: 6970 ± ft.
Cavings: Est %: _____ Average Size: _____

REC'D
OCS DISTRICT OFFICE
APR 7 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.68 lb/g Min. Estimated Fracture Pressure (Open Hole): 13 lb/g Casing Sho
Estimated Pore Pressure: 9.4 lb/g Min. Estimated Pore Pressure (Open Hole): 8.8 @ shoe
Max. Estimated Pore Pressure (Open Hole): 9.4 @ TD Estimated Fracture Pressure at TD: _____

Comments:

① RIH w/ NB # 13 & stuck pipe 90' off bottom. Free pipe & Ream 3 singles to bottom and drill ahead.
② Due to high pump pressure & low flow rates a plug jet is likely
@ 0400 DRILLING @ 7135 ft w/ NB # 13 @ 15 ft/hr & 27 units
MUD WT TO 10.0 lb/gal DUE TO TIGHT HOLE @ 0200 hrs
LAST SURVEY @ 6979 ft = 2.95° S58W

EXLOG — GEMDAS LOGGING REPORT NO. 24

COMPANY Amoco Production Co. WELL OCS Y 0302 #1

DATE 4/4/86 TIME 2400

DEPTH 7360' LAST REPORT DEPTH 7079

RIG OPERATIONS Drilling

REPORT BY Gunderson REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No. 14 Type Smith SDGH Size 12 1/4 Jets 13:13:13

On Bit: Footage 119 Hours 7.9 ROP 15 ft/hr WOB 60 RPM 120

Pump Press 2890 SPM 153 Torque 100-120 TBR 56,345 CP I: $ 201 CP B: $ 533

HYDRAULICS REPORT

Mud Density In: [illegible] Mud Density Out: 10.0+ ECD: 10.07 PV/YP: 14/6

Gels: 7/51/72 Salinity: 1400 PPM Cl Solids: 9 %

Hole Volume: 1070 bbl Annular Volume: 698 bbl Tubing Volume: 96 bbl Displaced Volume: 75 bbl

Carbide Lag—Calculated Lag: 3756-12034 strks Flowrate: 483 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 89 ft/min Drillpipe Annular Vel (Open Hole): 91 ft/min

Drill Collar Annular Vel (Open Hole): 137 ft/min Critical Vel: 213 ft/min

Pressure Loss System: 2579 Pressure Loss Bit: 1417 % Pressure Loss: 55

Nozzel Vel: 398 ft/sec Jet Impact Force: 995 lbs HHP: 399

PRESSURE PARAMETERS

Drilling Exponent: 1.85 Flowline Temperature: 115° F

Shale Density: [illegible] Shale Factor: [illegible]

Background Gas: [illegible] Max. Formation Gas: _____ @ _____ Trip Gas: [illegible]

Other Gas: [illegible]

Fill: [illegible] Tight Hole: [illegible]

Cavings: [illegible] Average Size: [illegible]

RECEIVED
OCS DISTRICT OFFICE
APR 09 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 15.6 lb/g Min. Estimated Fracture Pressure (Open Hole): 13.3 @ shoe

Estimated Pore Pressure: 9.5 Min. Estimated Pore Pressure (Open Hole): 8.8 @ shoe

Max. Estimated Pore Pressure (Open Hole): 9.5 @ TD Estimated Fracture Pressure at TD: _____

Comments:

[illegible] RIH w/ NB #14 & Drill Ahead

[illegible] Ream 60 feet to bottom.

[illegible] DRILLING W/ NB#14 @ 7378 ft @ 37.2 ft/hr

[illegible] 20 units GAS. ROP INCREASED FROM 15-18 ft/hr

[illegible] 7350 ft To 25-40 ft/hr

[illegible]

EXLOG — GEMDAS LOGGING REPORT NO. 25

COMPANY Amoco Production Co. WELL OCS Y 0302 #1
DATE 4/5/86 TIME 2400
DEPTH 7562 LAST REPORT DEPTH 7300
RIG OPERATIONS Drilling
REPORT BY Gary Gunderson REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: 15 Type: Smith F1 Size: 12¼" Jets: 13/13/13
On Bit: Footage: 165 Hours: 9.7 ROP: 17 ft/hr WOB: 40 RPM: 70-80
Pump Press: 2700 SPM: 153 Torque: 40-80 TBR: 35805 CP I: $ 220 CP B: $ 402

HYDRAULICS REPORT

Mud Density In: 10.1 Mud Density Out: 10.1+ ECD: 10.5 PV/YP: 12/17
Gels: 1/7/17 Salinity: 1000 PPM Cl Sol Solids: 10 %
Hole Volume: 1108 bbl Annular Volume: 931 bbl Tubing Volume: 100 bbl Displaced Volume: 77 bbl
Carbide Lag—Calculated Lag: 13894 - 12479 STROKES Flowrate: 477 gpm
Drillpipe Annular Vel (Max. Dia. Sec.): 88.3 ft/min Drillpipe Annular Vel (Open Hole): 90 ft/min
Drill Collar Annular Vel (Open Hole): 135 ft/min Critical Vel: 171 ft/min
Pressure Loss System: 2510 psi Pressure Loss Bit: 1390 psi % Pressure Loss: 55
Nozzel Vel: 393 ft/sec Jet Impact Force: 976 lbs HHP: 386

PRESSURE PARAMETERS

Drilling Exponent: 1.50 Flowline Temperature: 124 °F
Shale Density: _____ Shale Factor: _____
Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____
Other Gas: _____
Tight Hole: _____
Cavings: Est %: _____ Average Size: _____

RECEIVED
OCS DISTRICT OFFICE
APR 09 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.51 lb/g Min. Estimated Fracture Pressure (Open Hole): 13.3 lb/g @ shoe
Estimated Pore Pressure: 9.6+ Min. Estimated Pore Pressure (Open Hole): 8.8 @ shoe
Max. Estimated Pore Pressure (Open Hole): 9.6+ @ TD Estimated Fracture Pressure at TD: _____

Comments:

* RIH w/ NB 15 & Ream 100' to obtain MWD-LOG

Surveys 7387' 1.77° 244° Az
7513' 2.24° 246°

@2400hrs DRILLING W/NB #15 @ 7615 ft @ 14 ft/hr

EXLOG

GEMDAS LOGGING REPORT NO. 26

COMPANY Amoco Productions CO. WELL OCS Y 0302 #1

DATE 4/7/86 TIME 2400

DEPTH 7780 LAST REPORT DEPTH 7562

G OPERATIONS Drilling

EPORT BY Gary Gunderson REPORT RECEIVED BY _____ SIGNED _____ (OPERATOR)

RILLING REPORT

No.: 16 Type: Smith F-2 Size: 12 1/4" Jets: 13:13:13

Bit: Footage: 215 Hours: 8.4 ROP: 13.5 WOB: 55 RPM: 60

mp Press: 2670 SPM: 152 Torque: 200-275 TBR: 29259 CP I:$ 188 CP B:$ 557

YDRAULICS REPORT

d Density In: 10.0 ppg Mud Density Out: 10.1 ECD: 10.15 PV/YP: 14/14

ls: 2.5/2.0 Salinity: 900 PPM Cl Solids: 11 %

le Volume: 1137 bbl Annular Volume: 956 bbl Tubing Volume: 103 bbl Displaced Volume: 78 bbl

rbide Lag—Calculated Lag: 14259-12807 STKS Flowrate: 480 gpm

rillpipe Annular Vel (Max. Dia. Sect.): 89 ft/min Drillpipe Annular Vel (Open Hole): 91 ft/min

ill Collar Annular Vel (Open Hole): 137 ft/min Critical Vel: 208 ft/min

essure Loss System: 2535 psi Pressure Loss Bit: 1394 psi % Pressure Loss: 55

ozzel Vel: 396 ft/sec Jet Impact Force: 992 lbs HHP: 385

RESSURE PARAMETERS

rilling Exponent: Trend Normal Flowline Temperature: 117°F

hale Density: Shale Resistivity:

ackground Gas: Max. Formation Gas: @ Trip Gas: @

onn. Gas:

Right Hole:

Average Size:

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA
APR 09 1986
OCS DISTRICT OFFICE
RECEIVED

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 12.0 lb/g Min: Estimated Fracture Pressure (Open Hole): 13.3 lb/g @ shoe

Estimated Pore Pressure: 9.7 lb/g Min. Estimated Pore Pressure (Open Hole): 8.8 @ shoe

Max. Estimated Pore Pressure (Open Hole): 9.7 @ TD Estimated Fracture Pressure at TD: —

Comments: RIH w/ NB #16 & Ream 30' to bottom

BOTTOM @ 7780ft - LOSING MUD TO FORMATION, CIRC SLOW

DRILLING ; TOTAL MUD LOSS = APPROX 85 bbls

w/ NB #16 @ 7791 ft @ 10.5 ppg & W/

EXLOG (SM)

GEMDAS LOGGING REPORT NO. 27

COMPANY Amoco Production Co WELL OCS Y 0302 #1

DATE 4/7/86 TIME 2400

DEPTH 7976 ft LAST REPORT DEPTH 7762 ft

RIG OPERATIONS Wiper hole [illegible]

REPORT BY Swanson REPORT RECEIVED BY _____ SIGNED (OPERATOR)

DRILLING REPORT

Bit No.: 16 Type: Smith F2 Size: 12 1/4 Jets: 13 13 13

On Bit: Footage: 329 Hours: 26 ROP: 12.6 WOB: 60 RPM: 55

Pump Press: 2610 SPM: 156 Torque: [illegible] TBR: 76539 CP I: $ 269 CP B: $ 378

HYDRAULICS REPORT

Mud Density In: 9.9 Mud Density Out: 9.7 ECD: [illegible] PV/YP: 8/4

Gels: 1 14 Salinity: 250 PPM Cl Solids: 6.0 %

Hole Volume: 1170 bbl Annular Volume: 984 bbl Tubing Volume: 406 bbl Displaced Volume: 401 bbl

Carbide Lag—Calculated Lag: 7480 – 13:45 Flowrate: 477 gpm

Drillpipe Annular Vel (Max. Dia. Sec.): 88 ft/min Drillpipe Annular Vel (Open Hole): 90 ft/min

Drill Collar Annular Vel (Open Hole): 135 ft/min Critical Vel: 132 ft/min

Pressure Loss System: 2520 psi Pressure Loss Bit: 1369 psi % Pressure Loss: 54

Nozzel Vel: 323 ft/sec Jet Impact Force: 912 lbs HHP: 381

PRESSURE PARAMETERS

Drilling Exponent: 1.70 normal trend Flowline Temperature: 124°F

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

RECEIVED
OCS DISTRICT OFFICE
APR 09 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.45 lb/g Min. Estimated Fracture Pressure (Open Hole): 13.0 lb/g

Estimated Pore Pressure: 9.7 lb/g Min. Estimated Pore Pressure (Open Hole): 5.8 @ Max

Max. Estimated Pore Pressure (Open Hole): 9.7 @ TD Estimated Fracture Pressure at TD: —

Comments:

Reached TD 7976' @ 2027 hrs 4/7/86

Wiper hole to casing shoe

4/8/86 0000 hrs HOLE TIGHT @ 4841 ft – P/U KELLY & WORK PIPE

0100 hrs ATTEMPT TO COMPLETE WIPER TRIP – HOLE STILL TIGHT – LAY DOWN SINGLES (6)

0145 hrs P/U KELLY @ 4467 ft & WORK PIPE, REAM TIGHT HOLE @ 0400 hrs CONTINUE WORK PIPE @ 4467 ft

EXLOG

GEMDAS LOGGING REPORT NO. 28

COMPANY Amoco Production Co. WELL OCS-Y-0302

DATE 4/8/86 TIME 2400

DEPTH 7976' LAST REPORT DEPTH 7976'

RIG OPERATIONS Rig-up for E-LOGS

REPORT BY GUNDERSON REPORT RECEIVED BY _____ (OPERATOR SIGNED)

DRILLING REPORT

Bit No. 17 Type: Smith SDS Size: 12¼" Jets: 15,15,15

On Bit Footage: — Hours: — ROP: — WOB: — RPM: —

Pump Press: 2310 SPM: 162 Torque: — TBR: — CP: — CP Bit: —

HYDRAULICS REPORT

Mud Density In: 10.0 Mud Density Out: 10.0 ECD: 10.0 PV/YP: 7/15

Gels: 0/2/6 Salinity: 800 PPM Cl Solids: 10 %

Hole Volume: 1170 bbl Annular Volume: 994 bbl Tubing Volume: 108 bbl Displaced Volume: 68 bbl

Carbide Lag—Calculated Lag: 14825 - 13314 Flowrate: 520

Drillpipe Annular Vel (Max. Dia. Sec.): 96.5 ft/min Drillpipe Annular Vel (Open Hole): 98 ft/min

Drill Collar Annular Vel (Open Hole): 148 ft/min Critical Vel: 134 ft/min

Pressure Loss System: 2177 psi Pressure Loss Bit: 929 psi % Pressure Loss: 43

Nozzel Vel: 322 ft/sec Jet Impact Force: 868 lbs HHP: 285

PRESSURE PARAMETERS N/A

Drilling Exponent: _____ Flowline Temperature: 114 °F

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Cavings: Size: _____

RECEIVED
OCS DISTRICT OFFICE
APR 15 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: 1.45 lb/g Min. Estimated Fracture Pressure (Open Hole): 13.5 @ 4400

Estimated Pore Pressure: 9.7 Min. Estimated Pore Pressure (Open Hole): 8.5 @ Shoe

Max. Estimated Pore Pressure (Open Hole): 9.7 @ 7976 Estimated Fracture Pressure: —

Comments:

* Rlt & Ream 4400-4800'
Rlt to bottom & Ream - circulate & condition
POOH w/ Bit #17 for E-LOGS
very little drag on trip out
@ 0400 RUNNING DRESSER-ATLAS ELECTRIC

EXLOG | GEMDAS LOGGING REPORT NO. 30

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1
DATE APRIL 16th 1986 TIME 2400
DEPTH 7976 ft LAST REPORT DEPTH 7976 ft
RIG OPERATIONS [illegible]
REPORT BY RICHARD WHITTEN REPORT RECEIVED BY ____ SIGNED ____ (OPERATOR)

DRILLING REPORT

Bit No.: 17 Type: SMITH SDS Size: 12 1/4" Jets: 15/15/15
On Bit: Footage: 0 Hours: ROP: WOB: RPM: 75
Pump Press: 2376 SPM: 103 Torque: TBR: CP I: $ CP B: $

HYDRAULICS REPORT

Mud Density In: Mud Density Out: ECD: PV/YP:
Gels: Salinity: PPM Cl Solids. %
CORRECTED Hole Volume: 1707 bbl CORRECTED Annular Volume: 1485.25 Tubing Volume: 10.8 bbl Displaced Volume: 63 bbl
Carbide Lag—Calculated Lag: 14759 STROKES = 82 mins Flowrate: 511 gal/min
Drillpipe Annular Vel (Max. Dia. Sec.): 94.7 ft/min Drillpipe Annular Vel (Open Hole):
Drill Collar Annular Vel (Open Hole): 145.8 ft/min DC Critical Vel: 171.9 ft/min
Pressure Loss System: 2146 psi Pressure Loss Bit: 900 psi % Pressure Loss: 43
Nozzel Vel: 316.7 ft/sec Jet Impact Force: 541.8 lb HHP: 268.3 hp

PRESSURE PARAMETERS

Drilling Exponent: Flowline Temperature: 90°F
Shale Density: Shale Factor:
Background Gas: Max. Formation Gas: @ Trip Gas: @
Other Gas:
Fill: Tight Hole:
Cavings: Est %: Average Size:

RECEIVED
OCS DISTRICT OFFICE
APR 16 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: Min. Estimated Fracture Pressure (Open Hole):
Estimated Pore Pressure: Min. Estimated Pore Pressure (Open Hole): @
Max. Estimated Pore Pressure (Open Hole): @ Estimated Fracture Pressure at TD:

Comments:
RAN [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] RIH [illegible] [illegible]

2400hrs [illegible] [illegible] [illegible]
0350 Stop Circulating —— prepare to pooh
0415 POOH ——

EXLOG

GEMDAS LOGGING REPORT NO. 31

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1

DATE APRIL 11TH 1986 TIME 2400

DEPTH 7976 ft LAST REPORT DEPTH 7976

RIG OPERATIONS RUN 9 5/8" CASING

REPORT BY RICHARD WHIFFEN REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: RR #17 Type: SMITH 525 Size: _____ Jets: 15/15/15

On Bit: Footage: 0 Hours: _____ ROP: _____ WOB: _____ RPM: _____

Pump Press: 2460 SPM: 168 Torque: _____ TBR: _____ CP 1: $ _____ CP 8: $ _____

HYDRAULICS REPORT

Mud Density In: _____ Mud Density Out: _____ ECD: _____ PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: 1282 bbl Annular Volume: 1107 bbl Tubing Volume: 108 bbl Displaced Volume: 68 bbl

Carbide Lag—Calculated Lag: _____ Flowrate: _____

Drillpipe Annular Vel (Max. Dia. Sec.): 97.2 ft/min Drillpipe Annular Vel (Open Hole): 98.9 ft/min

Drill Collar Annular Vel (Open Hole): 149.2 ft/min DC Critical Vel: 135.5 ft/min

Pressure Loss System: 2186 psi Pressure Loss Bit: 932 psi % Pressure Loss: 43

Nozzel Vel: 325 ft/sec Jet Impact Force: 873 lb HHP: 286 hp

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: 112°F

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

RECEIVED
OCS DISTRICT OFFICE
APR 16 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: _____ Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): _____ @ _____ Estimated Fracture Pressure at TD: _____

Comments:

MADE WIPER TRIP, CIRCULATED 4 HRS ON BOTTOM, PULLED TO SHOE, CIRC & WAITED ON ORDERS; RAN BACK TO BOTTOM & CIRCULATE 2.3 HRS; POOH TO RUN 9 5/8" CASING

@ 2400 HRS 24 JOINTS RUN

EXLOG

GEMDAS LOGGING REPORT NO. 32

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1

DATE APRIL 12TH 1986 TIME 2400

DEPTH 7982 ft LAST REPORT DEPTH 7982 ft

RIG OPERATIONS INSTAL WELL-HEAD (9⅝")

REPORT BY RICHARD WHITTEN REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: — Type: _____ Size: _____ Jets: _____

On Bit: Footage: _____ Hours: _____ ROP: _____ WOB: _____ RPM: _____

Pump Press: _____ SPM: _____ Torque: _____ TBR: _____ CP I: S _____ CP B: S _____

HYDRAULICS REPORT

Mud Density In: _____ Mud Density Out: _____ ECD: _____ PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: 564 661 Annular Volume: _____ Tubing Volume: _____ Displaced Volume: _____

Carbide Lag—Calculated Lag: _____ Flowrate: _____

Drillpipe Annular Vel (Max. Dia. Sec.): _____ Drillpipe Annular Vel (Open Hole): _____

Drill Collar Annular Vel (Open Hole): _____ Critical Vel: _____

Pressure Loss System: _____ Pressure Loss Bit: _____ % Pressure Loss: _____

Nozzel Vel: _____ Jet Impact Force: _____ HHP: _____

RECEIVED
DCS DISTRICT OFFICE

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: _____

APR 16 1986

Shale Density: _____ Shale Factor: _____

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: _____ Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): _____ @ _____ Estimated Fracture Pressure at TD: _____

Comments:

RAN 9⅝" CASING WORKED & PUMPED FINAL W/ JONES TO BOTTOM - CIRCULATED THROUGH CASING W/ 166 gpm
1220 hrs BEGIN PUMPING CEMENT - GAINED 430 661s IN PITS
1330 hrs BEGIN DISPLACING CEMENT W/ RIG PUMPS + MW
PUMPED 7338 STROKES (548 661) @ 300 psi / 136 spm
LOST APPROX 100 661 MUD, HAD RETURNS THROUGHOUT DISP

EL P/N 18429 MAY 1980

THIS REPORT IS GOVERNED BY THE TERMS AND CONDITIONS AS SET FORTH ON THE REVERSE SIDE

EXLOG

GEMDAS LOGGING REPORT NO. 33

COMPANY AMOCO PRODUCTION CO. WELL OCS Y-0302 #1

DATE APRIL 13TH 1986 TIME 2400

DEPTH 7982 LAST REPORT DEPTH 7982

RIG OPERATIONS RUN CBL

REPORT BY RICHARD WHIFFEN REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: 18 Type: _____ Size: 8½" Jets: _____

On Bit: Footage: _____ Hours: _____ ROP: _____ WOB: _____ RPM: 73

Pump Press: 1100 SPM: 126 Torque: TRA: _____ CP 1: 2 _____ CP 2: 6 _____

HYDRAULICS REPORT

Mud Density In: _____ Mud Density Out: _____ ECD: _____ PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: 559 bbl Annular Volume: _____ Tubing Volume: _____ Displaced Volume: _____

Carbide Lag—Calculated Lag: _____ Flowrate: _____

Drillpipe Annular Vel (Max. Dia. Sec.): _____ Drillpipe Annular Vel (Open Hole): _____

Drill Collar Annular Vel (Open Hole): _____ Critical Vel: _____

Pressure Loss System: _____ Pressure Loss Bit: _____ % Pressure Loss: _____

Nozzel Vel: _____ Jet Impact Force: _____ HHP: _____

PRESSURE PARAMETERS

Drilling Exponent: _____ Flowline Temperature: _____

Shale Density: _____ Shale Factor: _____

Background Gas: _____ Max. Formation Gas: _____ @ _____ Trip Gas: _____ @ _____

Other Gas: _____

Fill: _____ Tight Hole: _____

Cavings: Est %: _____ Average Size: _____

RECEIVED
OCS DISTRICT OFFICE
APR 16 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

ESTIMATED PORE AND FRACTURE PRESSURE

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

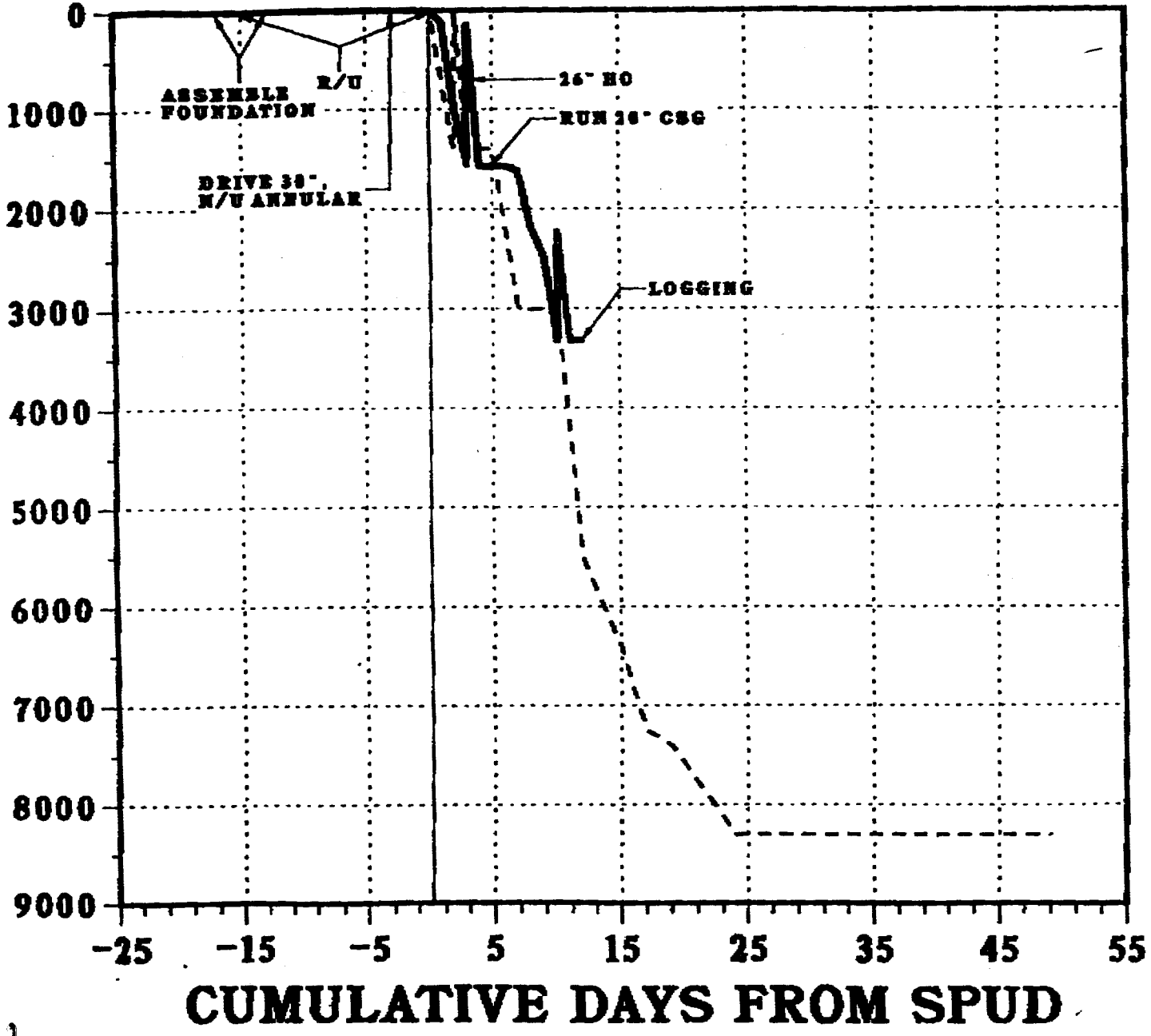
Estimated Pore Pressure: _____ Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): _____ @ _____ Estimated Fracture Pressure at TD: _____

Comments:

NIPPLE-UP BOPE & TEST SAME
1000 hrs RIH W/ 8½" BIT, CASING SCRAPER, 6½" DCs
WORKED / FINAL 3 STANDS OF TRIP IN
1345 CIRC @ FLOAT COLLAR @ APPROX 7892 ft
1100 psi / 126 SPM
1355 PRESSURE TEST CASING 2100 psi / 25 Mins = OK
1630 POOH
2000 RIG-UP DRESSER-ATLAS - RUN CBL

CUMULATIVE DAYS VS. DEPTH
MARS PROSPECT



Legend

PLANNED

ACTUAL

0302
7-G7

EXLOG

GEMDAS LOGGING REPORT NO. —

GEOLOGIST 0415 UPDATE

COMPANY AMOCO Production Co. WELL OCS Y-0302 #1

DATE 3/13/96 TIME 0415

DEPTH 147' LAST REPORT DEPTH 124'

RIG OPERATIONS CERC.

REPORT BY R. MANSHER REPORT RECEIVED BY _____ (OPERATOR)
SIGNED

DRILLING REPORT

Bit No.: 1 Type: SMTH SDS Size: 17½" Jets: 3 x 20

On Bit: Footage: 22' Hours: 6.6 hrs ROP: 11 ft/hr WOB: 0-5K RPM: 60-70

Pump Press: 250 psi SPM: VAR Torque: — TBR: — CP I: $ — CP B: $ —

HYDRAULICS REPORT

Mud Density In: _____ Mud Density Out: _____ ECD: _____ PV/YP: _____

Gels: _____ Salinity: _____ PPM Cl Solids: _____ %

Hole Volume: _____ Annular Volume: _____ Tubing Volume: _____ Displaced Volume: _____

Carbide Lag—Calculated Lag: _____ Flowrate: _____

Drillpipe Annular Vel (Max. Dia. Sec.): _____ Drillpipe Annular Vel (Open Hole): _____

Drill Collar Annular Vel (Open Hole): _____ Critical Vel: _____

Pressure Loss System: _____ Pressure Loss Bit: _____ % Pressure Loss: _____

Nozzel Vel: _____ Jet Impact Force: _____ HHP: _____

PRESSURE PARAMETERS

Drilling Exponent: 606 Flowline Temperature: 52 °F

Shale Density: — Shale Factor: —

Background Gas: <1 unit Max. Formation Gas: <1 unit @ present Trip Gas

Other Gas: —

Fill: — Tight Hole: —

Cavings: Est %: — Average Size: —

Received
OCS District Office
MAR 17 1996

ESTIMATED PORE AND FRACTURE PRESSURE

Minerals Management Service
Anchorage, Alaska

Kick Tolerance: _____ Min. Estimated Fracture Pressure (Open Hole): _____

Estimated Pore Pressure: 8.4 ppg Min. Estimated Pore Pressure (Open Hole): _____ @ _____

Max. Estimated Pore Pressure (Open Hole): 8.4 ppg @ present Estimated Fracture Pressure at TD: _____

Comments:

0000 — Con't cleaning out conductor
0205 — Start drilling formation below conductor
0253 — Circulate & Condition Mud
0318 — Resume drilling
0413 — Stop drilling @ 147' CBU --
prepare to POOH & Pick up BHA.

EL P/N 18429 MAY 1980

WELL LOGGING REPORT

COMPANY Amoco Production Co.

WELL OCS-Y-302 No. 1 Mars

LOCATION West Harrison Bay, AK

Date 3/13/86 Time 04:15 hrs Depth 146' Present Operation Drill ahead

Feet made 25' Hrs drlg 4.5 Avg drlg rate 8 ft/hr

Depth last sample 120' Sd _____ Sh _____ Other 100% Clay

Hotwire: Min. _____ Depth _____ Max. _____ Depth _____ Avg. _____

H_2S: Min 0 Depth _____ Max. 0 Depth _____ Avg. _____

CO_2: Min. 0% Depth 130-146' Max. 0.05% Depth 80-130% Avg. 0.025%

Conn. gas: Min. 0 Depth _____ Max. _____ Depth _____

Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	172 ppm	726 ppm	242 ppm	140'
C_2	0			
C_3	0			
C_4	0			
C_5	0			

Mud properties: Wt 8.9+ Vis 75 Wl 14.8 Ph 9.0 Cl 4600

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth _____ Gas _____ Amount carbide used _____

Bottom up: Pump strokes _____ at _____ strokes per minute, Time _____

Lithology and remarks:

100% Clay - large volume of cuttings over shakers. pump nutplug to clean out hole with moderate success

COMPANY Amoco Prod. Co.

WELL OCS-Y-302 NO. 1 MARS.

LOCATION West Harrison Bay, Beaufort Sea, AK

Date 3-13-86 Time 00:01 Depth 121' Present Operation Drilling

Feet made 46' Hrs drlg 6 hrs Avg drlg rate 15 ft/hr

Depth last sample 120' Sd ____ Sh ____ Other 100% clay

Hotwire: Min. ____ Depth ____ Max. ____ Depth ____ Avg. 2

H_2S: Min. N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0% Depth 110 Max. .05% Depth 100 Avg. .05%

Conn. gas: Min. N/A Depth ____ Max. N/A Depth ____

Trip gas N/A Depth ____ Lag time for trip gas N/A

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	155 ppm	1011 ppm	250 ppm	113
C_2	N/A			
C_3				
C_4				
C_5				

Mud properties: Wt ____ Vis ____ WI ____ Ph ____ Cl ____

Sol ____ Oil ____ Wtr ____ Other ____

Carbide check: Depth N/A Gas ____ Amount carbide used ____

Bottom up: Pump strokes 727 at 140 strokes per minute, Time 23:45

Lithology and remarks: CLAY- gy, gmmy, sft

Received
OCS District Office

MAR 17 1986

Minerals Management Service
Anchorage, Alaska

Called in by ____ Talked with ____ Phone ____

WELL LOGGING REPORT

Y AMOCO PROD. CO.

OCS-Y-302 NO. 1 MARS

ON WEST HARRISON BAY, AK

14-86 Time 00:01 Depth 1001 Present Operation Drlg

de 880 Hrs drlg 18 Avg drlg rate 145 ft/hr

ast sample 960 Sdt GVL - 60% ~~Sft~~ Tr Coal Other CLY - 40%

: Min. 2 Depth 200-550 Max. 38 Depth 725 Avg. 21

n. N/A Depth ____ Max. ____ Depth ____ Avg. ____

n. .05% Depth ____ Max. .05% Depth ____ Avg. .05%

s: Min. N/A Depth ____ Max. ____ Depth ____

s NONE - N/A Depth 146 Lag time for trip gas N/A

tograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	2	38	15	725
C_2	N/A	N/A	N/A	
C_3				
C_4				
C_5				

perties: Wt 9.2 Vis 50 WL 20 Ph 9.0 Cl 4100

Sol 7% Oil N/A Wtr ____ Other About Not Plug

e check: Depth 818 Gas 42 units Amount carbide used 4oz

up: Pump strokes 1567 at 150 strokes per minute, Time 22:30

gy and remarks: SDT GVL - varic, blk, gy, clr, wh, pbls, crs gr, p srt, rnd-sb rnd, uncons, pyr, qtz, lith frag

CLY - lt gy, gy brn, gmmy, stky, slty, sft

Received
OCS District Office

MAR 17 1986

Minerals Management Service
Anchorage, Alaska

in by ____ Talked with ____ Phone ____

MUD LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION WEST HARRISON BAY, AK

Date 3-15-86 Time 00:01 Depth 1550-12¼ Present Operation Open Hole to

Feet made 549 Hrs drlg 4.5 Avg drlg rate 450 ft/hr

Depth last sample 1550 Sd+GVL- 90% Sh _____ Other CLAY 10%

Hotwire: Min. 12 Depth 800 Max. 72 Depth 1125 Avg. 35

H_2S: Min N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0.5% Depth _____ Max. 0.5% Depth _____ Avg. 0.5%

Conn. gas: Min. N/A Depth _____ Max. _____ Depth _____

Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	1200 ppm	7200 ppm	3500 ppm	1125
C_2	N/A			
C_3				
C_4				
C_5				

All METHANE

Mud properties: Wt 9.1 Vis 37 Wl 45 Ph 8 Cl 8200

Sol 6% Oil N/A Wtr _____ Other Nut Plug

Carbide check: Depth 818 Gas 42 units Amount carbide used 4 oz

Bottom up: Pump strokes 2510 at 160 strokes per minute, Time 05:30 hrs.

Lithology and remarks: GVL- varic, blk, gy, brn, wh, clr, gn, pbls- crs gr, sb rnd- rnd, uncons, qtz, tr cht, tr pyr, lith frags

CLY- gy, brn, slty, gmmy, stky, sft

* Open hole to 26" - 12 hrs

00:01 Present Depth 350

Received
OCS District Office
MAR 18 1986
Minerals Management Service
Anchorage, Alaska

Called in by _____ Talked with _____ Phone _____

03/16/1986 01:00

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION WEST HARRISON BAY, AK

Date 3-16-86 Time 00:01 Depth 1569 * Present Operation Circ Btms Up - Short Trip

Feet made 19 Hrs drlg 24 Avg drlg rate 20 ft/hr

Depth last sample 1569 Sd GVL - 90% Sh _____ Other CLY - 10%

Hotwire: Min. 13 Depth 1569 Max. 40 Depth 1555 Avg. 20

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0.% Depth 1555 Max. 0.5% Depth _____ Avg. 0.5%

Conn gas: Min. N/A Depth _____ Max. _____ Depth _____

Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	1200 ppm	3800 ppm	2400 ppm	1550
C_2	N/A			
C_3				
C_4				
C_5				

Mud properties: Wt 9.5+ Vis 35 WI 45 Ph 8.5 Cl 13500

Sol 8% Oil _____ Wtr _____ Other Not Plug

Carbide check: Depth 818 Gas 42 units Amount carbide used 4 oz.

Bottom up: Pump strokes 9504 at 170 strokes per minute, Time 23:00 hrs

Lithology and remarks:

GVL - varic, blk, gy, wh, grn, pbls - crs gr, sb rnd - rnd, uncons, qtz, cht, pyr, lith frags

CLY - gy, brn, stky, sft, slty

* Open hole to 26" f/350 - 1569, Circ Btms Up, Short Trip, POOH, Run CSG

Called in by _____ Talked with _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION WEST HARRISON BAY, AK

Date 3-17-86 Time 00:00 Depth 1569 Present Operation Pump CMT ?

Feet made 0 Hrs drlg 0 Avg drlg rate N/A

Depth last sample 1569 Sd +GVL 90% Sh _____ Other CLY-10%

Hotwire: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

Conn. gas: Min. N/A Depth _____ Max. _____ Depth _____

Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	N/A			
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt ** Vis _____ WL _____ Ph _____ Cl _____

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth 818 Gas 42 units Amount carbide used 4oz

Bottom up: Pump strokes N/A at _____ strokes per minute, Time _____

Lithology and remarks:

* RUN CSG, Nipple Down, Nipple Up, WOC, RIH, Drill Ahead.

** Change Over Mud

? Dowell having trouble with frozen valves

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION WEST HARRISON BAY, AK

Date 3-19-86 Time 00:01 Depth 1618 Present Operation Drilling

Feet made 49' Hrs drlg 3.5 hrs Avg drlg rate 260

Depth last sample 1590 Sd GVL - 90% ~~Sh~~ COAL - 10% Other CMT CONT.

Hotwire: Min. 5 Depth 1570 Max. 20 Depth 1580 Avg. 15

H_2S: Min. N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0 Depth ____ Max. 0 Depth ____ Avg. ____

Conn. gas: Min. N/A Depth ____ Max. ____ Depth ____

Trip gas N/A Depth ____ Lag time for trip gas ____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	540 ppm	2000 ppm	15	1580
C_2	N/A			
C_3				
C_4				
C_5				

Mud properties: Wt 8.9 Vis 42 WI 20 Ph 12.6 Cl 2500

Sol 3% Oil ____ Wtr ____ Other ____

Carbide check: Depth 818 Gas 42 units Amount carbide used 4oz

Bottom up: Pump strokes 5560 at 210 strokes per minute, Time 23:30 hrs

Lithology and remarks: SD+GVL - varic, gy, blk, wh, clr, crs gr, ang, uncons, qtz, lith frags

PAST 24 hrs - Nipple Up, RIH, Test CSG, Tag CMT @ 1519, Circ + Cond Mud, Float Collar @ 1521, Tag Float Shoe @ 1563,

Next Sign Activity - Drill 100', POOH, ∆ Bit, RIH, Drill Ahead

Called in by ____ Talked with ____ Phone ____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 No. 1 MARS

LOCATION West Harrison Bay, AK

Date 3-18-86 Time 00:01 Depth 1569 Present Operation Nipple Up BOP.

Feet made 0 Hrs drlg 0 Avg drlg rate N/A

Depth last sample 1569 SS gravel - 90% Sh _____ Other Cly - 10%

Hotwire: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

Conn gas: Min. N/A Depth _____ Max. _____ Depth _____

Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	N/A			
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt * Vis _____ WL _____ Ph _____ Cl _____

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth 818 Gas 42 units Amount carbide used 4 oz

Bottom up: Pump strokes N/A at _____ strokes per minute, Time _____

Lithology and remarks: - Nipple Up, Test BOP's, P/u BHA, RIH, Drill CMT, Circ + COND Mud

* Change Over Mud After Drill CMT

WELL LOGGING REPORT

COMPANY Amoco Production Co.

WELL OCS-Y-302 No. 1 "MARS"

LOCATION West Harrison Bay, Beaufort Sea, AK.

Date 3/20/86 Time 24:00 Depth 2186' Present Operation Drill ahead

Feet made 568' Hrs drlg 10.4 Avg drlg rate 54.6 ft/hr

Depth last sample 2130 Sd 10% Sh _____ Other SLTST- 90%

Hotwire: Min. 20 Depth 2110 Max. 110u Depth 1710 Avg. 25u

H_2S: Min. 0 Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth _____ Max. _____ Depth _____ Avg. _____

Conn gas: Min. 0 Depth _____ Max. 0 Depth _____

Trip gas 55 Depth 1650 Lag time for trip gas 26 mins

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	2000 ppm	11,000 ppm	1324 ppm	1710
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt _____ Vis _____ Wl _____ Ph _____ Cl _____

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth 2039' Gas 41 Amount carbide used 402

Bottom up: Pump strokes 5949 at 190 strokes per minute, Time 31 mins

Lithology and remarks:

1590 - 1980 · 100% SD & GVL - uncons, varic, pebs - fgrsd, p-m srtd, sbrnd-sbang gtz, cht, lith frags

1980 - 2040 30-40% CLY - lt gy, slty, sft

60-70% SD & GVL - a/a

2040 - 2070 60-80% SLTST - lt gy, varg, carb flks, sl sol in HCL, sft

30% CLY - a/a

10% SD & GVL - a/a

2070 - 2130' - 90-100% SLTST - a/a, pyr

0-10% SD & GVL

RECEIVED
DCS DISTRICT OFFICE
MAR 26 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY Amoco Prod. Co.
WELL OCS-Y-302 #1 Mars
LOCATION Block 140, Track 138
Date 3-21-86 Time 24:00 Depth 2506 Present Operation Drlg
Feet made 320 Hrs drlg 11.7 Avg drlg rate 110 ft/hr
Depth last sample 2400 Sd _____ Sh _____ Other 100%
Hotwire: Min. 5u Depth 2220 Max. 50u Depth 2345 Avg
H_2S: Min. 0 Depth _____ Max. _____ Depth _____ Avg.
CO_2: Min. 0 Depth _____ Max. _____ Depth _____ Avg.
Conn. gas: Min. 0u Depth _____ Max. 50u Depth 2347
Trip gas 80/45 Depth 2202/2225 Lag time for trip gas 49 mins

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	346 ppm	2697 ppm	1585 ppm	2345
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt 9.1 Vis 40 Wl 14 Ph 12.0 Cl _____
Sol _____ Oil _____ Wtr _____ Other _____
Carbide check: Depth 2039 Gas 411 Amount carbide used 4 oz.
Bottom up: Pump strokes 9453 at 190 strokes per minute, Time 50

Lithology and remarks:

2190-2250 - 10% SD & Gvl - H gy, wh, pbls-c gr, uncons, p-m srt, ang-sbang, ldh frags, tr calc, tr pyr
90% SLST - H-m gy, v arg, tr carb flks, grdg to CLY ST, sft
2250-2400 100% SLST - a/a

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY Amoco Prod. Co.

WELL OCS-Y-302 #1 Mars

LOCATION Block 140, Track 138

Date 3-22-86 Time 24:00 Depth 3322 Present Operation Open Hole

Feet made 816 Hrs drlg 8.4 Avg drlg rate 160 ft/hr

Depth last sample 3300 Sd 10% Sh _____ Other 90% SLST

Hotwire: Min. 25u Depth 2405 Max. 2400u Depth 3205 Avg. 100u

H_2S: Min. 0 Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth _____ Max. _____ Depth _____ Avg. _____

Conn. gas: Min. 0u Depth _____ Max. 200u Depth 2879

Trip gas _____ Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	1738 ppm	13850 ppm	7800 ppm	3205
C_2				
C_3				
C_4				
C_5				

RECEIVED
OCS DISTRICT OFFICE
MAR 25 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Mud properties: Wt _____ Vis _____ Wl _____ Ph _____

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth 3253 Gas 190 Amount carbide used 8. oz.

Bottom up: Pump strokes 10675 at 190 strokes per minute, Time 56 min

Lithology and remarks:

2400-2460 - 100% SLST - Hgy, sbfiss, gcdg to vf SS ip, carb flks, v sft

2460-2550 - 80-90% SLST - a/a; Tr - 10% Tuff - wh, sr cm, tr pyr flks, sft; 10% SH - m gy, sb fiss, slty, carb flks, m firm

2550-2610 - 100% SLST - a/a

2610-2700 - 80-90% SLST - a/a; Tr - 10% Tuff - a/a; Tr - 10% SH - a/a

2700-2790 - 100% SLST - a/a

2790-2850 - 90% SLST - a/a; 10% SS - wh, tr as l, f-m gr, m srt, ang-sb rnd, v sl calc, fri, fri, fri, as afc

2850-3300 - 80-100% SLST - a/a; 0-20% SS - a/a

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY Amoco Prod. Co.
WELL OCS-Y-302 #1 Mars
LOCATION Blk. 140, Trk 139
Date 3-23-86 Time 24:00 Depth 3322 Present Operation Trip
Feet made 0 Hrs drlg _____ Avg drlg rate N/A
Depth last sample 3300 Sd 10% Sh _____ Other 90% SLST
Hotwire: Min. NA Depth _____ Max. _____ Depth _____ Avg. _____
H_2S: Min. NA Depth _____ Max. _____ Depth _____ Avg. _____
CO_2: Min. NA Depth _____ Max. _____ Depth _____ Avg. _____
Conn gas: Min. NA Depth _____ Max. _____ Depth _____
Trip gas NA Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1				
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt _____ Vis _____ WL _____ Ph _____ Cl _____
Sol _____ Oil _____ Wtr _____ Other _____
Carbide check: Depth 3253 Gas 190 Amount carbide used 8 oz.
Bottom up: Pump strokes 10675 at 190 strokes per minute, Time 56 min.
Lithology and remarks:
* Open Hole to 17 1/2"; Gas running 10-60 units; Avg Gas = 30 u
No new lithology to report; Current Depth = 2458

* Open Hole 2225'-3322'
Trip to run E logs
Run Casing

RECEIVED
OCS DISTRICT OFFICE
MAR 25 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

RECEIVED
OCS DISTRICT OFFICE
MAR 25 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

COMPANY Amoco Prod. Co.
WELL OCS-Y-302 "Mars"
LOCATION Blk 140, Tract 13B

Date 3-24-86 Time 24:00 Depth 3322 Present Operation Trip to run E logs
Feet made 0 Hrs drlg N/A Avg drlg rate N/A
Depth last sample 3300 Sd 10% Sh _____ Other 90% SLST
Hotwire: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____
H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____
CO_2: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____
Conn. gas: Min. N/A Depth _____ Max. _____ Depth _____
Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1				
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt _____ Vis _____ Wl _____ Ph _____ Cl _____
Sol _____ Oil _____ Wtr _____ Other _____
Carbide check: Depth 3322 Gas 130 u Amount carbide used 4 oz.
Bottom up: Pump strokes 13547 at 206 strokes per minute, Time 66 min.
Lithology and remarks:
Hole opened 17½" to depth of 3322'; Gas running 10 units to 340 units; Avg. Gas = 130 units

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY Amoco Prod. Co.

WELL OCS-Y-302 #1 Mocs

LOCATION BLK 140 Trk 138

Date 3-25-86 Time 24:00 Depth 3322 Present Operation Run Casing

Feet made 0 Hrs drlg N/A Avg drlg rate N/A

Depth last sample 3300 Sd 10% Sh _____ Other 90% SLST

Hotwire: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

Conn gas: Min. N/A Depth _____ Max. _____ Depth _____

Trip gas 480 u Depth 3322 Lag time for trip gas 55 min

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1				
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt _____ Vis _____ Wl _____ Ph _____ Cl _____

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth 3322 Gas 130 u Amount carbide used 4 OZ.

Bottom up: Pump strokes 13547 at 206 strokes per minute, Time 66 min

Lithology and remarks:

Run E logs, Trip in for Wiper Run, Trip Out to run Casing

Received
OCS District Office

MAR 27 1986

Minerals Management Service
Anchorage, Alaska

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY Amoco Prod. Co.

WELL OCS-Y-302 #1 Mars

LOCATION Blk. 140 Trk 138

Date 3-26-86 Time 24:00 Depth 3322 Present Operation Nipple Up; W.O.

Feet made 0 Hrs drlg N/A Avg drlg rate N/A

Depth last sample 3300 Sd 10% Sh _____ Other 90% SLST

Hotwire: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

Conn. gas: Min. N/A Depth _____ Max. _____ Depth _____

Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1				
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt _____ Vis _____ Wl _____ Ph _____ Cl _____

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth 3322 Gas 130 u Amount carbide used 4 oz

Bottom up: Pump strokes 13547 at 206 strokes per minute, Time 66 min.

Lithology and remarks:

Called in by _____ Talked with _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 - NO. 1 MARS

LOCATION Blk 140 Trk 13B West HARRISON BAY, AK

Date 3-27-86 Time 00:01 Depth 3322 Present Operation Test BOP's

Feet made 0 Hrs drlg N/A Avg drlg rate N/A

Depth last sample 3300 Sd 10% Sh _____ Other 90% SLTST

Hotwire: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

Conn gas: Min. N/A Depth _____ Max. _____ Depth _____

Trip gas N/A Depth _____ Lag time for trip gas _____

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	N/A			
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt _____ Vis _____ WL _____ Ph _____ Cl _____

Sol _____ Oil _____ Wtr _____ Other _____

Carbide check: Depth 3322 Gas 130 units Amount carbide used 4oz

Bottom up: Pump strokes 13547 at 206 strokes per minute, Time 66 min

Lithology and remarks: _____

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION Blk 140 TRK 138 West HARRISON BAY, AK

Date 3-28-86 Time 00:01 Depth 3535 Present Operation Drilling

Feet made 213 Hrs drlg 5.3 hrs Avg drlg rate 120

Depth last sample 3450 Sd _____ Sh _____ Other SLTST - 100%

Hotwire: Min. 10 Depth 3335 Max. 245 Depth 3460 Avg. 90

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth _____ Max. 0 Depth _____ Avg. 0

Conn. gas: Min. 60 units Depth 3340 Max. 110 Depth 3399

Trip gas 275 units Depth 3430 Lag time for trip gas 31 mins

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	1015 ppm	23100 ppm	7500	3460
C_2	_____	35 ppm	Tr	_____
C_3	_____	_____	_____	_____
C_4	_____	_____	_____	_____
C_5	_____	_____	_____	_____

Mud properties: Wt 9.1+ Vis 50 WL 13.3 Ph 12.5 Cl 3000

Sol 6% Oil _____ Wtr _____ Other _____

Carbide check: Depth 3322 Gas 130 units Amount carbide used 402

Bottom up: Pump strokes _____ at _____ strokes per minute, Time _____

Lithology and remarks:

Predo SLTST - lt gy to gy, sdy, c/y, uncons slt i.p., grdg to vf ss, sft

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION BLK 140 TRK 138 West Harrison Bay, AK

Date 3-29-86 Time 00:01 Depth 4575 Present Operation Drilling

Feet made 1040 Hrs drlg 21.5 hrs Avg drlg rate 90 ft/hr

Depth last sample 4500 Sd _____ Sh _____ Other CLY-100%

Hotwire: Min. 40 Depth 3640 Max. 1310 Depth 3940 Avg. 230

H_2S: Min N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth _____ Max. 0 Depth _____ Avg. 0

Conn gas: Min. 170 Depth 3685 Max. 1400 Depth 3933

Trip gas 275 units Depth 3430 Log time for trip gas 31 mins

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	3000	120700 ppm	18700 ppm	3940
C_2	475		85 ppm	
C_3				
C_4				
C_5				

Mud properties: Wt 9.8 Vis 43 Wl 12.4 Ph 12.5 Cl 2900

Sol 9½% Oil N/A Wtr _____ Other _____

Carbide check: Depth 4375 Gas 320 units Amount carbide used 5 oz

Bottom up: Pump strokes 7570 at 165 strokes per minute, Time 46 mins

Lithology and remarks:

3535-3750 - 70-100% SLTST - lt-mgy, grdg to vf ss, carb, sft

0-30% CLY - lt gy, silty, carb, pyr, sft

3750-4070 - 100% CLY - lt gy, silty, carb, stky, arg, sft

4070-4350 - 80-90% CLY 10-20% SLTST TR SS, TR COAL

4350- - 100% CLY

Significant GAS INC - 3920-3945 BKG 230 INC To 1310 BACK To 21

4175-4210 BKG 110 - INC to 910 BACK To 95

* NOTE - INC Mud Wt to 9.6 at 3960

Called in by _____ Talked with _____ Phone _____

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION BLK 140 TRK 138 West Harrison Bay, AK

Date 3-30-86 Time 00:01 Depth 5015 Present Operation Drilling

Feet made 440 Hrs drlg 11.5 hrs Avg drlg rate 60 ft/hr

Depth last sample 4950 Sd _____ SLT- 20% Other CLY- 80%

Hotwire: Min. 45 Depth 4780 Max. 120 Depth 4670 Avg. 65

H_2S: Min N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth _____ Max. 0 Depth _____ Avg. _____

Conn gas: Min. N/A Depth _____ Max. N/A Depth _____

Trip gas 1480 units Depth 4667 Lag time for trip gas 51 mins

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	3400	10200	6500	4670
C_2		125	88	
C_3		57	15	
C_4				
C_5				

RECEIVED
OGG DISTRICT OFFICE
APR 1 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Mud properties: Wt 9.8+ Vis 44 WL 11.8 Ph 12.5 Cl 2500

Sol 10% Oil N/A % Wtr _____ Other _____

Carbide check: Depth 4375 Gas 310 units Amount carbide used 5oz

Bottom up: Pump strokes 7570 at 165 strokes per minute, Time 46 mins

Lithology and remarks:

4600- 4700 - 100% CLY

4700- 4900 - 70-80% CLY 20-30% SLTST

CLY- lt gy, sy brn, slty, stky, carb, sft

SLTST- vf-m gy, arg, aren, mica, carb lam, pyr, tuff, frm

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION Blk 140 TRK 138 West Harrison Bay, AK

Date 3-31-86 Time 00:00 Depth 5635 Present Operation Drillin

Feet made 620 Hrs drlg 16.5 Avg drlg rate 45 ft/hr

Depth last sample 5580 Sd _____ SLTST - 40% Other CLY - 6

Hotwire: Min. 55 Depth 5055 Max. 410 Depth 5425 Avg. 1

H_2S: Min. N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth _____ Max. 0 Depth _____ Avg. C

Conn gas: Min. 85 Depth 5132 Max. 1470 Depth 5412

Trip gas 970 units Depth 5486 Lag time for trip gas 46 mins

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	5500	35100	8500	5420
C_2	180	2100	500	
C_3	80	1200	240	
C_4	Tr	630	Tr	
C_5				

Mud properties: Wt 9.8 Vis 42 WI 10.5 Ph 12 Cl 2200

Sol 10% Oil 0 Wtr _____ Other _____

Carbide check: Depth 5319 Gas 140 units Amount carbide used 8 oz

Bottom up: Pump strokes 8907 at 180 strokes per minute, Time 49 m.

Lithology and remarks: CLY - lt-med gy, gy brn, slty, stky, bent-tuff, sft

4900 - 5280 - 60-80% CLY 20-40% SLTST

5280 - 5490 - 90-100% CLY 0-10% SLTST

5490 - 5580 - 60-80% CLY 20-40% SLTST

SLTST - lt gy, gy brn, arg, aren, mica, carb, sft

* Sign. Gas Inc - 5420 - BKG 200 INC to 410 Back to 16

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION BLK 140 TRK 138 West HARRISON Bay, AK

Date 4-1-86 Time 00:01 Depth 6040 Present Operation Drilling

Feet made 405' Hrs drlg 15 hrs Avg drlg rate 30 ft/hr

Depth last sample 6000 SLTST - 20% SH 20% Other CLY - 60%

Hotwire: Min. 20 Depth 5930 Max. 130 Depth 5635 Avg. 40

H_2S: Min. N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0 Depth ____ Max. 0 Depth ____ Avg. ____

Conn. gas: Min. 55 Depth 5852 Max. 150 Depth 5630

Trip gas 295 units Depth 5740 Lag time for trip gas 48 mins

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	1200	7700	2700	5635
C_2	60	500	140	
C_3	25	250	50	
C_4	tr	tr	tr	
C_5				

Mud properties: Wt 9.8 Vis 47 WL 9.0 Ph 12 Cl 2000

Sol 9% Oil ____ Wtr ____ Other ____

Carbide check: Depth 5974 Gas 75 units Amount carbide used 5oz

Bottom up: Pump strokes 10360 at 180 strokes per minute, Time 63 mins

Lithology and remarks:

5635 - 5850 - 60% CLY - 30-40% SLTST

5850 - 6000 - 60% CLY 20% SLTST 20% SH

CLY - lt-m gy, sy brn, silty, stky, arg, carb, sft

SLTST - dk gy, aren, arg, carb, mica, frm

SH - dk gy brn, sb fiss, silty, carb lam, mica, pyr, frm

Received
OCS District Office

APR 3 1986

Minerals Management Service
Anchorage, Alaska

Called in by ____ Talked with ____ Phone ____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION BLK 140 TRK 138 West Harrison Bay, AK

Date 4-2-86 Time 00:01 Depth 6436 Present Operation Drilling

Feet made 396 Hrs drlg 18.5hrs Avg drlg rate 25 ft/hr

Depth last sample 6390 SILT- 40% Sh 40% Other CLY- 20%

Hotwire: Min. 25 Depth 6225 Max. 600 Depth 6095 Avg. 40

H_2S: Min N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0 Depth ____ Max. 0 Depth ____ Avg. ____

Conn gas: Min. 50 Depth 6257 Max. 115 Depth 6155

Trip gas 720 Depth 6383 Log time for trip gas 64 mins

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	1700	51800	3800	6095
C_2	90	illegible	illegible	
C_3	30	600	70	
C_4		100	Tr	
C_5		100		

Received
OCS District Office
APR 3 1986
Minerals Management Service
Anchorage, Alaska

Mud properties: Wt 9.8+ Vis 41 WL 8.7 Ph 12 Cl 2700

Sol 10% Oil ____ Wtr ____ Other ____

Carbide check: Depth 5974 Gas 75units Amount carbide used 5oz

Bottom up: Pump strokes 10360 at 180 strokes per minute, Time 63 mins

Lithology and remarks:

6040 - 6270 - 70% CLY 20% SH 10% SLTST

6270 - 6390 - 40% CLY 40% SH 20% SLTST

CLY - gy brn, silty, stky, carb, sft

SLTST - m.gy brn, arg, aren, sl calc, carb, mica, sft

SH - dk gy, fiss, splntry, pyr, mica, carb lam, frm

Tr SS - lt gy brn, stp, vf gr, sb ang, w srt, silty, sl calc, carb, fri. No Sh

Sign. GAS INC. - 6045-6075 BKG 40 INC to 360 Return to 50

6090-6100 BKG 50 INC to 600 Return to 60

Called in by ____ Talked with ____ Phone ____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION BLK 140 TRK 138 West Harrison Bay, AK

Date 4-3-86 Time 00:01 Depth 6910 Present Operation Drilling

Feet made 474' Hrs drlg 24 hrs Avg drlg rate 25 ft/hr

Depth last sample 6870 SLTST- 40% Sh 40% Other CLY -20%

Hotwire: Min. 20 Depth 6710 Max. 38 Depth 6790 Avg. 25

H_2S: Min. N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0 Depth ____ Max. 0 Depth ____ Avg. ____

Conn gas: Min. N/A Depth ____ Max. N/A Depth ____

Trip gas 720 Depth 6383 Lag time for trip gas 64 mins

Chromatograph:	Minimum	Maximum	Average	Depth (m)
C_1	1200	2900	2300	6[illegible]
C_2	90	160	95	
C_3	10	50	15	
C_4	Tr	20		
C_5				

RECEIVED
OCS DISTRICT OFFICE
APR 7 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Mud properties: Wt 9.7 Vis 42 WL 8.2 Ph 12.6 Cl 1600

Sol 8% Oil ____ Wtr ____ Other ____

Carbide check: Depth 6570 Gas 80 units Amount carbide used 8 oz

Bottom up: Pump strokes 12133 at 180 strokes per minute, Time 67 mins

Lithology and remarks:

6390 - 6570 50-70% CLY 20-40% SH \ 10-20% SLTST

6570 - 6780 30-40% CLY 30-40% SH 30-40% SLTST

6780 - 6870 20% CLY 40-50% SH 30-40% SLTST

6870 - Tr SS - clr, stp, vfgr, rnd, pyr, slty, carb, qtz, fri, NSOFC

CLYST - lt gy, slty, arg, carb, sft

SH - m-dk gy, sb fiss - fiss, slty, mica, carb lam, frm

SLTST - lt-mgy, arg, sparc, mica, pyr, carb, tuff i.p., sft-frm

6630 - Tr RND QTZ Gr

Called in by ____ Talked with ____ Phone ____

MUD LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION Blk 140 TRK 13B West Harrison Bay, AK

Date 4-4-86 Time 00:01 Depth 7079 Present Operation Drilling

Feet made 169' Hrs drlg 11.5 hrs Avg drlg rate 23 ft/hr

Depth last sample 7050 CLY-20% Sh 40% Other SLTST-40%

Hotwire: Min. 18 Depth 6935 Max. 25 Depth 6980 Avg. 20

H_2S: Min. N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0 Depth ____ Max. 0 Depth ____ Avg. ____

Conn. gas: Min. N/A Depth ____ Max. ____ Depth ____

Trip gas 345 Depth 7057 Lag time for trip gas 102 mins @ 125 SPM.

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	1700	2200	1900	6980
C_2	100	130	120	
C_3	Tr	Tr	Tr	
C_4				
C_5				

RECEIVED OCS DISTRICT OFFICE APR 7 1986 MINERALS MANAGEMENT SERVICE ANCHORAGE, ALASKA

Mud properties: Wt 9.7 Vis 48 Wl 8.5 Ph 12.5 Cl 1600

Sol 9% Oil ____ Wtr ____ Other ____

Carbide check: Depth 6570 Gas 80 units Amount carbide used 8oz

Bottom up: Pump strokes 12133 at 180 strokes per minute, Time 67 mins

Lithology and remarks:

6870 - 7020 20% CLY 30% SH 50% SLTST

SH - m-dk gy, fiss, papry i.p., slty, sft-frm

CLYST - lt gy, slty, arg, carb, sft

SLTST - lt-m gy, arg, spec, mica, sl calc, pyr, m frm

Tr TUFF, lt gy, crm, carb flks, m frm

Tr SS - lt gy, stp, vf gr, sbang, m-w srt, sl calc, slty, sft, v. fri, No Show or Cut

— Tested BOP's —

RECEIVED OCS DISTRICT OFFICE APR 7 1986 MINERALS MANAGEMENT SERVICE ANCHORAGE, ALASKA

Called in by ____ Talked with ____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION Blk 140 TRK 138 West Harrison Bay, AK

Date 4-5-86 Time 00:01 Depth 7300 Present Operation Drilling

Feet made 221' Hrs drlg 16 Avg drlg rate 17 ft/hr

Depth last sample 7260 SLTST 40% Sh 60% Other ____

Hotwire: Min. 12 Depth 7185 Max. 170 Depth 7265 Avg. 25

H_2S: Min. N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0 Depth 2080-7255 Max. 0.1% Depth 7260 Avg. 0

Conn gas: Min. 35 Depth 7259 Max. 37 Depth 7229

Trip gas 805 Depth 7178 Log time for trip gas 85 mins @ 152 SPM

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	900	12000	1900	7265
C_2	40	500	120	
C_3		200	Tr	
C_4		40		
C_5				

RECEIVED
OCS DISTRICT OFFICE
APR 09 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Mud properties: Wt 10 Vis 42 WL 9.2 Ph 12 Cl 1400

Sol 9% Oil ____ Wtr ____ Other ____

Carbide check: Depth 6570 Gas 80 units Amount carbide used 8 oz

Bottom up: Pump strokes 12133 at 180 strokes per minute, Time 67 mins

Lithology and remarks:

7050 - 7140 10% CLY, 50% SH, 40% SLTST

7140 - 7200 10-30% CLY, 30-60% SH, 30-40% SLTST

7200 - 7260 50-60% SH 40-50% SLTST

SH - m-dk gy, plty, pap, mica, carb, slty, tr fine w rnd m-crs gr qtz, hd

SLTST - m gy, arg, carb, mica, frm

Tr Tuff - lt gy, wh, crm, wxy, sft - gel wh min flor, No Cut

NOTE - CATCHING 10' SAMPLES @ 7200

Called in by ____ Talked with ____ Phone ____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION Blk 140 TRK 138 West Harrison Bay, AK

Date 4-6-86 Time 00:01 Depth 7562 Present Operation Drilling

Feet made 262 Hrs drlg 14 hrs Avg drlg rate 30 ft/hr

Depth last sample 7540 Sd 90% Sh _____ Other 10% Tuff

Hotwire: Min. 14 Depth 7330 Max. 3320 Depth 7355 Avg. 50

H_2S: Min N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth 7420- Max. 0.5% Depth 7405 Avg. 0

Conn. gas: Min. 25 Depth 7325 Max. 4040 Depth 7355

Trip gas 980 Depth 7397 Lag time for trip gas 89 mins @ 152 SPM

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	890	187000	4100	7355
C_2	50	8500	210	
C_3		3300	110	
C_4		900		
C_5		tr		

Mud properties: Wt 10.1 Vis 50 WL 7.5 Ph 12.3 Cl 1000

Sol 12% Oil Tr Wtr _____ Other _____

Carbide check: Depth 7323 Gas 37 units Amount carbide used 8oz

Bottom up: Pump strokes 13461 at 152 strokes per minute, Time 89 mins

Lithology and remarks:

7280 - 7360 - 60-90% SH 10-40% SLTST

7370 - 7520 80-100% SS Tr SH, Tr SLTST

7530 - 7540 90% SS 10% Tuff

7400 - 7435 — SS - clr, wh, tn, vf-mgr, sb rnd, cong/i.c., p. srt, pyr, sl calc, gtz, chr, lith frags, dul yel flor, sl strmg yel cut

7370 - 7400
7440 - 7510 SD - clr, wh, lt brn, vf, gr, sb rnd-rnd, w srt, gtz, cht, uncons

Tuff - wh, crm, lt gy, sft-occas-wtr min flor

Called in by _____ Talked with _____ Phone _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION BLK 140 TRK 138 West Harrison Bay, AK

Date 4-7-86 Time 00:01 Depth 7762 Present Operation Drilling

Feet made 200' Hrs drlg 17 hrs Avg drlg rate 10 ft/hr

Depth last sample 7740 Sd 50% DOL - 20% Other LS-30%

Hotwire: Min. 15 Depth 7650 Max. 250 Depth 7670 Avg. 65

H_2S: Min N/A Depth ____ Max. ____ Depth ____ Avg. ____

CO_2: Min. 0 Depth ____ Max. 0 Depth ____ Avg. ____

Conn gas: Min. 105 Depth 7603 Max. 165 Depth 7730

Trip gas 540 Depth 7647 Lag time for trip gas 94 mins

Chromatograph:	Minimum	Maximum	Average	Depth (max. gas)
C_1	1200	17500	3500	7670
C_2	70	7700	200	
C_3	tr	3200	100	
C_4				
C_5				

Mud properties: Wt 10.1 Vis 40 Wl 8.2 Ph 12.3 Cl 900

Sol 11% Oil ____ Wtr ____ Other ____

Carbide check: Depth 7323 Gas 37 units Amount carbide used 8oz

Bottom up: Pump strokes 13461 at 152 strokes per minute, Time 89 mins

Lithology and remarks:

HWG Drill Rate/LITH - 15 ft/hr - 7540 - 7580 - 100% SS

10 ft/hr - 7590 - 7640 - 80-50% SS 10-20% SH

10 ft/hr 7640 - 7680 - 30-40% SS, 20-50% SLTST, 20-40% SH

40 ft/hr 7690 - 7700 - 100% SS

14 ft/hr 7700 - 7740 40-50% SS, 20-30% DOL, 20-30% LS

NOTE - LS, DOL @ 7710 sample

Called in by ____ Talked with ____ Phone ____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302-#0. 1 MARS

LOCATION BLK 140 TRK 13B West Harrison Bay, AK

Date 4-8-86 Time 00:01 Depth 7975 Present Operation Short Trip

Feet made 213 Hrs drlg 20.5 Avg drlg rate 13 ft/hr

Depth last sample 7975 QT2T - 80% Sh _____ Other Arg - 20%

Hotwire: Min. 13 Depth 7960 Max. 210 Depth 7805 Avg. 50

H_2S: Min N/A Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. 0 Depth _____ Max. 0 Depth _____ Avg. _____

Conn. gas: Min. 98 Depth 7910 Max. 220 Depth 7884

Trip gas 540 Depth 7647 Lag time for trip gas 94 mins

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1	800	12900	3400	7805
C_2	40	600	200	
C_3		200	100	
C_4		100	Tr	
C_5		Tr		

Mud properties: Wt 9.9 Vis 37 WI 8.4 Ph 12.3 Cl 750

Sol 9% Oil _____ Wtr _____ Other _____

Carbide check: Depth 7323 Gas 37 units Amount carbide used 8oz

Bottom up: Pump strokes 13461 at 152 strokes per minute, Time 89 mins

Lithology and remarks:

7750 - 7780 10-30% DOL 10-80% LS 10-20% SH TR SS

7790 - 7860 60-100% LS 10-30% SH

7870 - 7920 70-80% QT2T 20% SH 10-30% LS

7920 - 7975 80-100% QT2T 20% Arg.

RECEIVED
OCS DISTRICT OFFICE
APR 09 1986
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Called in by _____ Talked with _____

WELL LOGGING REPORT

COMPANY AMOCO PROD. CO.

WELL OCS-Y-302 NO. 1 MARS

LOCATION West Harrison Bay, AK

Date 4-9-86 Time 00:01 Depth 7975 Present Operation Rig up Dresse

Feet made N/A Hrs drlg N/A Avg drlg rate N/A

Depth last sample 7975 SS QTZT - 100% Sh _____ Other _____

Hotwire: Min. _____ Depth _____ Max. _____ Depth _____ Avg. _____

H_2S: Min. _____ Depth _____ Max. _____ Depth _____ Avg. _____

CO_2: Min. _____ Depth _____ Max. _____ Depth _____ Avg. _____

Conn gas: Min. _____ Depth _____ Max. _____ Depth _____

Trip gas 2415 Depth 7975 Lag time for trip gas 84 mins

Chromatograph:

	Minimum	Maximum	Average	Depth (max. gas)
C_1				
C_2				
C_3				
C_4				
C_5				

Mud properties: Wt 10+ Vis 38 WL 7.5 Ph 12.3 Cl 800

Sol 10% Oil _____ Wtr _____ Other _____

Carbide check: Depth _____ Gas _____ Amount carbide used _____

Bottom up: Pump strokes _____ at _____ strokes per minute, Time _____

Lithology and remarks: Pumping @ 168 SPM

Trip Gas - 2415 units @ 14400 strokes

2520 units @ 15000 strokes

steady increase after 10750 strokes

steady decrease after 15800 strokes to 1525 units

decrease after 17000 strokes