

**UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE**

**NOTICE OF INCIDENTS OF NON-COMPLIANCE DETECTED
AND ACTIONS TAKEN**

Page 1 of 1

Lease No.:

065-Y-1597

Date:

10/31/93

Time (24-hour clock)

3:00 P 15:00

District Name:

Alaska

Lease Operator:

Arco Alaska, Inc

Address:

949 E. 36th Anchorage, AK 99508

Area:

Block:

760

Platform or
Rig Name:

CDU Kulluk

Field:

Wildcat (Wild Weasle)

TO:

(Company Representatives) D. Bungarner

THE FOLLOWING LIST OF INCIDENTS OF NON-COMPLIANCE WERE FOUND BY MINERALS MANAGEMENT SERVICE INSPECTOR(S) ON THE DATE AND AT THE SITE LISTED ABOVE.

WARNING IS HEREBY GIVEN TO CORRECT THE FOLLOWING DEFICIENCIES:

Inc. No.	Explanation or Remarks	Date Corrected
E-100	1/2-1 gal of various (an unknown mix) oils released from the disposal carsson. The sheen dispersed within 100 yards from the rig - no cleanup action was taken.	NONE Required
	This incident of non-compliance documents that the MMS was notified & investigated the incident.	
	onsite inspector - Jerry Teschke	

(If more space is needed attach separate sheet)

YOU ARE HEREBY ORDERED TO SHUT-IN THE FOLLOWING OPERATIONS: (The related INC's are marked with an asterisk *)

Signature of M.M.S. Representative

Date:

10/31/93

The date each incident of non-compliance was corrected should be inserted in the appropriate column and the green copy of this form returned to the District Engineer at the address shown no later than 7 days from the date of inspection. Each item cited in the above list shall be corrected before the form is returned. The operator's representative shall sign the form certifying that all the incidents of non-compliance on the list have been corrected. If the form cannot be returned within 7 days, appropriate waiver must be obtained through the District Engineer.

Any wells/platforms shut-in by this order must be inspected before returning to operation.

I, _____, certify that each incident of non-compliance listed above has been corrected as of _____.

Signature (Company Representative):

Position Title:

D. Bungarner

Sr Drilling Supv.

PART VI. BLOWOUT

1. TYPE OF ACTIVITY (EXPLORATORY DRILLING, WORKOVER, ETC.)		2. DRILLING DEPTH	3. MUD WEIGHT IN HOLE
4. MAKEUP OF DRILL/WORK STRING HOLE		5. LAST STRING OF CASING SET DEPTH SIZE	
6. BOP STACK AND CHOKE MANIFOLD TYPE SIZE PRESSURE RATING		7. MAKEUP OF DIVERTER SYSTEM INCLUDING VALVE TYPES	
SUBSURFACE SAFETY DEVICE TYPE DATE INSTALLED			
8. INDICATE ANY HOLE PROBLEMS PRIOR TO BLOWOUT			
9. KICK SIZE		11. MUD KILL WEIGHT	12. EVACUATION PROCEDURES
13. INITIAL SHUT-IN DRILL PIPE PRESSURE	14. INITIAL SHUT-IN CASING PRESSURE	15. WERE PERFORATIONS OPEN? <input type="checkbox"/> YES <input type="checkbox"/> NO	
16. WAS WELL DIVERTED? <input type="checkbox"/> YES <input type="checkbox"/> NO		17. WHAT WELL CONTROL PROCEDURE WAS USED?	
18. DIRECT CAUSE OF BLOWOUT CEASING (BRIDGED, PUMPED KILL MUD, DRILLED RELIEF WELL, ETC.)			
19. DIRECT CAUSE(S) OF BLOWOUT OR DETERMINED CAUSE(S) OF ACCIDENT AS A RESULT OF INVESTIGATION			
20. NARRATIVE DESCRIPTION (IN SEQUENCE) OF BLOWOUT			

ACCIDENT INVESTIGATION REPORT
OUTER CONTINENTAL SHELF

PART I. IDENTIFICATION DATA

1. LEASE IDENTIFICATION				2. DATE OF ACCIDENT	
LEASE NUMBER	AREA	BLOCK	COMPLEX ID	10/31/93	
Y 1597	Beaufort Sea, Sec 124	760	Kulluk	3. TIME OF ACCIDENT	
4. DESIGNATED OPERATOR			4a. OPERATOR ONSITE REPRESENTATIVE		
Arco Alaska Inc.			Dave Bumgarner		
5. CONTRACTOR			5a. CONTRACTOR ONSITE REPRESENTATIVE		
Cannar			Dave Hope		
6. SERVICE COMPANY			6a. SERVICE COMPANY REPRESENTATIVE		
NA					
7. TYPE OF STRUCTURE			8. WATER DEPTH	9. DISTANCE FROM SHORE	
Semi Submersible			87'	6 NM	
10. TYPE OF ACCIDENT(S)				11. INITIAL CLASSIFICATION OF ACCIDENT	
Oil Spill				Minor	

PART II. SPECIFIC ACCIDENT DATA

1. NUMBER OF INJURIES		2. NUMBER OF FATALITIES		3. AMOUNT OF PROPERTY DAMAGE	
NA		NA		NA	
4. WEATHER CONDITIONS AT TIME OF ACCIDENT					
Seas 2.5 Meters, Visibility 8 Miles, Winds 090° @ 30 Kts, 700' Overcast					
5. TYPE OF OPERATION BEING CONDUCTED AT TIME OF ACCIDENT			6. IDENTIFY EQUIPMENT INVOLVED IN OPERATION		
Discharging Mud from P.t #9, (Passed Sheen Test)			Disposal Caisson		
7. IDENTIFY EQUIPMENT THAT FAILED			8. NAME OF EQUIPMENT MANUFACTURER		
Disposal Caisson			NA		
7a. NAME OF MANUFACTURER OF EQUIPMENT THAT FAILED			NA		
9. PROVIDE MAINTENANCE AND/OR SERVICE HISTORY OF EQUIPMENT THAT FAILED					
Maintain Daily					
9. IDENTIFY SAFETY DEVICE THAT MALFUNCTIONED			9a. NAME OF MANUFACTURER OF SAFETY DEVICE(S) THAT SHOULD HAVE ACTIVATED TO PREVENT THE ACCIDENT		
NA					
10. NAME OF PERSON(S) TITLE IMMEDIATELY RESPONSIBLE FOR THE OPERATIONS BEING CONDUCTED AT THE TIME OF THE ACCIDENT		11. NAME OF PERSON(S) IMMEDIATELY RESPONSIBLE FOR THE EQUIPMENT IN USE AT THE TIME OF THE ACCIDENT		12. WERE PICTURES TAKEN?	
Dave Bumgarner				<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
				13. WERE STATEMENTS TAKEN?	
				<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
ADD WITNESS STATEMENT AS ATTACHMENT					

AREA

1. DIRECT CAUSE OF ACCIDENT:

NA

2. CONTRIBUTING CAUSE(S):

NA

3. DESCRIBE IN SEQUENCE HOW ACCIDENT OCCURRED:

Approximately 120 Bbls of Fresh Water Gel Drilling Mud Was Being Discharged From Pit #9 of Mud Pits. The Fluid Was Tested And Passed Sheen Test. The Mud Discharged Into Disposal Caisson Which Had Evidently Collected Residual Oil/Fuel.

PART IV. FIRE/EXPLOSION

1. SOURCE OF IGNITION	2. TYPE OF FUEL	3. FUEL SOURCE
4. ACTIVITIES BEING CONDUCTED AT TIME OF FIRE/EXPLOSION		
5. PROPERTY DAMAGED (IDENTIFY)	6. NATURE OF DAMAGE	
7. WHAT PRECAUTIONS OR ACTIONS WERE TAKEN TO ISOLATE KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT?		
8. DIRECT CAUSE OF FIRE/EXPLOSION		
9. NARRATIVE DESCRIPTION OF FIRE/EXPLOSION		

PART V. HYDROCARBON RELEASE

1. VOLUME OF HYDROCARBON RELEASED <i>1/2 To 1 Gal</i>	2. TYPE OF HYDROCARBON RELEASED <i>Hydraulic Oil</i>		3. SOURCE OF HYDROCARBON RELEASED <i>Disposal Caisson</i>	
4. APPEARANCE OF WATER <i>Lite Sheen</i>	4a. ESTIMATED LENGTH <i>600-800'</i>	4b. ESTIMATED WIDTH	4c. DIRECTION OF MOVEMENT <i>NW of B5</i>	5. WERE SAMPLES TAKEN? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
6. STATUS AND TYPE OF CLEANUP EQUIPMENT ACTIVATED OR ON STANDBY <i>None Seas To Rough, And Sheen Dissipating Rapidly</i>			7. ESTIMATED RECOVERY <i>None</i>	
8. RESPONSE TIME				
9. DIRECT CAUSE(S) OF RELEASE <i>Disposal Caisson</i>				
10. NARRATIVE DESCRIPTION OF HYDROCARBON RELEASE <i>Approximately 120 Bbls of Fresh Water Gel Drilling Mud Was Being Discharged From Mud Pit # 5. The Fluid Was Tested And Passed Sheen Test. The Mud Discharged Into The Disposal Caisson Which Had Evidently Collected Residual Oil/Fuel</i>				

PART VII. INTERNAL CONTROL TA

1. IDENTIFY VIOLATIONS OF THE REGULATIONS AND OCS ORDERS

E-100 40(a)

Is Lessee Preventing Pollution Of Offshore Waters

1a. SPECIFY THOSE VIOLATIONS THAT MAY HAVE DIRECTLY OR INDIRECTLY CONTRIBUTED TO THE ACCIDENT

NA

1b. IDENTIFY PREVIOUS REGULATION VIOLATIONS (SIMILAR OR RELATIVE TO THIS ACCIDENT) THAT WERE DOCUMENTED ON PREVIOUS INSPECTIONS

NA

2. ACTION INITIATED (SUSPENSIONS OF PRODUCTION/DRILLING OPERATIONS, WARNING, OTHER) FOR EACH OF THE IDENTIFIED VIOLATIONS

Warning

3. CORRECTIVE ACTION RECOMMENDED BY THE OPERATOR (CHANGES IN EQUIPMENT, OPERATIONAL PROCEDURES, SAFETY DEVICES OR SYSTEMS, TRAINING, OTHER)

Frequent Pumping Of Disposal Caisson

4. IDENTIFY ANY "WAIVERS/DEPARTURES" THAT MAY HAVE BEEN IN EFFECT AT THE TIME OF THE ACCIDENT RELATIVE TO THE INCIDENTS

NA

5. PREVENTATIVE ACTION RECOMMENDED BY INVESTIGATOR(S), MINERALS MANAGEMENT (PRIMARY AND SECONDARY SAFETY DEVICE(S), SAFETY ALERTS, NOTICE TO LESSEES, CHANGES IN THE OCS ORDERS AND REGULATIONS, OTHER)

To Redesign Disposal Caisson

6. FINAL CLASSIFICATION OF ACCIDENT

Minor

7. DATE INVESTIGATION WAS INITIATED

10/31/93

7a. TIME

1245 Hrs

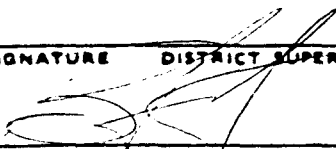
8. DATE INVESTIGATION WAS COMPLETED

10/31/93

9. TEAM MEMBERS (NO SIGNATURES REQUIRED)

J. Jeschke

10. SIGNATURE DISTRICT SUPERVISOR



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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 283	Depth:	Prog.	Spud Date: 10/13/93 9:00 AM	Days Actual: 157	Days Planned: 37.0	Date: 11/12/93
OCS-Y-1597 #1 -TOW						
Contractor/Rig No.: CANMAR/KULLUK	Last Casing:	Next Casing:	Shoe Test EMW:	Formation:		

Operation at 0600: UNDER TOW BY KALUIK TO MCKINLEY	1993 Proj. Cost	Daily Cost, (\$):	Accum. Cost (\$):

BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:				MW:	KWM	Filter Cake:	KWM Cake:	Depth:		Depth:					
Size:				Visc:	Visc:	%Solids:	%Solids:			ROT					
Make:				PV:	PV:	%Sand:	%Sand:	Mud Wt:		WT:		Torque:			
Type:				YP:	YP:	Ph:	Ph:	FL Temp:		PLI Wt:		Jar No.:			
Scr #:				Gels:	Gels:	Pm:	Pm:	BGG:		SO Wt:		Jar Hrs.:			
Depth Out:				API FL:	API FL:	PI:	PI:	CG:							
Feet:				HTHPWL:		MI:	MI:	TG:		LNR:	6.5	6.5	Bit AP:		
Hours:				MBT:		Chlor:	Chlor:	Max Gas:		SPM			HMP:		
WOB:				CUM CST	SDaily	OW:	OW:	Dc Exp:		PS:			HHPV		
APMT						Total GPM:		Sh Den:		SPS:			sq in:		
Jets:				Kick Tol:				Est PP:		SPP:			ECD:		
Grade:				Survey No.	Depth	Angle	Azimuth	TYD	Section	N/S	E/W	Dogleg	An Vel		
													DP/DC:		
													WTR DEPTH		
													RKB-MSL		
													RKB-ML		
													RKB-WH		
													GH Depth		
													RKB-BGH		

TIME	HRS	OPERATIONS FROM 0600 TO 0600
06:00-07:00	20.0	Under tow to McKinley Bay. Kulluk crossed US/CANADA BORDER 18:38 AST (16:38 AST) 11 NOV 1993. KULLUK FUEL 580m³ LUBE 4.34m³. KALUIK 1781.5m³ FUEL ON BOARD 77.525m³ LUBE OIL ON BOARD. IKALUIK 1125m³ FUEL 16.8m³ LUBE OIL. 19:00 KALUIK SLOWED TOW TO REPAIR FUEL LINE RESUED FULL AWAY 19:30. HAS BEEN RUNNING 400% POWER. MISCAROO AND SUPPLIER II ARRIVED MCKINLEY BAY 20:30 MST 11 NOV 1993. ICE MOVEMENT AT MOUTH OF CHANNEL. VESSELS WILL ENTER AT DAYLIGHT. CANMAR CREW SUSPENDED OPS IN MCKINLEY OVERNIGHT AND SHUT DOWN GPS DUE TO INTERFERENCE W/ DEADHORSE. SUBVENS W/ NORTECH ON KALUIK AND MISCAROO WILL SHUT DOWN D.H. GPS THIS AM WHEN MCKINLEY GPS STARTS UP.
07:00-08:00	--6--	ADJUST CLOCKS FORWARD 1 HOUR, FOR MOUNTAIN STANDARD TIME +1 HOUR PREVIOUS ADJUSTMENT 11/11 = 2 HRS.
TOTAL HOURS:	20.0	Ops Time
On Site Engineer:		Env Alert Status:
		Kick Tolerance:
		Signed: DCB UHARNER / R.L. MORRISON

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:							
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary		
Pol Water:	208	1403	Bbl		Rotary	Motor	Total
Drill Water:	-	3573	Bbl	Well Daily			
Fuel:	3088	152,723	Gal	Well Cumulative			
Barite:	-	-	Sx	BHA			
Cement: G/AS	-	-	Sx				
Supply Vessel Information:				PEERSONNEL ONBOARD			
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	ARCO: 1	
KALUK	3569		4227	296401	18	PARTNER:	
MISCARDO	4972		10,567	276,588	18	CONTRACTOR: CANMAR 51	
KALVIK			15,296	335,234	19	CATERER: STANTON 9	
SUPPLIER	4123		3963	48,685	13	CEMENTER: DOWELL	
WEATHER DATA: @ 05:00						WEATHER: HORIZON 2	
TEMPERATURE 15°F WIND SPEED 20 KTS DIRECTION OBO						SAFETY: H2S/MEDIC 1	
VISIBILITY 5 CEILING 2000' OC BEAS 0						CASING: GBR/MDS	
Personnel Accidents: Yes _____ None Reported <u>X</u>						COATING: INTECO/CORELAB	
Description of Accident:						DST: MRS	
						ELECTRIC LOG: SCHLUMBERGER	
						MUD LOG: SPERRY	
						ERA 3	
Well Site Safety:						PIPE PROTECT 2	
						BAYLOR BANK 1	
						COMMUNICATION: N. S. TELECOM	
						OTHER: Divers/Radio/MMS 7	
Date Last Kick Drill: _____ Date Last BOP Test: _____						VISITORS: SURV. SYSTEMS/MEZO	
Other Drills-Describe: _____							
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL 77	
03:00-06:00	3.0	CONTINUE UNDER TOW TO MCKINLEY BAY					
		POSITIONS: 18:00 11/11/93 70°15'1"N 142°54.7'W 202 NM TO GO					
		00:00 11/12/93 70°15'N 139°52.6'W 181 NM TO GO					
		06:00 11/12/93 70°5.2'N 139°04.4'W 163 NM TO GO					
		ETA @ 35KTS 07:30 11/14/93					
		SHORTENED TOW TO 300 NM LINE					
		MISCARDO CROSSED BORDER US/CAN 02:26 MST 11/11/93 108.5m ³ FOB 25556 m ³ LOR					
		SUPPLIER II CROSSED BORDER US/CAN 02:28 MST 11/11/93 275m ³ FOB 5256 m ³ LOR					
		NOTE: ERA 412 UNABLE TO LEAVE KULLUK 11/11/93 DUE TO ICING IN DEADWATER AND FLIGHT ROUTE. WEATHER IMPROVING. 412 STILL ON BOARD.					
		RIG CREW CONTD. W/ PITCHING, COMPLETED EL MAGO BRACE. CLEAN UP FLOOR & TOOLS.					
		Kulluk Alert Status (Hours)					
		Green	Blue	Yellow	Red	Black	
	Envirn.						ICE COVERAGE: 3-9/10 4-10-30cm
	Well						
	Vessel						
TOTAL HOURS:							
On Site Engineer:		Signed: D. B. B. / R. A. TORRISON				DATE: 11/12/93	

FAIRWEATHER FORECASTING, INC.	Office 907 258 9168	17:25
715 L St. #1, Anchorage, Alaska 99501	Fax 907 258 9167	11/11/93

TO: ARCO, ATTN: Tim Billingsly	265-6224
KULLUX 907-263-3169	

SYNOPSIS

ONLY A MODERATE GRADIENT WILL BE OVER THE CANADIAN ARCTIC COAST FRIDAY AND SATURDAY. WEAK HIGH PRESSURE OVER THE YUKON WILL MOVE SOUTHEAST. A LARGE LOW OVER THE BERING SEAS WILL WEAKEN BUT A TROUGH WILL EXTEND FROM THE LOW CENTER NORTHEAST TO NEAR FRUDHOE BAY FRIDAY NIGHT AND SATURDAY. A WEAK LOW WILL BE OVER THE NORTHWEST TERRITORY SUNDAY.

WEATHER REPORTS FROM COASTAL STATIONS

SITE:	TIME	SKY CONDITIONS	VSBY/WX	DIR	SPEED	TEMP	CHILL
Deadhorse	1549	-X E6 OVC	22-S-F	060°	18	19	-10
Deadhorse	1656	-X E6 OVC	22L-S-F	050°	19	19	-10
Barter I	1555	AWOS M16 OVC	7	090°	07	18	5
Barter I	1655	AWOS 8 SCT M35 BKN 50 OVC	10	100°	09	18	5

KUVLUM LOCATION

TONIGHT...CLOUDY WITH A CHANCE OF SNOW SHOWERS. WIND EAST 10-15 KTS.

FRIDAY...MOSTLY CLOUDY WITH A CHANCE OF SCATTERED SNOW SHOWERS. WIND BECOMING NORTHEAST 10-15 KTS.

SATURDAY...MOSTLY CLOUDY WITH A CHANCE OF SCATTERED SNOW SHOWERS. WIND NORTHEAST 10-15 KTS.

SUNDAY...CLOUDY WITH WITH SCATTERED SNOW SHOWERS LIKELY. WIND NORTHEAST 15 KTS.

DAY OF WEEK	FRI				SAT			
	03am	09am	03pm	09pm	03am	09am	03pm	09pm
VALID TIME								
TEMPERATURE	20	19	19	18	17	17	18	16
WIND DIR/SPEED	090/10	070/10	070/08	060/08	060/10	050/10	040/10	030/08
MAX WIND SPEED	12	12	10	10	12	12	12	10
CHILL FACTOR	5	0	0	0	0	0	0	0
VISIBILITY	--7 CHC 3SW---				--7 SLT CHC 3SW-----			

Chill Factor 20	10	0	-10	-20	-30	-40	-50	-60	-70	-80	-90
Range											

SUNRISE	RISE	SET	HOURS
SUNSET	10:11	14:37	04:26

DEADHORSE AVIATION

IFR BECOMING MVFR CHANCE IFR MID-MORNING FRIDAY. PERIODS OF FREEZING DRIZZLE, LIGHT SNOW AND FOG TONIGHT. WIND NORTHEAST 20 KTS. CLOUDY WITH SNOW SHOWERS FRIDAY. WIND NORTHEAST 10-15 KTS.

CHECK WITH FAA OR NWS FOR LATEST TERMINAL FORECAST AND FLYING HAZARDS

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295	Depth:	Prog.	Spud Date: 10/13/93 8:00 AM	Days Actual: 156	Days Planned: 33	Date: 11/11/93
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Contractor/Rig No.: CANMARK KULLUK	Last Casing:	Next Casing:	Shoe Test EMW:	Formation:
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Operation at 0600: UNDER TOW - FINAL REPORT AX9295	1993 Proj. Cost	Daily Cost, (\$):	Accum. Cost, (\$)
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BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:				MW:	KWM	Filter Cake:	KWM Cake:	Depth:		Depth:					
Size:				Visc:	Visc:	% Solids:	% Solids:	Mud Wt:		ROT		Torque:			
Make:				PV:	PV:	% Sand:	% Sand:	FL Temp:		PU WL:		Jar No.:			
Type:				YP:	YP:	PH:	PH:	BGG:		SO WL:		Jar Hrs.:			
Ser #:				Gels:	Gels:	Pm:	Pm:	CG:		Pump #1	Data #2	HYDRAULICS			
Depth Out:				API FL:	API FL:	BI:	PI:	TQ:		LNR:	6.5	6.5	Bit AP:		
Feet:				RTPWL		MI:	MI:	Max Gas:		SPM			HHP:		
Hours:				MBT:		Chlor:	Chlor:	Dc Exp:		PSI:			HMP/30 in:		
WOB:				CUM CST	EDaily	OW:	OW:	Sh Den:		SPS:			ECO:		
RPM:						Total GPM:		Est PP:		SPP:			An Vel DP/DC:		
Jets:				Kick Tol:											
Grade:				Survey No.	Depth	Angle	Azimuth	TVS	Section	N/S	E/W	Dogleg	ELEVATIONS		
													WTR DEPTH	87'	
													RKB-MSL	85'	
													RKB-ML	152'	
													RKB-WH		
													GH Depth	40.5'	
													RKB-BGH	182.5'	

TIME	HFS	OPERATIONS FROM 0600 TO 0600
06:00-16:30	10.5	Retrieve anchors: #17 OFF BOTTOM 05:12 11/10 VISUAL INST. NO DRG
		# 6 OFF BOTTOM 05:07 11/10 VISUAL INST. NO DRG
		# 3 OFF BOTTOM 15:24 11/10 NO DRG
		LAST ANCHOR UP # 9 OFF BOTTOM 16:27 11/10 NO DRG
		RIG CREW: ASSIST BAYLOR REP IN REPAIRING FLARED WORK ON SEEDING
		MUD PITS. REPLACE WHIPLINE ON #1 CRAW. GEN. MAINT. ROAD PITS.
		SURGE: MAINTENANCE SERVICE ON ISA BOPC. SEE DRILL READ-INITIAL
		BY GLEN ROSPER 11/10/93.
		TRUNE: WORK ANCHOR RETRIEVAL AND SEEDING. HOOK UP TOW BEHOLD
		TO KALVIL. INSPECTION OF ANCHOR
		2 ANCHORS ON BOARD KULLUK. END TOW 1) TS 3400
		2) Revolve-k

SUBTOTAL HOURS:	Opt Time	Env Alert Status:	Kick Tolerance:
On Site Engineer:	Signed: D.C. BUNGER / R.L. MORRISON		

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX OCS-Y-1597 #1-704 9283	Depth:	Prog.	Spud Date: 10/13/93 9:00 AM	Days Actual: 156 36.0	Days Planned:	Date: 11/11/93
Contractor/Rig No.: CANMAR/KULLUK	Last Casing:	Next Casing:	Shoe Test EMW:	Formation:		
Operation at 0600: Rig under tow to McKinley Bay, NWT			1993 Proj. Cost: 1,200,000	Daily Cost, (\$): 1,200,000	Accum. Cost, (\$): 1,200,000	
BIT DATA		MUD DATA		MUD LOG DATA		DRILLING
Bit #:		MW:	KWM	Filter Cake:	KWM Cake:	
Size:		Visc:	Visc:	% Solids:	% Solids:	
Make:		PV:	PV:	% Sand:	% Sand:	
Type:		VP:	VP:	Ph:	Ph:	
Scr #:		Gels:	Gels:	Pm:	Pm:	
Depth Out:		API FL:	API FL:	PI:	PI:	
Feet:		HYHPWL:		MI:	MI:	
Hours:		MBT:		Chlor.:	Chlor.:	
WOB:		COM CST	\$Daily	OW:	OW:	
PPM				Total GPM:		
Jcis:		Kick Tel:				
Grade:		Survey No.	Depth	Angle	Azimuth	TVD
						Section
						N/S
						C/W
						Depth
						ELEVATIONS
						WTR DEPTH
						RKB-MSL
						RKB-ML
						RKB-WH
						GH Depth
						RKB-BGH
TIME	HRS	OPERATIONS FROM 0600 TO 0600				
16:30-17:30	1	LAST ANCHOR UP AT OCS-Y-1597 #1 AT 16:22 HRS 11/10/93. ANCHOR #9. RETRIEVE ANCHOR 44RE.				
17:30-02:00	8.5	RIG UNDER TOW FROM OCS-Y-1597 #1. EPA 412 ON DECK AT 18:00 HRS. TO RIDE TO CAN/US BORDER. PREDICTED ARRIVAL: 19:00 HRS 11/11/93 AT BORDER.				
02:00-03:00	—	NOTE: SET CLOCKS FORWARD 1 HOUR ON EVENING SHIFT IN PREPARATION FOR ENTERING MST ZONE. (1 HOUR FORWARD ON 11/12 REPORT TO FOLLOW)				
03:00-06:00	3.0	RIG UNDER TOW TO MCKINLEY. POSITION AT 03:00 HRS 11/11/93 EST. TO BORDER (4:00 EST 11/11) 70° 12' N 144° 03.5' W EST. TO MCKINLEY, Sea Buoy - 11/13-22:00 EST POSITION AT 06:00 HRS 11/11/93 70° 15.2' N 143° 09.6' W SUBSEA: SEE INITIAL DIVE REPT WORK ON 15M BOP - SERVICE. DRILLING: CLEAN MUD PITS. REPAIR KILMAGO BRACE. R.L. MORRISON RA KALDIK FOR TOW.				
SUBTOTAL HOURS:		Op Time	Env Alert Status:	Kick Tolerance:		
On Site Engineer:		Signed: DEB BUCHNER / R.L. MORRISON				

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Name: AX 9275 -1597 #1	Depth: —	Prog: —	Spud Date: 10/13/93 9:00 AM	Days Actual: 155 35.0	Days Planned:	Date: 11/10/93
Contractor/Rig No.: CANMARK KULLUK	Last Casing: 13 3/8 @ 3829'	Next Casing: N/A	Shoe Test ENW: N/A	Formation: N/A		

Operation at 0600: Retrieve anchors # 4, # 12. Prep. to set back BOP	1993 Proj. Cost: 800,000.00	Daily Cost, (\$): 5,000.00	Accum. Cost, (\$): 3,000.00
---	--	---------------------------------------	--

BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:				MW:	RWM	Filler Cake:	RWM Cake:	Depth:		Depth:					
Size:				Visc:	Visc:	% Solids:	% Solids:			ROT					
Make:				PV:	PV:	% Sand:	% Sand:	Mud Wt:		WT:		Torque:			
Type:				YP:	YP:	Ph:	Ph:	FL Temp:		PL Wt:		Jar No.:			
Ser #:				Gels:	Gels:	Pm:	Pm:	BGS:		SO Wt:		Jar Hrs.:			
Depth Out:				API FL:	API FL:	PI:	PI:	CG:							
Feet:				HTHPWL		MI:	MI:	TG:		UNR:	6.5	6.5	Bit AP:		
Hours:				MBT:		CMOT:	CMOT:	Max Gas:		SPM			HHP:		
WOB:				CUM CST	\$Daily	OW:	OW:	Dc Exp:		PSI			HHP/30 in:		
RPM:						Total GPM:		Sh Den:		SPS			ECD: NOV 1 1993		
Grade:				Kick Tol:				Est PP:		SPP			An Vel		
				Survey No.	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	DP/DC		
													ETA/CS DISTRICT OFFICE		
													ETA/CS MANAGEMENT SERVICE		
													ETA/CS ALASKA		
													ELEVATIONS		
													WTR DEPTH 87		
													RKB-MSL 65		
													RKB-ML 152		
													RKB-WH 123.5		
													GH Depth 40.5		
													RKB-BGH 192.5		

TIME	HRS	OPERATIONS FROM 0600 TO 0600
06:00 - 17:00	11.0	Pull BOPC. Took 300,000' over to Pull from mud sloughed into Glory hole. Lay down marine riser. * Visual inspection of riser pin connector indicated serious keyseated wear at pin connector below bullfit - 1/2 - 3/4" x 4-5". Wear report will be prepared by Subsea. Export additional wear in box below pin connector. LMRP on MacaPool Belay.
17:00 - 18:00	1.0	Jump divers. For site clearance. Bottom clear.
18:00 - 24:00	6.0	Bridge crane hydraulic problem when moving into position to retrieve LMRP R1H to 186' into glory hole and cement hole with 80 metric tons (51" (1853 sks) and followed by 186 met. tons Arctic Set (3197 sks) D/S complete operations and cleaning/staking out equipment. Rig crew helping cement and assist deck crew. Moved G.H. bit to Supplier II. Moved anchors from Kulluk to Supplier II. Moved anchors from Miscarpo to Kulluk - ongoing operation.
AL HOURS: 0.0	Opr Time	Env Abri Status
On Site Engineer: T. E. Magnusen	Signed: DC BURGARNER / R.L. MORRISON	

CONFIDENTIAL

PAGE 2 OF 2

4-1597*1 TOWREP7 AX9283

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:							
Rig Supply Data:	Used last 24 hours	Remaining Stock	Unit	Hours Summary			
Pot Water:	218	1453	Bbl		Rotary	Meter	Total
Drill Water:		3573	Bbl	Well Daily			
Fuel:	5270	155,811	Gal	Well Cumulative			
Bore:		-	Sx	BHA			
Cement: G/AS		-	Sx	PERSONNEL ONBOARD			
Supply Vessel Information:				APCO:	1		
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB		
KALUK	3969		6868	300.628	18	CONTRACTOR: CANMAR 51	
MISCARGO	4977		4491	287.155	18	CATERP: STANTON 9	
KALVIK			9484	350.530	19		
SUPPLIER	4123		1585	72647	13	WEATHER: HORIZON 2	
WEATHER DATA: @ 09:00						SAFETY: H2S/MEDIC 1	
TEMPERATURE	19°	WIND SPEED	10	DIRECTION		070	
VISIBILITY	6	CEILING	2,000' oc	SEAS		-	
Personnel Accidents:		Yes		None Reported		X	
Description of Accident:		ERA HELICOPTER					3
		PIPE PROTECT					2
		BAYLOR BRAKES					1
Well Site Safety:		Date Last Kick Drill:		Date Last BOP Test:		COMMUNICATION: N. S. TELECOM	
Other Drills/Describe:						OTHER: DIVE/RADIO/MMS 7	
TIME	HRS	OPERATIONS FROM 0600 TO 0600				VISITORS: SUAV. SYSTEMS/MEZO	
						TOTAL PERSONNEL: 77	
ITEMS PLANNED FOR OFFLOADING AT KULUK, SEA BUOY:							
1) Drill pipe - 155' to 135' B410 G-105 199, 15-95 38' 14" WDP							
2) Drill collars - 9"-6' total, 8"-25' total, 6 1/2"-31'							
Related pumps / Spool DC 10 / Pump 20							
3) Anchor wire on Riser?							
4) 4 lifeboats + 1 fast response craft.							
5) Fuel down to 150m ³ L.							
6) 2 Anchors							
7) Riser JTS							
Kulluk Alert Status (Hours)							
Green Blue Yellow Red Black							
Environ.						ICE COVERAGE:	
Well							
TOTAL HOURS: 12.5		Vessel					
On Site Engineer:		Signed: DCE Magway / R. L. Morrison				DATE: 11/11/93	

TO 213#4419474 No. 4664 P. 12/13

KULLUK ALERT MONITORING PROGRAM TOW LOG

DATE: 11-Nov-93		DEPARTURE 10 NOVEMBER, 1730 AST				
ESTIMATED ARRIVAL TIMES		TOTAL DISTANCE TO RUN		294 N.M.		
ETA @ 3.5 KTS	14 NOV. 07:30 MDT	LOCATION		TOW	TOW LINE	SUPPORT
ETA @ 4.0 KTS	13 NOV. 21:00 MDT	FROM	TO	VESSEL	LENGTH	VESSEL(S)
ETA @ 4.5 KTS	13 NOV. 12:30 MDT	Y1597	McKINLEY BAY	KALVIK	570 METRES	IKALUK
ETA @ 5.0 KTS	13 NOV. 06:30 MDT					
ETA @ 5.5 KTS	13 NOV. 01:00 MDT					

ENVIRONMENTAL CONDITIONS

TIME //	ICE COVER	ICE THICKNESS	WAVE HEIGHTS	AIR TEMP.	WIND SPEED	WIND DIRECTION
00:00	7-9 TENTHS	10-20 CM.	M.	-7.5 DEG. C.	15 KTS	070 DEG.
06:00	8-9 TENTHS	10-20 CM.	M.	-7.1 DEG. C.	13 KTS	080 DEG.
12:00	9+ TENTHS	15-30 CM.	M.	-7.8 DEG. C.	10 KTS	070 DEG.
18:00	9+ TENTHS	15-30 CM.	M.	-6.9 DEG. C.	12 KTS	070 DEG.
TIME //	HEADING / SPEED	POSITION		DISTANCE RUN	DISTANCE TO GO	
		LATITUDE	LONGITUDE			
00:00	087 @ 4.2 KTS	70° 17.0' N	144° 03.5' W	29 N.M	265 N.M	
06:00	095 @ 3.9 KTS	70° 15.7' N	143° 09.6' W	48 N.M	246 N.M	
12:00	093 @ 4.1 KTS	70° 15.15' N	141° 58.15' W	72 N.M	222 N.M	
18:00	090 @ 3.6 KTS	70° 15.1' N	140° 54.7' W	92 N.M	202 N.M	

COMMENTS: 0200 / 11 CLOCKS ADVANCED ONE HOUR

11/12 1325 / 11 TOW SHORTENED TO 300 METRES

00:00	098 @ 2.4	70° 15' N	139° 52.6' W	113 NM	181 NM	NOTE - FUEL LINE REPAIR - HAWK/N
06:00	095 @ 3.8	70° 15.2' N	139° 04.1' W	131 NM	163 NM	

Nov. 12. 1993 8:57A MARCO ALASKA INC

KULLUK DAILY REPORT (ENGLISH)

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FOR THE PERIOD 0000 - 2400:

10 NOV 93

		LOCATION: N70 28.8 W144 08.25		OPERATOR: ARCO ALASKA		DOWNTIME LAST 24 HRS: 0							
DAYS ON LOC.:		WELL:		OPER. REP.: DAVE BUMGARDNER		CUM. DOWNTIME: 58.50							
DAYS ACCUM: 115		START UP DATE: 6/1/93		O.I.M.: DAVE HOPE									
FROM	TO	OPERATIONS SUMMARY				ALERT STATUS(hours)							
00:00	17:30	PULL ANCHORS - LAST ANCHOR UP AT 16:22 HRS.				LEVEL	ENVIR WELL VESSEL						
17:30	24:00	UNDER TOW TO MCKINLEY BAY.				GREEN							
		ASSIST BAYLOR HAND WITH EMALGO REPAIR.				BLUE							
		CLEAN MUD PITS.				YELLOW							
		CLEAN AND SERVICE 15 M BOP.				RED							
		REPLACE DAMAGED WHIP LINE WIRE ON #1 CRANE.				BLACK							
		NO ACCIDENTS REPORTED LAST 24 HRS.				0600							
		NO SPILLS REPORTED LAST 24 HRS.				VESSEL MOTIONS/ATTITUDE							
						MAX	0600						
						HEAVE (ft)	0 0						
						TILT (slng amp)	0 0						
						R.A.(deg)	N/A N/A						
						OFFSET(ft)	N/A N/A						
		TOW REPORT				GLOBAL LOAD(mt)	0 0						
		MISCAROO & SUP 2 CROSSED US/CANADA NOV/11 @ 00:26 AST				STABILITY DATA							
		FUEL / LUDE FOR MISCAROO & SUP 2 @ US/CANADA BOARDER				DISPLACEMENT(mt)	27,680						
		MISCAROO: F.O.B. 1087 M3, L.O.B. 25.556 M3				DECK LOAD(mt)	2,684						
		SUP 2: F.O.B. 275 M3, L.O.B. 5.256 M3				DRAFT (ft)	37						
		MISCAROO & SUP2 ETA MCKINLEY BAY = NOV/11 23:00 MST				KM (ft)	140						
		KULLUK & SUPPORT ETA US/CAN BOARDER - NOV/11, 18:00 MST				KG (ft)	48						
		KULLUK & SUPPORT ETA MCKINLEY FAIRWAY - NOV/13, 22:00 MST				KG MARGIN (ft)	79						
						GM (ft)	93						
						KB(ft)	22						
SUPPORT ACTIVITIES													
BARGE DEPT:		FIRE & SECURITY WATCH MAINTAINED. HELIDECK DUTIES, CONTROL ROOM DUTIES. WASTE											
		MANAGEMENT AND INCINERATOR DUTIES.											
MAINT. DEPT.		REPLACING INTERNAL COIL ON EMALGO BRAKE. SPOOLING NEW WHIP LINE WIRE ON #1 CRANE.											
		CHECKING WEADOWNS AND WINTERIZING SMALL CENTRIFUGE. PLANNED MAINTENANCE= 25 HOURS.											
		UNPLANNED MAINTENANCE= 95 HOURS.											
ANCHORS (mt)		1	2	3	4	5	6	7	8	9	10	11	12
TST TENSION													
OP TENSION													
PK TENSION													
PERSONNEL LOG							KULLUK SAFETY LOG		SHIPS SAFETY LOG				
		KULLUK	KALUK	KALVIK	MISCAROO	SUP/2	TOTAL	FIRE DRILL	31-Oct	DSLTA			
CANMAR		51	17	17	17	13	115	ABANDON DRILL	24-Oct	KALUK	73		
CANMAR SVC		8					8	WELL DRILL	31-Oct	KALVIK	9		
ARCO		1					1	DSLTA	1	MISCAROO	72		
ARCO SVC		8	1	2	1		12	MEDIVACS		SUPPLIER II	148		
STANTON (CS)		9					9	MEDIC DV		H-F/D	H.O.B. USED		
OTHER								MEDIC NON-OV	2	KULLUK	1,229 0		
TOTAL		77	18	19	18	13	145	FLIGHTS	4				
ENVIRONMENT	PAST	0600	NEXT	ENVIRONMENT	PAST	0600	NEXT	ENVIRONMENT	PAST	0600			
INFORMATION	24 HRS		24 HRS	INFORMATION	24 HRS		24 HRS	INFORMATION	24 HRS				
ICE CON.(10ths)	3-9	9.00	7-9	TEMP (min) (f)	18.5	19.0	19	SIG WAVE HT (ft)	3	0			
THICKNESS (ft)	.7	.7	.7	TEMP (max) (f)	25.0		21	SIG SWELL HT (ft)	0	0			
DRIFT (kts)	N/A	N/A	N/A	WINDCHILL (f)	-16.6	5.0	-9.4	MAX COMBINED (ft)	3	0			
DIR (deg)	N/A	N/A	N/A	SS TEMP (f)				TRACE					
RIDGING ?(w/h)	N	N	N	WIND DIR (deg)	070-13	070	110-16	WATER DEPTH (ft)	86.9	86.9			
ICE PRESS ? (y/h)	N	N	N	WIND SPEED (kts)	10-33	10	12-18	VISIBILITY (nm)	3-12	6			
ENVIRONMENTAL SUMMARY:													
EAST NORTHEAST TO EAST SOUTHEAST WINDS 10 TO 33 KNOTS													
CEILING @ 0400:2000' OVERCAST													
3- 9/10THS NEW ICE (10-30 cm)													

PAGE 2 OF 2

10 NOV 93

FLEET TOTALS									REMARKS:						
	(gals)	(sacks)	(sacks)	(sacks)	(bbls)	(bbls)	(gals)	(gals)							
R.O.B.	1166771	12,065	0	0	2,734	3,573	23,742	3,170							
S/U															
ON HIRE															
	FUEL	BAR	AS	OWG	POT W	DW	LUB	50%GL							
K 95% CAP	402,334	11,877	6,843	3,968	1,962	4,227		28,134							
U REC'D	0	0	0	0	406	0	0	0							
L DISCH'D	0	0	0	0	0	0	0	0							
L USED	5,270	0	0	0	218	0	26	0							
U R.O.B.	155,811	0	0	0	1,453	3,573	1,147	3,170							
K S/U															
ON HIRE															
I 95% CAP	400,485	6,417	0	0	0	0									
K REC'D	0		0	0	36	0	0	0							
A DISCH'D	0	0	0	0	0	0	0	0							
L USED	6,868	0	0	0	36	0	0	0							
U R.O.B.	300,628	3,969	0	0	324	0	4,438	0							
K S/U															
ON HIRE															
K 95% CAP	481,586	4,648	3,098	2,066	0	0									
A REC'D	0	0	0	0	0	0	0	0							
L DISCH'D	0	0	0	0	0	0	0	0							
V USED	9,484	0	0	0	38	0	78	0							
I R.O.B.	350,530	0	0	0	201	0	10,017	0							
K S/U															
ON HIRE															
M 95% CAP	376,445	5,865	0	0	0	0									
I REC'D	0	0	0	0	41	0	0	0							
S DISCH'D	0	0	0	0	0	0	0	0							
C USED	4,491	0	0	0	41	0	26	0							
A R.O.B.	287,155	4,972	0	0	308	0	6,751	0							
R S/U															
O ON HIRE															
S 95% CAP	116,236	4,657	0	0	0	0									
U REC'D	0	0	0	0	6	0	0	0							
P DISCH'D	0	0	0	0	0	0	0	0							
Z USED	1,585	0	0	0	47	0	38	0							
R.O.B.	72,647	4,123	0	0	448	0	1,388	0							
S/U															
ON HIRE															
MOORING	1	2	3	4	5	6	7	8	9	10	11	12	GAS	FULL	M/T
WIRE LGTH(ft)													OXY	6	0
WIRE OUT (ft)													ACET	13	6
RAR S/N													NITR	0	2
RAR CODE													HYDR	0	0
GROUND PEN.													FRON	0	0
ANCHOR TYPE													PROP	5	8
ANCHOR S/N													HELIUM	0	0
FLUKE L (deg)													ARGON	1	1
BEARING(deg)													BLUE S	2	0
PIGGY TYPE														0	0
ANCHOR S/N														0	0
FLUKE L (deg)														0	0
CROWN PEN.														0	0
BUOY														0	0

Nov. 12. 1993 8:54AM MARCO ALASKA INCK

TO 13#001907215.4664 P. 10/13

KULLUK DAILY REPORT (ENGLISH) PAGE 1 OF 2
FOR THE PERIOD 0000 - 2400: 11 NOV 93

DAYS ON LOC.: WELL:		LOCATION: N70 15 W133 52.6	OPERATOR: ARCO ALASKA	DOWNTIME LAST 24 HRS: 0								
DAYS ACCUM: 116		START UP DATE: 6/1/93	OPER. REP.: DAVE BUMGARDNER	CUM. DOWNTIME: 58.50								
		O.I.M.: DAVE HOPE										
FROM	TO	OPERATIONS SUMMARY		ALERT STATUS(hours)								
00:00	24:00	UNDER TOW TO MCKINLEY BAY.		LEVEL ENVIR WELL VESSEL								
		ASSIST BAYLOR HAND WITH EMALGO REPAIR - INSTALL AND TEST SAME.		GREEN								
		CLEAN AND SERVICE 15 M BOP - REMOVE BALL JOINT FROM LMRP		BLUE								
		TO SEND SOUTH FOR KEYSEAT REPAIR.		YELLOW								
		CLEAN MUD PITS AND SHAKER ROOM.		RED								
		LTP CONVENTIONAL SWIVEL.		BLACK								
		NO ACCIDENTS REPORTED LAST 24 HRS		0600								
		NO SPILLS REPORTED LAST 24 HRS.										
		VEHICLE MOTIONS/ATTITUDE										
		CLOCKS ADJUST FORWARDED TO M.S.T @ 02:00		MAX 0600								
				HEAVE (ft) 0 0								
				TILT (sing amp) 0 0								
				R.A (deg) N/A N/A								
				OFFSET(ft) N/A N/A								
		TOW REPORT		GLOBAL LOAD(mt) 0 0								
		MISCAROO & SUP 2 ARRIVE MCKB CHANNEL NOV/11 @ 20:30 MST		STABILITY DATA								
		MISCAROO & SUP 2 WAITING ON NAV / SYSTEM TO ENTER CHANNEL		DISPLACEMENT(mt) 27.680								
		KULLUK & SUPPORT CROSSED US/CAN BORDER - NOV/11, 18:38 MST		DECK LOAD(mt) 2.684								
		KULLUK = F.O.B. 580 M3, L.O.B. 4.34 M3		DRAFT (ft) 37								
		KALVIK = F.O.B. 1281.5 M3, L.O.B. 37.525 M3		KM (ft) 140								
		KALUK = F.O.B. 1125 M3, L.O.B. 16.8 M3		KG (ft) 48								
		KULLUK & SUPPORT ETA MCKINLEY FAIRWAY - NOV/13, 22:00 MST		KG MARGIN (ft) 79								
				GM (ft) 93								
		SUPPORT ACTIVITIES		KB(ft) 22								
BARGE DEPT:		FIRE & SECURITY WATCH MAINTAINED. HELIDECK DUTIES, CONTROL ROOM DUTIES, WASTE										
		MANAGEMENT AND INCINERATOR DUTIES, PREPS FOR DEADWT SURVEY.										
MAINT. DEPT.		COMPLETED REPAIRS, ADJUSTMENT AND TESTING OF EMALGO BRAKE. CHANGED OVER VESSEL TO RUN										
		ON HEAT MEDIA DUE TO HEAVY SLUSHING AT SEA INLETS - PULLING DOWN DEGASSER FOR INSPECTION										
		PLANNED MAINTENANCE - 20 HOURS. UNPLANNED MAINTENANCE - 100 HOURS										
ANCHORS (mt)	1	2	3	4	5	6	7	8	9	10	11	12
TST TENSION												
OP TENSION												
PK TENSION												
PERSONNEL LOG					KULLUK SAFETY LOG			SHIPS SAFETY LOG				
	KULLUK	KALUK	KALVIK	MISCAROO	SUP/2	TOTAL	FIRE DRILL	31-Oct	DSLTA			
CANMAR	51	17	17	17	13	115	ABANDON DRILL	24-Oct	KALUK	74		
CANMAR SVC	8					8	WELL DRILL	31-Oct	KALVIK	10		
ARCO	1					1	DSLTA	2	MISCAROO	73		
ARCO SVC	8	1	2	1		12	MEDIVACS		SUPPLIER II	49		
STANTON (CS)	9					9	MEDIC OV		M-F/O	R.O.B.		
OTHER							MEDIC NON-OV		KULLUK	1,229		
TOTAL	77	18	19	18	13	145	FLIGHTS			0		
ENVIRONMENT	PAST	0600	NEXT	ENVIRONMENT	PAST	0600	NEXT	ENVIRONMENT	PAST	0600		
INFORMATION	24 HRS		24 HRS	INFORMATION	24 HRS		24 HRS	INFORMATION	24 HRS			
ICE CON. (10ths)	3-9	9.00	7-9	TEMP (min) (f)				SIG WAVE HT (ft)	3	0		
THICKNESS (ft)	7	7	7	TEMP (max) (f)				SIG SWELL HT (ft)	0	0		
DRIFT (kts)	N/A	N/A	N/A	WINDCHILL (f)				MAX COMBINED (ft)	3	0		
DIR (deg)	N/A	N/A	N/A	SS TEMP (f)				TRACE				
RIDGING (y/h)	N	N	N	WIND DIR (deg)	090	060	070	WATER DEPTH (ft)	86.9	86.9		
ICE PRESS (y/h)	N	N	N	WIND SPEED (kts)	10	20	20	VISIBILITY (nm)	3-12	5		
ENVIRONMENTAL SUMMARY:												
EAST NORTHEAST TO EAST SOUTHEAST WINDS 10 TO 20 KNOTS												
CEILING @ 0400:2000 OVERCAST												
3-9/10THS NEW ICE (10-30 cm)												

Nov. 12, 1993 8:55A ARCO ALASKA INC

10 13#0019072 No. 4664 P. 11/13

KULLUK DAILY REPORT (ENGLISH)
FOR THE PERIOD 0000 - 2400: 11 NOV 93

PAGE 2 OF 2

FLEET TOTALS										REMARKS:			
	(gals)	(sacks)	(sacks)	(sacks)	(bbls)	(bbls)	(gals)	(gals)					
R.O.B.	1129631	13,065	0	0	2,694	3,573	23,448	3,170					
S/U													
ON HIRE													
	FUEL	BAR	AS	OWG	POT W	DW	LUB	50%GL					
K 95% CAP	402,334	17,877	5,843	3,968	1,962	4,227		28,134					
U REC'D	0	0	0	0	0	0	0	0					
L DISCH'D	0	0	0	0	0	0	0	0					
L USED	3,088	0	0	0	208	0	26	0					
U R.O.B.	152,723	0	0	0	1,403	3,573	1,120	3,170					
K S/U													
ON HIRE													
I 95% CAP	400,485	6,417	0	0	0	0							
K REC'D	0	0	0	0	37	0	0	0					
A DISCH'D	0	0	0	0	0	0	0	0					
L USED	4,227	0	0	0	34	0	0	0					
U R.O.B.	296,401	3,969	0	0	327	0	4,438	0					
K S/U													
ON HIRE													
K 95% CAP	481,586	4,648	3,098	2,066	0	0							
A REC'D	0	0	0	0	0	0	0	0					
L DISCH'D	0	0	0	0	0	0	0	0					
V USED	15,296	0	0	0	38	0	149	0					
I R.O.B.	335,234	0	0	0	201	0	9,869	0					
K S/U													
ON HIRE													
M 95% CAP	376,445	5,866	0	3,076	0	0							
I REC'D	0	0	0	0	44	0	0	0					
S DISCH'D	0	0	0	0	0	0	0	0					
C USED	10,567	0	0	0	25	0	26	0					
A R.O.B.	276,588	4,972	0	0	327	0	6,751	0					
R S/U													
ON HIRE													
S 95% CAP	116,236	4,657	0	0	0	0							
U REC'D	0	0	0	0	19	0	0	0					
P DISCH'D	0	0	0	0	0	0	0	0					
Z USED	3,963	0	0	0	31	0	119	0					
R.O.B.	68,685	4,123	0	0	436	0	1,270	0					
S/U													
ON HIRE													
MOORING										1	2	3	4
WIRE LGTH (ft)										5	6	7	8
WIRE OUT (ft)										9	10	11	12
RAR S/N										GAS		FULL	M/T
RAR CODE										OXY		6	0
GROUND PEN.										ACET		13	6
ANCHOR TYPE										NITR		0	3
ANCHOR S/N										HYDR		0	0
FLUKE L (deg)										FREON		0	0
BEARING (deg)										PROP		5	8
PIGGY TYPE										HELIUM		0	0
ANCHOR S/N										ARGON		1	1
FLUKE L (deg)										BLUES		2	0
CROWN PEN												0	0
BUDY												0	0

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 0275 OCS-Y-1597 #1	Depth: —	Prog: —	Spud Date: 10/13/93 9:00 AM	Days Actual: 155 35.0	Days Planned:	Date: 11/10/93
Contractor/Rig No.: CANMARK/KULLUK	Leas Casing: 13 3/8 @ 382.9'	Next Casing: N/A	Shoe Test EMW: N/A	Formation: N/A		
Operation at 0600: Retrieve anchors #6, #12. Prep. to set back 30P			1993 Proj. Cost: \$6,100,000	Daily Cost, (\$): \$40,000	Accum. Cost, (\$): \$1,100,000	
BIT DATA		MUD DATA		MUD LOG DATA		DRILLING
Bit #: —	MW: —	KWM: —	Filler Cake: —	KWM Cause: —	Depth: —	Depth: —
Size: —	Visc: —	Visc: —	% Solids: —	% Solids: —	Mud Wt: —	ROT WT: —
Make: —	PV: —	PV: —	% Sand: —	% Sand: —	FL Temp: —	PU WL: —
Type: —	YP: —	YP: —	Ph: —	Ph: —	BGG: —	SO WL: —
Ser #: —	Gels: —	Gels: —	Pm: —	Pm: —	CG: —	Pump #1 Data #2
Depth: —	API FL: —	API FL: —	PI: —	PI: —	TG: —	LNR: 6.5 6.5
Out: —	HTRPWL: —	ME: —	MT: —			SPM: —
Feet: —	MBT: —	Chlor: —	Chlor: —	Max Gas: —		PSI: —
Hours: —	CUM EST \$Daily	O/W: —	O/W: —	Do Exp: —		SPS: —
WOB: —		Total GPM: —		Sh Don: —		SPP: —
PPM: —	Kick Tol: —			Est PP: —		
Jobs: —	Survey No. —	Depth —	Angle —	Azimuth —	TVD —	Section N/S E/W Dogleg
Grade: —						ELEVATIONS
						WTA DEPTH 87'
						RKB-MSL 65'
						RKB-ML 132'
						RKB-WH 183.5'
						GH Depth 40.5'
						RKB-BGH 192.5'
TIME	HRS	OPERATIONS FROM 0600 TO 0600				
06:00-17:00	11.0	Pull 30P. Took 300,000* over to pull from mud sloughed into glory hole. Lay down marine riser.* Visual inspection of riser pin connector indicated serious key seated wear at pin connector below bull bit - 1/2 - 3/4" x 4-5". Wear report will be prepared by Subsea. Expect additional wear in box below pin connector. AMP on Maccad bars.				
17:00-18:00	1.0	Jump divers. For site clearance. Bottom clear.				
18:00-24:00	6.0	Bridge crane hydraulic problem when moving into position to retrieve LMRP BH to 186' into glory hole and cement hole with 80 metric tons 51 1/2" (1853 sks) and followed by 186 metric tons Arctic Set (3197 sks). D/S complete operations and cleaning/stacking out equipment. Rig crew helping cement and assist deck crew. Moved G.H. bit to Supplier II. Moved anchors from Kulluk to Supplier II. Moved anchors from Miscaroon to Kulluk - ongoing operation.				
SUBTOTAL HOURS: 0.0		Opr Time	Env Alert Status	Kick Tolerance:		
On Site Engineer: T.E. Manner	Signed: DC BUNGARNER / R.L. MORRISON					

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA
Description:

Rig Supply Data:	Used In 24 hours	Remaining Stock	Unit	Hours Summary		
Pot Water:	218	1453	Ebl		Rotary	Motor
Drill Water:	0	3522	Ebl	Well Daily		Total
Fuel:	5350	161,082	Gal	Well Cumulative		
Barite:	0	0	Sx	BHA		
Cement: G/AS	3197/1853	0	Sx			

Supply Vessel Information:						ARCO (NUMBER OUT- STANDING)	2
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTICIP	
KALUK	3969		2642	307,496	18	CONTRACTOR CANMAR	51
MEGAROO	4972		2113	291,646	18	CATERPILLER STANTON	9
KALVIK			951	340,019	17	CEMENTITE DOWELL	2
SUPPLIER	4123		1585	74,232	13	WEATHER: HORIZON	2

WEATHER DATA: 08:05:00						SAFETY: H2S/MEDIC	1
TEMPERATURE 20.8°	WIND DIRECTION 26 KTS	DIRECTION 100°				CASING: G8PMDS	
VISIBILITY 7	CEILING 500' O.C.	SEAS 3				CORING: INTERCORELAB	
Personnel Accidents: Yes <input checked="" type="checkbox"/> None Reported						DST: HRS	

Description of Accident:	Jodie Cordell, Deck attendant for Stanton Catering slipped while stepping over threshold while mopping 2nd deck bathroom. Probable hamstring tear right leg. Immobilized and medicated to Prudhoe Bay Amudays Camp. Transferring to Anchorage - Providence. X Rays negative.	ELECTRIC LOG SCHLUMBERGER	1
14:40 11/9/93		WATER BENCHES	1
		WATER BENCHES	1
		WATER BENCHES	2
		WATER BENCHES	2

Well Site Safety:	Anchorage - Providence. X Rays negative.	COMMUNICATION N.E. TELECOM	
Date Last Kick Drill:	Date Last BOP Test:	DRILL: DIVERS/RADIO/MVS	2
Other Drills-Describe:		VESSELS: VULCAN/STANLEY	

TIME	HRS	OPERATIONS FROM 0600 TO 0600	TOTAL PERSONNEL	80
------	-----	------------------------------	-----------------	----

24:00-06:00 6:0 Pulling anchors during visual and magnetic field inspection. Continue anchor transfers. Ready remaining Arco/Dowell/Italliburton equipment for shipment. Run jet tool-wash BOP cavities.

ANCHOR INSPECTION: #8 OFF BOTTOM: 09:47 11/9 VISUAL INSPECTION
#2 13:41 11/9
#5 18:20 11/9
#11 22:53 11/9

NOTE: 1. ROUSTABOUT SHORT 12:00-18:00 11/9
2. ROUSTABOUT SHORT 18:00-23:00 11/9
1. ROUSTABOUT SHORT 23:00-06:00 11/10

Barge off loaded 23:00 11/9/93
#4 01:30 11/10 Condensed barge boom out washed 1800. Inspected.

Kulluk Alert Status (Hours) #12
Green Blue Yellow Red Black

Environ. Well Vessel
ICE COVERAGE 6-9/10 thin 15' yr
3 ft.

L HOURS: Vessel Drift: 5 WNW

On Site Engineer: T.E. Maunder Signed: DC Bumgarner / R.L. Morrison DATE 11/10/93

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA
Description:

Rig Supply Data:

Port Water:
Drill Water:
Fuel:
Barite:
Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Rotary Motor Total

218

1453

Ebl

0

3522

Ebl

Well Daily

535A

161,082

Gw

Well Cumulative

0

0

Sk

BHA

3197/1853

0

Sk

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO: (NUMBER OUT-
PROVIDENCE)

2

VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB
IKALUK	3969		2642	307,496	18
MISCAROO	4972		2113	291,646	18
KALVIK			951	340,014	17
SUPPLIER	4123		1585	74,232	13

PARTNER

CONTRACTOR: CANNAR

51

CATELL: STANTON

9

CEMENTITY: DOWELL

2

WEATHER: HORIZON

2

WEATHER DATA: @ 05:00

TEMPERATURE 20.8°

WIND SPEED 26 KTS

DIRECTION 100°

VISIBILITY 7

CEILING 500' O.C.

SEAS 3

SAFETY: H33/MEDIC

1

CAUSE: GBR/HDS

CORING: INTEQ/CORELAB

Personnel Accidents:

Vne X

None Reported

DST: HRS

Description of
Accident:
16:40 11/9/93

Jodie Cardell, Deck attendant for Stanton Catering
slipped while stepping over threshold while
mopping 2nd deck bathroom. Probable hamstring
tear right leg. Immobilized and medevac to
Pudhoe Bay Amn Base Camp. Transferring to
Anchorage - Providence. X-Rays negative.

ELECTRICIAN: SCHLUMBERGER

ELECTRICIAN: BARKER

ELECTRICIAN: SPERRY

ELECTRICIAN: SPERRY

ELECTRICIAN: SPERRY

ELECTRICIAN: SPERRY

ELECTRICIAN: SPERRY

Well Site Safety:

Date Last Kick Drill:

Date Last BOP Test:

Other Drills-Describe:

COMMUNICATION: N. S. TELECOM

OTHER: Divers/Radio/MMS

VISIONS: SURV. SYSTEMS VES20

TIME	HRS	OPERATIONS FROM 0600 TO 0600	TOTAL PERSONNEL	BO
24:00-06:00	6.0	Pulling anchors during visual and magnetic field inspection. Continue anchor transfers. Ready remaining Area / Dowell / Hall- iburton equipment for shipment. Run jet tool-wash BOP cavities. ANCHOR INSPECTION: #8 off bottom: 09:47 11/8 USDR/MSR #2 13:41 11/8 " #3 18:20 11/8 " #11 22:53 11/8 " #7 20:49 11/9 OK - VISUAL + INST. 11/9 #1 22:41 11/9 Some single wire breaks and cabling NOTE: 1 ROUSTABOUT SHORT 12:00-18:00 11/9 2 ROUSTABOUTS SHORT 18:00-24:00 11/9 1 ROUSTABOUT SHORT 24:00-06:00 11/10 #10 22:52 11/9 Bad link on 36m. out visual + INST. inspection #4 01:30 11/10 Condensed bud on boom out installed 1988. This not defect. Barge off loaded 23:00 11/9/93 #6 05:07 11/10 Kulluk Alert Status (Hours) #12 Green Blue Yellow Red Black Environ. Well Vessel TOTAL HOURS: Vessel On Site Engineer: T.E. Maunder Signed: DC Bumgarner / Z.L. Morrison DATE: 11/10/93 ICE COVERAGE: 6-9/10 thin 1st yr 3 ft Drift, S WNW		

CONFIDENTIAL

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ARCO Alaska, Inc.

Daily Drilling Report New Ventures

Well Name: AX 8275	Depth:	Prog. 0'	Spud Date: 10/13/93 9:00 AM	Days Actual: 154 34.0	Days Planned: 31	Date: 11-9-93	
Contractor/Rig No.: CANMAR/KULLUK	Lost Casing: 13 3/4 @ 3525'	Next Casing: NA	Shoe Test EMW: NA	Formation: NA			
Operation at 0600: Break out 2 LD Kelly Prepare to Pull BOP Stack				1993 Proj. Cost: NA	Daily Cost, (\$): NA	Accum. Cost, (\$): NA	
BIT DATA		MUD DATA		MUD LOG DATA		100' DRILLING OFFICE	
Bit #:	MW:	RWM	Filter Cake:	RWM Cake:	Depth:	NOV 9 1993	
Size:	Visc:	Visc:	% Solids:	% Solids:	Mud Wt:	Torque:	
Make:	PV:	PV:	% Sand:	% Sand:	FL Temp:	PU WL: MINERAL SERVICE	
Type:	YP:	YP:	PH:	PH:	SO WL:	ANCHOR SERVICE	
Cor #:	Gels:	Gels:	Pm:	Pm:	CG:	Pump #1 Data #2 HYDRAULICS	
Depth Out:	API FL:	API FL:	PI:	PI:	TG:	LNR: 6.5 6.5 Bit SP:	
Feet:	RYHPWL	MI:	MI:	Max Gas:	SPM	HHP:	
Hours:	MBT:	Chlor:	Chlor:	Dc Exp:	PSI:	MHP/sg in:	
WOB:	CUM CST	\$Day	OW:	OW:	Sh Den:	SPS:	
RPWT:	Kick Tol:	NA	Total GPM:	NA	Est PP:	SPP:	
Jets:	Survey No.	Depth	Angle	Azimuth	TVD	Section	
Grade:						N/S	E/W
						Dogleg	ELEVATIONS
						WTR DEPTH	87
						RKB-MSL	65
						RKB-ML	152
						RKB-WH	193.5
						GH Depth	40.5
						RKB-BGH	192.5
TIME	HRS	OPERATIONS FROM 0600 TO 0600					
0600-0630	0.5	Continued POH LDDP to 7400'					
0630-0800	1.5	Rig in Dawell. Break circ w/ 5 bbls SW. Tested lines to 2000 psi. Pumped 15 bbls SW. Mixed & pumped 287 cc "G" cement slurry @ 15.8 ppg w/ 0.6% D-13, 0.05 GRS D-47 for balanced plug #2 7400'-7600'. Pumped 3 bbls SW and displaced w/ 118 bbls mud. CIP @ 07:55 hrs. Plug witnessed by MMS rep. RD Dawell.					
0800-0900	1.0	POH to 7000'. Circ hole clean					
0900-1000	1.0	Rig in Dawell, pump 5 bbls SW & test lines to 2000 psi. Mix & pump 287 cc "G" cement slurry as before for balanced plug #3 7000'-6600'. Displace w/ 111 bbl mud. CIP @ 10:07 hrs. Plug witnessed by MMS rep. RD Dawell.					
1000-1100	1.0	POH 5 stands DP. Circ hole clean.					
1100-1930	7.5	POH 3 stands back 12 stands DP. POH LDDP					
SUBTOTAL HOURS:	Opr Time	Env Alert Status:	Blue	Kick Tolerance:	NA		
On Site Engineer:	Signed:		B Campbell / S. Schultz				

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NOV 09 1993

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA
Description:WELLS LOGS, BENT SERVICE
ADDITIONAL ALASKA

Rig Supply Data:

Pot Water:

Drill Water:

Fuel:

Barite:

Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Rotary

Motor

Total

Well Daily

Well Cumulative

BHA

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO

3

VESSEL BARITE (SX) CEMENT (SX) FUEL USED FUEL LEFT POB

PARTNER

0

KALUK

CONTRACTOR: CANMAR

51

KALVIK

CATERER

10

KODORAK

CEMENTER: DOWELL / NORTON

2

SUPPLIER

WEATHER:

2

WEATHER DATA:

TEMPERATURE

WIND SPEED

DIRECTION

SAFETY: H2S/MEDIC/DE

2

VISIBILITY

CEILING

SEAS

CARGO: ZEEGDR/MS

0

DET-ON: HRS

0

Personnel Accidents:

Yes

None Reported

OST-SUP: HRS

0

Description of
Accident:

ELECTRIC LOG: SCHLIMBERGER

2

MUD LOG: SPERRY

0

MUD ENG: M

2

MWD SERVICE: SPERRY

0

WELLHEAD: DRILQUIP

0

COMMUNICATION: N.S. TELECOM

0

OTHER: divers/radio/etc

8

VISITORS:

0

Well Site Safety:

Date Last Kick Drill: 11/4-93

Date Last BOP Test: 10/31-93

Other Drills-Describe:

TIME	HRS	OPERATIONS FROM 0600 TO 0600	TOTAL PERSONNEL
1830-1900	1/2	M/U Haliburton 13 3/4" E2SV	82
1900-2100	2	RIH w/ E2SV on DP	
2100-2130	1/2	Set E2SV @ 3760', pressured up annulus to 500 psi.	
2130-2200	1	RIH Dowell, pressure tested lines to 1500 psi. Pumped 20 Bbls of SW, formation broke down with 1472 psi @ 2 1/2 BPM. Bullheaded away 47 Bbls of 10.8 ppg, Class "G" w/ oil gal/sk into formation, unstung, dumped 10 bbls of cement remaining in drillpipe on top of E2SV, CIP @ 10.15 hrs, pulled 5 stands	
2230-2300	1/2	Reversed out two DP volumes	
2300-0130	2 1/2	POOH, L/D 5" DP	
0130-0300	1 1/2	RIH SW5, trouble getting generator started, RIH w/ 2' tubing punch w/ 2 spt, perforated from 470'-472'. POOH, shut blind runs and tested 13 3/4" X 20" annulus to 500 psi for 15 minutes while R/D SW5	
0300-0400	1	M/U 13 3/4" E2SV, RIH & set 450'	
0400-0500	1	RIH Dowell, pumped 50 Bbls SW followed by 15.7 ppm Arlic sat w/ 3% D13 followed by 4 Bbls SW displacement, POOH	
TOTAL HOURS:			

On Site Engineer:

Signed: J.B. Campbell / S. Shultz DATE: 11-5-93

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NOV 09 1993

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:		MINERALS MANAGEMENT SERVICE					
		ANCHORAGE, ALASKA					
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary		
Pot Water:		462	1264	Bbl		Rotary	Motor
Drill Water:			3522	Bbl	Well Daily		
Fuel:		6554	166431	Gal	Well Cumulative		
Barite:			0	Sr	BHA		
Cement: G/AS		0/1243	3197/1853	Sr	PERSONNEL ONBOARD		
Supply Vessel Information:					ARCO: 3		
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER: 0	
IKALUK	3969		1849	310138	18	CONTRACTOR: CANMAR 51	
MISCAROO	4972		8454	293759	18	CATERER: STANTON 10	
KALVIK			1189	360965	16	CEMENTER: DOWELL 2	
SUPPLIER	4123		1585	76346	13	WEATHER: HORIZON 2	
WEATHER DATA: @ 05.00					SAFETY: H2S/MEDIC 2		
TEMPERATURE 24°F WIND SPEED 23 knots DIRECTION 120°					CASING: GBR/HDS 0		
VISIBILITY 4 miles CFWING 700' SEAS 1'					COILING: INTEQ/CORELAB 0		
Personnel Accidents: Yes None Reported ✓					DST. HRS 0		
Description of Accident:		ELECTRICLOG. SCHLUMBERGER 2					
		MUDLOG: SPERRY 0					
		MUDENGR. MI 2					
		MWD SERVICE: SPERRY 0					
		WELLHEAD: DRILQUIP 0					
Well Site Safety:					COMMUNICATION: N. S. TELECOM 0		
Date Last Kick Drill:					OTHER Divers/Audio/MMS 8		
Date Last BOP Test:					VISITORS: 0		
Other Drills-Describe:					TOTAL PERSONNEL 82		
TIME	HRS	OPERATIONS FROM 0600 TO 0600					
0500-0600	1	P/W wash tool, RIH washed wellhead area / BOP thoroughly L/D remaining 5" DP except for two stands					
		Notes:					
		1. Randy Howell w/ MMS witnessed E&S set & cement plugs #2, #3, #4 & #5					
		2. Barge released from rig @ 16:30 hrs, escorted to Prudhoe by supplier II, arrived @ West Dock @ 02:00 hrs ETA at supplier II back to rig @ 09:00 hrs					
		3. Recovered anchor systems #2, #3, #4 & #11 (All piggy back systems)					
		4. All Barite has been transferred off of Ikaluk.					
		Kulluk Alert Status (Hours)					
		Green	Blue	Yellow	Red	Black	
		Environ.	24				ICE COVERAGE: 9/10 th Total
		Well	24				2/10 th gray-white
		Vessel	24				7/10 th new ice
TOTAL HOURS:							
On Site Engineer: <i>Randy Howell</i>		Signed: <i>T.B. Campbell / S. Shulte</i>				DATE: 11/9/93	

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Daily Drilling Report - New Ventures

GENERAL INVESTIGATIVE SERVICE
U.S. DEPARTMENT OF JUSTICE

CONFIDENTIAL

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA
Description:

Rig Supply Data:

Pot Water:

Drill Water:

Fuel:

Barite:

Cement: G/A/S

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Rotary

Motor

Well Daily

Well Cumulative

BHA

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO

VESSEL	BARITE (BX)	CEMENT (BX)	FUEL USED	FUEL LEFT	MOB
KALUK	2205		1,321	310,402	18
MISCARCO	4972		5,019	302,213	18
KALVIK		0	5,023	382,153	18
SUPPLIER	4129		1,051	77,402	13

PARTNER

CONTRACTOR: CANMAR

CATERER: STANTON

CEMENTER: DOWELL/HOWCO

WEATHER: HORIZON

WEATHER DATA: @ 05:00

TEMPERATURE

23°

WIND SPEED 25 KNOTS

DIRECTION

100°

VISIBILITY

5 NM

CEILING

700' OVERCAST

SEAS

2.5'

CHILL FACTOR -16°

Personnel Accidents:

Yes

None Reported

X

SAFETY: H2S/MEDIC/ACS

CASINO: GBR/HDS

CONING: INTECO/CORELAB

DST: HRS

Description of
Accident:

ELECTRIC LOG: SCHLUMBERGER

MUD LOG: SPERRY

MUD ENGR: MI

MWD SERVICE: SPERRY

WELLHEAD: DRILQUIP

COMMUNICATION: N. S. TELECOM

OTHER: Divers/Radio/MMS

VISITORS:

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

Date Last Kick Drill: 11/1/93

Date Last BOP Test: 10/31/93

Other Drills-Describe FIRE DRILL 10/31/93.

TIME

HRS

OPERATIONS FROM 0600 TO 0600

TOTAL PERSONNEL:

94

NOTES:

1) CONTINUED LOADING CROWLEY BARGE. ALL ACS EQUIPMENT ABOARD FROM SUPPLIER II. ALL COMMUNICATIONS EQUIPMENT ABOARD EXCEPT SHELTER ON HELIDECK WITH RIG BASED DRT. ALL DRTs REMOVED FROM BOATS.

SWELL DEVELOPED AT RIG DUE TO OPEN WATER. HAD TO MOVE KALUK AND BARGE FROM BOW TO STARBOARD.

2) TRANSFERRED A TOTAL OF 80,308 GALLONS OF FUEL FROM KULLUK TO KALUK. BEGAN TRANSFERRING BARITE AFTER MISCARCO CAST OFF TO RELIEVE SUPPLIER II IN THE BOUY PATTERN.

3) KALVIK ALONGSIDE TO MOVE ANCHORS TO CLEAR DECK FOR TOW.

4) CANMAR ANCHOR WIRE INSPECTOR DID NOT ARRIVE. NOW DUE UP ON TUESDAY CHARTER. CANMAR STILL PLANS TO INSPECT AS MANY ANCHORS AS POSSIBLE AT THIS LOCATION. REMAINDER WILL BE INSPECTED AT OFFLOAD ANCHORAGE OUTSIDE MCKINLEY BAY.

5) PLAN TO PULL ALL PIGGY BACKED ANCHORS TODAY AND DISTRIBUTE ANCHORS TO BOATS

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

0

04

ICE COVERAGE PRESENTLY 2/10TH'S TOTAL.

24

CHANGING WINDS HAVE MOVED ICE AWAY

TOTAL HOURS: 24.0

24

ICE PRESENTLY IN STRIPS & PATCHES

On Site Engineer: T. E. MAUNDER

Signed: B. CAMPBELL/S. SHULTZ

DATE: 11/8/93

CONFIDENTIAL

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ARCO Alaska, Inc.

Daily Drilling Report New Ventures

Well Name: AX 9295		Depth: 9314' (TD)		Prog: 0'	Spud Date: 10/13/93 9:00 AM		Days Actual: 152 32.00		Days Planned: 29		Date: 11/7/93		
Contractor/Rig No.: OANMA/KULLUK		Last Casing: 13-3/8" @ 3623'		Next Casing: NA		Shoe Test EMW: 15.3 PPO		Formation: NA					
Operation at 0900: RU SCHLUMBERGER FOR RFT						1993 Proj. Cost \$ 4,444,200		Daily Cost, (\$): \$ 29,000		Accum. Cost, (\$): \$ 4,444,200			
BIT DATA			MUD DATA			MUD LOG DATA			DRILLING				
Bit #:	4	5	6RR	MW: 10.6	KWM: 17.7	Filler Cake: 1	KWM Cake:	Depth:	9314	Depth:	9314		
Size:	12-1/4"	12-1/4"	12-1/4"	VISC: 68	VISC:	%Solids: 12	%Solids:	MUD WL:	10.4	WI:	NA	Torque: NA	
Make:	HYCALOG	REED	STC	PV: 30	PV:	%Sand: 0.75	%Sand:	FL Temp:	NA	PU WL:	NA	Jar No.: 1771-0008	
Type:	DS40H	HP43A	FDTG	YP: 17	YP:	Ph: 8.7	Ph:	BGG:	NA	SO WL:	NA	Jar Hrs.: 230	
Cor #:	14012	P26920	NB3294	Gals: 4/12	Gals:	Pm: -	Pm:	CG:	NA	Pump Data		HYDRAULICS	
Depth Out:	9087	9314	9314	API FL: 3.4	API FL: 3.4	PI TH: 3.0	PI:	TG:	NA	LNR:	6.5	6.5	Bit AP: NA
Feet:	1174	247	WPER	HTHPWL: 7.6		ME: 3.0	ME:	Max Gas:	NA	GFM:	NA	NA	HHP: NA
Hours:	19	12.0	TRIP	MBT: 4.6		Chlor.: 17500	Chlor.:	De Exp:	NA	PSI:	NA	NA	HHP/sq in: NA
WCS:	5-20	35-40	NA	CUM CST: 344000	DAILY: 344000	CW: 0/88	O/W:	Gn Den:	N/A	CPC:	50	50	COD: NA
RPM:	140	120	NA	Kick Tol: 1.51		Total GPM: NA		Est PP:	9.4	SPP:	575	580	An Vel DP/DC: NA/NA
Jobs:	5X14	3X16	3X13	Survey No.	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Deg/deg	ELEVATIONS
	0.751	1X12	1X12		9190	2.54	220						WTR DEPTH 87'
Grade:	100%	-1.01"	3.21		9278	2.81	227	9274	179	5174	W43	0.03	RKB-MSL 65'
													RKB-ML 152'
#5	1.1 NO. A.F.I. NA TD												RKB-WH 183.5'
6RR	3.3 A.W.T. F.I. NO. 1 CGS												CH Depth 40.5'
													RKB-BGH 192.5'
TIME		HRS		OPERATIONS FROM 0600 TO 0600									
6:00 7:00		1.0		FINISH RUNNING LOG RUN #3-VSP. LD TOOL STRING									
7:00 15:30		8.5		RUN LOGS #4 AND #5-CGT. TOTAL CORCS ATTEMPTED 90. RECOVERED 85. LOST 2.3 EMPTY. BOTTOM SHOT 0000'. TOP SHOT 3900'. RU SCHLUMBERGER.									
15:30 20:30		5.0		PU 12-1/4" BIT. MU BHA RH TO 9314'. NO FILL									
20:30 22:00		1.5		CBU									
22:00 1:00		2.0		POH TO 13-3/8" SHOE									
1:00 1:30		0.5		CBU AT SHOE									
1:30 4:00		2.5		FINISH TOH.									
4:00 6:00		2.0		BROKE OUT SUR FROM TAM PACKED IN RAMP. BROKE AND LID & COLLARS LANDING STRONG. RIGGING UP SCHLUMBERGER AT REPORT TIME									
SUBTOTAL HOURS: 24.0		Opr Time 6.5		Env Alert Status: BLUE		Kick Tolerance: 1.51							
On Site Engineer: T. E. MAUNDER				Signed: R CAMPBELL/S. SHULTZ									

NO. 510

SECURE-FX TRANSMISSION 11/08/93 06:46 ARCO KULLUK II + 927 2651333

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

**Summarized BHA
Description:**BIT/F.S./PONY D.C. 12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-O/24X5" HWDP
= 1204.38'**Rig Supply Data:**

Pot Water:

Used last 24 hours	Remaining Stock	Unit	Hours Summary			
222	1,304	Bbl		Rotary	Motor	
0	3,522	Bbl	Well Daily	0.0	0.0	0.0
4,457	258,585	Gal	Well Cumulative	124.5	24.1	148.6
0	3,241	Sx	BHA	125.4	24.1	149.5
Cement: G/AS	0/0	9085/3197	Sx	PERSONNEL ONBOARD		

Drill Water:

Fuel:

Barite:

Cement: G/AS

Supply Vessel Information:

VESSEL	BARITE (BX)	CEMENT (BX)	FUEL USED	FUEL LEFT	POB	ANALYST	
KALUK	1864		1,848	235,000	18	PARTNER	0
MISCAROO	4488		2,113	307,232	18	CONTRACTOR: CANMAR	51
KALVIK		0	8,684	388,177	16	CATERER: STANTON	10
SUPPLIER	4123		1,585	78,459	15	CEMENTER: DOWELL/HOWCO	1
						WEATHER: HORIZON	2

WEATHER DATA: @ 05:00TEMPERATURE: 20° WIND SPEED: 10 KNOTS DIRECTION: 150°
VISIBILITY: 8 NM CLOUD: 100% OVERCAST SEAS: 0' CHILL FACTOR: 1°**Personnel Accidents:**

VAA: _____ Name Reported: _____ X

**Description of
Accident:**

ELECTRIC LOG: SCHLUMBERGER	5
MUD LOG: SPERRY	3
MUD ENG: MI	2
MUD SERVICE: SPERRY	0
WELLHEAD: DRILQUIP	0
COMMUNICATION: N. B. TELECOM	4
OTHER: Divers/Radio/MMS	8
VISITORS	0

Well Site Safety: HELD DRILL ON RIG ON 10/12/93

Date Last Kick Drill: 11/4/93

Date Last BOP Test: 10/31/93

Other Drills-Describe FIRE DRILL 10/31/93.

TIME	HRS	OPERATIONS FROM 0000 TO 0600	TOTAL PERSONNEL
		NOTES:	
		1) CONTINUED LOADING CROWLEY BARGE. ALL MUD PRODUCTS ABOARD. TRANSFERRING EQUIPMENT FROM SUP II.	
		2) BEGAN TRANSFERRING PIPE FROM KULLUK TO IKALUK. TRANSFER RATE ABOUT 22 CUBES/HR.	
		3) CONTINUED TRANSFERRING BARITE FROM KULLUK TO MISCAROO.	
		4) FAIRWEATHER SAFETY TECH FINISHED DISMANTLING CASCADE SYSTEM ON SUPPLIER II.	
		5) TELECOM PEOPLE BEGAN DEMOBING ARCO COMMUNICATIONS EQUIPMENT.	
		AS OF THIS DATE SATELITE PHONE SYSTEM NOT OPERATIONAL. RADIO ROOM PHONE # 659-8355.	
		AS OF THIS DATE MICROSOFT MAIL NOT OPERATIONAL.	
		6) DIVERS INSPECTED GLORY HOLE. FILL LEVEL CONSIDERABLY HIGHER THAN BEFORE. CANMAR SUBSEA PEOPLE	
		STILL DO NOT FEEL THERE WILL BE ANY PROBLEM PULLING THE STACK. SEE DIVER'S REPORT.	
		7) MAXIS UNIT AND SATELITE DISM LOADED ON BARGE.	
		Kulluk Alert Status (Hours)	
		Green Blue Yellow Red Black	
		0 24	ICE COVERAGE PRESENTLY 8/10THS TOTAL.
		24	3/10 GREY, 4/10 NILAS, 2/10 NEW ICE
		24	TRACES OF MULTYEAR AND GREY-WHITE
TOTAL HOURS: 24.0			

On Site Engineer: T. E. MAUNDER

Signed: S. CAMPBELL/SHULTZ

DATE: 11/7/93

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

[illegible]

Nov. 6. 1993 SE 10:20 AM T CO ALASKA INC
11-01-93 00:29 ARCU KUULUM II - 907 2651393

CO ALASKA INC

ARLU KUVLUH II - 907 2651393

No. 4543

P. 3/7

NO. 504

001

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description: BIT/JUNK BSKT/MWD-LWD/F.9/PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DO/8" JARS/1X8" DC/X-O/24X6" HWDP = 1204.38'																																																																					
Rig Supply Data:																																																																					
Pot Water: 203 Drill Water: 0 Fuel: 4,533 Barite: 0 Cement: G/AS 0/0	<table border="1"> <thead> <tr> <th>Used last 24 hours</th> <th>Remaining Stock</th> <th>Units</th> <th colspan="4">Hours Summary</th> </tr> </thead> <tbody> <tr> <td>203</td> <td>1,138</td> <td>Bbl</td> <td></td> <td>Rotary</td> <td>Motor</td> <td></td> </tr> <tr> <td>0</td> <td>6,622</td> <td>Bbl</td> <td>Well Daily</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> </tr> <tr> <td>4,533</td> <td>268,082</td> <td>Gal</td> <td>Well Cumulative</td> <td>124.6</td> <td>24.1</td> <td>148.6</td> </tr> <tr> <td>0</td> <td>8,898</td> <td>Sx</td> <td>BHA</td> <td>125.4</td> <td>24.1</td> <td>149.5</td> </tr> <tr> <td>0/0</td> <td>3085/3187</td> <td>Sx</td> <td colspan="4">PERSONNEL ONBOARD</td> </tr> </tbody> </table>	Used last 24 hours	Remaining Stock	Units	Hours Summary				203	1,138	Bbl		Rotary	Motor		0	6,622	Bbl	Well Daily	0.0	0.0	0.0	4,533	268,082	Gal	Well Cumulative	124.6	24.1	148.6	0	8,898	Sx	BHA	125.4	24.1	149.5	0/0	3085/3187	Sx	PERSONNEL ONBOARD																													
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Weather Data: @ 05:00 TEMPERATURE 25' WIND SPEED CALM DIRECTION NA VISIBILITY 7 NM CLOUDING 800' OVERCAST SEAS 0'																																																																					
Personnel Accidents: Yes _____ None Reported <u>X</u>																																																																					
Description of Accident: NOTE: ON 11/3 REPORT BARRY BLOOM WAS REPORTED TO HAVE A HERNIA AND WOULD NOT BE RETURNING TO WORK. MEDICAL RELEASE HAS BEEN OBTAINED FROM HIS DOCTOR. NOT A LTA.																																																																					
Well Site Safety: HELD DRILL ON RIG ON 10/31/93 Date Last Kick Drill: 11/4/93 Date Last BOP Test: 10/31/93 Other Drills-Describe FIRE DRILL 10/31/93.																																																																					
TIME	HRS																																																																				
OPERATIONS FROM 0600 TO 0600																																																																					
NOTE: 1) CONTINUED LOADING CROWLEY BARGE. BACK LOAD ABOUT 75% COMPLETE AT THIS TIME 2) BUILT AN ADDITIONAL 200+ BBLs 18.0 PPG KILL MUD. 3) TRANSFERRING BARITE FROM KULLUK TO MISCAROO. 4) DISMANTLED CASCADE SYSTEM ON SUPPLIER II. 5) TELECOM PEOPLE DUE ON BOARD TODAY. WILL BEGIN DEMOBING ARCO COMMUNICATIONS EQUIPMENT FROM BOATS FOLLOWED BY DEMOBING SATELITE SYSTEM ON RIG.																																																																					
Kulluk Alert Status (Hours) <table border="1"> <thead> <tr> <th>Green</th> <th>Blue</th> <th>Yellow</th> <th>Red</th> <th>Black</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>24</td> <td></td> <td></td> <td></td> </tr> <tr> <td>24</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>24</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Green	Blue	Yellow	Red	Black	0	24				24					24																																																				
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DATE: 11/8/93																																																																					

PAGE 1 OF 2

Daily Drilling Report - New Ventures

~~62. Mawnday~~

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

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CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:

BIT/JUNK BSKT/MWD-LWD/F.S/PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-O/24X5" HWDP
= 1204.38'

Rig Supply Data:

Pol Water:

Drill Water:

Fuel:

Barite:

Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hourly Summary

Rotary

Motor

Well Daily

Well Cumulative

BHA

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO:

4

VESSEL

BARITE (BX)

CEMENT (BX)

FUEL USED

FUEL LEFT

POB

PARTNER

1

IKALUK

1854

2,113

238.547

10

CONTRACTOR: CANMAR

50

MISCAROO

1544

3,883

321.761

17

CATERER: STANTON

10

KALVIK

0

1,215

377.845

17

CEMENTER: DOWELL/HOWCO

1

SUPPLIER

4123

793

85,502

16

WEATHER: HORIZON

2

WEATHER DATA: @ 06:00

TEMPERATURE

34"

WIND SPEED 12 KNT

DIRECTION

170"

VISIBILITY

10 NM

CEILING 6000' OVERCAST

SEA 0'

SAFETY: M25/MEDIC

2

CASING: GBR/HDS

1

CONING: INTEQ/CORELAB

Personnel Accidents:

Yes

X

None Reported

DST: HRS

0

Description of Accident:

1) SEAMAN II - IKALUK (RPRD 10/25). BRUISED LEFT KNEE CLEANSING CMT TANKS.
KNEE SWELLING P/A CHECKED 11/2 - DRAINED FLUID/RETURNED TO BOAT. NOT LTA
2) CHIEF MATE - SUPPLIER II (RPRD 10/30). REMOVING ICE FROM DECK WHEN
ROGUE WAVE SWEEP OVER STEPN CARRYING HIM AGAINST TOWGATE AND BRUISING
LEFT SIDE (LAY PECTORAL & THIGH). P/A CHKD 11/2/RETURNED TO BOAT - NOT LTA.

ELECTRIC LOG: SCHLUMBERGER

5

MUD LOG: SPERRY

7

MUD ENGR: MI

2

MWD SERVICE: SPERRY

2

WELL HEAD: DRILQUIP

1

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

COMMUNICATION: N. S. TELECOM

1

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 10/31/93

OTHER: Divers/Radio/MMS

8

Other Drills-Describe FIRE DRILL 10/31/93

VISITORS:

0

TIME

HRS

OPERATIONS FROM 0600 TO 0600

TOTAL PERSONNEL:

97

NOTE:

1) CROWLEY BARGE (ARCTIC ENDEAVOR) ARRIVED @ LOCATION 1230 HRS. MOORED UP @ 0205 HRS. 11/4/93
2) DIVERS JUMPED 2 TIMES - FOUND 4TH AND LAST EXHAUST/VENT PIPE. UNABLE TO RECOVER YET DUE TO ICE
INTERFERENCE WITH TAG LINE. PLAN TO HAVE BOAT WORK ICE THIS A.M. AND FINISH RECOVERING EXHAUST PIPE.
3) INSPECTED GLORY HOLE - FOUND FILL UP TOP PIPE RAM ON SIDE ADJACENT POSTS 2 AND 3.
4) ORIGINAL VARCO TOPDRIVE (KULLUK'S IS SERIAL # 003) SWIVEL LINKS MEANT TO ONLY SUPPORT CARRIAGE WEIGHT
(40 KLBS) - NEWER MODELS DESIGNED TO HAVE SWIVEL LINKS CAPABLE OF SUPPORTING FULL RATING OF HOISTING
CAPACITY (500 KLBS). SEE ATTACHED DIAGRAM.

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

0

24

ICE COVERAGE PRESENTLY 8/10TH'S (NILAS).

24

ICE THICKNESS VARIES FROM 2" TO 4".

TOTAL HOURS: 24.0

24

On Site Engineer: G.LALVORD

Signed: T.CAMPBELL/S.MULTZ

DATE: 11/4/93

NOV. 4. 1993
11/05/93 8:59AM
06:58
NCO ALASKA INC
HRCO KULUM II - 907 2651393

N. 4487 P. 4/12
NO. 488
D02

Y-1597 #1						
KICK TOLERANCE WORKSHEET				GLA 11/4/93		
				CASE 1		
GIVEN INFORMATION & ASSUMPTIONS:				TBD = To be determined		
Variable	Symbol	Value	Units			
Safety Factor	SF	TBD	ppg			
Kick Tolerance	KT	TBD	ppg			
Leakoff Test Depth	DPIT	3870	feet			
Influx Volume	Vi	25	bbls			
Length of Influx	Li	TBD	feet			
Hole diameter	DH	12.25	inches			
Drill collar diameter	DC	8.0	inches			
Actual mud weight in use	AMW	10.4	ppg			
Total depth of well	TD	9314	feet			
Reduction in hydrostatic	RH	TBD	ppg			
Yield point of mud	YP	36	lbs/100 sq ft			
Drill pipe diameter	DP	5.0	inches			
Surge Gradient	SG	TBD	ppg			
Water depth at site	DW	87	feet			
Air gap from MSL to RTE	DA	65	feet			
Riser Margin	RM	TBD	ppg			
Allowance Factor	A	TBD	ppg			
Equivalent MW at leakoff	EMW	15.5	ppg			

MINERAL
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CALCULATIONS:		CASE 1		
1) Safety Factor:				
Below 20" Conductor	33	psi		
Below 13-3/8" Surface	50	psi		
Below 9-5/8" Intermediate	100	psi		
SF, selected from above 3 choices:	50	psi		
SF =	0.248	ppg	(is LESS than 0.334 ppg, thus use 0.248)	
	0.248	ppg		
2) Reduction in Hydrostatic:				
LI =	299	feet		
RH =	0.334	ppg		
3) Surge Gradient:				
SG =	0.177	ppg		
4) Riser Margin:				
RM =	0.087	ppg		
5) Allowance Factor:				
A =	0.510	ppg	(note: RH + SG is greater than RM)	
6) Kick Tolerance:				
KT =	151	ppg		
Max Allowable Csg Pressure	1026.4	psi		
Assuming VI =	25	bbls		

4552.06	0.58	198.58	4551.62	-43.20	10.93	39.34	0.07
4646.62	0.62	193.45	4646.17	-44.15	10.65	40.33	0.06
4739.50	0.67	196.08	4739.05	-45.16	10.39	41.37	0.06
4833.03	0.68	200.58	4832.57	-46.20	10.04	42.46	0.05
4927.05	0.71	198.46	4926.58	-47.27	9.66	43.60	0.04
5020.84	0.85	191.93	5020.36	-48.50	9.33	44.87	0.17
5114.74	0.86	193.50	5114.25	-49.87	9.03	46.27	0.00
5149.29	0.87	193.09	5148.80	-50.37	8.91	46.79	0.00
5301.83	1.03	195.26	5301.32	-52.82	8.28	49.32	0.10
5421.93	0.95	191.30	5421.40	-54.84	7.81	51.39	0.08
5518.05	0.85	188.41	5517.51	-56.32	7.55	52.89	0.11
5610.78	0.88	188.68	5610.23	-57.71	7.34	54.29	0.00
5700.68	1.05	194.07	5700.12	-59.19	7.03	55.80	0.21
5800.55	1.05	189.83	5799.97	-60.98	6.66	57.62	0.07
5891.49	1.29	192.56	5890.89	-62.80	6.29	59.48	0.27
5984.81	1.25	194.37	5984.19	-64.81	5.81	61.55	0.05
6077.67	1.34	194.48	6077.02	-66.83	5.28	63.65	0.09
6174.63	1.33	188.91	6173.96	-69.06	4.83	65.91	0.13
6266.76	1.36	187.76	6266.06	-71.20	4.51	68.06	0.04
6362.66	1.49	197.14	6361.93	-73.51	3.99	70.43	0.28
6456.44	1.53	197.30	6455.68	-75.87	3.26	72.90	0.04
6548.68	1.64	200.53	6547.89	-78.29	2.43	75.44	0.15
6643.11	1.68	197.47	6642.27	-80.87	1.54	78.16	0.10
6736.90	1.92	197.58	6736.02	-83.68	0.66	81.10	0.26
6831.25	1.96	193.40	6830.31	-86.76	-0.20	84.30	0.15
6924.93	2.20	194.48	6923.93	-90.06	-1.02	87.70	0.26
7016.53	2.06	198.13	7015.47	-93.33	-1.97	91.10	0.21
7111.70	2.25	196.25	7110.57	-96.75	-3.03	94.67	0.21
7206.15	2.70	189.21	7204.93	-100.72	-3.90	98.74	0.57
7300.48	2.65	189.63	7299.16	-105.06	-4.62	103.13	0.05
7392.81	2.92	187.91	7391.38	-109.50	-5.30	107.60	0.31
7487.69	2.82	185.79	7486.14	-114.22	-5.87	112.32	0.16
7582.62	2.90	186.95	7580.95	-118.92	-6.40	117.01	0.10
7677.41	2.85	188.57	7675.63	-123.63	-7.04	121.73	0.11
7774.22	2.82	193.42	7772.32	-128.30	-8.03	126.51	0.35
7867.80	2.56	192.17	7865.79	-132.56	-9.08	130.89	0.32
7961.38	2.35	203.91	7959.29	-136.35	-10.30	134.87	0.58
8055.87	2.16	203.06	8053.71	-139.76	-11.78	138.53	0.21
8238.55	2.02	209.35	8236.26	-145.72	-14.70	145.02	0.15
8337.97	1.63	217.03	8335.63	-148.37	-16.41	148.00	0.46
8433.69	1.67	221.86	8431.32	-150.49	-18.15	150.48	0.15
8528.43	1.82	224.92	8526.01	-152.59	-20.14	152.98	0.18
8718.17	2.14	222.26	8715.64	-157.34	-24.64	158.67	0.18
8811.86	2.30	222.24	8809.26	-160.02	-27.08	161.86	0.17
8907.34	2.45	229.50	8904.66	-162.77	-29.92	165.20	0.35
9001.81	2.82	229.50	8999.03	-165.58	-33.22	168.73	0.39
9099.68	2.80	228.69	9096.78	-168.72	-36.84	172.64	0.04
9195.54	2.54	227.58	9192.54	-171.70	-40.17	176.32	0.27
9277.56	2.51	227.20	9274.47	-174.14	-42.83	179.33	0.03

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD

HORIZONTAL DISPLACEMENT AT A DEPTH OF 9277.6 FEET
IS 179.3 FEET ALONG S 13 DEG 49 MIN W
RELATIVE TO WELL HEAD

SECURE-FX TRANSMISSION

11/04/93

07:01

ARCO KULLUM II - 907 2651393

OCS DISTRICT OFFICE

NO. 483

D03

CONFIDENTIAL

NOV 03 1993

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Alaska, Inc.

Daily Drilling Report - New Ventures

MINERALS MARKING AND SERVICE

Well Name:	AX 0205	Depth:	8198	Prog:	131	Spud Date:	10/13/93 9:00 AM	Days Actual:	148	Days Planned:	26	Date:	11/3/93
OCS-Y-1597 #1													
Contractor/Rig No.:	CANMAR/KULLUK	Last Casing:	13-3/8" @ 3829'	Next Casing:	9-5/8" @ 10,000'	Shoe Test EMW:	15.5 PPG	Formation:	60%SLT/30%CLY/10%SS				

Operation at 0600:	1993 Proj. Cost	Daily Cost, (\$):	Amount. Cost, (\$)
DRILLING 12-1/4" HOLE @ 9198'	\$ 82,252,106	\$ 480,374	\$14,951,968

BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:	4	5		MW: 10.4	KWM: 17.7	Filer Cake: 1	KWM Cake:	Depth:	8146	Depth:	9198				
Size:	12-1/4"	12-1/4"		Visc: 72	Visc:	%Solids: 10.5	%Solids:	Mud Wt:	10.3	ROT	WT:	290	Torque: 250 A		
Make:	HYCALOG	FEED		PV: 34	PV:	%Sand: 0.75	%Sand:	FL Temp:	104	PU Wt:	290	Jer No.: 1771-0006			
Type:	DS40H	HP43A		YP: 35	YP:	Ph: 9.0	Ph:	BGG:	20	SO Wt:	290	Jer Hrs.: 225			
Ser #:	14012	P26820		Gels: 4/13	Gels:	Pm: -	Pm:	CG:	0	Pump Data					
Depth				API FL: 2.8	API FL:	PI: 15	PI:	TG:	63	UNR:	6.5	8.5	Bit AP: 651		
Out:	9067	9198		HYHPWL: 7.2		MI: 2.1	MI:	Max Gas:	31	SPM	74	74	HMP: 329		
Feet:	1174	131		MBT: 5.0		Chlor.: 19000	Chlor.:	De Exp:	1.41	PSI:	3100	3100	HHPsq in: 2.8		
Hours:	19	7.0		CUM CRY \$391775	DAILY \$9164	OW: 0/89	OW:	Sh Den:	N/A	SPS:	50	50	ECD: 10.5		
W:	5-20	35-40				Total GPM: 719		Est PP:	9.2	SPP:	575	580	An Vel DP/DC: 130/189		
RFM	140	120		Kick Tol: 1.57											
Jets:	5X14	3 X 16		Survey No.	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Deg/deg	ELEVATIONS		
	0.751	1 X 12											WTR DEPTH	87'	
Grade:	100%	SH											RKB-MSL	85'	
													RKB-ML	182'	
													RKB-WH	183.5'	
													GH Depth	40.5'	
													RKB-BGH	192.5'	

TIME		HRS	OPERATIONS FROM 0600 TO 0800					
6:00	7:30	1.5	CIRC BOTTOMS UP PRIOR TO POH FOR BIT CHANGE.					
7:30	11:30	4.0	COULD NOT BREAK OUT DP FROM TOP DRIVE. REPAIRED TORQUE WRENCH AIR CYLINDER ON FLOW REVERSE VALVE.					
			BROKE OUT STRING FROM TOP DRIVE					
11:30	17:00	5.5	POH FOR BIT CHANGE. HOLE IN GOOD SHAPE. BIT INSPECTION REVEALED 4 MISSING UPPER BLADE INSERTS ON					
			HYCLOG PDC (DS40) BIT. EACH BLADE INSERT IS APPROX 3-1/2" HIGH x 3" WIDE x 1" THICK AND HAS					
			4 x 19mm CUTTERS AND 5 BACK-UP INSERTS PER BLADE.					
17:00	18:00	1.0	DOWNLOAD AND REPROGRAMMED MWD/LWD. PU NEW 12-14" HP43A (INSERT) BIT AND MAU BOOT BASKET.					
18:00	18:30	1.5	RIH TO 3600'. FILLED DRILL PIPE.					
19:30	20:00	0.5	SERVICED TOP DRIVE.					
20:00	22:30	2.5	RIH TO 9067'. NO FILL.					
22:30	23:30	1.0	WORKED JUNK SUB (RECIPROCATED WHILE CYCLING PUMPS) ON BOTTOM.					
23:30	6:00	6.5	DRILLED 12-1/4" HOLE FROM 9067 TO 9198'.					
SUBTOTAL HOURS:		24.0	Opr Time	6.6	Env Alert Status	BLUE	Kick Tolerance:	1.57
On Site Engineer: G.LALVORD			Signed: T.CAMPBELL/SCHULTZ					

6/2/93 2 094450

ARCO ALASKA INC

NOV 3 1993 10:56AM

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Daily Drilling Report - New Ventures

NOV. 3. 1993 10:57AM

REC'D
OCS DISTRICT OFFICE
NOV 03 1993
MATERIALS MANAGEMENT SERVICE
INDEPENDENCE, ALASKA

Y-1597 #1							
				GLA 11/2/93			
KICK TOLERANCE WORKSHEET		CASE 1					
GIVEN INFORMATION & ASSUMPTIONS:				TBD = To be determined			
Variable	Symbol	Value	Units				
Safety Factor	SF	TBD	ppg				
Kick Tolerance	KT	TBD	ppg				
Leakoff Test Depth	DPIT	9870	feet				
Influx Volume	VI	25	bbls				
Length of Influx	LI	TBD	feet				
Hole diameter	DH	12.25	inches				
Drill collar diameter	DC	8.0	inches				
Actual mud weight in use	AMW	10.3	ppg				
Total depth of well	TD	9198	feet				
Reduction in hydrostatic	RH	TBD	ppg				
Yield point of mud	YP	36	lbs/100 sq ft				
Drill pipe diameter	DP	5.0	inches				
Surge Gradient	SG	TBD	ppg				
Water depth at site	DW	87	feet				
Air gap from MSL to RTE	DA	65	feet				
Riser Margin	RM	TBD	ppg				
Allowance Factor	A	TBD	ppg				
Equivalent MW at leakoff	EMW	15.5	ppg				

SECURE-FX TRANSMISSION
ARCO KUALUM II - 00T 2051303
07:04

NO. 403
REC'D
OCS DISTRICT OFFICE

NOV 03 1993

MINERALS MANAGEMENT SERVICE
ANALYSIS

CALCULATIONS:			CASE 1			
1) Safety Factor:						
Below 20" Conductor		33	psi			
Below 13-3/8" Surface		50	psi			
Below 9-5/8" Intermediate		100	psi			
SF, selected from above 3 choices:		50	psi			
SF =		0.248	ppg	(is LESS than 0.334 ppg, thus use 0.248)		
		0.248	ppg			
2) Reduction in Hydrostatic:						
LI =		299	feet			
RH =		0.335	ppg			
3) Surge Gradient:						
SG =		0.179	ppg			
4) Riser Margin:						
RM =		0.087	ppg			
5) Allowance Factor:						
A =		0.514	ppg	(note: RH + SG is greater than RM)		
6) Kick Tolerance:						
KT =		1.57	ppg			
Max Allowable Csg Pressure		1046.5	psi			
Assuming Vi =		25	bbls			

Nov. 3. 1993 10:58AM ARCO ALASKA INC

NO. 4450 F. 5.9

SECURE-FX TRANSMISSION

11/04/93

07:00

NRCC KUULUM II - 937 2651393

REC'D
COS DISTRICT

NO. 163

002

NOV 03 1993

3989.58	0.38	180.96	3989.16	-38.78	11.70	35.39	0.30
4083.35	0.38	183.04	4082.92	-39.40	11.68	36.00	0.00
4177.67	0.46	190.03	4177.24	-40.09	11.60	36.69	0.09
4270.62	0.46	182.33	4270.19	-40.82	11.52	37.43	0.06
4363.71	0.46	193.98	4363.28	-41.55	11.41	38.16	0.10
4552.06	0.58	198.58	4551.62	-43.20	10.93	39.87	0.07
4646.62	0.62	193.45	4646.17	-44.15	10.65	40.86	0.06
4739.50	0.67	196.08	4739.05	-45.16	10.39	41.90	0.06
4833.03	0.68	200.58	4832.57	-46.20	10.04	42.99	0.05
4927.05	0.71	198.46	4926.58	-47.27	9.66	44.12	0.04
5020.84	0.85	191.93	5020.36	-48.50	9.93	45.40	0.17
5114.74	0.86	193.50	5114.25	-49.87	9.03	46.79	0.00
5149.29	0.87	193.09	5148.80	-50.37	8.91	47.31	0.00
5301.83	1.03	195.26	5301.32	-52.82	8.28	49.84	0.10
5421.93	0.95	191.30	5421.40	-54.84	7.81	51.91	0.08
5518.05	0.85	188.41	5517.51	-56.32	7.55	53.42	0.11
5610.78	0.88	188.68	5610.23	-57.71	7.34	54.82	0.00
5700.68	1.05	194.07	5700.12	-59.19	7.02	56.33	0.21
5800.55	1.05	189.83	5799.97	-60.98	6.66	58.15	0.07
5891.49	1.29	192.56	5890.89	-62.80	6.29	60.01	0.27
5984.81	1.25	194.37	5984.19	-64.81	5.81	62.08	0.05
6077.67	1.34	194.48	6077.02	-66.85	5.28	64.18	0.09
6174.63	1.33	188.91	6173.96	-69.06	4.83	66.44	0.13
6265.76	1.36	187.76	6265.06	-71.20	4.51	68.59	0.04
6362.66	1.49	197.14	6361.93	-73.51	3.99	70.97	0.28
6456.44	1.53	197.30	6455.68	-75.87	3.26	73.43	0.04
6548.68	1.64	200.53	6547.88	-78.29	2.43	75.97	0.15
6642.11	1.68	197.47	6642.27	-80.87	1.54	78.68	0.10
6736.90	1.92	197.58	6736.02	-83.68	0.66	81.61	0.26
6831.25	1.96	193.40	6830.31	-86.76	-0.20	84.80	0.15
6924.93	2.20	194.48	6923.93	-90.06	-1.02	88.21	0.26
7016.53	2.06	198.13	7015.47	-93.33	-1.97	91.60	0.21
7111.70	2.25	196.25	7110.57	-96.75	-3.03	95.17	0.21
7206.15	2.70	189.21	7204.93	-100.72	-3.90	99.23	0.57
7300.48	2.65	189.63	7299.16	-105.06	-4.62	103.63	0.05
7392.81	2.92	187.91	7391.38	-109.50	-5.30	108.11	0.91
7487.69	2.82	185.79	7486.14	-114.22	-5.87	112.84	0.16
7582.62	2.90	186.95	7580.95	-118.92	-6.40	117.55	0.10
7677.41	2.85	188.57	7675.63	-123.63	-7.04	122.29	0.11
7774.22	2.82	195.42	7772.32	-128.30	-8.03	127.06	0.35
7867.80	2.56	192.17	7865.79	-132.56	-9.08	131.44	0.32
7961.38	2.35	203.91	7959.29	-136.35	-10.20	135.41	0.58
8055.87	2.16	203.06	8053.71	-139.76	-11.78	139.05	0.21
8238.55	2.02	209.35	8236.26	-145.72	-14.70	145.50	0.15
8337.97	1.63	217.03	8335.63	-148.37	-16.41	148.46	0.46
8433.69	1.67	221.86	8431.32	-150.49	-18.15	150.90	0.15
8528.43	1.82	224.92	8526.01	-152.59	-20.14	153.37	0.18
8718.17	2.14	222.26	8715.64	-157.34	-24.64	158.97	0.18
8811.86	2.30	222.24	8809.26	-160.02	-27.08	162.12	0.17
8907.34	2.45	229.50	8904.66	-162.77	-29.92	165.40	0.35
9001.81	2.82	229.50	8999.03	-165.58	-33.22	168.86	0.39
9099.68	2.80	228.69	9096.78	-168.72	-36.84	172.70	0.04

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD

NOV 3 1993 11:00AM ARCO ALASKA INC. NO. 4450 P. 8/9

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Daily Drilling Report - New Ventures

CONFIDENTIAL

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:		BIT/MWD-LWD/F.S/PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-O/24X5" HWDP = 1202.35'					
Rig Supply Data:		Used last 24 hours	Remaining Stock	unit	Hours Summary		
Pot Water:	205	1,082	Bbl		Rotary	Motor	
Drill Water:	0	3,522	Bbl	Well Daily	13.0	0.0	6.0
Fuel:	7,278	285,757	Gal	Well Cumulative	112.3	24.1	136.4
Barite:	0	7,850	Sx	BHA	112.3	24.1	136.4
Cement: G/AS	0/0	3095/3197	Sx	PERSONNEL ONBOARD			
Supply Vessel Information:				ARCO:		4	
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER:	1
KALUK	1654		1,586	241,189	19	CONTRACTOR: CANMAR	50
MISCAROO	1544		3,170	331,272	17	CATERER: STANTON	10
KALVIK		0	3,698	381,332	17	CEMENTER: DOWELL/HOWCO	1
SUPPLIER	4123		793	87,177	15	WEATHER: HORIZON	2
WEATHER DATA: @ 05:00				SAFETY: H2S/MEDIC		2	
TEMPERATURE	21°	WIND SPEED	17 KNT	DIRECTION	270°	CASING: GBR/HDS	2
VISIBILITY	10 NM	CEILING	8000' OVERCAST	SEAS	0'	CORING: INTEQ/CORELAB	
Personnel Accidents:				Yes <input checked="" type="checkbox"/> (2) None Reported		DST: HRS	
Description of Accident:		1) SEAMAN II ON KALVIK (RPTD 10/30) - SENT TO P/U SHAMPOO IN SHOWER. BOAT ROLLED IN HEAVY SEAS AND SEAMAN FELL OUT OF SHOWER BRUISING LEFT RIBS ON SINK/SINK LEGS. P/A CHECKED 11/1, LTA - SEAMAN TO PHYSICIAN.				ELECTRO LOG: SCHLUMBERGER	
		2) PMC ROUSTABOUT 11/1 - NOTICED PAIN IN GROIN AREA AFTER NORMAL SHIFT ENTAILING LIFTING. P/A CHECKED - SENT TO TOWN FOR EXAM (NOT LTA YET).				MUD LOG: SPERRY	
						MUDENGR: MI	
						MWD SERVICE: SPERRY	
						WELLHEAD: DRILQUIP	
Well Site Safety:				HELD DRILL ON RIG ON 10/13/93		COMMUNICATION: N. S. TELECOM	
Date Last Kick Drill: 10/3/93				Date Last BOP Test: 10/31/93		OTHER: Divers/Radio/MMS	
Other Drills-Describe FIRE DRILL 10/31/93.						VISITORS:	
TIME	HRS	OPERATIONS FROM 0600 TO 0800				TOTAL PERSONNEL: 96	
NOTE:							
1) MADE TOTAL OF 4 DIVES 11/1/93. 1ST TO INSPECT STACK DOWN TO CONNECTOR - OK. NEXT 3 DIVES TO LOCATE AND RECOVER 2 EXHAUST PIPES (HAD LOST 4 OF 6 TOTAL EXHAUST/VENT PIPES DURING STORM).							
2) RECOVERED P-2 LIFEBOAT FROM NORTH SIDE OF FLAXMAN ISLAND. USED ARTIC FOX TUG TO TOW LIFEBOAT THRU SHORE ICE TO OPEN WATER. KALVIK CARRIED LIFEBOAT BACK TO KULLUK (ON MAINDECK THAWING). KALVIK ON LOCATION. ARCTIC FOX RETURNED TO PRUHOE BAY.							
Kulluk Alert Status (Hours)							
		Green	Blue	Yellow	Red	Black	
		0	24				ICE COVERAGE PRESENTLY 7/9 10TH'S (NILAS).
		24					
TOTAL HOURS: 24.0		24					

On Site Engineer: G.LALVORD

Signed: DBUMGARNER/RL MORRISON

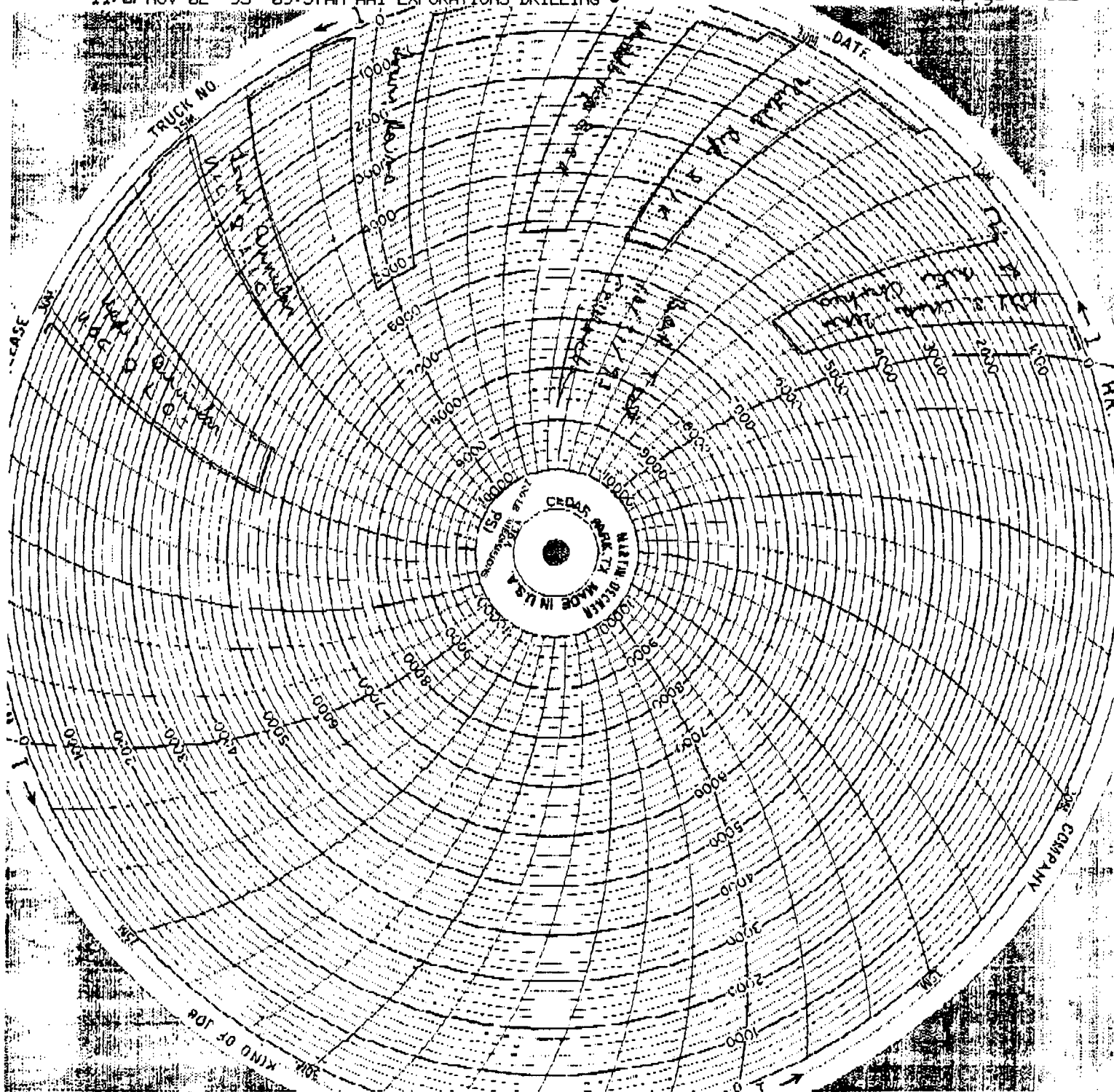
DATE: 11/2/93

3989.38	0.38	180.96	3989.16	-38.78	11.70	35.72	0.20
4083.38	0.38	183.04	4082.92	-39.40	11.68	36.38	0.00
4177.67	0.46	190.03	4177.24	-40.09	11.60	37.02	0.09
4270.62	0.46	182.33	4270.19	-40.82	11.52	37.75	0.06
4363.71	0.46	193.98	4363.28	-41.56	11.41	38.50	0.10
4553.06	0.58	198.58	4551.62	-43.20	10.93	40.20	0.07
4646.62	0.62	193.45	4646.17	-44.15	10.65	41.19	0.05
4739.50	0.67	186.08	4739.05	-45.16	10.39	42.25	0.06
4833.03	0.68	200.58	4832.57	-45.20	10.04	43.32	0.03
4927.05	0.71	198.46	4926.58	-47.27	9.66	44.45	0.04
5020.84	0.85	191.93	5020.36	-48.50	9.33	45.72	0.17
5114.74	0.86	183.50	5114.25	-49.67	9.03	47.12	0.00
5149.29	0.87	199.09	5148.90	-50.37	9.91	47.64	0.00
5301.82	1.03	195.26	5301.32	-52.82	8.28	50.15	0.10
5421.93	0.95	191.30	5421.40	-54.84	7.81	52.23	0.08
5518.05	0.85	188.41	5517.51	-56.32	7.55	53.74	0.11
5610.78	0.88	188.68	5610.23	-57.71	7.34	55.14	0.00
5700.68	1.05	194.07	5700.12	-59.19	7.03	56.65	0.21
5800.55	1.05	199.83	5799.97	-60.98	6.66	58.49	0.07
5891.49	1.28	192.56	5890.99	-62.80	6.29	60.33	0.27
5984.81	1.25	194.37	5984.19	-64.91	5.81	62.40	0.05
6077.67	1.34	194.48	6077.02	-66.85	5.28	64.10	0.09
6174.63	1.33	188.91	6173.96	-69.06	4.83	66.76	0.13
6266.76	1.36	187.76	6266.06	-71.20	4.51	68.92	0.04
6362.66	1.49	197.14	6361.92	-73.51	3.99	71.20	0.28
6456.44	1.53	197.30	6455.68	-75.87	3.26	73.75	0.04
6548.68	1.64	200.53	6547.88	-78.29	2.43	76.28	0.15
6643.11	1.68	197.47	6642.27	-80.87	1.54	78.98	0.10
6736.90	1.92	197.58	6736.02	-83.63	0.66	81.91	0.26
6831.25	1.96	193.40	6830.31	-86.76	-0.20	85.10	0.15
6924.93	2.20	194.48	6923.93	-90.06	-1.02	88.50	0.26
7016.53	2.06	198.13	7015.47	-93.33	-1.97	91.89	0.21
7111.70	2.25	196.25	7110.57	-96.75	-3.03	95.45	0.21
7206.15	2.70	189.21	7204.93	-100.72	-3.96	99.32	0.57
7300.48	2.65	189.63	7299.16	-103.06	-4.62	103.92	0.05
7392.81	2.92	187.91	7391.38	-109.50	-5.30	108.41	0.21
7487.69	2.82	185.79	7486.14	-114.22	-5.87	113.14	0.16
7582.62	2.90	186.95	7580.95	-118.92	-6.40	117.86	0.10
7677.41	2.85	188.57	7675.63	-123.63	-7.04	123.60	0.11
7774.22	2.82	195.42	7772.87	-128.30	-8.03	127.07	0.35
7867.80	2.56	192.17	7865.74	-132.86	-9.08	131.75	0.32
7961.38	2.85	203.91	7959.29	-136.95	-10.30	135.71	0.58
8055.87	2.16	203.06	8053.71	-139.76	-11.78	139.35	0.21
8238.55	2.02	209.35	8236.26	-145.72	-14.70	145.77	0.15
8337.97	1.63	217.03	8335.63	-148.37	-16.41	148.70	0.46
8433.69	1.67	221.86	8431.32	-150.49	-18.15	151.13	0.15
8528.43	1.82	224.82	8526.01	-152.59	-20.14	153.56	0.18
8718.17	2.14	222.26	8715.64	-157.34	-24.64	159.11	0.18
8811.86	2.30	222.24	8809.26	-160.02	-27.08	162.33	0.17
8907.34	2.45	229.50	8904.66	-162.77	-29.92	165.47	0.35
9001.81	2.82	229.50	8999.63	-165.58	-33.22	169.98	0.24

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD
HORIZONTAL DISPLACEMENT AT A DEPTH OF 9001.9 FEET

SECURE-FX TRANSMISSION
11/02 NOV 02 '93 09:57AM AAI EXPLORATIONS DRILLING 3

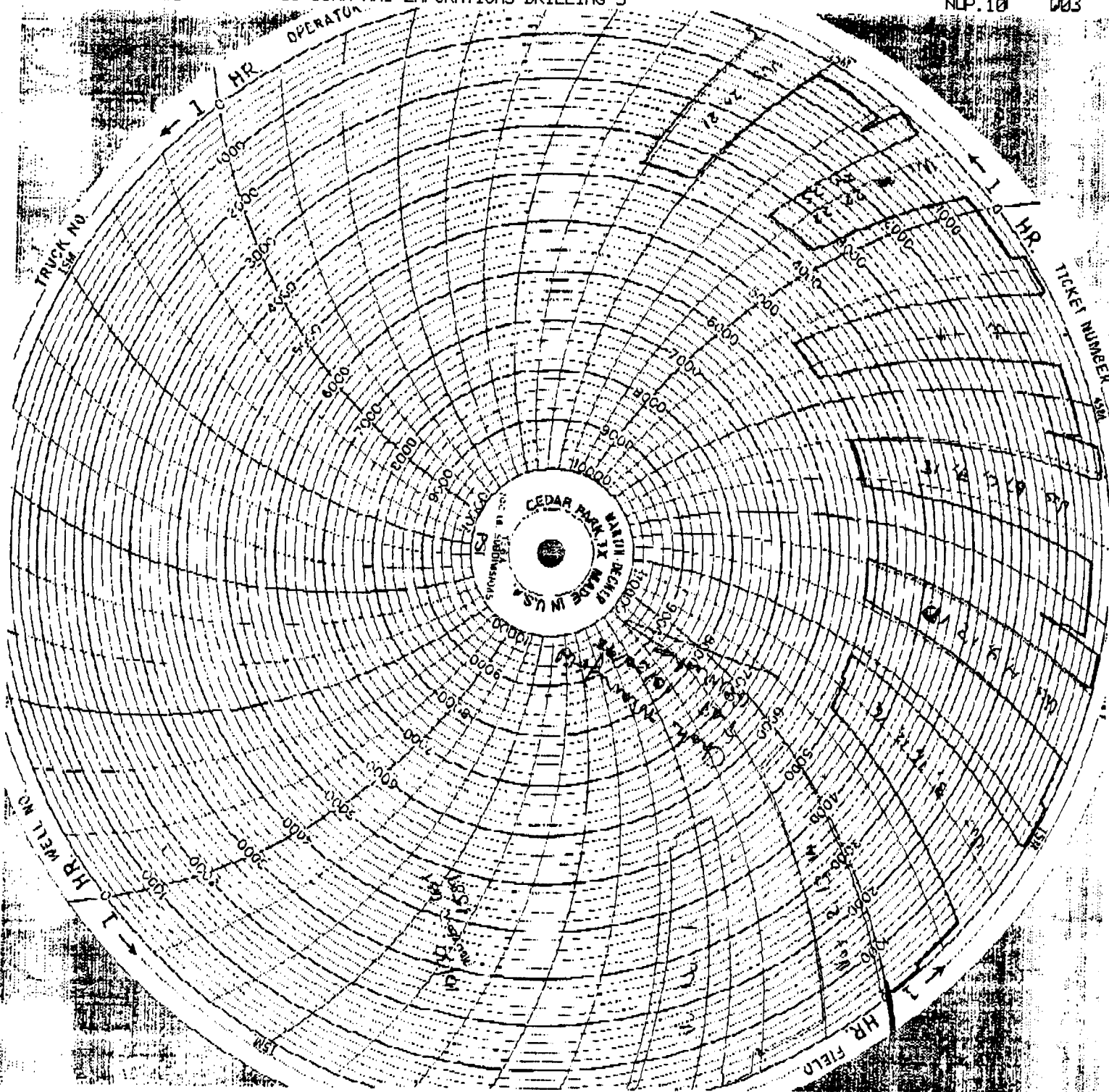
NOV 50 102



COB ESTIMATED 1970-

NEW YORK

THESE RESEARCHES HAVE BEEN FINANCED BY THE
FRENCH GOVERNMENT AND THE REGION OF LORRAINE



NOV 02 1993

09:59AM

SECURE-FX TRAIL .SSION
 NOV 02 '93 10:00PM
 07:30
 ARCO KUULUM II - 907 2651393

P.12
 ND.475
 D11

CALCULATIONS:		CASE 1			
1) Safety Factor:					
Below 20" Conductor		33	psi		
Below 13-3/8" Surface		50	psi		
Below 9-5/8" Intermediate		100	psi		
SF, selected from above 3 choices:		50	psi		
SF =		0.248	ppg	(is LESS than 0.334 ppg, thus use 0.248)	
		0.248	ppg		
2) Reduction in Hydrostatic:					
LI =		299	feet		
RH =		0.340	ppg		
3) Surge Gradient:					
SG =		0.146	ppg		
4) Riser Margin:					
RM =		0.088	ppg		
5) Allowance Factor:					
A =		0.486	ppg	(note: RH + SG is greater than RM)	
6) Kick Tolerance:					
KT =		1.63	ppg		
Max Allowable Csg Pressure		1046.5	psi		
Assuming Vi =		25	bbls		

3989.58	0.38	180.96	3989.16	-38.78	11.70	35.72	0.30
4083.35	0.38	183.04	4082.92	-39.40	11.68	36.33	0.00
4177.67	0.46	190.03	4177.24	-40.08	11.60	37.02	0.09
4270.62	0.46	182.33	4270.19	-40.82	11.52	37.75	0.06
4363.71	0.46	193.98	4363.28	-41.56	11.41	38.50	0.10
4553.06	0.58	198.58	4551.62	-43.20	10.93	40.20	0.07
4646.62	0.62	193.45	4646.17	-44.15	10.65	41.19	0.05
4739.50	0.67	196.08	4739.05	-45.16	10.39	42.29	0.06
4833.03	0.68	200.58	4832.57	-46.20	10.04	43.72	0.05
4927.05	0.71	198.46	4926.58	-47.27	9.66	44.45	0.04
5020.84	0.85	191.93	5020.36	-48.50	9.33	45.72	0.17
5114.74	0.86	193.50	5114.25	-49.67	9.05	47.12	0.00
5149.29	0.87	193.09	5148.80	-50.37	8.91	47.64	0.00
5301.82	1.02	195.26	5301.32	-52.82	8.28	50.16	0.10
5421.92	0.95	191.30	5421.40	-54.84	7.81	52.29	0.08
5518.05	0.85	188.41	5517.51	-56.32	7.55	53.74	0.11
5610.78	0.88	188.68	5610.23	-57.71	7.34	55.14	0.00
5700.68	1.05	194.07	5700.12	-59.19	7.02	56.65	0.21
5800.55	1.05	199.83	5800.97	-60.98	6.66	58.49	0.07
5891.49	1.28	192.56	5890.99	-62.80	6.29	60.33	0.27
5984.81	1.25	194.37	5984.19	-64.81	5.81	62.40	0.05
6077.67	1.34	194.48	6077.02	-66.85	5.28	64.50	0.09
6174.63	1.33	188.91	6173.96	-68.06	4.83	66.75	0.13
6266.75	1.35	187.76	6266.06	-71.20	4.51	68.92	0.24
6362.66	1.49	197.14	6361.92	-73.51	3.99	71.20	0.28
6456.44	1.53	197.30	6455.68	-75.87	3.26	73.75	0.04
6548.68	1.64	200.53	6547.88	-78.29	2.43	76.28	0.15
6643.11	1.68	197.47	6642.27	-80.87	1.54	78.98	0.10
6736.90	1.92	197.58	6736.02	-83.68	0.66	81.91	0.26
6831.25	1.96	193.40	6830.31	-86.76	-0.20	85.10	0.15
6924.93	2.20	194.48	6923.93	-90.06	-1.02	88.50	0.26
7016.53	2.06	198.13	7015.47	-93.33	-1.97	91.89	0.21
7111.70	2.25	196.25	7110.57	-96.75	-3.03	95.45	0.21
7206.15	2.70	189.21	7204.93	-100.72	-3.90	99.32	0.57
7300.48	2.65	189.63	7299.16	-103.06	-4.62	103.92	0.05
7392.81	2.92	187.91	7391.28	-109.50	-5.30	108.41	0.21
7487.69	2.82	185.79	7486.14	-114.22	-5.87	113.14	0.16
7582.62	2.90	186.95	7580.85	-118.92	-6.40	117.86	0.10
7677.41	2.85	188.57	7675.63	-123.63	-7.04	122.60	0.11
7774.22	2.82	195.42	7772.87	-128.30	-8.03	127.57	0.35
7867.80	2.56	192.17	7865.74	-132.86	-9.08	131.75	0.32
7961.38	2.85	203.91	7959.29	-136.35	-10.20	135.71	0.58
8055.87	2.16	203.06	8053.71	-139.76	-11.78	139.35	0.21
8238.55	2.02	209.35	8236.26	-145.72	-14.70	145.77	0.15
8337.97	1.62	217.03	8335.63	-148.37	-16.41	148.70	0.46
8433.69	1.67	221.86	8431.32	-150.49	-18.15	151.13	0.15
8528.43	1.82	224.82	8526.01	-152.59	-20.14	153.56	0.18
8718.17	2.14	222.26	8715.64	-157.34	-24.64	159.11	0.18
8811.86	2.30	222.24	8809.26	-160.02	-27.08	162.33	0.17
8907.34	2.45	229.50	8904.66	-162.77	-29.92	165.47	0.35
9001.81	2.82	229.50	8999.03	-165.58	-33.22	168.98	0.24

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD
HORIZONTAL DISPLACEMENT AT A DEPTH OF 9001.3 FEET

NOV 02 1993

SECURE-FX TRAIL MISSION
 NOV 02 '93 10:00 AM
 SECURE-FX TRAIL MISSION
 07:29
 ARCO KUULUN II - 507 2651393

P.11
 NO. 475
 P10

Y-1507 #1						
KICK TOLERANCE WORKSHEET				GLA 11/2/93		
				CASE 1		
GIVEN INFORMATION & ASSUMPTIONS:				TBD = To be determined		
Variable	Symbol	Value	Units			
Safety Factor	SF	TBD	ppg			
Kick Tolerance	KT	TBD	ppg			
Leakoff Test Depth	DPIT	3870	feet			
Influx Volume	VI	25	bbls			
Length of Influx	Li	TBD	feet			
Hole diameter	DH	12.25	inches			
Drill collar diameter	DC	8.0	inches			
Actual mud weight in use	AMW	10.3	ppg			
Total depth of well	TD	9064	feet			
Reduction in hydrostatic	RH	TBD	ppg			
Yield point of mud	YP	29	lbs/100 sq ft			
Drill pipe diameter	DP	5.0	inches			
Surge Gradient	SG	TBD	ppg			
Water depth at site	DW	87	feet			
Air gap from MSL to RTE	DA	65	feet			
Riser Margin	RM	TBD	ppg			
Allowance Factor	A	TBD	ppg			
Equivalent MW at leakoff	EMW	15.5	ppg			

- 1 - White - Pig Caps (Hebin in Book)
- 2 - Green - Calgary Office (Well File)
- 3 - Yellow - Calgary Office - Subsea Engineer
- 4 - Pink - Sub Sea Files
- 5 - Goldenrod - Drilling Engineer

1507

كواليت
Englewood

Contractor Cannan

Test Date 93 . 10 . 31
Year Month Day

R.T. Water Depth 87 fathoms R.T. Wellhead 84.65 fathoms Stack = (476 mm) @ (70000 kPa) W.P.

Last Test Date 93 - 10 - 23
Year Month Day

[illegible]

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295	Depth: 8185'	Prog. 202	Spud Date: 10/13/93 9:00 AM	Days Actual: 146 26.00	Days Planned: 24	Date: 11/1/93
OCS-Y-1597 #1						

Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 13-3/8" @ 3829'	Next Casing: 9-5/8" @ 10,000'	Shoe Test EMW: 15.5 PPG	Formation: 70%SLT/20%CLY/10%SAND
-----------------------------------	------------------------------	-------------------------------	-------------------------	----------------------------------

Operation at 0600: DRILLING 12-1/4" HOLE @ 8185'.	1993 Proj. Cost \$	Daily Cost, (\$): \$	Accum. Cost, (\$) \$
--	--------------------	----------------------	----------------------

BIT DATA				MUD DATA				MUD LOG DATA		DRILLING			
Bit #:	3	4		MW: 10.3	KWM 17.7	Filter Cake: 1	KWM Cake:	Depth:	8025	Depth:	8185		
Size:	12-1/4"	12-1/4"		Visc: 67	Visc:	%Solids: 10.6	%Solids:		Mud Wt:	10.3	ROT WT:	312	Torque: 337 A
Make:	HYCALOG	HYCALOG		PV: 28	PV:	% Sand: 0.6	%Sand:	FL Temp:		97	PU Wt.:	312	Jar No.:1771-0008
Type:	DS40H	DS40H		YP: 31	YP:	Ph: 8.7	Ph:		BGG:	20	SO Wt.:	312	Jar Hrs.: 205
Ser #:	14352	14012		Gels: 4/8	Gels:	Pm: .05	Pm:	CG:		N/A	Pump Data		HYDRAULICS
Depth Out:	7893	8185		API FL: 2.8	API FL: ----	Pl: .1	Pl:		TG:	222	LNR:	6.5	
Feet:	3860	292		HTHPWL: 7.2		Mf: 2.1	Mf:	Max Gas:		47	SPM	74	74
Hours:	46.4	6.0		MBT: 4.5		Chlor.: 17000	Chlor.:		Dc Exp:	0.79	PSI:	3100	3100
WOB:	5-10	5-10		CUM CST \$	DAILY \$	O/W: 0/89	O/W:	Sh Den:		N/A	SPS:	50	50
RPM:	140	140		Kick Tol: 1.79		Total GPM: 719			Est PP:	9.0	SPP:	550	550

JETS:		Survey No.		Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS
5X14		5X14		7868	2.56	192						WTR DEPTH 87'
0.751				7961	2.86	204						RKB-MSL 65'
				8056	2.16	203	8054	140	S140	W12	0.21	RKB-ML 152'
#3 3-3-WT-A-X-1/4-CT-PR												RKB-WH 183.5'
												GH Depth 40.5'
												RKB-BGH 182.5'

TIME	HRS	OPERATIONS FROM 0600 TO 0600
6:00 9:00	3.0	POH. DOWNLOAD LWD/MWD.
9:00 12:00	3.0	PULL AND INSPECT WEAR BUSHING. OBSERVED 1/2" - 3/4" WEAR AT TOP OF BUSHING TAPERING OFF TO MINOR WEAR AT BOTTOM. ROTATE WEAR BUSHING 180° TO POSITION WEAR PATTERN AWAY FROM WORN SPOT. RIH AND SET CUP TESTER.
12:00 14:00	2.0	PRESS TEST BOP STACK - UPPER/LOWER ANNULAR, MIDDLE/LOWER PIPE RAMS AND FAIL SAFE VALVES TO 250 PSI LO/5000 PSI HIGH.
14:00 14:30	0.5	POH. LD RUNNING TOOL AND TEST PLUG.
14:30 16:00	1.5	CHANGE BATTERIES AND RE-PROGRAM LWD/MWD.
16:00 20:30	4.5	RIH TO 6500'. CIRC BOTTOMS UP - MAX GAS 222u.
20:30 21:30	1.0	CONT RIH - STOP AND CIRC BOTTOMS UP @ 7100'.
21:30 22:00	0.5	CONT RIH TO 7330'.
22:00 23:00	1.0	REAM HOLE FROM 7330' TO 7893'.
23:00 6:00	7.0	DRILL 12-1/4" HOLE FROM 7893' TO 8185'.

SUBTOTAL HOURS: 24.0	Opr Time 6.5	Env Alert Status: YELLOW	Kick Tolerance: 1.79
On Site Engineer: G.LALVORD Signed: D.BUMGARDNER/R.L.MORRISON			

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:		BIT/MWD-LWD/F.S./PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-O/24X5" HWDP = 1202.35'					
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary		
Pot Water:	207	1,107	Bbl		Rotary	Motor	
Drill Water:	0	3,522	Bbl	Well Daily	6.0	0.0	6.0
Fuel:	5,402	293,035	Gal	Well Cumulative	99.3	24.1	123.4
Barite:	0	7,850	Sx	BHA	99.3	24.1	123.4
Cement: G/AG	0/0	3095/3197	Sx	PERSONNEL ONBOARD			
Supply Vessel Information:				ARCO:	4		
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER:	1
IKALUK	1654		3,170	242,774	18	CONTRACTOR: CANMAR	52
NISCAROO	1544		5,283	334,442	17	CATERER: STANTON	10
KALVIK		0	5,706	385,031	17	CEMENTER: DOWELL/HOWCO	1
SUPPLIER	4123		1,321	87,969	15	WEATHER: HORIZON	2
WEATHER DATA: @ 05:00						SAFETY: H2S/MEDIC	2
TEMPERATURE	22°	WIND SPEED 0 KNT	DIRECTION	0°		CASING: GBR/MDS	2
VISIBILITY	20 NM	CEILING UNLIMITED	SEAS			CORING: INTEQ/CORELAB	
Personnel Accidents: Yes <input checked="" type="checkbox"/> X None Reported						DST: HRS	0
Description of Accident:		FLOORHAND WAS HOLDING BACK STAND OF SWINGING DP (VESSEL MOTION WITHIN CONTRACTOR'S OPERATING PARAMETERS) AND SLIPPED TO RIG FLOOR, END OF PIPE SWUNG BACK AND GRAZED LEFT SIDE OF JAW CHIPPING LEFT UPPER 2ND INCISOR. NOT A LOST TIME ACCIDENT. P/A CHECKED EMPLOYEE AND RETURNED HIM TO WORK.				ELECTRIC LOG: SCHLUMBERGER	2
						MUD LOG: SPERRY	7
						MUD ENGR: MI	2
						MWD SERVICE: SPERRY	2
Well Site Safety:		HELD DRILL ON RIG ON 10/13/93				WELLHEAD: DRILQUIP	1
Date Last Kick Drill: 10/3/93		Date Last BOP Test: 10/31/93				COMMUNICATION: N. S. TELECOM	1
Other Drills-Describe FIRE DRILL 10/31/93.						OTHER: Divers/Radio/MMS	8
						VISITORS:	0
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL: 87	
NOTE:							
1) OBSERVED SHEEN WHILE DISCHARGING 120 BBL FRESHWATER GEL THRU DISPOSAL CAISSON. ALL DISCHARGED FLUIDS PAST SHEEN TESTS. ESTIMATE 1/2 - 1 GAL OF HYDRAULIC/FUEL OIL (?) TRAPPED IN CAISSON WAS DISCHARGED WITH MUD (SEE ATTACHED SPILL REPORT).							
2) P-2 LIFEBOAT LOCATED OFF NORTH SIDE FLAXMAN ISLAND. RESCUE ATTEMPT BY BERING MARINE "ARCTIC FOX" SCHEDULED FIRST LIGHT THIS A.M. KALVIK WILL ASSIST (LIFEBOAT SUSTAINED CANOPY DAMAGE)							
3) CROWLEY TUG "PT. BARROW" AND ARCTIC FOX WORKED CHANNEL FOR ACCESS IN PRUDHOE BAY.							
4) TRANSFERRED ELMAGO COIL FROM ARCTIC FOX TO KALVIK 0000 HRS 11/1.							
5) JUMP DIVERS AND CHANGED OUT CONTROL LINE ON YELLOW POD @ 0700 HRS 10/31.							
6) HELD SUPERVISORS SAFETY MEETING 10/31 A.M.							
7) OBSERVED FIRST YEAR ICE FORMATION AT LOCATION 0300 HRS 11/1.							
Kulluk Alert Status (Hours)							
		Green	Blue	Yellow	Red	Black	
		0	24				ICE COVERAGE PRESENTLY OPEN WATER
		24					
TOTAL HOURS: 24.0		24					

On Site Engineer: G.LALVORD

Signed: D.BUMGARDNER/L.MORRISON

DATE: 11/1/93

SPERRY-SUN DRILLING SERVICES, INC.

PAGE 1

ARCO ALASKA, INC.
WILDCAT
AKMM931023:55-171-00011
OCTOBER 1993

QCS-Y-1397 #1
KULLUK
NORTH REFERENCE : TRUE NORTH
SHORT COLLAR METHOD
MAG. FIELD STRENGTH (NT) : 57550
DIP ANGLE : 80.96
TOTAL CORRECTION : 31.47

MEASURED INCLIN DEPTH (feet)	DEPTH (degree)	AZIMUTH (degree)	VERTICAL DEPTH (feet)	LATITUDE (N/S, +/-) (feet)	DEPARTURE (E/W, +/-) (feet)	VERTICAL SECTION (feet)	DOG - SEVERITY (deg/100ft)
6077.67	1.34	194.48	6077.07	-66.85	5.28	66.17	0.08
6174.63	1.33	188.91	6173.96	-69.06	4.83	69.41	0.11
6266.76	1.36	187.76	6266.06	-71.20	4.51	70.56	0.09
6362.66	1.43	197.14	6361.93	-73.51	3.99	72.97	0.26
6456.44	1.53	197.30	6455.68	-75.87	3.26	75.32	0.09
6548.68	1.64	200.53	6547.88	-78.29	2.43	77.81	0.15
6643.11	1.68	197.47	6642.27	-80.87	1.54	80.45	0.19
6736.90	1.92	197.58	6736.02	-83.68	0.66	83.23	0.28
6831.25	1.96	193.40	6830.31	-86.76	-0.20	86.47	0.15
6924.92	2.20	194.48	6923.23	-90.06	-1.02	89.83	0.26
7016.53	2.06	198.13	7015.47	-93.33	-1.97	93.17	0.21
7111.70	2.25	196.25	7110.57	-96.75	-3.03	96.66	0.21
7206.13	2.70	189.21	7204.92	-100.72	-3.90	100.69	0.53
7300.48	2.65	189.63	7299.16	-105.06	-4.62	105.08	0.09
7392.81	2.92	187.91	7391.38	-109.50	-5.30	109.36	0.31
7487.69	2.82	185.79	7486.14	-114.22	-5.87	114.31	0.16
7582.62	2.90	186.95	7580.95	-118.92	-6.40	118.04	0.19
7677.41	2.85	188.57	7675.63	-123.63	-7.04	123.76	0.11
7774.22	2.82	195.43	7772.22	-128.30	-8.03	128.57	0.35
7867.80	2.56	192.17	7865.80	-132.56	-9.09	132.95	0.32
7961.38	2.35	203.91	7959.29	-136.35	-10.30	136.74	0.58
8055.87	2.16	203.06	8053.71	-139.76	-11.78	140.25	0.21

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD
HORIZONTAL DISPLACEMENT AT A DEPTH OF 8055.9 FEET
IS 140.3 FEET ALONG S 4 DEG 49 MIN W
RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION COMPUTED ALONG 104.82 DEG
A DECLINATION OF 31.47 HAS BEEN APPLIED

*** To Exit, Press "F4" ***

NOV 01 1993

Y-1597 #1							
KICK TOLERANCE WORKSHEET				CASE 1	TAB 10/28/93		
GIVEN INFORMATION & ASSUMPTIONS:				TBD = To be determined			
Variable	Symbol	Value	Units				
Safety Factor	SF	TBD	ppg				
Kick Tolerance	KT	TBD	ppg				
Leakoff Test Depth	DPIT	3870	feet				
Influx Volume	Vi	25	bbls				
Length of Influx	Li	TBD	feet				
Hole diameter	DH	12.25	inches				
Drill collar diameter	DC	8.0	inches				
Actual mud weight in use	AMW	10.3	ppg				
Total depth of well	TD	8185	feet				
Reduction in hydrostatic	RH	TBD	ppg				
Yield point of mud	YP	31	lbs/100 sq ft				
Drill pipe diameter	DP	5.0	inches				
Surge Gradient	SG	TBD	ppg				
Water depth at site	DW	87	feet				
Air gap from MSL to RTE	DA	65	feet				
Riser Margin	RM	TBD	ppg				
Allowance Factor	A	TBD	ppg				
Equivalent MW at leakoff	EMW	15.5	ppg				

CALCULATIONS:	CASE 1		
1) Safety Factor:			
Below 20" Conductor	33	psi	
Below 13-3/8" Surface	50	psi	
Below 9-5/8" Intermediate	100	psi	
SF, selected from above 3 choices:	50	psi	
SF =	0.248	ppg	(is LESS than 0.334 ppg, thus use 0.248)
	0.248	ppg	
2) Reduction in Hydrostatic:			
Li =	299	feet	
RH =	0.376	ppg	
3) Surge Gradient:			
SG =	0.173	ppg	
4) Riser Margin:			
RM =	0.097	ppg	
5) Allowance Factor:			
A =	0.549	ppg	(note: RH + SG is greater than RM)
6) Kick Tolerance:			
KT =	1.79	ppg	
Max Allowable Csg Pressure	1046.5	psi	
Assuming Vi =	25	bbls	

Daily Drilling Report - New Ventures

MINERALS MANAGEMENT SERVICE
ANALYST, ALASKA

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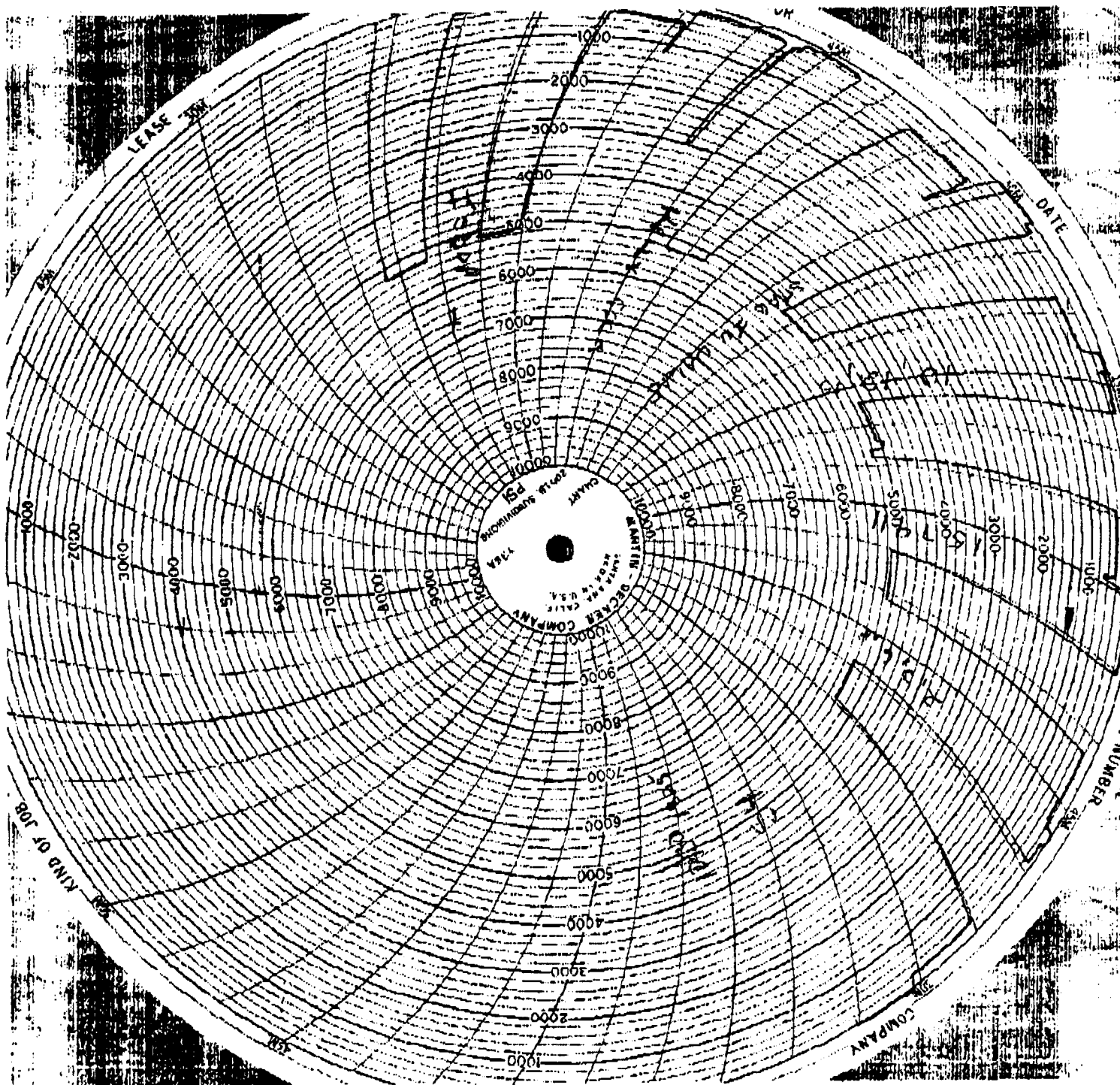
Daily Drilling Report - New Ventures

Summarized BHA Description:		BIT/MWD-LWD/F.B/PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-Q/24X5" HWDP										
		= 1202.35'										
Rig Supply Data:		Used last 24 hours		Remaining Stock		Unit		Hours Summary				
Pot Water:		229		1,138		Bbl				Rotary	Motor	
Drill Water:		0		3,522		Bbl		Well Daily		0.0	0.0	6.8
Fuel:		3,947		298,438		Gal		Well Cumulative		93.3	24.1	117.4
Barite:		0		7,850		Sx		BHA		93.3	24.1	117.4
Cement: G/AS		0/0		3095/3197		Sx		PERSONNEL ONBOARD				
Supply Vessel Information:								ARCO:		4		
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POS	PARTNER:						
IKALUK	1654		4,491	245,944	19	CONTRACTOR: CANMAR				53		
MISCAROO	1544		2,113	339,725	17	CATERER: STANTON				10		
KALVIK		0	6,472	390,737	17	CEMENTER: DOWELL/HOWCO				1		
SUPPLIER	4123		1,321	89,290	15	WEATHER: HORIZON				2		
WEATHER DATA: @ 0600								SAFETY: H2S/MEDIC		2		
TEMPERATURE 24°		WIND SPEED 37 KNT		DIRECTION 090°		CASING: GBR/HDS				2		
VISIBILITY 6 NM		CEILING 700' OVERCAST		SEAS 8'		CORING: INTEQ/CORELAB						
Personnel Accidents:		Yes		None Reported		X		DST: HRS		0		
Description of Accident:								ELECTRIC LOG: SCHLUMBERGER		2		
								MUD LOG: SPERRY		7		
								MUD ENGR: MI		2		
								MWD SERVICE: SPERRY		2		
								WELLHEAD: DRILQUIP		1		
Well Site Safety:		HELD DRILL ON RIG ON 10/13/93						COMMUNICATION: N. S. TELECOM		1		
Date Last Kick Drill: 10/3/93		Date Last BOP Test: 10/23/93						OTHER: Divers/Radio/MMS		8		
Other Drills-Describe FIRE DRILL 10/24/93.								VISITORS:		0		
TIME	HRS	OPERATIONS FROM 0600 TO 0600						TOTAL PERSONNEL:		98		
		NOTE:										
		1) MANIFOLD REGULATOR CONTROL LINE IN YELLOW POD RUPTURED. PREP TO JUMP DIVERS TO CHANGE OUT SAME										
		2) DIVERS REMOVED CHAIN AND SAND BAGS FROM NOZZLE ON BERING SEA "ARCTIC FOX". TUG O.K. AND STANDING BY AT WEST DOCK.										
		3) SUPPLIER II INDICATED LIFEBOAT (P-2) IS 3-1/2 MILES EAST OF BROWNLOW PT. (412 CHOPPER UNABLE TO LOCATE LIFEBOAT ON ITS 1 FLIGHT YESTERDAY).										
		4) IKALUK OBSERVED MODERATE SIZE (1/2 MI X 3/4 MI) MULTIYEAR ICEFLOW 17 MI NW OF KULLUK. DRIFT DIR WNW.										
		5) GENERATORS #1 AND #3 WERE STARTED AND CHECKED - ALL O.K.										
		Kulluk Alert Status (Hours)										
		Green	Blue	Yellow	Red	Black						
		0		8	16		ICE COVERAGE PRESENTLY OPEN WATER					
		24					MANAGEMENT SERV					
TOTAL HOURS: 24.0		24					ALERT					
On Site Engineer: G.L. ALVORD												
Signed: D.B. JARNER/V.L. MORRISON												
DATE: 10/31/93												

REOL
OCS DISTRICT OFFICE

NOV 01 1993

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA



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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295		Depth: 7893'		Prog. 0		Spud Date: 10/13/93 9:00 AM		Days Actual: 144 24.00		Days Planned: 24		Date: 10/30/93			
Contractor/Rig No.: CANMAR/KULLUK		Last Casing: 12-3/8" @ 3829'		Next Casing: 9-5/8" @ 10,000'		Shoe Test EMW: 16.6 PPG		Formation: 20%SLT/20%CLY/60%SAND							
Operation at 0600: LMRP DISCONNECTED/HUNG-OFF WITH BIT @ 3755' - W.O.W.								1993 Proj. Cost \$		Daily Cost, (\$): \$		Accum. Cost, (\$)			
BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:	3			MW: 10.2	KWM 17.7	Filter Cake: 1	KWM Cake:	Depth:	7893	Depth:	7893'				
Size:	1 1/2 - 1/4"			Visc: 87	Visc:	%Solids: 10	%Solids:	Mud Wt:	10.2	WT:	295	Torque: 240 A			
Make:	HYCLOG			PV: 34	PV:	% Sand: 0.6	%Sand:	FL Temp:	103	PU Wt.:	295	Jar No.: 1771-0008			
Type:	DS40H			YP: 47	YP:	Ph: 8.7	Ph:	BGG:	45	SO Wt.:	295	Jar Hrs.: 199			
Ser #:	14352			Gels: 0/10	Gels:	Pm: .05	Pm:	CG:	231	Pump Data #1 #2 HYDRAULICS					
Depth Out:	7893			API FL: 2.8	API FL: —	Pf: .3	Pf:	TG:	-	LNR:	6.5	6.5	Bit ΔP: 819		
Feet:	3860			HTHPWL: 7.2		Mf: 2.7	Mf:	Max Gas:	98	SPM:	72	72	HHP: 336		
Hours:	46.4			MBT: 4.5		Chlor.: 18000	Chlor.:	Dc Exp:	0.91	PSI:	2800	2800	HHP/sq in: 2.85		
WOB:	5-10			CUM CST \$	DAILY \$	O/W: 0/90	O/W:	Sh Den:	N/A	SPS:	50	50	ECD: 10.5		
RFM:	140					Total GPM: 702		Est PP:	9.0	SPP:	550	550	An Vel DP/DC: 138/200		
Jets:	5X14 0.751			Surver No.	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS		
Grade:	6H				7112	2.25	196						WTR DEPTH 87'		
					7300	2.65	190						RKB-MSL 65'		
					7488	2.82	186						RKB-ML 152'		
					7774	2.82	188	7772	129	128.6	8 W	0.05	RKB-WH 183.5		
													GH Depth 40.5'		
													RKB-BGH 192.5'		
TIME		HRS		OPERATIONS FROM 0600 TO 0600											
6:00		6:00		24.0 W.O.W. - SUSTAINED WINDS 60 TO 62 KNTS W/ MAX WINDS TO 70 KNTS, 20' SEAS AND 5° - 6° (8° MAX) ROLL 10/29											
				PRESENT CONDITIONS: WINDS 45 GUSTING TO 55 KNTS FROM 080°, 18' SEAS AND 7° (MAX) ROLL.											
				NOTE:											
				1) #1 AND #3 EMD GENERATORS HAD SEAWATER FORCED UP EXHAUST AND ENTER TURBINES. BOTH TURBOS BEING WASHED OUT W/ FRESHWATER, DRIED AND RE-LUBED PRIOR TO RESTART ATTEMPTS. #3 EMD DRY @ PRESENT AND READY FOR RESTART ATTEMPT.											
				2) 1 BOILER PRESENTLY OPERATIVE, 1 BOILER AND STEAM GENERATOR ALSO HAD SEAWATER FORCED UP EXHAUST, PRESENTLY DRAINED AND OPERATIVE (NORMALLY 1 BOILER ON LINE FOR OPERATIONS).											
				3) 4 EXHAUST/VENT PIPES FROM GENERATORS/STEAM GENERATORS BROKEN OFF AND OVERBOARD. APPROXIMATE DIMENSIONS 20" DIA. X 40' LENGTHS. 5TH OF 6 PIPES LOOSE AND PROBABLY WILL BE LOST											
				4) LIFEBOAT P-2 (PORT SIDE) SUFFERED DAMAGE TO CANOPY AND WAS TORN FROM DAVIT @ 1315 HRS. 10/29.											
				SUPPLIER II UNABLE TO RECOVER DUE TO HEAVY SEAS AND SHALLOW WATER. LIFEBOAT COURSE PLOTTED TOWARDS BROWNLOW PT. LIFEBOAT P-1 HAS SUSTAINED CANOPY DAMAGE AND IS VULNERABLE.											
SUBTOTAL HOURS: 24.0		Opr Time 6.5		Env Alert Status: RED		Kick Tolerance: 1.81									
On Site Engineer: G.LALVORD				Signed: D.BUMGARDNER/L.HILL											

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Daily Drilling Report - New Ventures

Summarized BHA Description:		BIT/MWD-LWD/F.6/PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10XB" DC/B" JARS/1X8" DC/X-O/24X6" HWDP = 1202.35'							
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary				
Pot Water:	195	1,472	Bbl		Rotary	Motor			
Drill Water:	0	3,522	Bbl	Well Daily	9.4	0.0	6.8		
Fuel:	4,134	302,384	Gal	Well Cumulative	93.3	24.1	117.4		
Barite:	0	7,850	Sx	BHA	93.3	24.1	117.4		
Cement: G/AS	0/0	3095/3197	Sx	PERSONNEL ONBOARD					
Supply Vessel Information:				ARCO:		4			
VESSEL	BARITE (SX)	CEMENT (GX)	FUEL USED	FUEL LEFT	POB	PARTNER:			
KALUK	1554		1,585	250,435	19	CONTRACTOR: CANMAR			
MISCAROO	1544		2,113	341,839	17	CATERER: STANTON			
KALVIK		0	8,921	397,209	17	CEMENTER: DOWELL/HOWCO			
SUPPLIER	4123		1,321	90,611	15	WEATHER: HORIZON			
WEATHER DATA: @ 05:00						SAFETY: H2S/MEDIC			
TEMPERATURE	20°	WIND SPEED 45GSS KNT	DIRECTION	080°		CASING: GBR/HDS			
VISIBILITY	1.5 NM	CEILING 500'	SEAS	18'		CORING: INTEQ/CORELAB			
Personnel Accidents:				Yes _____ None Reported _____ X		DET: HRS			
Description of Accident:	REC'D OCS DISTRICT OFFICE NOV 9 1 1993 MINERALS MANAGEMENT SERVICE OFFICE ALASKA					ELECTRIC LOG: SCHLUMBERGER			
						MUD LOG: SPERRY			
						MUD ENGR: MI			
						MWD SERVICE: SPERRY			
Well Site Safety:				HELD DRILL ON RIG ON 10/13/93		WELLHEAD: DRILQUIP			
Date Last Kick Drill: 10/3/93				Date Last BOP Test: 10/23/93		COMMUNICATION: N. S. TELECOM			
Other Drills-Describe FIRE DRILL 10/24/93.						OTHER: Divers/Radio/MMS			
						VISITORS:			
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL:			
		NOTES (CONT'D):							
		5) DERRICK LOST PINS AND SPRINGS IN FINGERBOARD. ALL PIPE SECURE IN DERRICK. RIG FLOOR OFF LIMITS.							
		6) PORTSIDE MAIN DECK DECLARED OFFLIMITS DUE TO HEAVY SPRAY, STANDING SEAWATER AND ICE.							
		7) HELIDECK DECLARED OFFLIMITS DUE TO SPRAY, ICE AND POOR FOOTING.							
		8) WEEKLY BOP TEST DUE TODAY, WILL TEST WHEN RE-CONNECTED AND FINISH POH.							
		9) MAX GLOBAL LOAD OBSERVED LAST 24 HRS WAS 950 MT. PRESENT GLOBAL LOAD @ 776 MT.							
		10) MAX RECORDED PEAK TENSION 323 MT ON ANCHOR #9. 5 ANCHORS HAVE HAD MAX PEAK TENSIONS BRIEFLY EXCEED TEST TENSIONS.							
Kulluk Alert Status (Hours)									
		Green	Blue	Yellow	Red	Black			
		0			24		ICE COVERAGE PRESENTLY OPEN WATER		
		24							
TOTAL HOURS:	24.0	24							
On Site Engineer: G.LALVORD				Signed: D.BUMSARNER/L.HILL		DATE: 10/30/93			

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Daily Drilling Report - New Ventures

MINERALS MANAGEMENT SERVICE
ANALYST, ALASKA

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

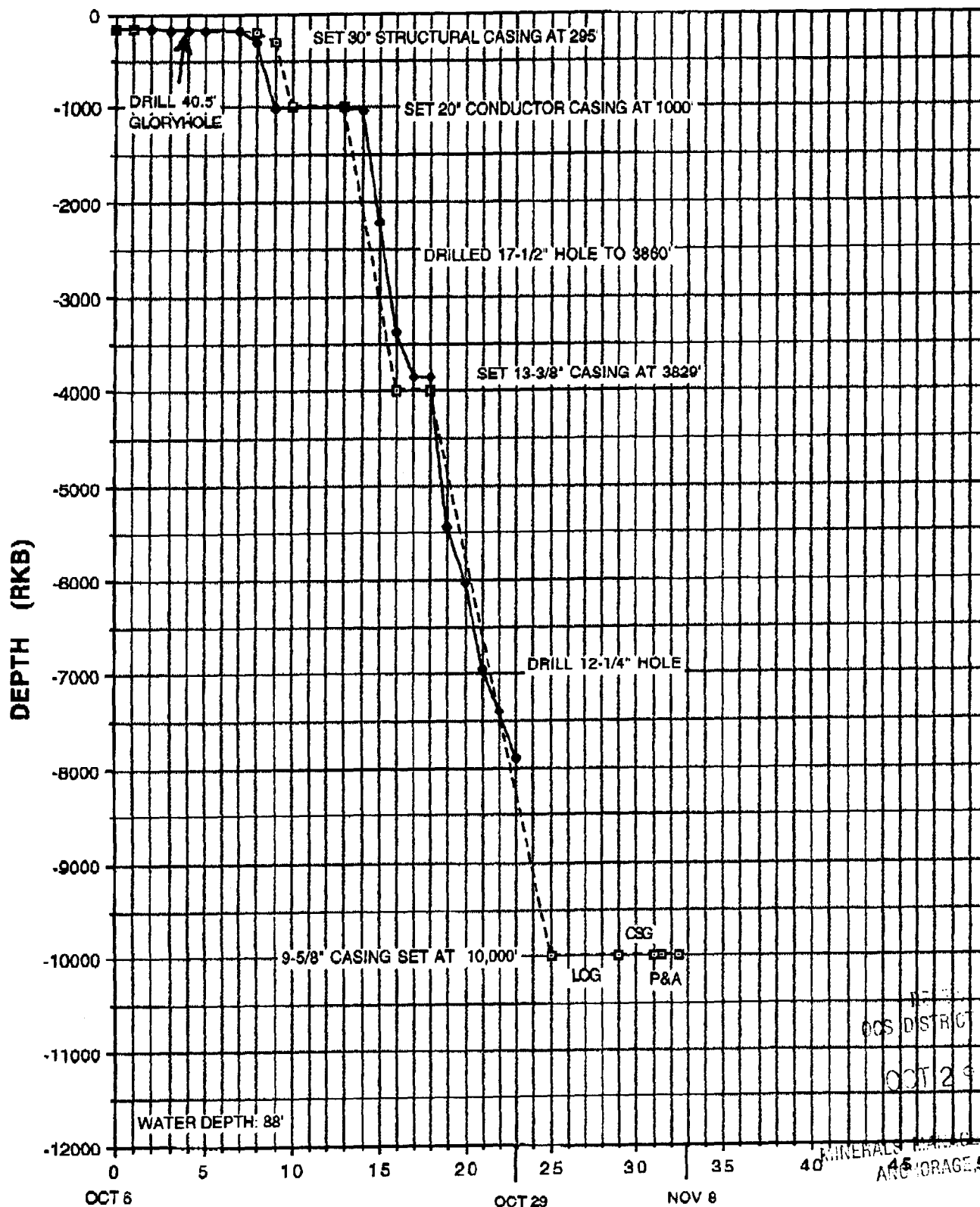
Summarized BHA Description:		BIT/MWD-LWD/F.S./PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-Q/24X5" HWDP						
		= 1202.35'						
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary			
Pot Water:		195	1,472	Bbl		Rotary	Motor	
Drill Water:		0	3,522	Bbl	Well Daily	9.4	0.0 6.8	
Fuel:		7,059	306,519	Gal	Well Cumulative	93.3	24.1 117.4	
Barite:		0	7,850	Sx	BHA	93.3	24.1 117.4	
Cement: G/AS		0/0	3095/3197	Sx				
Supply Vessel Information:					PERSONNEL ONBOARD			
					ARCO:	4		
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POS	PARTNER:		
IKALUK	1654		1,585	252,020	19	CONTRACTOR: CANMAR	52	
MISCAROO	1544		528	345,009	17	CATERER: STANTON	10	
KALVIK		0	3,513	404,130	17	CEMENTER: DOWELL/HOWCO	1	
SUPPLIER	4123		1,321	91,932	15	WEATHER: HORIZON	2	
WEATHER DATA: @ 06:00					SAFETY: H2S/MEDIC			2
TEMPERATURE	23°	WIND SPEED 45G55 KNT	DIRECTION	070°	CASING: GBR/HDS			1
VISIBILITY	7 NM	CEILING 1000'	SEAS	14'	CORING: INTEQ/CORELAB			
Personnel Accidents: Yes _____ None Reported <input checked="" type="checkbox"/> X					DST: HRS			0
Description of Accident:						ELECTRICLOG: SCHLUMBERGER	2	
						MUDLOG: SPERRY	7	
						MUD ENGR: MI	2	
						MWD SERVICE: SPERRY	2	
						WELLHEAD: DRILQUIP	1	
Well Site Safety: HELD DRILL ON RIG ON 10/13/93					COMMUNICATION: N. S. TELECOM			1
Date Last Kick Drill: 10/3/93 Date Last BOP Test: 10/23/93					OTHER: Divers/Radio/MMS			8
Other Drills-Describe FIRE DRILL 10/24/93.					VISITORS:			0
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL:		96
NOTES:								
1) BERING SEA TUG "ARCTIC FOX" DEPARTED WEST DOCK @ 2000 HRS, 10/28 W/ CANMAR COIL ON DECK. TUG DID NOT CLEAR PRUDHOE BAY. PROP JAMMED (ICE?), UNABLE TO NAVIGATE. ATTEMPTED TO MEET ARCTIC FOX W/ ADDTNL TUG - UNABLE TO CLEAR WEST DOCK. KALVIK STANDING BY OFF PRUDHOE BAY WAITING TO RENDEVOUS W/ ARCTIC FOX TUG.								
OCS DISTRICT OFFICE								
OCT 29 1993								
Kulluk Alert Status (Hours)								
		Green	Blue	Yellow	Red	Black		
		0	13	3	8			
		24						
TOTAL HOURS: 24.0		24						
ICE COVERAGE PRESENTLY OPEN WATER								

On Site Engineer: G.LALVORD

Signed: D. BUMGARNER, HILL

DATE: 10/29/93

Y - 1597 PROSPECT
OCS-Y-1597 #1
EXPECTED DRILLING TIME CURVE



SPERRY-SUN DRILLING SERVICES, INC.

PAGE 1

ARCO ALASKA, INC.
 WILDCAT
 AKMM921023:55-171-00011
 OCTOBER 1993

DCS-Y-1597 #1
 KULLUK
 NORTH REFERENCE : TRUE NORTH
 SHORT COLLAR METHOD
 MAG. FIELD STRENGTH (NT) : 57553
 DIP ANGLE : 80.96
 TOTAL CORRECTION : 31.47

MEASURED INCLIN DEPTH (feet)	(degree)	AZIMUTH (degree)	VERTICAL DEPTH (feet)	LATITUDE (N/S, +/-) (feet)	DEPARTURE (E/W, +/-) (feet)	VERTICAL SECTION (feet)	DOG LEG SEVERITY (dg/100ft)
5518.05	0.85	188.41	5517.51	-56.32	7.55	55.74	0.11
5610.78	0.88	188.68	5610.23	-57.71	7.34	57.14	0.00
5700.68	1.05	184.07	5700.12	-59.19	7.03	58.64	0.21
5800.55	1.05	189.83	5799.97	-60.98	6.66	60.44	0.07
5891.49	1.29	192.56	5890.89	-62.80	6.29	62.29	0.27
5984.81	1.25	194.37	5984.19	-64.81	5.81	64.32	0.05
6077.67	1.34	194.48	6077.02	-66.85	5.28	66.39	0.09
6174.63	1.33	188.91	6173.96	-69.06	4.83	68.62	0.13
6266.76	1.36	187.76	6266.06	-71.20	4.51	70.77	0.04
6362.65	1.49	197.14	6361.93	-73.51	3.99	73.12	0.28
6456.44	1.53	197.30	6455.68	-75.87	3.26	75.52	0.04
6548.68	1.64	200.53	6547.98	-78.29	2.43	77.99	0.15
6643.11	1.68	197.47	6642.27	-80.87	1.54	80.61	0.10
6736.90	1.92	197.58	6736.02	-83.68	0.66	83.47	0.26
6831.25	1.96	193.40	6830.31	-86.76	-0.20	86.60	0.15
6924.93	2.20	194.48	6923.93	-90.06	-1.02	89.95	0.26
7016.53	2.06	198.13	7015.47	-93.33	-1.97	93.27	0.21
7111.70	2.25	195.25	7110.57	-96.75	-3.03	96.75	0.21
7206.15	2.70	189.21	7204.93	-100.72	-3.90	100.77	0.57
7300.48	2.65	189.63	7299.16	-105.06	-4.62	105.16	0.05
7392.81	2.92	187.91	7391.38	-109.50	-5.30	109.62	0.31
7487.69	2.82	185.79	7486.14	-114.22	-5.87	114.36	0.16
7582.62	2.90	186.95	7580.95	-118.92	-6.40	119.09	0.10
7677.41	2.85	188.57	7675.63	-123.63	-7.04	123.83	0.11
7774.22	2.82	195.42	7773.32	-128.30	-8.03	128.55	0.35

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD
 HORIZONTAL DISPLACEMENT AT A DEPTH OF 7774.2 FEET
 IS 128.6 FEET ALONG S 3 DEG 35 MIN W
 RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD
 VERTICAL SECTION COMPUTED ALONG 183.58 DEG
 A DECLINATION OF 31.47 HAS BEEN APPLIED

DCS DISTRICT OFFICE

=== To Exit, Press "F8" ===

OCT 29 1993

MINERALS MANAGEMENT SERVICE
 ANCHORAGE, ALASKA

SECURE-FX TRANSMISSION
 OCT 29 '93 - 07:48 PM
 10/30/93 06:40
 ARCO KULUM II + 907 2651393

P. 11
 NJ. 430
 D09

Y-1597 #1		TAB 10/28/93	
KICK TOLERANCE WORKSHEET		CASE 1	
GIVEN INFORMATION & ASSUMPTIONS:		TBD = To be determined	
Variable	Symbol	Value	Units
Safety Factor	SF	TBD	ppg
Kick Tolerance	KT	TBD	ppg
Leakoff Test Depth	DPIT	3870	feet
Influx Volume	Vi	25	bbls
Length of Influx	Li	TBD	feet
Hole diameter	DH	12.25	inches
Drill collar diameter	DC	8.0	inches
Actual mud weight in use	AMW	10.2	ppg
Total depth of well	TD	7893	feet
Reduction in hydrostatic	RH	TBD	ppg
Yield point of mud	YP	48	lbs/100 sq ft
Drill pipe diameter	DP	5.0	inches
Surge Gradient	SG	TBD	ppg
Water depth at site	DW	87	feet
Air gap from MSL to RTE	DA	65	feet
Riser Margin	RM	TBD	ppg
Allowance Factor	A	TBD	ppg
Equivalent MW at leakoff	EMW	15.5	ppg

OCT 29 1993

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 OPS DISTRICT OFFICE

D10

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CONFIDENTIAL

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9293	Depth: 7400'	Prog: 448'	Spud Date: 10/13/93 9:00 AM	Days Actual: 142 22.00	Days Planned: 23	Date: 10/28/93
Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 13-3/8" @ 3829'	Next Casing: 9-5/8" @ 10,000'	Shoe Test EMW: 15.5 PPG	Formation: 30%SLT/50%CLY/20%SAND		

Operation at 0600: DRILLING 12-1/4" HOLE @ 7400'	1993 Prod. Cost: \$ [REDACTED]	Daily Cost, (\$): [REDACTED]	Accum. Cost, (\$): [REDACTED]
---	--------------------------------	------------------------------	-------------------------------

BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:	3			MW: 10.2	KWM: 17.7	Filter Cake: 1	KWM: [REDACTED]	Depth:	7280'	Depth:	7400'				
Size:	12-1/4"			Visc: 86	Visc: [REDACTED]	%Solids: 10	%Solids: [REDACTED]	Mud Wt:	10.2	ROT WT:	295	Torque:	240 A		
Make:	HYCLOG			PV: 28	PV: [REDACTED]	%Sand: 0.6	%Sand: [REDACTED]	FL Temp:	99	PU Wt:	295	Jar No.:	1771-0008		
Type:	DS40H			YP: 48	YP: [REDACTED]	PH: 8.7	PH: [REDACTED]	BGG:	120	SO Wt:	295	190			
Ser #:	14352			Gels: 9/10	Gels: [REDACTED]	Pm: .05	Pm: [REDACTED]	CG:	231	Pump Data		HYDRAULICS			
Depth Out:	SH			API FL: 2.3	API FL: [REDACTED]	PI: 3	PI: [REDACTED]	TG:	108	LNR:	6.5	6.5	Bit ΔP:	825	
Feet:	3530'			HHPWL: [REDACTED]		MI: 2.7	MI: [REDACTED]	Max Gas:	900	SRM:	72	72	HHP:	340	
Hours:	3.7			MSY: 4.6		Chlor: 18000	Chlor: [REDACTED]	Do Exp:	0.98	PSI:	2800	2800	HMP/sq in:	2.9	
WOB:	32653			CUM CST: \$333254	DAILY: \$15837	O/W: 0/90	O/W: [REDACTED]	Sh Den:	N/A	SPS:	50	50	ECD:	10.5	
MPM:	140			Kick Tol: 1.03		Total GPM: 702		Esl PP:	9.0	SPP:	550	550	An Vel	OP/DC:	136/200
Jets:	5X14			Survey No:	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS		
Grade:	0.751			31	6923	2.20	194						WTH DEPTH	87	
				12	7017	2.06	198						RKB-MSL	65'	
				13	7112	2.23	190						RKB-ML	152'	
				14	7206	2.70	189	7204	101'	101' S	4' W	0.57	RKB-WH	183.5	
													GH Depth	40.5'	
													RKB-BGH	192.5'	

TIME	HRS	OPERATIONS FROM 0600 TO 0600
6:00	7:00	1.0 CONT CIRC B/U FOR SHORT TRIP.
7:00	13:00	6.0 POH FOR SHORT TRIP FROM 6964' TO 5509'. (PUMPED AND BACKREAMED FROM 6672' TO 5508')
13:00	15:30	2.5 MINOR FLASH-OVER ON DRAWWORKS 'B' MOTOR. CLEAN BURN MARKS FROM COMMUTATOR & FLASH RING.
15:30	19:00	3.5 CONT'D SHORT TRIP. BACKREAMED AND PUMPED FROM 5509' TO 6274'. ATTEMPTED TO PULL STANDS
		W/ LIMITED SUCCESS. CONT'D POH WITH PUMPING AND BACKREAMING TO SHOE
19:00	20:00	1.0 CIRC B/U AT SHOE
20:00	21:30	1.5 RIH TO 6554'. NO FILL. NO PROBLEMS.
21:30	3:00	6.5 DRILLED FROM 6054' TO 7231'. (GAS ZONE @ 7115'-7125' W/ 808 UNITS, CIRC F/ 5 MIN AND GAS UNITS DROPPED)
3:00	3:30	0.5 CIRC OUT DRILL GAS W/ MAX OF 900 UNITS FROM SAND @ 7160'-7175' FOR 30 MIN.
3:30	6:00	2.5 DRILLED FROM 7231' TO 7400'. ENCOUNTERED SOME VOLCANIC TUFF STREAKS
OCT 28 1993		
MINERALS MANAGEMENT SERVICE		
SUBTOTAL HOURS: 24.0	Op Time: 6.5	Env Alert Status: BLUE
On Site Engineer: T. A. BILLINGSLEY	Signed: D. BUMGARDNER/L. HILL	Kick Tolerance: 1.03

PAGE 2 OF 2

Daily Drilling Report - New Ventures

Summarized BHA Description:		BIT/MWD-LWD/F S/PONY D.C/12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-Q/24X5" HWDP										
		= 1202.35'										
Rig Supply Data:		Used last 24 hours		Remaining Stock		Unit		Hours Summary				
Pot Water:		212		1,481		Bbl				Rotary Motor		
Drill Water:		0		3,522		Bbl		Well Daily		6.8 0.0 6.9		
Fuel:		6,943		313,577		Gal		Well Cumulative		63.6 24.1 108.0		
Barite:		992		7,850		Sx		BHA		23.8 24.1 108.0		
Cement: G/AS		0/0		3085/3137		Sx		PERSONNEL ONBOARD				
Supply Vessel Information:								ARCO:		4		
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER:				1		
IKALUK	1854		1,057	253,805	19	CONTRACTOR: CANMAR				52		
MISCAROO	1544		528	345,009	17	CATERER: STANTON				10		
KALYIK		0	1,876	407,817	17	CEMENTER: DOWELL/HOWCO				1		
SUPPLIER	4123		1,057	93,253	15	WEATHER: HORIZON				2		
WEATHER DATA: @ 0500						SAFETY: H2S/MEDIC				2		
TEMPERATURE	14"	WIND SPEED: 14 KTS	DIRECTION: 270°		CASING: GBR/HDS						1	
VISIBILITY	10 NM	CEILING: 3000'	SEAS: "		CORING: INTECO/CORELAB							
Personnel Accidents: Yes _____ None Reported _____ X						DST: HRS				0		
Description of Accident:						ELECTRO LOG: BOCHLUMBERGER				2		
						MUD LOG: SPERRY				7		
						MUDENGR: MI				2		
						MWD SERVICE: SPERRY				2		
						WELLHEAD: DRILQUIP				1		
Well Site Safety: HELD DRILL ON RIG ON 10/13/93						COMMUNICATION: N. S. TELECOM				1		
Date Last Kick Drill: 10/3/93 Date Last BOP Test: 10/23/93						OTHER: Divers/Radio/MMS				8		
Other Drills-Describe FIRE DRILL 10/24/93.						VISITORS: ACS				0		
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL:				95		
NOTES:												
1) DIVERS INDICATED ±1.5 TO 2' ADDITIONAL FILL SINCE TWO DAYS AGO, 10/25.												
2) THIN FIRST YEAR ICE 1 TO 2 10THS AT RIG. (MOVED IN FROM SHORE)												
RECEIVED OCS DISTRICT OFFICE OCT 23 1993 MINERALS MANAGEMENT SERVICE ANCHORAGE, ALASKA												
Mulluk Alert Status (Hours)												
		Green	Blue	Yellow	Red	Black	ICE COVERAGE PRESENTLY 1-2 (10THS)					
		0	24									
		24										
TOTAL HOURS: 24.0		24										
On Site Engineer: T. A. BILLINGSLEY						Signed: D. BJMGARNER/L. HILL			DATE: 10/28/93			

SECURE-FX TRAIL MISSION
 OCT 28 '93 10:17 AM
 SECURE-FX INFORMATION
 05:42
 ARCO KULUM II + 907 2651393
 10/29/93

P.8
 NO. 423 003

Y-1597 #1		TAB 10/28/93	
KICK TOLERANCE WORKSHEET		CASE 1	
GIVEN INFORMATION & ASSUMPTIONS:		TBD = To be determined	
Variable	Symbol	Value	Units
Safety Factor	SF	TBD	ppg
Kick Tolerance	KT	TBD	ppg
Leakoff Test Depth	DPIT	3870	feet
Influx Volume	Vi	25	bbls
Length of Influx	LI	TBD	feet
Hole diameter	DH	12.25	inches
Drill collar diameter	DC	8.0	inches
Actual mud weight in use	AMW	10.2	ppg
Total depth of well	TD	7400	feet
Reduction in hydrostatic	RH	TBD	ppg
Yield point of mud	YP	48	lbs/100 sq ft
Drill pipe diameter	DP	5.0	inches
Surge Gradient	SG	TBD	ppg
Water depth at site	DW	87	feet
Air gap from MSL to RTE	DA	65	feet
Riser Margin	RM	TBD	ppg
Allowance Factor	A	TBD	ppg
Equivalent MW at leakoff	EMW	15.5	ppg

MINERALS MANAGEMENT SERVICE
 ANCHORAGE, ALASKA

OCT 28 1993

RECEIVED
 OCS DISTRICT OFFICE

SECURE-FX TRANSMISSION
 OCT 28 '93 08:16AM PRAI EXPLORATIONS DRILLING
 SECURE-FX TRANSMISSION
 10:00:01 06:41 PECO KUALUM II - 987 2651393

P.7
 NO. 423
 082

MINERALS MANAGEMENT SERVICE
 ANCHORAGE, ALASKA

OCT 28 1993

OCS DISTRICT OFFICE

CALCULATIONS:		CASE 1		
1) Safety Factor:				
Below 20" Conductor	33	psi		
Below 13-3/8" Surface	50	psi		
Below 9-5/8" Intermediate	100	psi		
SF, selected from above 3 choices:	50	psi		
SF =	0.248	ppg	(is LESS than 0.334 ppg, thus use 0.248)	
	0.248	ppg		
2) Reduction in Hydrostatic:				
LI =	299	feet		
RH =	0.412	ppg		
3) Surge Gradient:				
SG =	0.296	ppg		
4) Riser Margin:				
RM =	0.106	ppg		
5) Allowance Factor:				
A =	0.708	ppg	(note: RH + SG is greater than RM)	
6) Kick Tolerance:				
KT =	1.93	ppg		
Max Allowable Csg Pressure	1066.6	psi		
Assuming Vi =	25	bbls		

SPERRY-SUN DRILLING SERVICES, INC.

PAGE 1

ARCO ALASKA, INC.
 WTI DCAT
 AKMM931023:55-171-00011
 OCTOBER 1993

OCS-Y-1597 #1
 KUULUK
 NORTH REFERENCE : TRUE NORTH
 SHORT COLLAR METHOD
 MAG. FIELD STRENGTH (NT) : 57552
 DIP ANGLE : 80.96
 TOTAL CORRECTION : 31.47

MEASURED INCLIN DEPTH (feet)	DEPTH (feet)	AZIMUTH (degree)	VERTICAL DEPTH (feet)	LATITUDE (N/S, +/-) (feet)	DEPARTURE (E/W, +/-) (feet)	VERTICAL SECTION (feet)	DOG LEG SEVERITY (dg/100f)
5020.84	0.85	191.93	5020.36	-48.50	9.33	48.11	0.17
5114.74	0.86	193.50	5114.25	-49.87	9.03	49.48	0.00
5149.29	0.87	193.09	5148.90	-50.37	8.91	49.99	0.00
5301.83	1.03	195.26	5301.32	-52.82	8.28	52.46	0.10
5421.95	0.95	191.30	5421.40	-54.84	7.81	54.49	0.08
5518.05	0.95	188.41	5517.51	-56.32	7.55	55.99	0.11
5610.72	0.89	188.68	5610.23	-57.71	7.34	57.38	0.00
5700.68	1.05	194.07	5700.12	-59.19	7.03	58.87	0.21
5800.55	1.05	189.83	5799.97	-60.98	6.56	60.67	0.07
5891.49	1.29	192.56	5890.89	-62.80	6.29	62.51	0.27
5984.81	1.25	194.37	5984.19	-64.81	5.81	64.54	0.05
6077.67	1.34	194.48	6077.02	-66.85	5.28	66.59	0.09
6174.63	1.33	188.91	6173.96	-69.06	4.83	68.87	0.13
6266.76	1.36	187.76	6266.06	-71.20	4.51	70.97	0.04
6362.66	1.49	197.14	6361.93	-73.51	3.99	73.30	0.28
6456.44	1.53	197.30	6455.68	-75.87	3.26	75.69	0.04
6548.68	1.64	200.53	6547.88	-78.29	2.43	78.13	0.15
6643.11	1.68	197.47	6642.27	-80.87	1.54	80.75	0.10
6736.90	1.92	197.58	6736.02	-83.66	0.66	83.59	0.26
6831.25	1.96	193.40	6830.31	-86.76	-0.20	86.70	0.15
6924.93	2.20	194.48	6923.93	-90.06	-1.02	90.03	0.26
7016.53	2.06	198.13	7015.47	-92.33	-1.97	93.34	0.21
7111.70	2.25	196.25	7110.57	-96.75	-3.03	96.79	0.21
7206.15	2.70	189.21	7204.94	-100.72	-3.90	100.80	0.57

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD
 HORIZONTAL DISPLACEMENT AT A DEPTH OF 7206.1 FEET
 IS 100.8 FEET ALONG S 2 DEG 13 MIN W
 RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD
 VERTICAL SECTION COMPUTED ALONG 182.22 DEG
 A DECLINATION OF 31.47 HAS BEEN APPLIED

== To Exit, Press "F4" ==

RECEIVED
 OCS DISTRICT OFFICE

OCT 28 1993

MINERALS MANAGEMENT SERVICE
 ANCHORAGE, ALASKA

OCT 27 '93 07:30AM HHI

EXPLORATIONS DRILLING
CONFIDENTIALP. 2
PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295	Depth: 6954'	Prog. 923'	Spud Date: 10/13/93 9:00 AM	Days Actual: 141 21.00	Days Planned: 23	Date: 10/27/93
OCS-Y-1597 #1	6954'	923'	10/13/93 9:00 AM	141 21.00	23	10/27/93

Contractor/Rig No.: CANMARK/KULLUK	Last Casing: 13-3/8" @ 3829'	Next Casing: 9-5/8" @ 10,000'	Shoe Test EMW: 15.5 FPG	Formation: 50%SLT/30%CLAY/20%BAND
------------------------------------	------------------------------	-------------------------------	-------------------------	-----------------------------------

Operation at 0600: CIRC B/U FOR SHORT TRIP	1993 Proj. Cost \$ 78,726,685	Daily Cost, (\$): \$ 468,900	Accum. Cost, (\$) \$11,425,945
---	----------------------------------	---------------------------------	-----------------------------------

BIT DATA				MUD DATA				MUD LOG DATA		DRILLING			
Bit #:	3			MW: 10.0	KWM 17.6	Filter Cake:	KWM Cake:	Depth:	6855'	Depth:	6954'		
Size:	12-1/4"			Visc: 58	Visc:	%Solids: 9	%Solids:	Mud Wt:	10.2	ROT WT:	240	Torque:	260 A
Make:	HYCALOG			PV: 26	PV:	%Sand: 0.4	%Sand:	FL Temp:	101	PU Wt:	260	Jar No.:	1771-0008
Type:	DS40H			YP: 37	YP:	Ph: 8.8	Ph:	BGG:	150	SO Wt:	250	Jar Hrs.:	182
Ser #:	14352			Gels: 5/6	Gels:	Pm: .15	Pm:	CG:	232	Pump Data			
Depth Out:	GH			API FL: 3.4	API FL: ---	Pf: .15	Pf:	TG:	88	LNR:	6.5	#2	HYDRAULICS
Feet:	6084'			HTHPWL: -		Mf: 1.3	Mf:	Max Gas:	735	SPM	70	70	HHP: 320
Hours:	30.2			MBT: 3.75		Chlor.: 17000	Chlor.:	Dc Exp:	0.86	Pst	2675	2675	HHP/sq in: 2.7
WOB:	10			CUM CST \$317,897	DAILY \$29,902	O/W: 0/91	O/W:	Sh Den:	N/A	SPS	50	50	ECD: 10.4
PPM:	146			Kick Tol: 2.12		Total GPM: 690		Est PP:	9.0	SPP:	310	320	An Vel DP/DC: 135/197
Jets:	5X14			Survey No.	Depth	Angle	Azimuth	TYD	Section	N/E	E/W	Dogleg	ELEVATIONS
	0.751			25	5984	1.25	104°						WTR DEPTH 87'
Grade:				26	6175	1.33	169°						RKB-MBL 66'
				27	6363	1.49	197°						RKB-ML 152'
				28	6548	1.64	201°						RKB-WH 183.5'
				29	6737	1.92	197°						GH Depth 40.5'
				30	6831	1.96	193°						RKB-BGH 192.5'

TIME	HRS	OPERATIONS FROM 0600 TO 0600
6:00	11:00	5.0 DRILLED 12-1/4" HOLE FROM 6031' TO 6391'.
		CHANGED ENVIRONMENTAL ALERT STATUS FROM YELLOW TO BLUE @ 08:45 HRS DUE TO CALMER SEAS/WINDS.
11:00	11:30	0.5 SERVICED TOP DRIVE.
11:30	21:30	10.0 FAILURE ON ELECTRICAL BRAKE SYSTEM. CONTINUED CIRCULATING AND ROTATING.
		COULD NOT SAFELY TRIP PIPE OR DRILL AHEAD. WAIT ON PARTS/REPAIRS.
21:30	2:30	5.0 DRILLED FROM 6391' TO 6765'.
2:30	3:00	0.5 CIRC UP 735 UNITS GAS FROM 6715'.
3:00	5:30	2.5 DRILLED FROM 6765' TO 6954'. MAX GAS 640 UNITS @ 6795', 610 UNITS @ 6825'.
5:30	6:00	0.5 CIRC B/U FOR SHORT TRIP.
		NOTE: DIODES REPLACED IN BRAKE CONTROLLER TO GIVE ±50% BRAKING CAPACITY WITH TWO COILS OPERATING.
		PARTS ARRIVED FROM DOYON TO REPAIR CONTROLLER FOR 3RD COIL. BRAKE HAS 4 COIL SYSTEMS, ONE COIL WAS
		DAMAGED. REPLACEMENT COIL IS BEING ORDERED. ARRIVAL UNCONFIRMED.

SUBTOTAL HOURS: 24.0	Opr Time 6.5	Env Alert Status: BLUE	Kick Tolerance: 2.12
On Site Engineer: T. A. BILLINGSLEY Signed: D. BUMGARDNER/L. HILL			

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OCT 27 1993
DISTRICT OFFICE
MINERALS MANAGEMENT
ANCHORAGE

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

**Summarized BHA
Description:**

BIT/MWD-LWD/F.S/PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-O/24X5" HWDP
= 1202.35'

Rig Supply Data:

Pot Water:

Drill Water:

Fuel:

Barite:

Cement: G/AS

Used last 24 hours	Remaining Stock	Unit	Hours Summary		
216	1,491	Bbl		Rotary	Motor
0	3,522	Bbl	Well Daily	11.7	0.0 11.7
6,750	320,520	Gal	Well Cumulative	77.1	24.1 101.2
463	8,842	Sx	BHA	77.1	24.1 101.2
23/0	1173/3197	Sx	PERSONNEL ONBOARD		

Supply Vessel Information:

VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	ARCO:	
IKALUK	1654		2,806	254,662	19	PARTNER:	1
MISCAROO	1544		793	345,537	17	CONTRACTOR: CANMAR	51
KALVIK		1720/G	5,072	409,519	17	CATERER: STANTON	10
SUPPLIER	4123		528	84,309	15	CEMENTER: DOWELL/HOWCO	1
WEATHER DATA: @ 05:00						WEATHER: HORIZON	2
TEMPERATURE 19° WIND SPEED 27 KTS DIRECTION 140°						SAFETY: H2S/MEDIC	2
VISIBILITY 15 NM CLOUD 800' OVCST SEAS 7'						CASING: GBR/HDS	1
Personnel Accidents: Yes <input checked="" type="checkbox"/> None Reported						CORING: INTEQ/CORELAB	
						DST: HRS	0

**Description of
Accident:**

MIKE HUMES-DERRICKMAN. PROBABLE FRACTURED R. INDEX FINGER.
DRILL PIPE WAS STILL BEING SPUN UP AFTER DERRICKMAN BEGAN UNHOOKING
THE TUGGER WIRE. RIGHT HAND WAS CAUGHT IN CABLE, PINCHING TWO FINGERS.

ELECTRIC LOG: SCHLUMBERGER 0
MUD LOG: SPERRY 7
MUD ENGR: MI 2
MWD SERVICE: SPERRY 2
WELLHEAD: DRILQUIP 1

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 10/23/93

Other Drills-Describe FIRE DRILL 10/24/93.

COMMUNICATION: N. S. TELECOM 1
OTHER: Divers/Radio/MMS 8
VISITORS: ACS 0

TIME	HRS	OPERATIONS FROM 0600 TO 0600	TOTAL PERSONNEL
------	-----	------------------------------	-----------------

			93
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NOTE: NO DIVING PAST 24 HRS.

Kulluk Alert Status (Hours)

Green Blue Yellow Red Black

0 14.25 9.75

24

24

ICE COVERAGE PRESENTLY OPEN WATER

TOTAL HOURS: 24.0

On Site Engineer: T. A. BILLINGSLEY

Signed: D. BUMGARDNER/L. HILL

DATE: 10/27/93

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OCS DISTRICT OFFICE
OCT 27 1993
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Y-1597 #1			TAB 10/25/93		
KICK TOLERANCE WORKSHEET		CASE 1			
GIVEN INFORMATION & ASSUMPTIONS:			TBD = To be determined		
Variable	Symbol	Value	Units		
Safety Factor	SF	TBD	ppg		
Kick Tolerance	KT	TBD	ppg		
Leakoff Test Depth	DPIT	3870	feet		
Influx Volume	Vi	25	bbls		
Length of Influx	Li	TBD	feet		
Hole diameter	DH	12.25	inches		
Drill collar diameter	DC	8.0	inches		
Actual mud weight in use	AMW	10.2	ppg		
Total depth of well	TD	7000	feet		
Reduction in hydrostatic	RH	TBD	ppg		
Yield point of mud	YP	37	lbs/100 sq ft		
Drill pipe diameter	DP	5.0	inches		
Surge Gradient	SG	TBD	ppg		
Water depth at site	DW	87	feet		
Air gap from MSL to RTE	GA	65	feet		
Riser Margin	RM	TBD	ppg		
Allowance Factor	A	TBD	ppg		
Equivalent MW at leakoff	EMW	15.5	ppg		

RECEIVED
OCS DISTRICT OFFICE
OCT 27 1993
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

SECURE-FX INFORMATION
OCT 27 06:45
PRCO KUALUM II - 907 2651393

NO. 407

004

CALCULATIONS:	CASE 1			
1) Safety Factor:				
Below 20" Conductor	33	psi		
Below 13-3/8" Surface	50	psi		
Below 9-5/8" Intermediate	100	psi		
SF, selected from above 3 choices:	50	psi		
SF =	0.248	ppg	(is LESS than 0.334 ppg, thus use 0.248)	
	0.248	ppg		
2) Reduction In Hydrostatic:				
Li =	299	feet		
RH =	0.436	ppg		
3) Surge Gradient:				
SG =	0.241	ppg		
4) Riser Margin:				
RM =	0.112	ppg		
5) Allowance Factor:				
A =	0.677	ppg	(note: RH + SG is greater than RM)	
6) Kick Tolerance:				
KT =	2.12	ppg		
Max Allowable Csg Pressure	1066.6	psi		
Assuming Vi =	25	bbls		

SPERRY-SUN DRILLING SERVICES, INC.

PAGE 1

ARCO ALASKA, INC.
WILDCAT
AKMMSS1028:55-171-00011
OCTOBER 1993

OC9-Y-1597 #1
KULLUK
NORTH REFERENCE : TRUE NORTH
SHORT COLLAR METHOD
MAG. FIELD STRENGTH (NT) : 57553
DIP ANGLE : 80.96
TOTAL CORRECTION : 31.47

MEASURED INCLIN DEPTH (feet)	INCLIN (degree)	AZIMUTH (degree)	VERTICAL DEPTH (feet)	LATITUDE (N/S, +/-) (feet)	DEPARTURE (E/W, +/-) (feet)	VERTICAL SECTION (feet)	DOG LEG SEVERITY (deg/100ft)
4552.06	0.58	198.58	4551.62	-43.20	10.93	43.17	0.07
4646.62	0.62	193.45	4646.17	-44.15	10.65	44.13	0.06
4739.50	0.67	196.08	4739.05	-45.16	10.39	45.13	0.06
4832.03	0.68	200.58	4832.57	-46.20	10.04	46.17	0.05
4927.05	0.71	198.46	4926.50	-47.27	9.66	47.25	0.04
5020.84	0.85	191.93	5020.36	-48.50	9.22	48.48	0.17
5114.74	0.86	193.50	5114.25	-49.87	9.03	49.85	0.00
5149.29	0.87	193.09	5148.80	-50.37	8.91	50.35	0.00
5301.83	1.03	195.26	5301.32	-52.82	8.28	52.80	0.10
5421.83	0.95	191.30	5421.40	-54.84	7.81	54.82	0.08
5518.05	0.85	188.41	5517.51	-56.32	7.55	56.31	0.11
5610.78	0.88	188.68	5610.23	-57.71	7.34	57.69	0.00
5700.68	1.05	194.07	5700.12	-59.19	7.03	59.17	0.21
5800.55	1.05	189.83	5799.97	-60.98	6.66	60.96	0.07
5891.42	1.23	192.35	5890.89	-62.80	6.29	62.78	0.27
5984.81	1.25	194.37	5984.18	-64.91	5.81	64.80	0.05
6077.67	1.34	194.48	6077.02	-66.85	5.28	66.84	0.09
6174.62	1.33	188.91	6173.95	-69.06	4.83	69.05	0.13
6266.76	1.35	187.76	6266.06	-71.20	4.51	71.18	0.04
6362.66	1.49	197.14	6361.93	-73.31	3.99	73.30	0.28
6456.44	1.53	197.30	6455.68	-75.87	3.26	75.87	0.04
6548.68	1.64	200.53	6547.88	-78.29	2.42	78.28	0.15
6643.11	1.68	197.47	6642.27	-80.87	1.54	80.86	0.10
6736.90	1.92	197.58	6736.02	-83.68	0.66	83.68	0.26
6831.25	1.96	193.40	6830.31	-86.75	-0.20	86.76	0.15

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD
HORIZONTAL DISPLACEMENT AT A DEPTH OF 6831.3 FEET
IS 86.8 FEET ALONG S 0 DEG 8 MIN W
RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION COMPUTED ALONG 180.13 DEG
A DECLINATION OF 31.47 HAS BEEN APPLIED

=== To Exit, Press "F4" ===

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GENERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

~~OCT 26 1933~~

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

TIME	HRS	OPERATIONS FROM 0600 TO 0600
6:00 6:30	0.5	CONT'D POH ON SHORT TRIP. REQ'D TO PUMP/REAM EACH STD.
6:30 7:30	1.0	CIRC B/U @ SHOE TO CLEAR HOLE/BHA. SERVICED TOP DRIVE WHILE CIRC.
7:30 9:30	2.0	CONT'D POH TO TOP OF HWDP. SWABBING NOTED IN CSG INITIALLY INDICATING SOLIDS BUILD-UP.
		CIRC/ROTATED AS REQ'D.
9:30 14:00	4.5	P/U 60 JTS (1904.10) 19.5 PPF "E" DP. RIH TO BOTTOM @ 5435'.
		NOTE: RETRIEVED STD ACROSS DERRICK-1/2 HR; SETTING COMPENSATOR-1/2 HR.
		WENT FROM BLUE TO YELLOW ALERT (ENVIRONMENTAL) @ 12:00, WINDS UP TO 36-45 KNTS, SEAS 8'.
14:00 16:30	2.5	DRILLED 12-1/4" HOLE FROM 5428' TO 5583'. WEATHER/SEAS DETERIORATED.
		WENT TO RED ALERT AT 16:30. WINDS 38-34 KNTS FROM 250° SEAS 9' AND BUILDING. VESSEL ANGLE 3°.
		RISER ANGLE (COMBINED) 5°.
16:30 17:00	0.5	CIRC B/U.
17:00 19:00	2.0	POH TO SHOE. HOLE IN GOOD CONDITION. PULLED ADDITIONAL 3 STDs.
19:00 20:00	1.0	P/U WB HANG-OFF TOOL. RIH ON LANDING STRING. HUNG-OFF DRILL STRING ON WB.
		DISPLACED RISER TO SW. RECOVERED LANDING STRING.
SUBTOTAL HOURS:	14.0	<div> <div>Op Time 6.5</div> <div>Env Alert Status: YELLOW</div> <div>Kick Tolerance: 2.63</div> </div>
On Site Engineer: T. A. BILLINGSLEY Signed: T. B. CAMPBELL/S. SCHULTZ		

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PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:		8 1/2" MWD-LWD/F.S/PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-Q/24X5" HWDP						
		- 1202.35'						
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary			
Pot Water:	179	1,516	Bbl		Rotary	Motor		
Drill Water:	0	3,523	Bbl	Well Daily	6.8	0.0	6.8	
Fuel:	6,546	327,260	Gal	Well Cumulative	65.4	24.1	89.5	
Barite:	463	9,371	Sx	BHA	65.4	24.1	89.5	
Cement: G/AS	0/0	1198/3197	Sx	PERSONNEL ONBOARD				
Supply Vessel Information:					ARCO:	4		
VESSEL	BARITE (BX)	CEMENT (BX)	FUEL USED	FUEL LEFT	POB	PARTNER:	1	
IKALUK	1654		2,113	257,588	19	CONTRACTOR: CANMAR	52	
MISCAROO	1544		2,113	346,328	18	CATERER: STANTON	10	
KALVIK		1720/G	3,434	414,592	17	CEMENTER: DOWELL/HOWCO	1	
SUPPLIER	4123		1,057	94,838	15	WEATHER: HORIZON	2	
WEATHER DATA: @ 05:00					SAFETY: H2S/MEDIC			2
TEMPERATURE	10"	WIND SPEED 16 KTS	DIRECTION	060°	CASING: GBR/HDS			1
VISIBILITY	7 NM	CEILING 600' OVCST	SEAS	8'	CORING: INTEQ/CORELAB			
Personnel Accidents: Yes _____ NRE Reported _____ X					DST: HRS			0
Description of Accident: <div style="text-align: center;"> <p>303 DISTRICT OFFICE</p> <p>OCT 26 1993</p> <p>MINERALS MANAGEMENT SERVICE</p> <p>ANCHORAGE, ALASKA</p> </div>					ELECTRIC LOG: SCHLUMBERGER			0
					MUD LOG: SPERRY			7
					MUD ENGR: MI			2
					MWD SERVICE: SPERRY			2
					WELL HEAD: DRILQUIP			1
Well Site Safety: HELD DRILL ON RIG ON 10/13/93					COMMUNICATION: N. S. TELECOM			1
Date Last Kick Drill: 10/3/93					OTHER: Divers/Radio/MMS			6
Other Drills-Describe FIRE DRILL 10/24/93					VISITORS: ACS			0
TIME	HFS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL:		94
20:00	20:30	0.5	MONITORED WEATHER BEFORE UNLATCHING LMRP. FORECAST WEATHER TO IMPROVE.					
20:30	21:00	0.5	DOWN GRADED ALERT STATUS FROM RED TO YELLOW @ 20:50 HRS. P/U HANGER RETRIEVING TOOL					
21:00	22:30	1.5	RIM TO SHEAR RAMS. DISPLACED RISER TO 9.8 PPG MUD. OPENED CHOKE LINE. NO PRESSURE UNDER SHEAR RAMS.					
			OPENED SHEAR RAMS. RECOVERED HANG-OFF TOOL/LANDING STRING. STOOD BACK SAME.					
22:30	0:00	1.5	RIM TO 5583'. PRECAUTIONARY REAMED 5493' TO BOTTOM @ 5583'. NO FILL					
0:00	6:00	8.0	DRILLED 12-1/4" HOLE FROM 5583' TO 6031'					
NOTES: 1) TOO ROUGH TO JUMP DIVERS.								
2) WENT TO YELLOW ALERT AT 12:00 DUE TO HIGH WINDS/SEAS. RISER ANGLE @ 1.5° MAX.								
3) TRACE OF NEW SHORE ICE DRAFTED BY RIG @ 14:00 HRS.								
4) WENT TO RED ALERT DUE TO HIGH RISER ANGLE OF 5°.								
5) WENT TO YELLOW ALERT TO RESUME DRILLING @ 20:30								
Kulluk Alert Status (Hours)								
		Green	Blue	Yellow	Red	Black	ICE COVERAGE PRESENTLY OPEN WATER	
		0	12	7.7	4.3		W/TRACE OF NEW ICE	
		24						
TOTAL HOURS: 24.0		24						

On Site Engineer: T. A. BILLINGSLEY

Signed: T.B. CAMPBELL/S. SCHULTZ

DATE: 10/26/93

Y-1597 #1					
			TAB 10/25/93		
KICK TOLERANCE WORKSHEET		CASE 1			
GIVEN INFORMATION & ASSUMPTIONS:		TBD = To be determined			
Variable	Symbol	Value	Units		
Safety Factor	SF	TBD	ppg		
Kick Tolerance	KT	TBD	ppg		
Leakoff Test Depth	DPIT	3870	feet		
Influx Volume	Vi	25	bb/s		
Length of Influx	Li	TBD	feet		
Hole diameter	DH	12.25	inches		
Drill collar diameter	DC	8.0	inches		
Actual mud weight in use	AMW	9.9	ppg		
Total depth of well	TD	6100	feet		
Reduction in hydrostatic	RH	TBD	ppg		
Yield point of mud	YP	37	lbs/100 sq ft		
Drill pipe diameter	DP	5.0	inches		
Surge Gradient	SG	TBD	ppg		
Water depth at site	DW	87	feet		
Air gap from MSL to RTE	DA	65	feet		
Riser Margin	RM	TBD	ppg		
Allowance Factor	A	TBD	ppg		
Equivalent MW at leakoff	EMW	15.5	ppg		

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 ANCHORAGE, ALASKA

10/27/93 SECURE-FX TRANSMISSION
05:43 ARCO KUALUMP 11 - 907 2651393

OCT 26 1993
ARCO
OCS DISTRICT OFFICE

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

CALCULATIONS:		CASE 1		
1) Safety Factor:				
Below 20" Conductor		33	psi	
Below 13-3/8" Surface		50	psi	
Below 9-5/8" Intermediate		100	psi	
SF, selected from above 3 choices:		50	psi	
SF =		0.248	ppg	(is LESS than 0.334 ppg, thus use 0.248)
		0.248	ppg	
2) Reduction In Hydrostatic:				
LI =		299	feet	
RH =		0.485	ppg	
3) Surge Gradient:				
SG =		0.277	ppg	
4) Riser Margin:				
RM =		0.121	ppg	
5) Allowance Factor:				
A =		0.762	ppg	(note: RH + SG is greater than RM)
6) Kick Tolerance:				
KT =		2.63	ppg	
Max Allowable Csg Pressure		1127.0	psi	
Assuming Vi =		25	bbbls	

SPERRY-SUN DRILLING SERVICES, INC.

PAGE 1

ARCO ALASKA, INC.
WILDCAT
ARMM931023, 55-171-00011
OCTOBER 1993

DCS-Y-1597 #1
KUULUM
NORTH REFERENCE : TRUE NORTH
SHORT COLLAR METHOD
MAG. FIELD STRENGTH (NT) : 57553
DIP ANGLE : 80.96
TOTAL CORRECTION : 31.47

MEASURED INCLIN DEPTH (feet)	INCLIN (degree)	AZIMUTH (degree)	VERTICAL DEPTH (feet)	LATITUDE (N/S, +/-) (feet)	DEPARTURE (E/W, +/-) (feet)	VERTICAL SECTION (feet)	DOG LER SEVERITY (dg/100f)
4083.35	0.38	183.04	4082.92	-39.40	11.68	40.44	0.00
4177.67	0.46	190.03	4177.24	-40.09	11.60	41.11	0.09
4270.62	0.46	182.33	4270.19	-40.82	11.52	41.83	0.06
4363.71	0.46	193.86	4363.28	-41.56	11.41	42.55	0.10
4552.06	0.58	198.58	4551.62	-43.20	10.93	44.13	0.07
4646.62	0.62	193.45	4646.17	-44.15	10.85	45.04	0.06
4739.50	0.67	196.08	4739.05	-45.16	10.39	46.02	0.06
4833.03	0.68	200.58	4832.57	-46.20	10.04	47.01	0.05
4927.05	0.71	196.46	4926.58	-47.27	9.66	48.04	0.04
5020.84	0.85	191.93	5020.36	-48.50	9.33	49.23	0.17
5114.74	0.86	193.50	5114.25	-49.87	9.03	50.55	0.00
5149.29	0.87	193.09	5148.80	-50.37	8.91	51.04	0.00
5301.83	1.03	195.26	5301.32	-52.82	8.28	53.41	0.10
5421.93	0.95	191.30	5421.40	-54.84	7.81	55.26	0.08
5518.05	0.88	188.41	5517.51	-56.32	7.55	56.81	0.11
5610.78	0.88	188.68	5610.23	-57.71	7.34	58.17	0.00
5700.68	1.05	194.07	5700.12	-59.19	7.03	59.60	0.21
5800.55	1.05	189.83	5799.97	-60.98	6.66	61.34	0.07

CALCULATIONS BASED ON THE MINIMUM CURVATURE METHOD
HORIZONTAL DISPLACEMENT AT A DEPTH OF 5800.5 FEET
IS 61.3 FEET ALONG S 6 DEG 14 MIN E
RELATIVE TO WELL HEAD

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION COMPUTED ALONG 173.77 DEG
A DECLINATION OF 31.47 HAS BEEN APPLIED

=== To Exit, Press "F4" ===

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MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

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PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295		Depth: 5426'	Prog: 1566'	Spud Date: 10/13/93 9:00 AM	Days Actual: 139 19.00	Days Planned: 21	Date: 10/25/93
OCS-Y-1597 #1							
Contractor/Rig No.: CANMAR/KULLUK		Last Casing: 13-9/8" @ 9920'	Next Casing: 9-5/8" @ 10,000'		Shoe Test EMW: 15.5 PPG		Formation: 40%GLT/50%CLAY/10%SS
Operation at 0600:				1993 Proj. Cost \$		Daily Cost, (\$): \$	Accum. Cost, (\$): \$
POH FOR SHORT TRIP TO CONDITION HOLE							
BIT DATA		MUD DATA		MUD LOG DATA		DRILLING	
Bit #:	3	MW: 9.8+	KWM 18.1	Filter Cake:	KWM Cake:	Depth:	3860
Size:	12-1/4"	Visc: 71	Visc:	%Solids: 8	%Solids:	Depth:	5426'
Make:	HYCLOG	PV: 28	PV:	%Sand: 0.65	%Sand:	ROT	
Type:	DS40H	YP: 29	YP:	Ph: 9.1	Ph:	WT:	220
Ser #:	14352	Gels: 5/6	Gels:	Pm: .3	Pm:	Torque:	200 A
Depth Out:	SH	API FL: 3.8	API FL: ---	Pi: .2	Pi:	PU Wt.:	230
Feet:	1566'	HTHPWL: -	MI: 1.2	MI:		Jar No.:	1771-0008
Hours:	12.1	MBT: 3.5	Chlor: 18000	Chlor:		Jar Hrs.:	162
WOB:	5	CUM CST \$264,809	DAILY \$37,782	Q/W: 0/92	Q/W:		
RFM:	140	Kick Tol:	3.1	Total GPM: 688			
Jets:	5X14	Survey No.	Depth	Angle	Azimuth		
Grade:	0.751	19	4083	0.38			
		20	4364	0.46			
		21	4740	0.67			
		22	6021	0.86			
		23	5149	0.87			
		24	5302	1.03			
TIME		HRS	OPERATIONS FROM 0600 TO 0600				
6:00	6:30	0.5	DRILLED UP PLUGS, FC THEN CMT TO 3790'.				
6:30	7:00	0.5	CIRC B/U.				
7:00	8:00	1.0	BREAK CIRC W/DOWELL UNIT. CLOSED ANNULAR. PRESSURED CSG FOR BASELINE DATA FOR LOT TO 1500 PSI.				
8:00	9:00	1.0	DRILLED CMT. FS @ 3829'. CLEANED OUT RAT HOLE 3829' - 3880'. DRILLED 12-1/4" HOLE FROM 3860' TO 3870'.				
9:00	9:30	0.5	CIRC TO CONDITION MUD FOR LOT.				
9:30	10:00	0.5	RIGGED IN DOWELL. PERFORMED LOT. 9.8 PPG MUD GAVE A LEAK-OFF OF 1140 PSI @ 3870'; EMW 15.5 PPG.				
10:00	1:00	15.0	DRILLED 12-1/4" HOLE FROM 3870' TO 5426'. DOUBLE REAMED EACH CONNECTION.				
1:00	2:00	1.0	CIRC B/U.				
2:00	5:00	4.0	POH ON SHORT TRIP TO SHOE. FIRST 2 STDs PULLED FREE. REMAINDER REQ'D TO BE PUMPED OUT.				
SUBTOTAL HOURS: 24.0		Opr Time 19.5	Env Alert Status: BLUE		Kick Tolerance: 3.10		
On Site Engineer: T.A. BILLINGSLEY		Signed: T.B. CAMPBELL/S. SCHULTZ					

OCS DISTRICT OFFICE
OCT 25 1993
MINERALS MANAGEMENT SERVICE

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ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:		BIT/MWD-LWD/F.S./PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-O/24X5" HWDP							
		= 1202.35'							
Rig Supply Data:		Used last 24 hours		Remaining Stock		Unit		Hours Summary	
Pot Water:		206		1,472		Bbl		Rotary Motor	
Drill Water:		0		3,485		Bbl		Well Daily 12.1 0.0 12.1	
Fuel:		6,707		333,816		Gal		Well Cumulative 58.6 24.1 82.7	
Barite:		1,896		9,834		Sx		BHA 58.6 24.1 82.7	
Cement: G/AS		0/0		1196/3197		Sx			
Supply Vessel Information:						ARCO:		4	
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER:		0	
IKALUK	1654		1,585	259,681	19	CONTRACTOR: CANMAR		52	
MISOARDO	1544		1,057	348,448	18	CATERER: STANTON		10	
KALVIK		1720/G	1,268	418,026	17	CEMENTER: DOWELL/HOWCO		1	
SUPPLIER	4123		793	95,894	15	WEATHER: HORIZON		2	
WEATHER DATA: @ 05:00						SAFETY: H2S/MEDIC		2	
TEMPERATURE 23° WIND SPEED 22 KTS DIRECTION 260°						CASING: GBR/HDS		0	
VISIBILITY 15 NM CEILING UNLIMITED SEAS 4'						CORING: INTEQ/CORELAB			
Personnel Accidents: Yes <input checked="" type="checkbox"/> X None Reported						DST: HRS		0	
Description of Accident:		BOBBY BOYD-ASST CRANE OPER., WORKING ON PIPE DECK 4 DAYS AGO.				ELECTRIC LOG: SCHLUMBERGER		0	
		FELL ON A CHAIN, FRACTURING RIGHT KNEECAP.				MUD LOG: SPERRY		5	
		MEDICAL TREATMENT ONLY.				MUD ENGR: MI		2	
						MWD SERVICE: SPERRY		2	
						WELLHEAD: DRILQUIP		1	
Well Site Safety: HELD DRILL ON RIG ON 10/13/93						COMMUNICATION: N. S. TELECOM		1	
Date Last Kick Drill: 10/3/93 Date Last BOP Test: 10/23/93						OTHER: Divers/Radio/MMS		8	
Other Drills-Describe FIRE DRILL 10/24/93.						VISITORS: ACS		0	
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL:		90	
		NOTE:							
		1) JUMPED DIVERS. FILL APPROX THE SAME AS YESTERDAY ON OUTSIDE OF GUIDE FRAME.							
		FILL SLOPES TOWARD INSIDE OF GUIDE FRAME (SEE ATTACHED DIVER'S REPORT).							
		MOBILIZED 6" HARDLINE FOR CONTINGENCY AIR LIFT SYSTEM.							
		2) TRANSFERRED 2776 SX BARITE FROM IKALUK TO KULLUK.							
		Kulluk Alert Status (Hours)							
			Green	Blue	Yellow	Red	Black		
	Environ.	0	24					ICE COVERAGE PRESENTLY OPEN WATER	
	Well	24							
	Vessel	24		24					
TOTAL HOURS: 24.0									

On Site Engineer: T. A. BILLINGSLEY

Signed: T.B.CAMPBELL/S.SCHULTZ

DATE: 10/25/93

OCS DISTRICT OFFICE

OCT 25 1993

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

OCS-Y-1597 #1
13-3/8" LEAK-OFF TEST

DATE: 10/24/93

MUD WEIGHT = 9.8 PPG, TVD = 3870'

HYDROSTATIC = $.052 \times 3870' \times 9.8 = 1972$ PSI

LEAK-OFF PRESSURE FROM GRAPH @ 1140 PSI WITH 2.8 BBLS PUMPED

LOT EMW = $(1972 \text{ PSI} + 1140 \text{ PSI}) / (3870' \times .052) = 15.5$ PPG

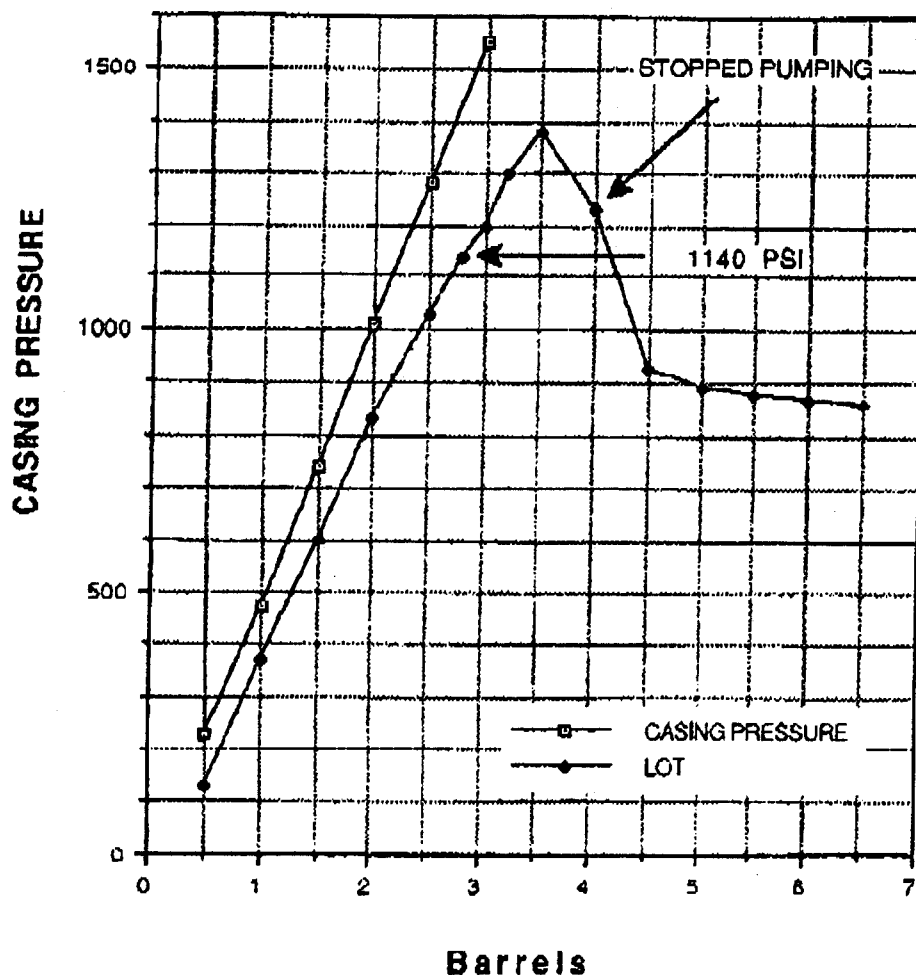
BOTH CASING AND LOT PRESSURES WERE OBTAINED @ 1/2 BPM.

HELD PRESSURE FOR 5 MINS. FORMATION BLED OFF FROM 1230 TO 850 PSI.

REG. NO.
OCS DISTRICT OFFICE

OCT 25 1993

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA



CONFIDENTIAL

OCT 25 1993 PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295		Depth: 3860'	Prog: 0'	Spud Date: 10/13/93 9:00 AM	Days Actual: 138 18.00	Days Planned: 17	MANAGEMENT SERVICE Date: 10/24/93	
OCS-Y-1597 #1							ANCHORAGE, ALASKA	
Contractor/Rig No.: CANMAR/KULLUK		Last Casing: 13-3/8" @ 3320'	Next Casing: 9-5/8" @ 10,000'		Shoe Test EMW:		Formation: 50%SLT/30%CLAY/20%SS	
Operation at 0800:					1993 Proj. Cost \$		Daily Cost, (\$): \$	
DRILLING OUT FLOAT EQUIPMENT							Accum. Cost, (\$): \$	
BIT DATA			MUD DATA			MUD LOG DATA		
Bit #: 3			MW: 9.8	KWM: 15.0	Filter Cake: 7.5	KWM Cake: 7.5	DRILLING	
Size: 12-1/4"			Visc: 60	Visc: 45	%Solids: 7.5	%Solids: 7.5	Depth: 3860'	Depth: 3860'
Make: HYCLOG			PV: 19	PV: 28	%Sand: 0.5	%Sand: 0.5	Mud Wt: 8.6	WT: 220
Type: DS40H			YP: 28	YP: 39	Ph: 9.3	Ph: 9.3	FL Temp: 44	PU Wt: 230
Ser #: 14352			Gels: 4.7	Gels: 6/8	Pm: .5	Pm: .5	BGG: 0	SO Wt: 225
Depth Out: SH			API FL: 4.4	API FL: ---	Pf: .3	Pf: .3	CG: 0	Pump #1
Feet:			HTHPWL: ---		Mf: 1.5	Mf: 1.5	TG: 25	Data #2
Hours:			MBT: 2.8		Chlor: 17000	Chlor: 17000	Max Gas: 0	LNR: 6.5
WOB:			CUM CST \$227,027	\$DAILY \$14,656	O/W: 0/92.5	O/W: 0/92.5	Do Exp: 1.22	SPM: 78
RFM:			Kick Tol:		Total GPM: 780		Sh Den: N/A	PSI: 2430
Jets: 5X14			Survey No: 13	Depth: 3375	Angle: 0.10	Azimuth: ---	Est PP: 8.7	SPS: 50
Grade: 0.751			14	3468	0.12			SPP: 310
			15	3561	0.15			320
			16	3666	0.21			
			17	3756	0.30			
			18	3828	0.20			
ELEVATIONS								
WTR DEPTH 87'								
RKB-MSL 65'								
RKB-ML 152'								
RKB-WH 183.5'								
GH Depth 40.5'								
RKB-BGH 192.5'								
TIME		HRS	OPERATIONS FROM 0600 TO 0600					
8:00	13:00	7.0	CONT'D TO RUN CSG. RAN TOTAL 87 JTS (3642' INCL FS, FC, BO JT, SS10 HGR) 13-3/8" 88 PPF L80 BT&C R3 CSG.					
			R/D 500 TON ELEVATORS, TAM PKR. M/U 13-3/8" SS10 CSG HGR W/SEAL ASS'Y. RIH ON LANDING STRING TO					
			PROFILE AT 187. LANDED OUT STRING. FLOAT SHOE @ 3829', FLOAT COLLAR @ 3746'.					
13:00	14:00	1.0	R/U SURFACE LINES. CIRC TO CONDITION MUD/HOLE FOR CMTING.					
14:00	17:00	3.0	PUMPED 90 BBL 8.9 PPG BRINE. R/1 DOWELL. BROKE CIRC. TESTED LINES TO 3500 PSI. DROPPED BALL F/ BOTTOM					
			PLUG. PUMPED 10 BBL SW PREFLUSH. MIXED AND PUMPED 1150 SX "G" 13.5 PPG LEAD SLURRY W/2%CACL2, 2% PHB					
			FOLLOWED BY 366 SX "G" 15.8 PPG TAIL SLURRY W/1.5% CACL2. DROPPED DART W/10 BBL SW. SHEARED OUT					
			TOP PLUG W/1800 PSI (AFTER 3 BBL SW PUMPED). DISPLACED W/529 BBL MUD. BUMPED PLUG W/2500 PSI. FLOATS					
			HELD. HAD GOOD RETURNS THRU JOBS. SMALL AMT CONTAMINATED BRINE/CMT TO SURFACE. CIP @ 17:06 HRS.					
17:00	17:30	0.5	ROTATED LANDING STRING TO RELEASE SEAL ASS'Y. TESTED LOWER CHOKE LINE/VALVE TO 2500 PSI. CLOSED					
			MIDDLE PIPE RAMS. PRESSURED BELOW RAMS TO 2500 PSI TO FULLY SET/LOCK SEAL ASS'Y TO CSG HGR.					
17:30	18:00	0.5	SHEARED OUT RUNNING TOOL W/80,000 LB OVERPULL. FLUSHED WH AREA THROUGHLY.					
18:00	19:00	1.0	POH W/RUNNING TOOL. CLEANED, L/D SAME. STOOD BACK LANDING STRING.					
19:00	22:00	3.0	MU DRILL-QUIP MULTI-PURPOSE RUNNING TOOL. RIH W/ WEAR BUSHING AND CUP TESTER, SET SAME. TESTED BOP.					
SUBTOTAL HOURS: 16.0			Opr Time 19.5	Env Alert Status: BLUE		Kick Tolerance:		
On Site Engineer: T.A. BILLINGSLEY			Signed: T.B. CAMPBELL/S. SCHULTZ					

CONFIDENTIAL

OCT 25 1993

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures MINERALS MANAGEMENT SERVICE

ANCHORAGE, ALASKA

Summarized BHA Description:		BIT/MWD-LWD/F.S./PONY D.C./12-1/4" STAB/1X8" DC/12-1/4" STAB/10X8" DC/8" JARS/1X8" DC/X-O/24X5" HWDP - 1202.35'							
Rig Supply Data:		Used last 24 hours		Remaining Stock		Units		Hours Summary	
Pot Water:		162		1,484		Bbl			
Drill Water:		0		3,472		Bbl		Well Daily	1.5 0.0 1.5
Fuel:		5,426		340,523		Gal		Well Cumulative	46.5 24.1 70.6
Barite:		838		8,952		Sx		BHA	46.5 24.1 70.6
Cement: G/AS		1524/0		1196/3197		Sx		PERSONNEL ONBOARD	
Supply Vessel Information:								ARCO: 3	
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER:		0	
IKALUK	4410		1,585	261,266	18	CONTRACTOR: CANMAR		53	
MISCAROO	1544		1,057	349,500	18	CATERER: STANTON		10	
KALVIK		1720/G	1,189	419,294	17	CEMENTER: DOWELL/HOWCO		3	
SUPPLIER	4123		132	96,667	15	WEATHER: HORIZON		2	
WEATHER DATA: @ 05:00						SAFETY: H2S/MEDIC		2	
TEMPERATURE 24°		WIND SPEED 18 KTS		DIRECTION 150°		CASING: GBR/HDS		2	
VISIBILITY 7 NM		CEILING 400'		SEAS 5'		CORING: INTEQ/CORELAB			
Personnel Accidents: Yes _____ None Reported <u>X</u>						DST: HRS		0	
Description of Accident:						ELECTRIC LOG: SCHLUMBERGER		0	
						MUD LOG: SPERRY		5	
						MUD ENGR: MI		2	
						MWD SERVICE: SPERRY		2	
						WELLHEAD: DRILQUIP		1	
Well Site Safety: HELD DRILL ON RIG ON 10/13/93						COMMUNICATION: N. S. TELECOM		1	
Date Last Kick Drill: 10/3/93 Date Last BOP Test: 10/19/93						OTHER: Divers/Radio/MMS		8	
Other Drills-Describe ABANDON SHIP/LIFEBOAT & FIRE DRILL 10/17/93.						VISITORS: ACS		1	
TIME	HRS	OPERATIONS FROM 0600 TO 0600						TOTAL PERSONNEL: 95	
		BOP STACK AND CHK MANIFOLD TESTED TO 250/5000 PSI. RETRIEVED MULTI-PURPOSE TOOL.							
22:00	23:30	1.5	CLOSED SHEAR RAMS. TESTED RAMS/CASING TO 3500 PSI FOR 30 MIN. CUT DRILL LINE WHILE BOP TESTING.						
23:30	6:00	6.5	MU 12-1/4" BIT, SERVICED MWD, RIH WITH DS, TAGGED FC 3748'. DRILLED FLOAT TO 3750'.						
NOTE: 1) SLIM WHEN POH TO RUN CSG: DIFFERENCE -2.04' - NO CORRECTION.									
2) TESTING OF SURFACE BOPE NOT REQUIRED AS PER MMS REPRESENTATIVE R. HOWELL. LAST TESTED 10/19/93.									
3) JUMPED DIVERS, FOUND INCREASED SLOUGHING OF GLORY HOLE PARTICULARLY ON GUIDE POSTS #2 AND #3.									
(SEE ATTACHED DIVERS REPORT)									
A PIECE OF FORMATION 30" TALL X 5' WIDE WAS LODGED BETWEEN GUIDE POST #3 AND THE SIDE OF GH.									
ABOUT 8' ABOVE FILL LINE @ BOTTOM OF GH. PLAN TO CONTINUE DAILY DIVES TO MONITOR SLOUGHING.									
WILL NOT AIR LIFT UNTIL FILL JEOPARDIZES PULLING OF BOP STACK.									
4) NO WEAR OBSERVED ON NOMINAL WEAR BUSHING.									
Kulluk Alert Status (Hours)									
		Green	Blue	Yellow	Red	Black			
	Environ.	0	24				ICE COVERAGE PRESENTLY OPEN WATER		
	Well	24							
	Vessel	24		24					
TOTAL HOURS: 24.0									

On Site Engineer: T. A. BILLINGSLEY

Signed: T.B.CAMPBELL/S.SCHULTZ

DATE: 10/24/93

Distribution
 - White - Run Every 10min in OSHA
 - Green - Exports Every 10min
 - Yellow - Exports Every 10min
 - Pink - Sub Sea Flow
 - Coloured - Other Engineer

B.O.P. Pressure Test

1504

Well Name OCS-Y-1597 #1 Ref KOKK Contactor Cumner

Test Date 93-10-23
Year Month Day

T. Water Depth 65 St. H. 184.65 in Stock = (400 mm) o (20000 iPa) W.P.

Last Test Date 93-10-19
Year Month Day

Test No. 5	Test No. 2	Test No. 4	Test No. 7	Test No. 3	Test No. 4	Test No. 8	Test No. 1
Choke Line Test	Lower Pipe Rains Test	Little Pipe Rains Inner Kill	Little Pipe Rains Outer Kill	Lower Annular Inner Choke	Upper Annular Outer Choke	Shear Rams & Lasing	Kill Line Test
Upper Annular Lower Annular Choke Rains Upper Annular Rains Middle Rains Lower Annular Rains	Upper Annular Lower Annular Shear Rams Upper Annular Rains Middle Rains Lower Annular Rains	Upper Annular Lower Annular Shear Rams Upper Annular Rains Middle Rains Lower Annular Rains	Upper Annular Lower Annular Shear Rams Upper Annular Rains Middle Rains Lower Annular Rains	Upper Annular Lower Annular Shear Rams Upper Annular Rains Middle Rains Lower Annular Rains	Upper Annular Lower Annular Shear Rams Upper Annular Rains Middle Rains Lower Annular Rains	Upper Annular Lower Annular Shear Rams Upper Annular Rains Middle Rains Lower Annular Rains	Upper Annular Lower Annular Shear Rams Upper Annular Rains Middle Rains Lower Annular Rains
Test Pressure MPa 250/5000	Test Pressure MPa 250/5000	Test Pressure MPa 250/5000	Test Pressure MPa 250/5000	Test Pressure MPa 250/5000	Test Pressure MPa 250/5000	Test Pressure MPa 250/3500	Test Pressure MPa 250/5000
Test Time min 5/5	Test Time min 5/5	Test Time min 5/5	Test Time min 5/5	Test Time min 5/5	Test Time min 5/5	Test Time min 5/5	Test Time min 5/5

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

OCT 25 1993

Hydraulic Operations Test		Open		Closed	
Function	Pressure MPa	Time Seconds	Volume	Time Seconds	Volume
Upper Annular		39	65.9	46	88.3
Lower Annular		40	66.6	48	88.1
Choke Rains		14	17.0	14	17.8
Upper Annular Rains		14	17.1	15	18.0
Lower Annular Rains					

Blue Drillers
 Note:
 1. The test is to be conducted at a pressure of 250 MPa (3625 psi) for 5 minutes.
 2. The test is to be conducted at a pressure of 5000 MPa (72500 psi) for 5 minutes.
 3. The test is to be conducted at a pressure of 3500 MPa (50750 psi) for 5 minutes.

All 10m choke manifold valves tested with BOP functions as per chart.

Legend	
	Closed
	Open
	Pressure

SECURE-TX TRAC
 OCT 25 1993 08:32H
 RCU KILLUM II 7 307 265135
 OCS DISTRICT OFFICE

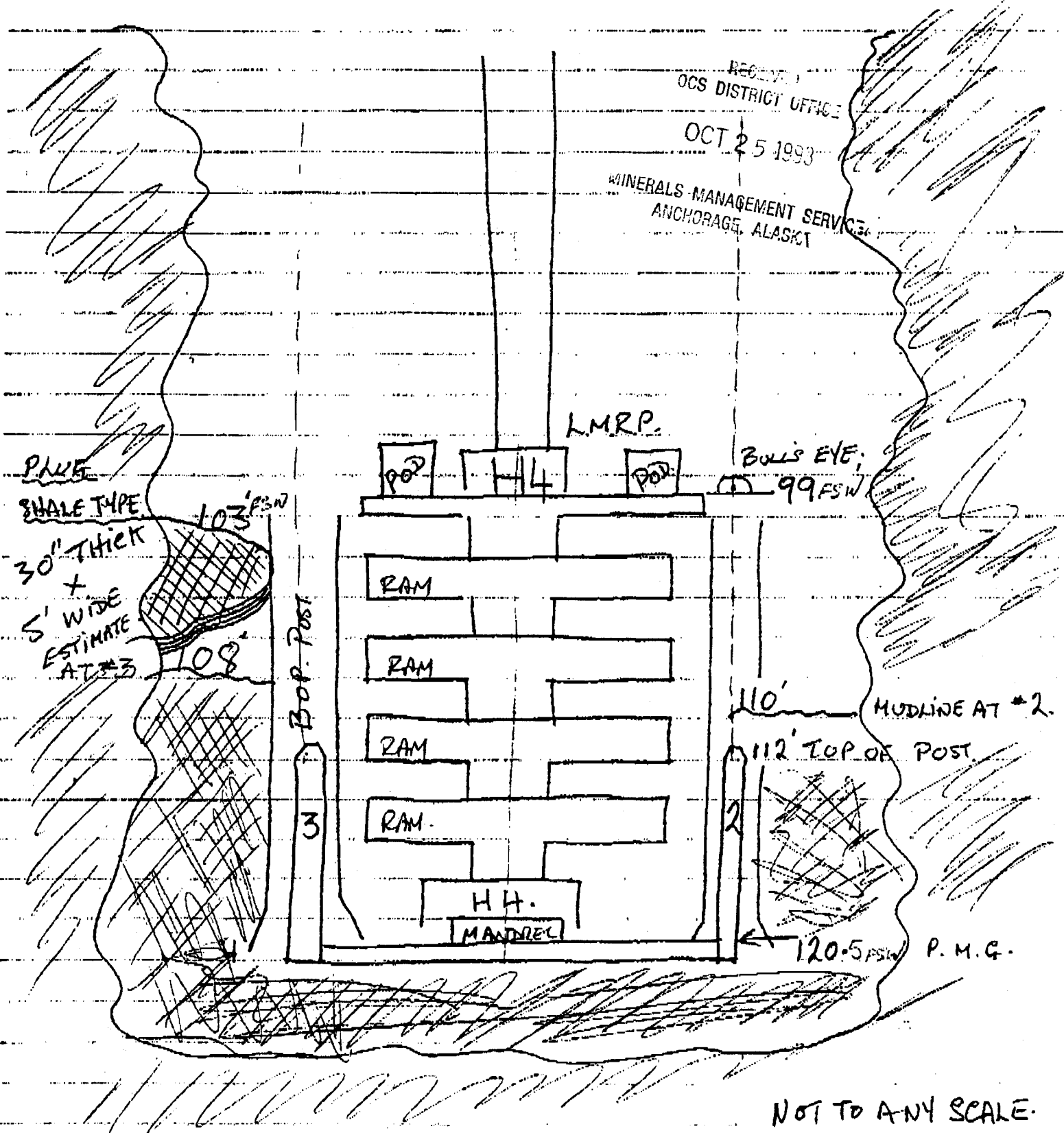
P. 2
 NO. 372
 OCS

OCT 25 '93 08:32AM HAI EXPLORATIONS DRILLING
10/25/93 06:07 ARCO KUULUM II → 907 2651393

REC'D
DCS DISTRICT OFFICE

MORTECH U.S.A. INC.

SATURDAY 23RD OCT. 93. DIVE #151. JOHN RILKOFF.



NOT TO ANY SCALE.

400 225 ON

5651592 206 - 11 WILLIAM II - 907 2651393

06:08

10/25/93

SECURE TX TRANSMISSION

THE UPPER BULLS EYE. 44FSW. P. 4. D. 1 & U. S. W.

Hodgins. Supervisor.

RISER & POD HOSE.

YELLOW POD & HOSE AT NO 3 POST. L.M.R.P.

CONTINUE DESCENT TO P.M.G.

BULL'S EYE ON P.M.G. RECORD.

LOWER H.H. CONNECTOR. LOCK INDICATOR.

MUD LINE INSIDE CAISSON AT P.M.G.

ASCENDING

VISUAL RAM CHECK. (HOSES & DEBRIS)

BULL'S EYE AT #3 AND #4 BELOW LATCH. X

UPPER H.H. AND LOCK INDICATOR: (NOT LOCATED)

BLUE POD AND HOSE BUNDLE.

ASCENT FROM L.M.R.P. TO SURFACECHECK PT KILL OR CHOKER

OK.

OK

at 44.5.

TOP BULLSEYE.

0' VISIBILITY.

SUPERVISOR. Sig. Hodgins.

PMG MUD LINE SURVEY.* FRIDAY 2 OCT.

BL ON 20W.

21ST. LEVEL ON

OCT. LEVEL ON 22ND

118' + 2'

1 117' + 3'

1 117' + 3'

117' + 3'

2 117' + 3'

2 117' + 3'

118' + 2'

3 118' + 2'

3 117' + 3'

120' + 0'

4 118' + 2'

4 118' + 2'

COPY RIG FILE.

CLIENT. Bruce CAMBELL.

105 DISTRICT OFFICE
OCT 25 1993
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295	Depth: 3860'	Prog: 476'	Spud Date: 10/13/93 9:00 AM	Days Actual: 137	Days Planned: 17.00	Date: 10/23/93
OCS-Y-1697 #1						

Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 20" @ 1000'	Next Casing: 13-3/8" @ 3837'	Shoe Test EMW: 15.0 PPG	Formation: 50%GLT/90%CLAY/20%SS
-----------------------------------	--------------------------	------------------------------	-------------------------	---------------------------------

Operation at 0600: RUNNING 13-3/8" CASING	1993 Proj. Cost \$	Daily Cost, (\$): \$	Accum. Cost, (\$) \$
--	-----------------------	-------------------------	-------------------------

BIT DATA				MUD DATA				MUD LOG DATA		DRILLING			
Bit #:	2			MW: 9.6	KWM: 14.8	Filter Cake:	KWM Cake:	Depth:	3860	Depth:	3384'		
Size:	17-1/2"			Visc: 72	Visc: 45	%Solids: 7.6	%Solids:			ROT			
Make:	SEC			PV: 20	PV: 26	%Sand: 1.5	%Sand:	Mud Wt:	9.6	WT:	220	Torque:	200 A
Type:	S33SF			YP: 39	YP: 39	Ph: 9.2	Ph:	FL Temp:	44	PU Wt:	230	Jar No.:	1771-0008
Ser #:	620621			Gels: 6/10	Gels: 6/8	Fm: .35	Fm:	BGG:	10	SO Wt:	225	Jar Hrs.:	150
Depth Out:	3860'			API FL: 3.6	API FL: —	Pt: .3	Pt:	CG:	0	Pump Data		HYDRAULICS	
Feet:	2840'			HTHPWL: —		MF: 1.7	MF:	TG:	70	LNR:	6.5	6.5	Bit ΔP: 850
Hours:	36.5			MBT: 3.8		Chlor.: 17000	Chlor.:	Max Gas:	15	SPM:	99	100	HHP: 485
WOB:	10/20			211867	24166	0/92.5	OW:	Dc Exp:	1.22	PSI:	2700	2700	HHP/sq in: 2.0
RPM:	140			Kick Tot: 1.03		Total GPM: 1013		Sh Den:	N/A	SPS:	50	50	ECD: 9.7
Jete:	3 X 20			Survey No:	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS
Grade:	1 X 10			13	3375	0.10							WTR DEPTH 87'
	2-2-IN			14	3468	0.12							RKB-MSL 65'
				15	3561	0.15							RKB-ML 152'
#2	2-2-WT-A-E-IN-NO-TD			16	3666	0.21							RKB-WH 183.6
				17	3756	0.38							GH Depth 40.5'
				18	3828	0.26							RKB-BGH 192.5'

TIME	HRS	OPERATIONS FROM 0800 TO 0600
6:00	13:00	7.0 DRILLED 17-1/2" HOLE FROM 3384' TO TD OF THIS HOLE SECTION AT 3860'. (CORRELATED FOR GOOD CSG SHOE SET)
13:00	14:00	1.0 CIRC B.U.
14:00	17:00	3.0 POH ON SHORT TRIP TO 20" SHOE. FIRST 2 STDs PULLED OK. REQD TO PUMP OUT STD #3, 4TH STD OK. PUMPED OUT STD #5, 6, 7, 8. PULLED REMAINDER.
17:00	18:30	2.5 MONITORED WELL, STATIC. RIH TO BOTTOM @ 3860'. NO FILL NOTED.
18:30	20:00	CIRC B.U. CIRC TO CONDITION MUD. MONITORED WELL, STATIC.
20:00	22:30	POH TO RUN CASING.
22:30	23:00	PULLED BHA INTO SHOE, HAD 20K OVERPULL, CIRC CLEAN.
23:00	1:00	CONT POH. CLEANED COPIOUS AMOUNTS OF GUMBO FROM DRILL STRING.
1:00	1:30	PULLED TO MWD AND DOWNLOADED LOGS.
1:30	2:00	PULLED REMAINING BHA. BROKE OUT BIT.
2:00	3:30	MU WEAR BUSHING RUNNING TOOL, RIH AND RETRIEVED WEAR BUSHING.
3:30	4:30	RU 500 TON CASING SLIPS AND ELEVATORS, 13-3/8" TAM PAKR AND 13-3/8" CASING TONGS.
4:30	6:00	MU 13-3/8" SHOE AND FLOAT COLLAR JTS. CHECKED FLOATS. OK. RUNNING 13-3/8" CASING AT REPORT TIME.
SUBTOTAL HOURS:	13.5	Opr Time 19.5 Env Alert Status: BLUE Kick Tolerance: 1.03
On Site Engineer: T. A. BILLINGSLEY Signed: T. B. CAMPBELL/S. SCHULTZ		

OCS DISTRICT OFFICE

OCT 25 1993

MINERALS MANAGEMENT SERVICES
ANCHORAGE, ALASKA

CONFIDENTIAL

OCT 25 1993

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

GENERAL MANAGEMENT SERVICE

Summarized BHA Description:

BIT/B.S./X-C/MWD-LWD/F.S./PONY D.C./17.5" STAB/1X6" DC/17.5" STAB/10X6" DC/8" JARS/OB" DC/X-O/24X6" HWDP
= 1207.09'

Rig Supply Data:

Pot Water:

Used last 24 hours
214

Remaining Stock
1,491

Unit
Bbl

Drill Water:

0

3,465

Bbl

Fuel:

6,789

345,949

Gal

Barite:

0

9,790

Sx

Cement: G/AS

0/0

2720/3197

Sx

Hours Summary

	Rotary	Motor	
Well Daily	7.0	0.0	7.0
Well Cumulative	45.0	24.1	69.1
BHA	45.0	24.1	69.1

PERSONNEL ONBOARD

Supply Vessel Information:

VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB
IKALUK	4410		1,585	262,851	18
MISCAROO	1544		1,057	350,556	18
KALVIK		1720/G	951	420,483	17
SUPPLIER	4123		132	96,819	15

ARCO:	3
PARTNER:	0
CONTRACTOR: CANMAR	52
CATERER: STANTON	10
CEMENTER: DOWELL/HOWCO	3
WEATHER: HORIZON	2
SAFETY: H2S/MEDIC	2
CASING: GBR/HDS	2
CORING: INTEQ/CORELAB	
D&T: HRS	0
ELECTRIC LOG: SCHLUMBERGER	0
MUD LOG: SPERRY	5
MUDENG: MI	2
MWD SERVICE: SPERRY	2
WELLHEAD: DRILQUIP	1
COMMUNICATION: N. S. TELECOM	1
OTHER: Divers/Radio/MMS	8
VISITORS: SURV. SYSTEMS/MEZO	

WEATHER DATA: @ 06:00

TEMPERATURE 26° WIND SPEED 12 KTS DIRECTION 270°
VISIBILITY 1.6 NM CLOUD 700' SEAS 1'

Personnel Accidents:

Yes _____ None Reported ☒ X

Description of Accident:

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 10/19/93

Other Drills-Describe ABANDON SHIP/LIFEBOAT & FIRE DRILL 10/17/93.

TIME	HRS	OPERATIONS FROM 0600 TO 0600	TOTAL PERSONNEL
------	-----	------------------------------	-----------------

			93

NOTE:

- 1) JUMPED DIVERS, NOTED NO FURTHER SLOUGHING IN GLORY HOLE.
- 2) DISCUSSED CSG PT @ 3837' IN LIEU OF PERMITTED DEPTH OF 4000' W/MMS REP R. HOWELL. NO OBJECTIONS.
- 3) YELLOW ALERT FOR 1 HR TO TRANSFER HELICOPTER FUEL.

Kulluk Alert Status (Hours)

	Green	Blue	Yellow	Red	Black	
Environ.	0	24				ICE COVERAGE PRESENTLY OPEN WATER
Well	24					
TOTAL HOURS: 13.5	Vessel	23	1			

On Site Engineer: T. A. BILLINGSLEY

Signed: T.B.CAMPBELL/S.SCHULTZ

DATE: 10/23/93

MARTECH. USA. INC.

E.D.V. KUULUM II

AUG 93.

SEPT. 93.

OCT. 93.

DAILY BOP. INSPECTION (VIDEO)

SUPERVISOR. T. HODGINS.

LOCATION. KUULUM II

DIVER. G. FULTON.

DATE. 22ND. OCTOBER 93.

DIVE #. 150 ASW.

CLIENT. ARCO. B. EMBELL

VISIBILITY. 3' TOP OF BOP. 0' BELOW PACKAGE;

DIVER DESCENDING INSPECTS

STB KILL OR CHOKER LINE.

RISER & POD HOSE.

YELLOW POD & HOSE AT NO 3 POST. L.M.R.P.

CONTINUE DESCENT TO P.M.G.

BULL'S EYE ON P.M.G. RECORD.

LOWER H-4. CONNECTOR. LOCK INDICATOR.

MUD LINE INSIDE CAISSON AT P.M.G.

ASCENDING

VISUAL RAM CHECK. (HOSES & DEBRIS)

BULL'S EYE AT #3 AND #4 BELOW LATCH. *

UPPER H-4. AND LOCK INDICATOR. (NOT LOCATED)

BLUE POD AND HOSE BUNDLE.

ASCENT FROM L.M.R.P. TO SURFACE

CHECK PT KILL OR CHOKER.

REMARKS

OK.

OK.

OK

at 44.5

FIG. 1
Bearing
A-1

TOP. BULLSEYE.

0' VISIBILITY.

RECEIVED
OCS DISTRICT OFFICE

OCT 25 1993

OFFICE

MINERALS MANAGEMENT SERVICE

ANCHORAGE, ALASKA

ALASKA

SUPERVISOR Sig. Hodgins.

2 MG MUD LINE SURVEY.

FL ON 20th.

118' + 2'

117' + 3'

118' + 2'

120' + 0'

21st. LEVEL ON

1 117' + 3'

2 117' + 3'

3 118' + 2'

4. 118' + 2'

* FRIDAY 2

OCT. LEVEL ON 22ND

1. 117' + 3'

2 117' + 3'

3 117' + 3'

4. 118' + 2'

COPY RIG FILE.

CLIENT. BEVES EMBELL.

CONFIDENTIAL

OCT 22 1993 PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9295 Depth: 2212 Prog: 1182 Spud Date: 10/13/93 9:00 AM Days Actual: 136 16.00
OCS-Y-1597 #1
Contractor/Rig No.: CANMAR/KULLUK Last Casing: 20" @ 1000' Next Casing: 13-3/8" @ 4000' Shoe Test EMW: 15.0 PPG Formation: 10% COAL 10%SLT/20%CL/80%SS
MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA
Date: 10/22/93

Operation at 0600:

DRLG 17-1/2" HOLE @ 3384'

1993 Proj. Cost

\$

Daily Cost, (\$):

\$

Accum. Cost, (\$)

\$

BIT DATA				MUD DATA				MUD LOG DATA		DRILLING			
Bit #:		2		MW: 9.6	KWM: 14.8	Filter Cake:	KWM Cake:	Depth:	3245	Depth:	3384'		
Size:		17-1/2"		Visc: 71	Visc: 45	%Solids: 7.5	%Solids:			ROT			
Make:		SEC		PV: 31	PV: 26	%Sand: 1.25	%Sand:	Mud Wt:	9.5	WT:	220	Torque:	200 A
Type:		S33SF		YP: 36	YP: 39	Ph: 9.7	Ph:	FL Temp:	40	PU Wt:	230	Jar No.:	1771-0008
Ser #:		020821		Gels: 4/5	Gels: 6/8	Pm: .5	Pm:	BGG:	10	SO Wt:	225	Jar Hrs.:	143
Depth Out:		SH		API FL: 3	API FL: 6/8	Pf: .5	Pf:	CG:	0	Pump Data		HYDRAULICS	
				HHPWL: -		Mf: 2.1	Mf:	TG:	48	LNR:	6.5	6.5	Bit ΔP: 840
Feet:		2225		MBT: 4.0		Chlor.: 17000	Chlor.:	Max Gas:	32	SFM	99	99	HHP: 475
Hours:		29.9		CUM C6T 188214	\$Daily 30687	0/02.5	O/W:	Dc Exp:	0.92	PSI	2550	2550	HHP/sq in: 2.0
WOB:		10/20				Total GPM: 1013		Sh Den:	N/A	SPS:	50	50	ECD: 9.7
RPM:		140		Kick Tol: 1.17				Est PP:	8.7	SPP:	310	320	An Vel DP/DC: 85/98
Jets:		3 X 20 1 X 10		Survey No.	Depth	Angle	Azimuth	TYD	Section	N/S	E/W	Dogleg	ELEVATIONS
				7	2162	0.51							WTR DEPTH 87'
Grade:		SH		8	2493	0.34							RKB-MSL 65'
				9	2684	0.14							RKB-ML 152'
				10	2874	0.08							RKB-WH 183.5
				11	3017	0.38							GH Depth 40.5'
				12	3150	0.18							RKB-BGH 192.5'

TIME

HRS

OPERATIONS FROM 0600 TO 0600

8:00	17:30	11.5	DRILLED 17-1/2" HOLE FROM 2210' TO 2908'.
17:30	18:00	0.5	CIRC BU.
18:00	21:00	3.0	POH ON SHORT TRIP. STRING PULLED TIGHT 2908' TO 2224'. BACKREAMED W/TOP DRIVE FROM 2224' TO SHOE.
21:00	21:30	0.6	SERVICED TOP DRIVE.
21:30	22:30	1.0	RIH TO 2872'. WASHED FROM 2872' TO 2908' (PRECAUTIONARY ONLY).
22:30	6:00	7.5	DRILLED FROM 2908' TO 3384'.
			NOTE: 02:30 TO 04:00 REDUCED ROP TO 40-50 FT/HR (AVE ROP WAS 100 FT/HR) DUE TO ONE SHAKER BEING DOWN. REMAINING 3 SHAKERS COULD NOT HANDLE CUTTINGS VOLUME.
			NOTE: ON SHORT TRIP. NOTED SHINY SPOTS ON DRILL STRING (SPIRALLING). REPOSITIONED RIG. WILL REEVALUATE DRILL STRING MARKINGS LATER THIS AM.
SUBTOTAL HOURS:	24.0	Opr Time 19.5	Env Alert Status: BLUE Kick Tolerance: 1.17
On Site Engineer: T. A. BILLINGSLEY Signed: T.B.CAMPBELL/S.SCHULTZ			

PAGE 2 OF 2

Daily Drilling Report - New Ventures

BIT/B.S./X-O/MWD-LWD/F.S./PONY D.C./17.5" STAB/1X5" DC/17.5" STAB/10X5" DC/8" JARS/1X5" DC/X-O/24X5" MWD/

Hours Summary

Motor

0.0

24.1

24.1

BOARD

PERSONNEL ONBOARD**Supply Vessel Information:**

ARCO:

4

0

61

10

2

2

2

2

D

0

5

2

2

1

1

92

PUMP #2

30 SPM/210 PSI

40 SPM/250 PSI

50 SPM/320 PSI

NOTE:

1) CROWLEY BARGE DEPARTED RIG @ 13:55 HRS. ETA WEST DOCK @ 22:30 HRS..

2) #2 ANCHOR(S) RUN. DIVERS JUMPED TO CHECK FAIRLEAD. PRETENSIONED #2 AND #8 ANCHORS TO 262 MT, 253 MT RESPECTIVELY.

3) DIVERS INSPECTED GLORY HOLE, 2' ADDITIONAL FILL NOTED ON #4 POST. NOT CONSIDERED A PROBLEM.

4) DRILLED W/ONE PUMP FROM 2070' -2160' AND 2275'-2385'. NO REAL TIME DATA AVAILABLE THRU THESE INTERVALS.

HOWEVER, WILL BE AVAILABLE FROM RECORDED DATA.

Kulluk Alert Status (Hours)

Green Blue Yellow Red Black

ICE COVERAGE PRESENTLY OPEN WATER

DATE: 10/22/93

OCT 22 1993 08:55AM
 06:11
 SECURE-FX TRANSMISSION
 ARCO EXPLORATIONS DRILLING
 ARCO KUULUN II - 907 2651393

OCT 22 1993
 RECEIVED
 OCS DISTRICT OFFICE

P 9
 NOT 563
 002

MINERALS MANAGEMENT SERVICE
 ANCHORAGE, ALASKA

Y-1597 #1					
			TAB 10/22/93		
KICK TOLERANCE WORKSHEET		CASE 1			
GIVEN INFORMATION & ASSUMPTIONS:			TBD = To be determined		
Variable	Symbol	Value	Units		
Safety Factor	SF	TBD	ppg		
Kick Tolerance	KT	TBD	ppg		
Leakoff Test Depth	DPIT	1030	feet		
Influx Volume	Vi	25	bbls		
Length of Influx	Li	TBD	feet		
Hole diameter	DH	17.5	inches		
Drill collar diameter	DC	8.0	inches		
Actual mud weight in use	AMW	9.6	ppg		
Total depth of well	TD	3400	feet		
Reduction in hydrostatic	RH	TBD	ppg		
Yield point of mud	YP	33	lbs/100 sq ft		
Drill pipe diameter	DP	5.0	inches		
Surge Gradient	SG	TBD	ppg		
Water depth at site	DW	86	feet		
Air gap from MSL to RTE	DA	66	feet		
Riser Margin	RM	TBD	ppg		
Allowance Factor	A	TBD	ppg		
Equivalent MW at leakoff	EMW	15	ppg		

SECURE-FX TRANSITION
 OCT 22 1993 08:54AM
 10/23/93 06:12
 ARCO KUULUW II - 907 2651393

RECEIVED
 DISTRICT OFFICE
 OCT 22 1993

P.B.
 NO. 363

003

MINERALS MANAGEMENT SERVICE
 ANCHORAGE, ALASKA

CALCULATIONS:	CASE 1		
1) Safety Factor:			
Below 20" Conductor	33	psi	
Below 13-3/8" Surface	50	psi	
Below 9-5/8" Intermediate	100	psi	
SF, selected from above 3 choices:	33	psi	
SF =	0.616	ppg	(is more than 0.334 ppg, thus use 0.334)
	0.334	ppg	
2) Reduction in Hydrostatic:			
U =	106	feet	
RH =	0.300	ppg	
3) Surge Gradient:			
SG =	0.068	ppg	
4) Riser Margin:			
RM =	0.211	ppg	
5) Allowance Factor:			
A =	0.368	ppg	(note: RH + SG is greater than RM)
6) Kick Tolerance:			
KT =	1.17	ppg	
Max Allowable Csg Pressure	289.2	psi	
Assuming Vi =	25	bbls	

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OCT 21 1993

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

GENERAL MANAGEMENT SERVICES

Well Name: AX 9295	Depth: 2212	Prog: 1182	Spud Date: 10/13/93 9:00 AM	Days Actual: 135 15.00	Days Planned: 14	Date: 10/21/93
--------------------	-------------	------------	-----------------------------	------------------------	------------------	----------------

Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 20" @ 1000'	Next Casing: 19-3/8" @ 4000'	Shoe Test EMW: 15.0 PPG	Formation: 30%SLTST/20%CLAY/50%SS
-----------------------------------	--------------------------	------------------------------	-------------------------	-----------------------------------

Operation at 0600: DRLG 17-1/2" HOLE @ 2212'	1993 Proj. Cost	Daily Cost, (\$):	Accum. Cost, (\$)
--	-----------------	-------------------	-------------------

BIT DATA			MUD DATA				MUD LOG DATA		DRILLING			
Bit #:	1 RR	2	MW: 9.6	KWM 14.8	Filter Cake:	KWM Cake:	Depth:	2019	Depth:	2212		
Size:	2 6"	17-1/2"	VISC: 75	Visc: 45	%Solids:	%Solids:	Mud Wt:	9.6	ROT WT:	190 Torque: 200 A		
Make:	HTC	SEC	PV: 35	PV: 26	% Sand:	% Sand:	FL Temp:	60	PU Wt.:	200 Jar No.:1771-0008		
Type:	ATXG1	S33SF	YP: 29	YP: 38	Ph:	Ph:	BGG:	15	SO Wt.:	200 Jar Hrs.: 119		
Bar #:	N86BT	820821	Gels: 4/5	Gels: 6/8	Pm:	Pm:	CG:	0	Pump Data		HYDRAULICS	
Depth Out:	SH	2212	API FL: 3	API FL: 6/8	Pf:	Pf:	TG:	72	LNR:	6.5	6.5	Bkt ΔP: 870
Feet:	816	1182	HTHPWL: -		Mf:	Mf:	Max Gas:	35	SPM	101	100	HHP: 505
Hours:	24	14.0	MBT: 2.5		Chlor.:	Chlor.:	Dc Exp:	0.78	PSI	2326	2326	HHP/2.1 sq in:
WOB:	4/12	2-5	CUM CST 157547	SDaily 16665	Q/W:	Q/W:	Sh Den:	N/A	SPS	40	40	ECD: 9.7
RFM:	120	50	Kick Tol:	1.81	Total GPM: 1013		Est PP:	8.7	SPP:	155	160	An Vel DP/DC: 86/100
Jets:	3 x 20	3 X 20	Survey No.	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS
	1 x 22	1 X 11	1	924	3.00							WTR DEPTH 67'
Grade:	2-2-1	SH	2	1166	1.78							RKB-MSL 65'
			3	1354	1.19							RKB-ML 152'
			4	1619	0.64							RKB-WH 183.5
			5	1736	0.52							GH Depth 40.5'
			6	1873	0.39							RKB-BGH 192.5'

TIME	HFS	OPERATIONS FROM 0600 TO 0600
6:00	6:30	0.5 COMPLETED CIRC BOTTOMS UP.
6:30	7:00	0.5 PULLED INTO SHOE AND CLOSED ANNULAR. CONDUCTED FORMATION LEAK-OFF TEST USING DOWELL UNIT.
		FORMATION LEAK-OFF TEST = 15.0 PPG EMW; 290 PSI SURFACE PRESS W/ 5.6 PPG @ 1030' TVD (TEST WITNESSED BY MMS REP.)
7:00	7:30	0.5 TOOK SPR'S. CHOKE/KILL LINE FRICTION LOSSES (SEE BELOW).
7:30	23:00	15.5 DRILL 17-1/2" HOLE FROM 1030' TO 1960' (DOUBLE REAMED EACH STAND).
23:00	23:30	0.6 CIRC BOTTOMS UP.
23:30	0:30	1.0 SHORT TRIP TO 20" CSG SHOE (MAX DRAG 10-15 KLBS).
0:30	1:30	1.0 SERVICED TOP DRIVE.
1:30	2:00	0.5 RIH.
2:00	6:00	4.0 DRILL 17-1/2" HOLE FROM 1960' TO 2212'.
SUBTOTAL HOURS: 24.0		
Opr Time 19.5 Env Alert Status: BLUE Kick Tolerance: 1.81		
On Site Engineer: G.L. ALVORD Signed: T.B. CAMPBELL/S. SCHULTZ		

CONFIDENTIAL

OCT 21 1993

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

GENERAL MANAGEMENT SERVICES

Summarized BHA Description:		BIT/B.S./X-OMWD-LWD/F.S./PONY D.C./17.5" STAB/1X8" DC/17.5" STAB/10X8" DC/9" JARS/1X8" DC/X-0/24X5" HWDP					
		≈ 1207.09'					
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary		
Pot Water:	162	1,522	Bbl		Rotary	Motor	
Drill Water:	0	3,547	Bbl	Well Daily	14.0	24.1	38.1
Fuel:	6,314	358,809	Gal	Well Cumulative	14.0	24.1	38.1
Barite:	0	9,393	Sx	BHA	14.0	24.1	38.1
Cement: G/AS	0/0	2720/3197	Sx	PERSONNEL ONBOARD			
Supply Vessel Information:				ARCO:		3	
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POD	PARTNER:	
IKALUK			1,057	265,483	18	CONTRACTOR: CANMAR	
MSCAROO	1544		2,908	353,990	19	CATERER: STANTON	
KALVIK		1720/G	1,110	469,962	17	CEMENTER: DOWELL	
SUPPLIER	4123		1,057	50,457	14	WEATHER: HORIZON	
WEATHER DATA: @ 05:00						SAFETY: H2S/MEDIC	
TEMPERATURE 28° WIND SPEED 4 KTS DIRECTION 220°						CASING: GBR/HDS	
VISIBILITY 15 NM CEILING UNLIMITED SEAS 0'						CORING: INTEQ/CORELAB	
Personnel Accidents: Yes _____ None Reported _____ X						DET: HRS	
Description of Accident:						ELECTRIC LOG: SCHLUMBERGER	
						MUD LOG: SPERRY	
						MUD ENG: MI	
						MWD SERVICE: SPERRY	
						WELLHEAD: DRILQUIP	
Well Site Safety: HELD DRILL ON RIG ON 10/13/93						COMMUNICATION: N. S. TELECOM	
Date Last Kick Drill: 10/3/93 Date Last BOP Test: 10/19/93						OTHER: Divers/Radio/MMS	
Other Drills-Describe: ABANDON SHIP/LIFEBOAT & FIRE DRILL 10/17/93.						VISITORS: SURV. SYSTEMS/MEZO	
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL: 94	
		PUMP #1 (ANNULUS - CHOKE LINE) PUMP #2 (ANNULUS - CHOKE LINE)					
		30 SPM/90 PSI - 30 SPM/100 PSI 30 SPM/100 PSI - 30 SPM/95 PSI					
		40 SPM/130 PSI - 40 SPM/155 PSI 40 SPM/120 PSI - 40 SPM/160 PSI					
		50 SPM/200 PSI - 50 SPM/240 PSI 50 SPM/200 PSI - 50 SPM/240 PSI					
		NOTE:					
		1) DIVERS/SUBSEA REPLACED HYDRAULIC (GLYCOL) RETURN LINE FROM STACK.					
		2) DIVERS JUMPED TO INSPECT GLORY HOLE. NO ADDITIONAL SLOUGHING NOTED.					
		3) CROWLEY BARGE ARRIVED AT LOCATION @ 1100 HRS 10/20/93. CURRENTLY OFFLOADING BARITE.					
		4) TRANSFERRED 105689 GALS FUEL FROM IKALUK TO KULLUK TO ALLOW BARITE TRANSFER FROM BARGE TO IKALUK.					
		Kulluk Alert Status (Hours)					
		Green	Blue	Yellow	Red	Black	
	Environ.	0	24				ICE COVERAGE PRESENTLY OPEN WATER
	Well	24					
	Vessel	18		6			
TOTAL HOURS: 24.0							

On Site Engineer: G.LALVORD

Signed: T.B.CAMPBELL/SCHULTZ

DATE: 10/21/93

"Y-1597 #1, 20" Leak-off Test

RECEIVED
DCS DISTRICT OFFICE

OCT 21 1993

WELL: Y-1597 #1

DATE/TIME: 0600 10/20/93

SUPERVISOR: CAMPBELL/SCHULTZ

RIG: CDU KULLUK

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

MUD WEIGHT = 9.8 ppg = MW

TRUE VERTICAL DEPTH = 1030 FEET = TVD

HYDROSTATIC HEAD1 (HH 1) = $0.052 \times \text{TVD} \times \text{MW} = 514$ psi

Leak-off test pressure taken from graph @ 290 psi with 1.5 barrels pumped.

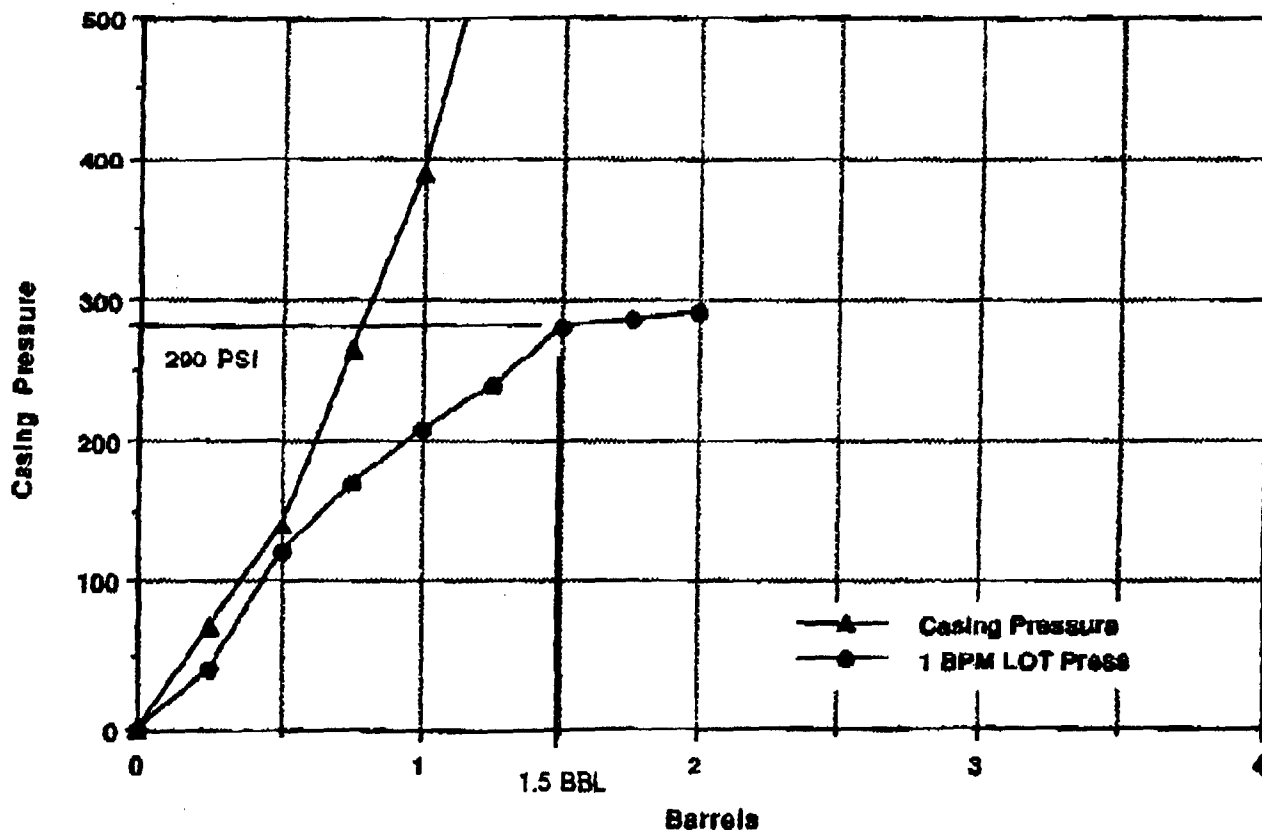
Leak-off EMW = $((0.052 \times \text{TVD} \times \text{MW}) + (\text{Surface press})) / (\text{TVD} \times 0.052) = 804 / (1030 \times 0.052)$

Leak-off EMW = 15.0 ppg

Both casing and leak-off test pressures taken @ 1 BPM using Dowell unit.

Held press for 5 mins. Formation leaked off - bled off from 290 psi to 210 psi in 5 min.

Pressure Profiles



SECURE-FX TRANSDUCER
OCT 21 '93 08:55AM FBI EXPLORATIONS DRILLING

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JCS DISTRICT OFFICE P.8
OCT 21 1993

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Y-1597 #1						
KICK TOLERANCE WORKSHEET				GLA 10/20/93		
				CASE 1		
GIVEN INFORMATION & ASSUMPTIONS:				TBD - To be determined		
Variable	Symbol	Value	Units			
Safety Factor	SF	TBD	ppg			
Kick Tolerance	KT	TBD	ppg			
Leakoff Test Depth	DPIT	1030	feet			
Influx Volume	Vi	25	bbis			
Length of Influx	Li	TBD	feet			
Hole diameter	DH	17.5	inches			
Drill collar diameter	DC	8.0	inches			
Actual mud weight in use	AMW	9.6	ppg			
Total depth of well	TD	2212	feet			
Reduction in hydrostatic	RH	TBD	ppg			
Yield point of mud	YP	29	lbs/100 sq ft			
Drill pipe diameter	DP	5.0	inches			
Surge Gradient	SG	TBD	ppg			
Water depth at site	DW	86	feet			
Air gap from MSL to RTE	DA	66	feet			
Riser Margin	RM	TBD	ppg			
Allowance Factor	A	TBD	ppg			
Equivalent MW at leakoff	EMW	15	ppg			

CALCULATIONS:		CASE 1		
1) Safety Factor:				
Below 20" Conductor		33	psi	
Below 13-3/8" Surface		50	psi	
Below 9-5/8" Intermediate		100	psi	
SF, selected from above 3 choices:		33	psi	
SF =		0.616	ppg	(is more than 0.334 ppg, thus use 0.334)
		0.334	ppg	
2) Reduction in Hydrostatic:				
LI =		106	feet	
RH =		0.461	ppg	
3) Surge Gradient:				
SG =		0.092	ppg	
4) Riser Margin:				
RM =		0.333	ppg	
5) Allowance Factor:				
A =		0.553	ppg	(note: RH + SG is greater than RM)
6) Kick Tolerance:				
KT =		1.81		
Max Allowable Csg Pressure		265.2	psi	
Assuming Vi =		25	bbls	

SECURE-TX TRANSDUCER
OCT 21 '93 08:56AM RRI EXPLORATIONS DRILLING

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

RECEIVED
RRI DRILL OFFICE
OCT 21 1993

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AK 8285 DCS-Y-1507 #1	Depth: 1030	Prog: 10	Spud Date: 10/13/93 8:00 AM	Days Actual: 134 14.00	Days Planned: 13	Date: 10/20/93
Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 20" @ 1000'	Next Casing: 13-3/8" @ 4000'	Shoe Test EMW: N/A	Formation:		
Operation at 0600: CIRC BOTTOMS UP PRIOR TO 20" L.O.T.			1993 Proj. Cost \$	Daily Cost (\$):	Accum. Cost (\$)	
BIT DATA			MUD DATA		MUD LOG DATA	
Bit #: 1 RA 2	MW: 9.8	KWM 14.8	Filter Cake:	KWM Cake:	DRILLING	
Size: 26" 17-1/2"	VIB: 72	VIB: 45	% Solids:	% Solids:	Depth: 1030	Depth: 1030
Make: HTC SEC	PV: 27	PV: 26	% Sand:	% Sand:	Mud Wt: 9.6	WT: 186 Torque: 100 A
Type: ATXG1 S33SF	YP: 32	YP: 39	Ph:	Ph:	FL Temp: 80	PU Wt: 185 Jar No.: 1771-0008
Seal: N86BT S20821	Gels: 8/8	Gels: 6/8	Pm:	Pm:	BGG:	SO Wt: 180 Jar Hrs: 105
Depth Out: SH	API FL: 4.0	API FL: ---	PI:	PI:	CG:	Pump #1 Data #2 HYDRAULICS
Feet: B16	HYHPWL	MI:	MI:		LNK: 6.5 6.5	Bit AP: 052
Hours: 24	MBT: -	Chlor:	Chlor:	Max Gas:	SPM: 101 100	HHP: 495
WOB: 4/12 2-5	CUM CST	SDaily	OW:	OW:	Dc Exp: 0.9E	PSI: 1650 1650
RFM: 120 50	Kick Tel: NA	TOTAL GPM: 884			Sh Den: N/A	SPS: N/A N/A
Jets: 3 x 20 3 X 20	Survey No. Depth Angle Azimuth				Est PP: 8.5	SPP: N/A N/A
1 x 22 1 X 11	1 924 3 00					
Grade: 2-2-1 SH						
ELEVATIONS						
WTR DEPTH 87'						
RKB-MSL 65'						
RKB-ML 152'						
RKB-WN 183.5'						
GH Depth 40.5'						
RKB-BGH 182.5'						
TIME	HRS	OPERATIONS FROM 0600 TO 0600				
6:00 7:30	1.5	JUMP DIVERS TO CONFIRM RIG POSITION. MOVED RIG 2' FORWARD. LANDED STACK. OVERPULLED 50 KILBS. RD				
		SPIDER RECOVERED DIVER.				
7:30 8:30	1.0	RIH W/ BOP TEST PLUG.				
8:30 9:30	1.0	PRESS TEST BOP STACK, FAIL SAFES, RAMS, ANNULARS TO 250 PSI LOW/3000 PSI HIGH.				
9:30 11:00	1.5	POH W/ TEST PLUG. RIH W/ NOMINAL SEAT PROTECTOR.				
11:00 12:30	2.5	TEST 20" CSG AGAINST BLIND/SHEAR BAMS TO 2200 PSI FOR 30 MINS (C50 TEST WITNESSED BY MMS REP). JUMPED				
		DIVERS TO CHECK STACK. READ 1-3/4" FROM BULLS EYE ON TOP OF STACK. NO ADDTNL FILL NOTED AROUND STACK.				
		TEST IBOP, SAFETY VALVES & LOWER KELLY COCK. COULD NOT GET TEST ON LOWER KELLY COCK.				
13:30 15:30	2.0	CHANGE OUT LOWER KELLY COCK AND TEST SAME TO 250/5000 PSI.				
15:30 19:30	4.0	M/U 13-3/8" SEAL ASSY (TEST STAND PIPE/MANIFOLD WHILE P/U 13-3/8" R/T), 13-3/8" HANGER & SSR CMT				
		PLUGS.				
19:30 21:00	1.5	MOVED HWDP IN DERRICK TO MAKE ACCESS FOR HANG-OFF TOOL.				
21:00 2:00	5.0	P/U AND PROGRAMMED LWD/MWD. M/U REMAINING BHA. RIH AND TAGGED CMT @ 883'.				
2:00 3:00	1.0	DRILLED CMT W/ SEAWATER TO 895'. DISPLACED HOLE TO 8.6 PRG PHPA MUD.				
SUBTOTAL HOURS: 21.0	Opr Time 20 5	Env Alert Status	BLUE	Kick Tolerance:	NA	
On Site Engineer: G. LALVORD Signed: T.B CAMPBELL/S. SCHULTZ						

Received
PCS District Office
Minerals Management Service
Anchorage, Alaska
20 1993

Oct. 20, 1993

7:57AM

ARCO ALASKA INC

No. 4053

P. 3/13

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA**Description:**

BIT/B.S./X-OMWD-LWD/F.S./PONY D.C./17.5" STAB/1X8" DC/17.5" STAB/10X8" DC/8" JARS/1X8" DC/X-Q/24X5" HWDP

= 1207.08'

Rig Supply Data:

Pot Water:

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Drill Water:

Fuel:

Barite:

Cement: G/AS

206

1,636

Bbl

0

3,516

Bbl

5,141

258,454

Gal

0

8,048

Sb

0/0

2720/3197

Sb

Rotary

Motor

Well Daily

Well Cumulative

BHA

0.0

14.2

14.2

0.0

24.1

24.1

0.0

24.1

24.1

PERSONNEL ONBOARD**Supply Vessel Information:**

ARCO

3

VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER	0
KALUK			528	372,218	18	CONTRACTOR: CANMAR	52
MISCAROO	1544		2,378	358,888	19	CATERER: STANTON	10
KALVIK		1720/G	2,747	471,072	17	CEMENTER: DOWELL	2
SUPPLIER	4123		1,321	81,514	14	WEATHER: HORIZON	2
WEATHER DATA: @ 05:00						SAFETY: H2S/MEDIC	2
TEMPERATURE	25°	WIND SPEED 7 KTS	DIRECTION	210°		CASING: GSA/HDS	1
VISIBILITY	15 NM	CEILING	600 SKY ONSHORED	SEAS	1'	CRANE: INTECO/CORELAS	
Personnel Accidents:		Yes	None Reported	X		OST: HRS	2

Description of Accident:

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

5

MUD ENG: MI

2

MWD SERVICE: SPERRY

2

WELLHEAD: DRILQUIP

1

COMMUNICATION: N. S. TELECOM

1

OTHER: Divers/RadioMMS

9

VISITORS: SURV. SYSTEMS/VEZO

2

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 10/18/93

Other Drills-Describe ABANDON SHIP/LIFEBOAT & FIRE DRILL 10/17/93.

TIME	HRS	OPERATIONS FROM 0600 TO 0800	TOTAL PERSONNEL	95
3:00	3:30	0.5	BROKE CIRC W/ DOWELL. CLOSE RAMS AND PERFORM BASELINE CSG TEST TO 2200 PSI (1 BPM).	
3:30	6:00	2.5	DRILL OMT, FB AND NEW FORMATION TO 1030'. CIRC BOTTOMS UP PRIOR TO L.O.T. @ 0600 HRS.	
			NOTE:	
			1) PRE-TENSIONED PIGGY BACKED ANCHOR SYSTEMS #5 (240 MT) AND #11 (220 MT). #2 SYSTEM (PIGGY BACKED) FAILED (@ 220 MT) WHILE ATTEMPTING TO TEST #2 AND #6. PENDANT BETWEEN ANCHORS (#2) BROKE. WHILE GRAPPLING FOR LEAD ANCHOR DAMAGED RIG ANCHOR WIRE. OUT 194' OF DAMAGED WIRE FROM #2 ANCHOR WIRE.	
			2) CROWLEY BARGE (LOADED WITH MUD PRODUCTS) ETA KULLUK 10/20 P.M. (DEPARTED WEST DOCK @ 0300 HRS)	
			Received	
			OCS District Office	
			Kulluk Alert Status (Hours)	
			Green Blue Yellow Red Black	

On Site Engineer: G.LALVORD

Signed: T.B CAMPBELL/S.SCHULTZ

DATE: 10/19/93

100 055 ON

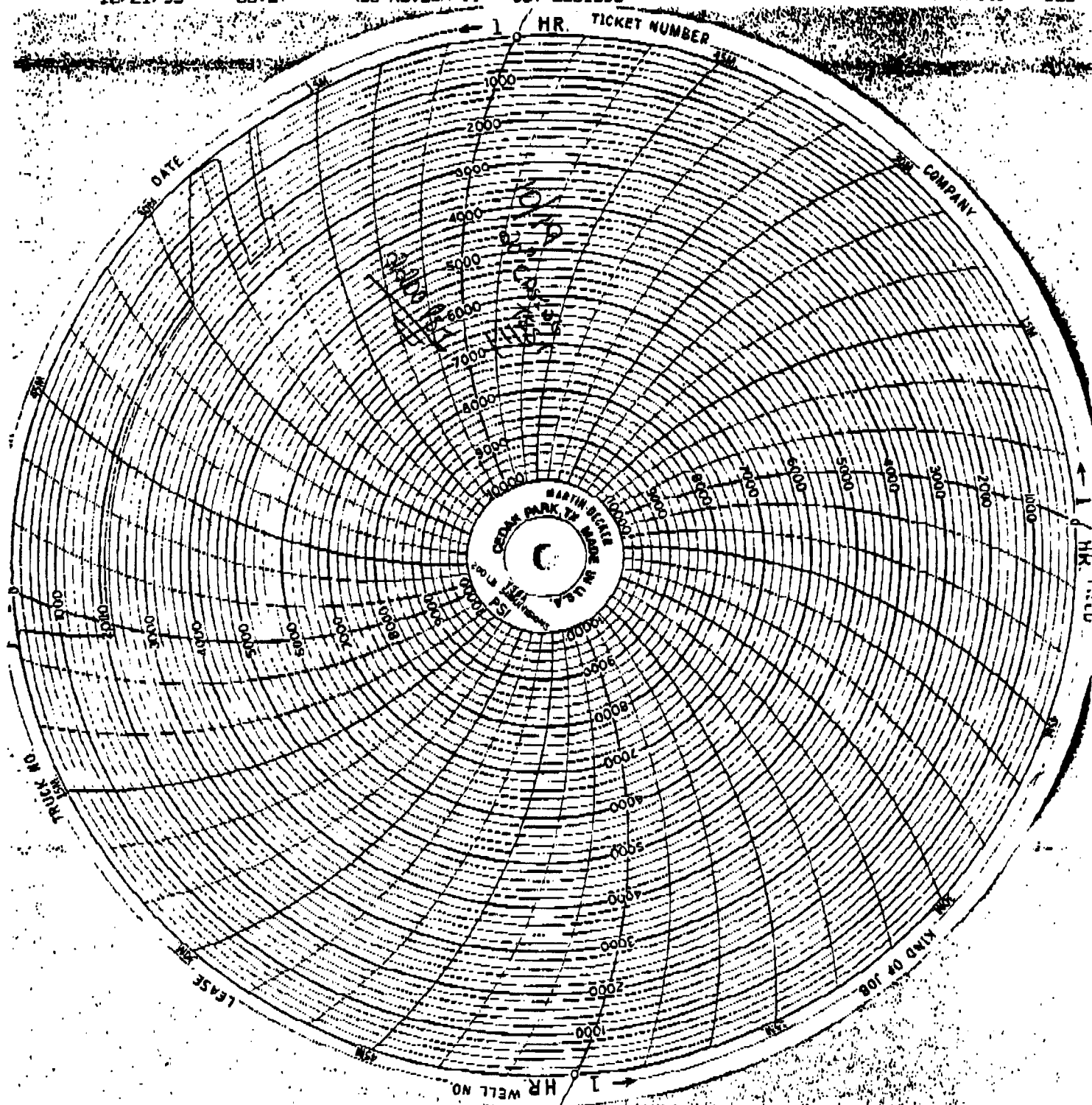
5651592 206 - 11 KULLUK 11 - 907 2651593

06:22

10/21/93

SECURE-FX TRANSMISSION

Service
a



Received
OCS District Office

Oct 20 1993

Minerals Management Service
Anchorage, Alaska

- 1 - Distribution
 2 - White - Big Core Station in Back
 3 - Green - Calgary Office (NWR) Test
 4 - Yellow - Calgary Office - Subsea Engineer
 5 - Pink - Sub Sea Files
 6 - Goldenrod - Drilling Engineer

Carman B.O.P. Pressure Test

1504

Well Name DES Y 1537 Rig KULLUK Contractor LRCO Test Date 93 10 19
 Year Month Day
 R.T. Water Depth 152 ft R.T. Wellhead 185.27 # Stack - (176 mm) @ (7000 kPa) W.P. Last Test Date 93 10 09
 Year Month Day

Test No. # 2	Test No. # 3	Test No. # 4	Test No. # 5	Test No. # 6	Test No. # 7	Test No. # 8	Test No. # 9
Choke Line Test	Lower Pipe Ramo Test	Middle Pipe Ramo & Inner Kill	Upper Pipe Ramo & Outer Kill	Lower Annulus & Inner Choke	Upper Annulus & Outer Choke	Slur Rams & Casing	Kill Line Test
Test Pressure kPa	Test Pressure kPa	Test Pressure kPa	Test Pressure kPa	Test Pressure kPa	Test Pressure kPa	Test Pressure kPa	Test Pressure kPa
Test Time min	Test Time min	Test Time min	Test Time min	Test Time min	Test Time min	Test Time min	Test Time min

Hydraulic Operations Test						Notes		Legend	
Function	Pressure kPa	Time Seconds	Volume	Time Seconds	Volume	Color	Drillers	Color	Drillers
Upper Annulus	1400	32	66	46	89.8			Color	Drillers
Lower Annulus	1400	33	66	46	91.2	YELLOW	DRILLERS	Color	Drillers
Choke Line	1500	14	12.0	20	18.2			Color	Drillers
Upper 12 inch Rammer	1500	14	14.3	19	17.8	DRILLERS	Note	Color	Drillers
Lower 12 inch Rammer	1500	15	18.6	19	17.9			Color	Drillers

LAST TEST WAS A STUMP TEST
 PRIOR TO SPUD

TEST # 8 ON SEPERATE CHART - CASING
 TEST

Contractor's Representative's (Signature)

Company Representative's (Signature)

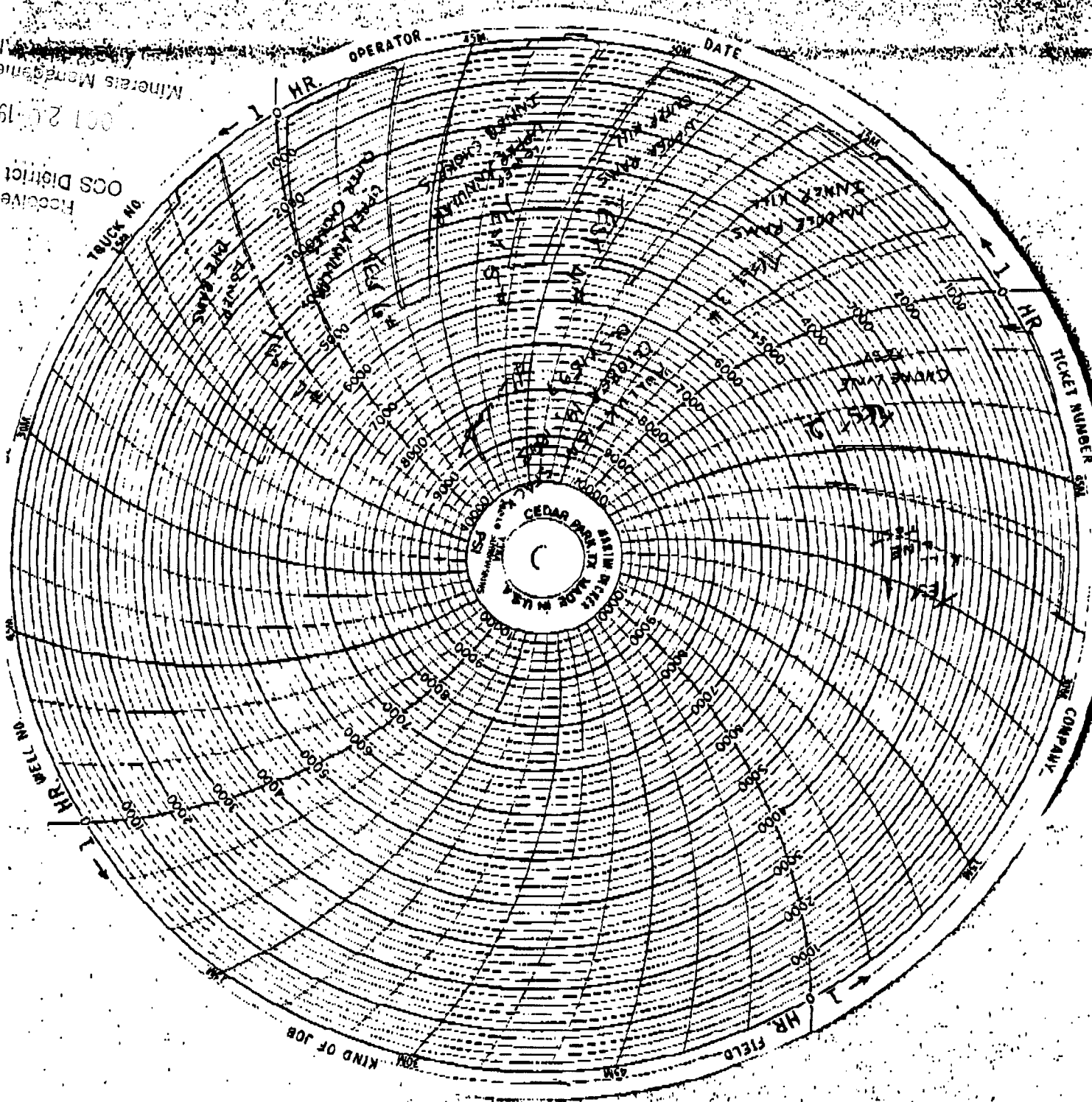
SURSEA ENR

Oct. 20, 1993 8:02AM
 CO ALASKA INC
 907 2651533

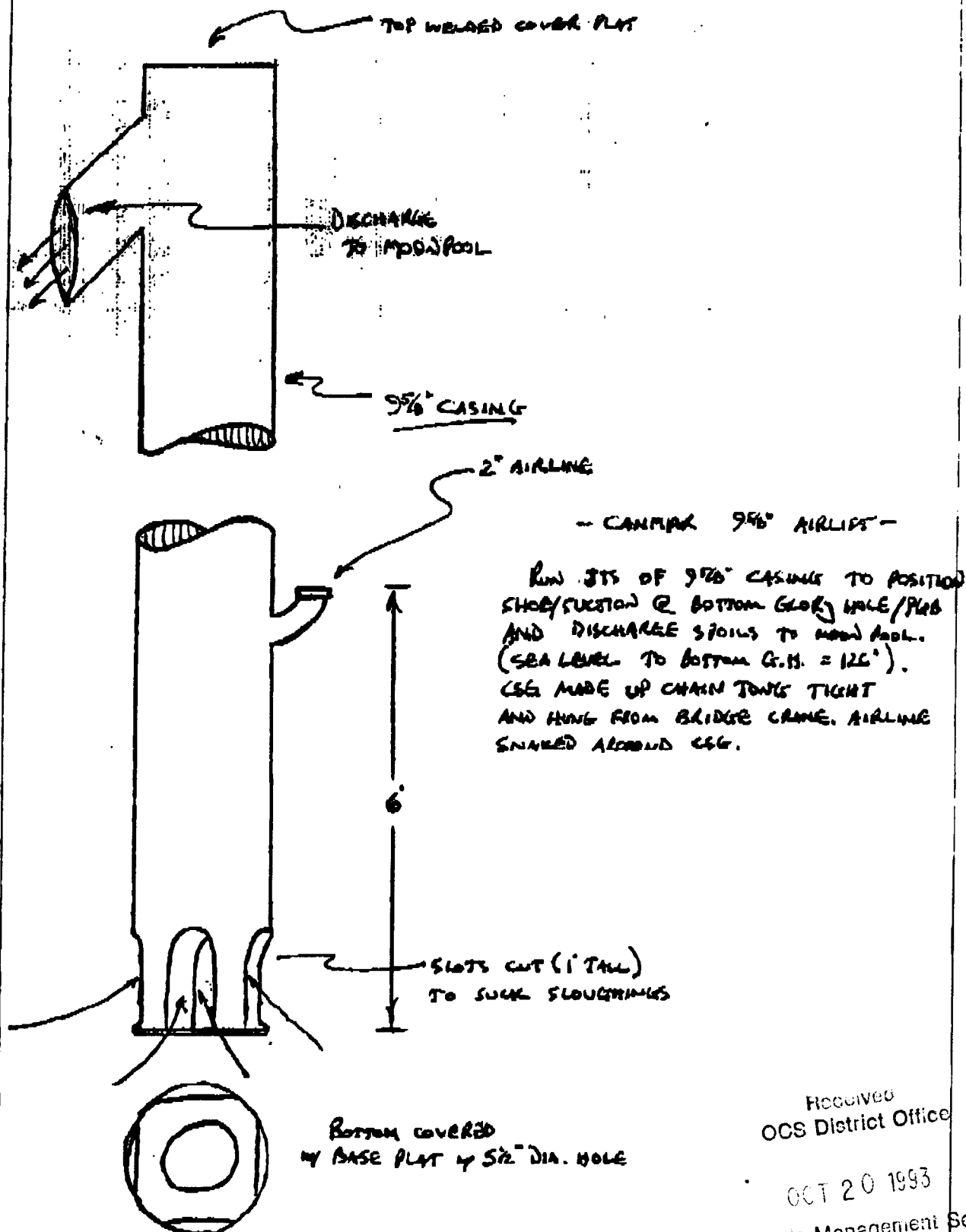
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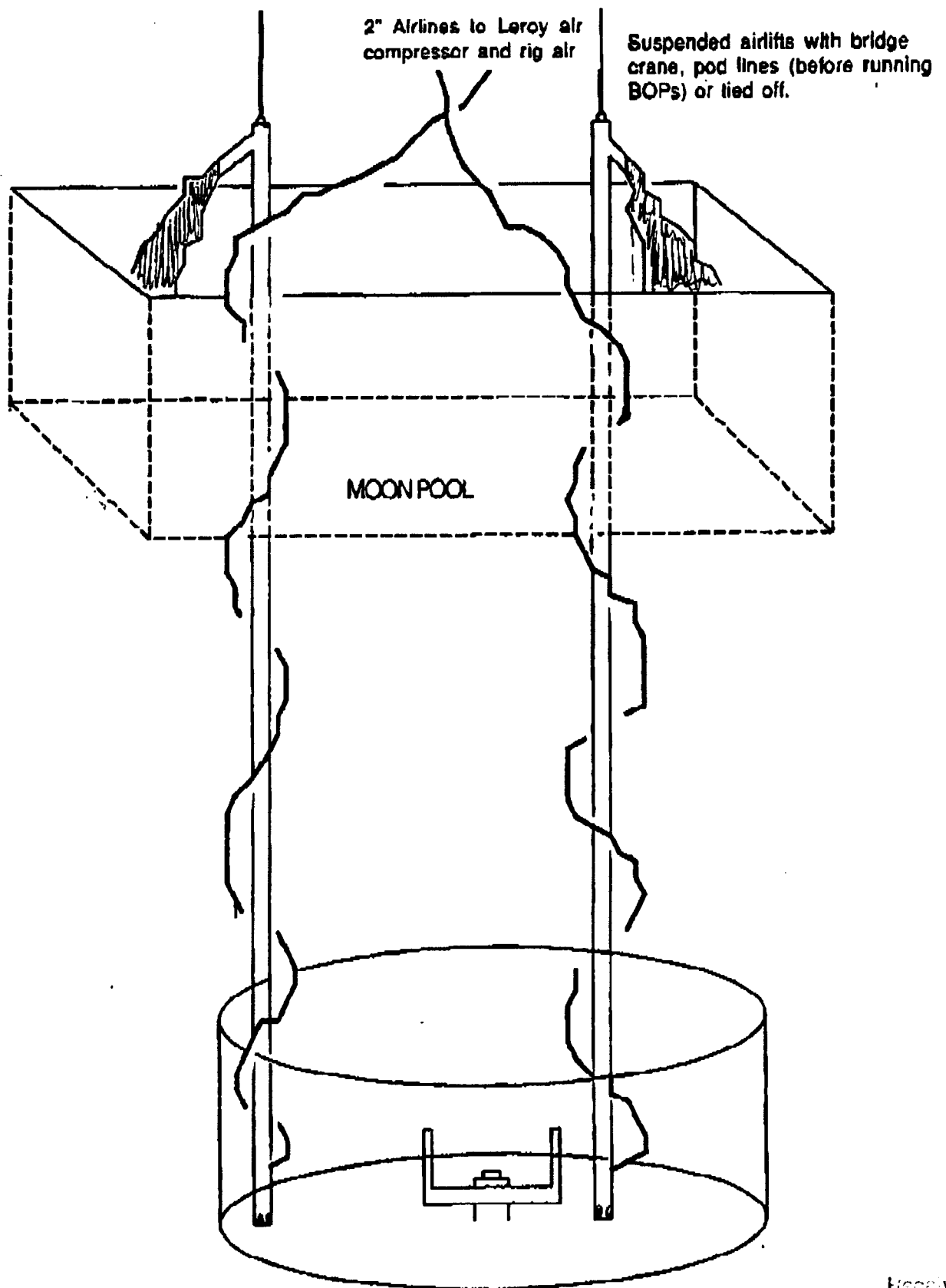
Date

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OCS District Office
OCT 20 1993
Minerals Management S
Alaska



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Received
OCS District Office

OCT 20 1993

Kearney 10/19/93 Minerals Management Service
Anchorage, Alaska

CONFIDENTIAL

OCT 19 1993

PAGE 1 OF 2

Minerals Management Service
Anchorage, Alaska

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9206	Depth: 1020	Prog: 0	Spud Date: 10/13/93 9:00 AM	Days Actual: 133 13.00	Days Planned: 11	Date: 10/19/93
--------------------	-------------	---------	-----------------------------	------------------------	------------------	----------------

Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 20" @ 1000'	Next Casing: 13-3/8" @ 4000'	Shoe Test EMW: N/A	Formation:
-----------------------------------	--------------------------	------------------------------	--------------------	------------

Operation at 0600: RUNNING BOP STACK	1993 Proj. Cost: 5	Daily Cost, (\$):	Accum. Cost, (\$):
---	--------------------	-------------------	--------------------

BIT DATA				MUD DATA				MUD LOG DATA		DRILLING			
Bit #:	1 RR			MW: 9.8	RWM: 14.8	Filter Cake:	RWM Cake:	Depth:	1020	Depth:	1020		
Size:	26"			Visc: 86	Visc: 45	% Solids:	% Solids:	Mud Wt:	SW	ROT WT:	150	Torque:	
Make:	HTC			PV: 30	PV: 26	% Sand:	% Sand:	FL Temp:		PU Wt:	150	Jer No.:	
Type:	ATXG1			YP: 35	YP: 39	Ph:	Ph:	BGG:		SO Wt:	150	Jer Hrs.:	
Ser #:	N68BT			Gels: 7/10	Gels: 6/8	Pm:	Pm:	CG:		Pump Data		HYDRAULICS	
Depth Out:	SH			API Fl: 4.2	API Fl: —	PI:	PI:	TG:		LNR:	6.5	6.5	Bit ΔP:
Feet:	816			RTHPWL		MI:	MI:	Max Gas:		SPM:	101	100	HMP: 291
Hours:	24			MBT: —		Chlor:	Chlor:	Dc Exp:	0.85	PSI:	1650	1650	HHP/eq in:
WOB:	4/12			CUM CST	8 Daily	O/W:	O/W:	Sh Den:	N/A	SFS:	N/A	N/A	EGD:
RPM:	120					Total GPM:		Est PP:	8.5	SPP:	N/A	N/A	An Vel DP/OC:
Jets:	3 x 20			Survey No:	Depth	Angle	Azimuth	TYD	Section	N/S	E/W	Dogleg	ELEVATIONS
	1 x 22			1	924	3.00							WTR DEPTH 87'
Grade:	2-2-1												RKB-MSL 65'
													RKB-ML 152'
													RKB-WH 183.5'
													G.H Depth 40.5'
													RKB-BGH 192.5'

TIME	HRS	OPERATIONS FROM 0600 TO 0800
6:00 11:00	5.0	AIRLIFT CUTTINGS AND HOLE SLOUGHINGS FROM PGB BOTTOM OF GLORY HOLE W/ 9-5/8" AIRLIFT SYSTEM
11:00 12:30	1.5	SHUT DOWN AIRLIFT AND JUMP DIVERS. INSPECTED GLORY HOLE AND PGB CLEANING PROGRESS. SET LAVALIN GAUGE ON PGB. CONFIRMED PGB @ 3/4" AND 1" ON TWO SEPERATE SURVEYS. RECOVER DIVER.
12:30 20:00	7.5	RESUME CLEANING BOTTOM OF GLORY HOLE/PGB W/ 9-5/8" AIRLIFT. FINISHED AND DEPLOYED 2ND 9-5/8" AIRLIFT SYSTEM @ 1600 HRS. CONT'D CLEANING G.H. W/ 2 X 9-5/8" AIRLIFT SYSTEMS.
20:00 21:00	1.0	SHUT DOWN AIRLIFT. JUMP DIVERS AND RE-SURVEY TOP OF PGB AND GUIDE POSTS W/ DIVER AND MESO-TECH. 1/2" OF LOOSE FILL ON PGB. ALL GUIDE POSTS CLEAR (3" LOOSE RUBBLE BEHIND #3) ENOUGH TO ATTEMPT RUN BOP.
21:00 23:30	2.5	POH AND R/D 2 X 9-5/8" AIRLIFT SYSTEMS IN ORDER TO RUN STACK.
23:30 6:00	6.5	R/U TO RUN 16 KPSI BOP STACK FUNCTION TEST BOPS AND AMF ON SURFACE. RUN BOP STACK. HOOK-UP JUMPER HOSES AND RISER TENSIONERS. JUMP DIVERS @ 0545 HRS. CHECK BOP STACK ORIENTATION TO GUDE POSTS

SUBTOTAL HOURS: 24.0	Op Time: 16	Env Alert Status: BLUE	Kick Tolerance: NA
On Site Engineer: G.LALVORD		Signed: D. BUNGARNER/B. MORRISON/L. HILL	

Minerals Management Service
Anchorage, Alaska

Daily Drilling Report - New Ventures

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CONFIDENTIAL

OCT 18 1993 PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures MINERALS MANAGEMENT SERVICE

Well Name:	AX 9295	Depth:	1020	Prog.	0	Spud Date:	10/13/93 9:00 AM	Days Actual:	132 12.00	Days Planned:	11	Date:	10/18/93		
Contractor/Rig No.:	CANMAR/KULLUK	Lost Casing:	20' @ 1000'	Next Casing:	13-3/8" @ 4000'	Shoe Test EMW:	N/A	Formation:							
Operation at 0500:						1993 Proj. Cost		Daily Cost, (\$):		Accum. Cost, (\$)					
DREDGING GLORY HOLE W/ 9-5/8" AIRLIFT SYSTEM						\$ 300,000		\$ 1,500		\$ 15,000					
BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:	1 RR	MW:	9.8	KWM:	14.8	Filler:	Cake:	KWM:	Cake:	Depth:	1020	Depth:	1020		
Size:	2 1/2"	Visc:	84	Visc:	45	%Solids:	%Solids:	%Solids:	%Solids:	Mud Wt:	SW	ROT:	WT:		
Make:	HTC	PV:	30	PV:	26	%Sand:	%Sand:	%Sand:	%Sand:	FL Temp:		PU Wt:	150		
Type:	ATXG1	YP:	37	YP:	39	Ph:	Ph:	Ph:	Ph:	BGG:		SO Wt:	150		
Ser #:	N868T	Gels:	8/10	Gels:	6/8	Pm:	Pm:	Pm:	Pm:	OG:		Pump	Data		
Depth:	SH	API FL:	3.6	API FL:	----	PI:	PI:	PI:	PI:	TG:		LNR:	6.5		
Out:		RTHFWL:		RTHFWL:		MI:	MI:	MI:	MI:			SPM:	101		
Feet:	816	MBT:		Chlor:	Chlor:					Max Gas:			100		
Hours:	24	CUM CST		SDaily		O/W:	O/W:			Dc Exp:	0.85	PBI:	1850		
WOB:	4/12									Sh Den:	N/A	SPB:	N/A		
ROP:	120	Kick Tol:	NA	Total		GPM:				Eul PP:	8.5	SPP:	N/A		
Jets:	3 x 20	Survey No	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS				
	1 x 22	1	924	3.00								WTR DEPTH	87'		
Grade:	2-2-1											RKB-MSL	65'		
												RKB-ML	152'		
												RKB-WH	183.5'		
												GH Depth	40.5'		
												RKB-BQH	192.5'		
TIME		HRS		OPERATIONS FROM 0800 TO 0800											
6:00		6:30		SLACK OFF FULL CSG WEIGHT ONTO WH AND MONITOR CSG/WH FOR 30 MIN TO CHECK FOR SUBSIDENCE - OK											
6:30		9:00		RELEASE R/T FROM WELLHEAD AND POOH W/ CEMENTING STRING. FLUSH WH (FR/ 213' - 183) W/ SW ON TRIP OUT.											
8:00		9:00		JUMP DIVER. INSTALL CORROSION CAP ONTO WELLHEAD. RECOVER DIVER.											
9:00		18:00		RIH W/ JETTING STRINGS OF 5" DP TO 185' AND FLUSH PGB/WELLHEAD WHILE AIRLIFTING CUTTINGS.											
18:00		18:30		JUMP DIVERS. OBSERVED PGB CLEAN ADJACENT AIRLIFT SLOT, 2' FILL (LOOSE RUBBLE) ON REMAINING 3 GUIDE											
				POSTS AND WELLHEAD. BEHIND GUIDE POSTS RUBBLE SLOPES FROM 30° TO 45° UP TO EDGE OF GLORY HOLE.											
				INDICATIONS ARE GLORY HOLE MAY BE SLOUGHING. RECOVER DIVERS											
19:30		22:00		MUJ AND DEPLOY MESO-TECH SURVEY TOOL ON DP. RIH TO SURVEY GLORY HOLE AND PGB GUIDE POST ORIENTATION.											
				SURVEY INDICATES G.H. WASHED OUT (MAX WASHOUT IS 33' O.D. @ 20' INTO G.H.). GUIDE POSTS 85° OUT.											
22:00		23:00		PULL 6" AIRLIFT LINE AND STANDBACK IN DERRICK.											
23:00		2:30		SHEAR 4 GUIDE WIRES. MUJ GUIDE WIRE RUNNING TOOL ON DP. DRESS GUIDE WIRES. JUMP DIVERS AND											
				RE-ESTABLISH GUIDE WIRES TO POSTS (WHILE FINISHING FABRICATION OF 9-5/8" AIRLIFT)											
2:30		6:00		R/U AND RUN 9-5/8" AIRLIFT. DREDGE G.H. W/ 9-5/8" AIRLIFT.											
SUBTOTAL HOURS:		24.0		Opr Time		18		Env Alert Status		BLUE		Kick Tolerance:		NA	
On Site Engineer: G.LALVORD														Signed: D. BUMGARDNER/B. MORRISON/L. HILL	

CONFIDENTIAL

OCS DISTRICT OFFICE PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

OCT 18 1993

Summarized BHA Description:MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA**Rig Supply Data:**

Pot Water:

Used last 24 hours

219

Remaining Stock

1,686

Unit

Bbl

Drill Water:

0

3,491

Bbl

Fuel:

5,368

269,166

Gal

Barite:

0

8,048

Sk

Cement: G/AS

0/3142

2720/3' 98

Sk

Hours Summary

Rotary

Motor

Well Daily

0.0

14.2

14.2

Well Cumulative

0.0

24.1

24.1

BHA

0.0

24.1

24.1

PERSONNEL ONBOARD**Supply Vessel Information:**

ARCO:

4

PARTNER:

0

VESSEL

BARITE (\$K)

CEMENT (\$K)

FUEL USED

FUEL LEFT

POB

CONTRACTOR: CANMAR

52

KALUK

1544

1720/G

1,849

372,538

18

CATERER: STANTON

10

MISCARDO

4122

1,057

528

358,538

19

CEMENTER: DOWELL

2

KALVIK

1,057

58,012

1,057

53,891

14

WEATHER: HORIZON

2

SUPPLIER

03:00

WIND SPEED 23 KTS

DIRECTION 240°

SAFETY: H2S/MEDIC

2

WEATHER DATA:

TEMPERATURE 30°

WIND SPEED 23 KTS

DIRECTION 240°

DURING: GBR/HDS

1

TEMPERATURE 30°

WIND SPEED 23 KTS

DIRECTION 240°

SAFETY: H2S/MEDIC

DURING: GBR/HDS

1

WIND SPEED 23 KTS

DIRECTION 240°

SAFETY: H2S/MEDIC

DURING: GBR/HDS

CORING: INTEQ/CORELAB

2

DIRECTION 240°

SAFETY: H2S/MEDIC

DURING: GBR/HDS

CORING: INTEQ/CORELAB

DST: HRS

X

Personnel Accidents:

Yes

None Reported

X

Description of Accident:

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

5

MUD ENGR: MI

2

MWD SERVICE: SPERRY

2

WELLHEAD: DRILQUIP

1

COMMUNICATION: N S TELECOM

1

OTHER: Divers/Radio/MMS

9

VISIONS: SURV, SYTEMBAEZO

2

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 10/11/93 stump 1st

Other Drills-Describe: ABANDON SHIP & FIRE DRILL 10/10/93.

TIME

HRS

OPERATIONS FROM 0600 TO 0600

TOTAL PERSONNEL: 95

NOTE:

1) HELD SUPERVISORS SAFETY MEETING ON 10/17/93 AND REVIEWED KUPARUK SAFETY S.I.R.s

2) KALVIK FINISHED RE-FUELING IN MCKINLEY BAY @ 0600 HRS 10/18/93. ETA KULLUK 0600 HRS 10/19/93

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

Environ.

0

24

ICE COVERAGE PRESENTLY OPEN WATER

Well

24

TOTAL HOURS: 24.0

Vessel

24

On Site Engineer: G. LALVORD

Signed: D. BUMGARDNER/B. MORRISON/L. HILL

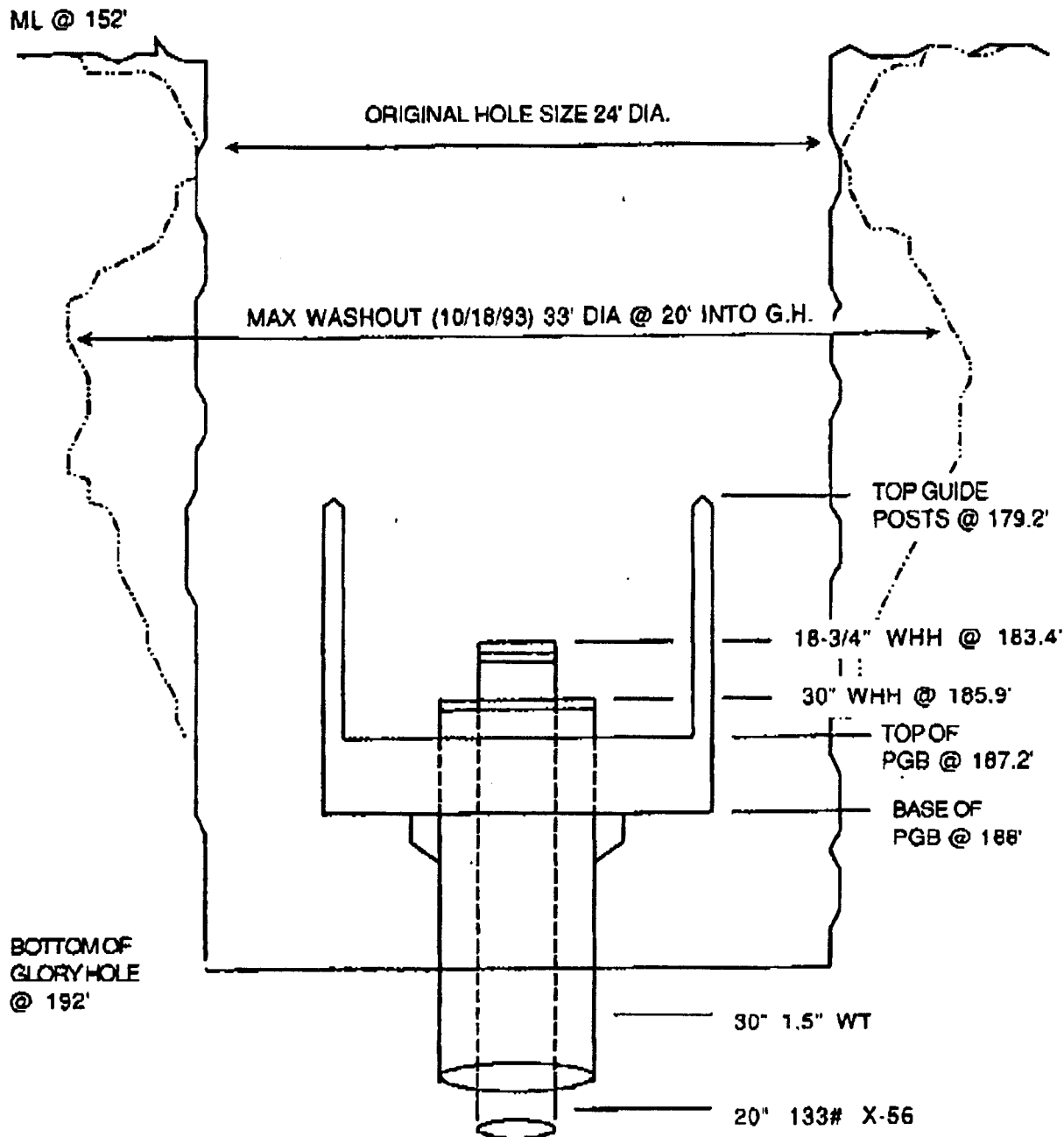
DATE: 10/18/93

RECEIVED
DGS DISTRICT OFFICE

**Y-1597 #1
GLORY HOLE DIAGRAM**

OCT 18 1993

GENERAL MANAGEMENT SERVICE
ANCHORAGE, ALASKA



NOTE: ALL DEPTHS ARE FROM ROTARY TABLE (RT)

GLA 10/18/93

General Purpose Worksheet

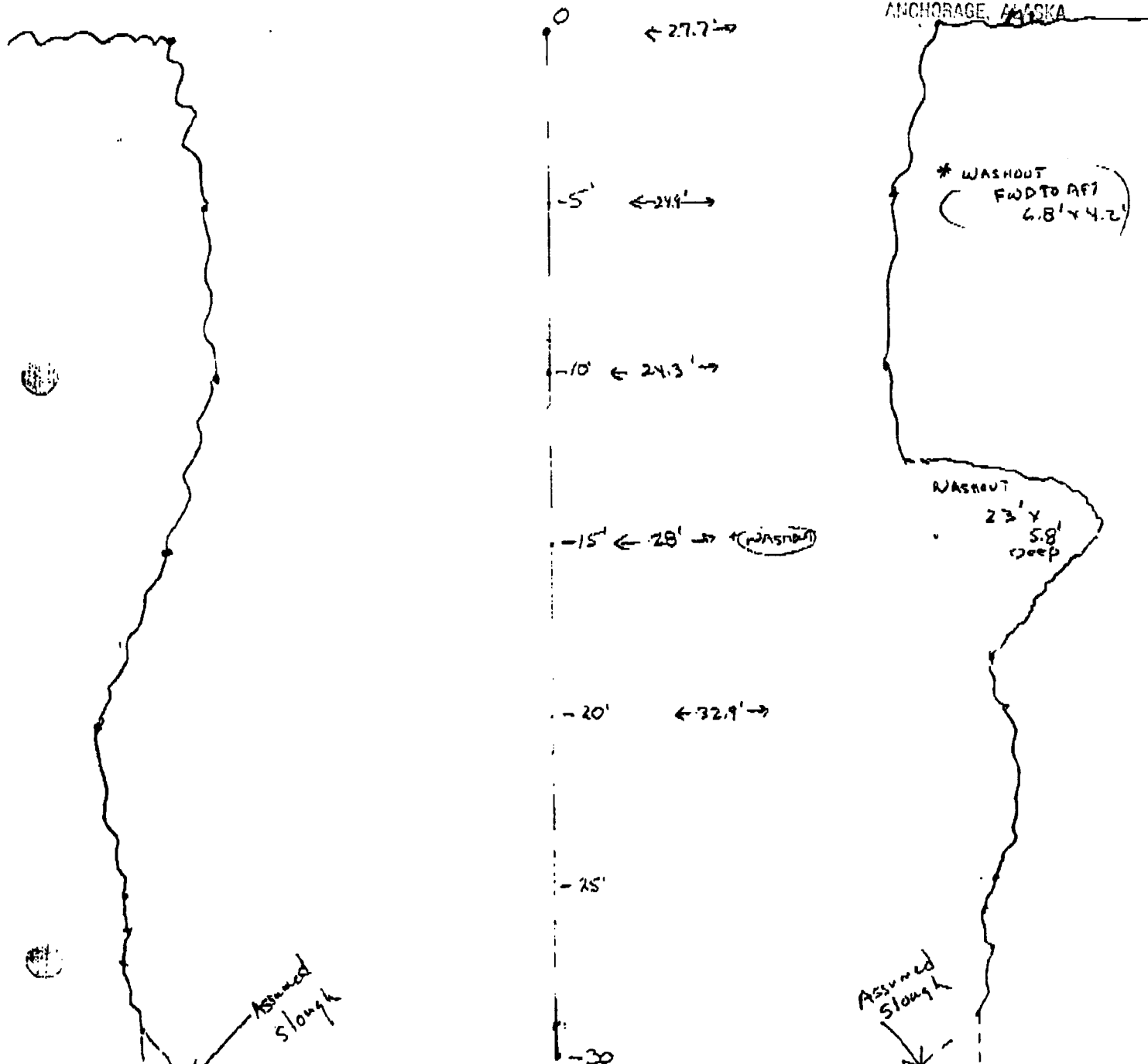
Subject	GLORY HOLE DIAGRAM		Page No.	1	2
File	Y-1597 #1		By	DCTB	Date 10/18/93

RECEIVED
NCS DISTRICT OFFICE

PORT / STARBOARD AXIS

OCT 18 1993

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA



NO. 313 D02
1020-UCRA

SECURE-FX TRANSMISSION
06:38 10/19/93
ARC0 KULUM 11 - 907 2651393

Oct. 18, 1993 8:25AM

ARCO ALASKA INC. 501 2651552

OCS DISTRICT OFFICE
N. 39801 P. 13/17.

OCT 18 1993

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

MINERALS MANAGEMENT SERVICE
ALASKA STATE

Well Name: AX 9295		Depth: 1020		Prog: 0	Spud Date: 10/13/93 9:00 AM		Days Actual: 131 11.00		Days Planned: 10		Date: 10/17/93				
Contractor/Rig No.: CANMARK/KULLUK		Last Casing: 20" @ 1000'		Next Casing: 13-3/8" @ 4000'		Shoe Test EMW: NA		Formation:							
Operation at 0600: MONITOR CSG/MH FOR SUBSIDENCE FOLLOWING 20" CEMENT JOB						1993 Proj. Cost \$ 24,666,003		Daily Cost. (\$): \$ 4,933.20		Accum. Cost. (\$) \$ 640,000.00					
BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:	1 RR			MW: RWM	RWM	Filter	RWM	Depth:	1020	Depth:	1020				
Size:	2 1/2"			Visc: 47	Visc: 45	% Solids:	% Solids:	Mud Wt:	SW	WT:	150	Torque:			
Make:	HTC			PV: 23	PV: 26	% Band:	% Sand:	FL Temp:		PU WL:	150	Jar No.:			
Type:	ATXG1			YP: 45	YP: 39	Ph:	Ph:	BGG:		SO WL:	150	Jar Hrs.:			
Ser #:	N86BT			Gels: 10/13	Gels: 6/6	Pm:	Pm:	CG:		Pump #1		Data #2			
Depth Out:	SHI			API FL: 16	API FL: 16	PI:	PI:	TG:		LNR:	6.5	6.5			
Feet:	816			HTNPWL		MI:	MI:	Max Gas:		SPM:	101	100			
Hours:	24			MBT:		Chlor:	Chlor:	Dc Exp:	0.95	PSI:	1650	1650			
WOB:	4/12			CUM CST	8 Day	OW:	OW:	Sh Den:	N/A	SPS:	N/A	N/A			
RFM:	120			Kick Tel:	NA	Total GPM:		Eel PP:	8.5	SPP:	N/A	N/A			
Jets:	3 x 20			Survey No.	Depth	Angle	Asimuth	TYD	Section	N/S	E/W	Dogleg			
	1 x 22			1	924	3.00									
Grade:															
ELEVATIONS															
											WTR DEPTH	87'			
											RKB-MSL	85'			
											RKB-ML	152'			
											RKB-WH	183.5'			
											GH Depth	40.5'			
											RKB-BGH	192.5'			
TIME		HRS		OPERATIONS FROM 0600 TO 0800											
6:00 14:00		8.0		RUN 20", 1334, X-56 CSG TO 185'. JUMP DIVERS AND STAB 20" INTO 30" WHH. HOOK-UP AIRLIFT. RECOVER DIVERS.											
				CONT RIH W/ 20" CSG TO 814' (16 JTS TOTAL). R/D CSG EQUIPMENT AND TAM PKR. R/U FALSE ROTARY AND RIH W/											
				8 STANDS 5" DP AND STINGER. M/U 18-3/4" WHH AND R/T. CONT RIH ON 5" DP. FILL CSG @ MOON POOL. INSTALL											
				AND CLOSE VALVE ON R/T. CONT RIH W/ CSG. TOOK WEIGHT W/ FS @ 996' (4' HIGH). R/U CIRC HEAD AND WASH TO											
				BOTTOM. LAND CSG W/ FS @ 1000' AND 18-3/4" WHH @ 183.5'. LATCH WHH AND OVERPULL 25 KLBS - OK.											
				SLACK-OFF 70 KLBS AND OBSERVED 4" SUBSIDENCE (INNER DP STINGER @ 976', 20" ABOVE TOP OF FS).											
14:00 2:00		12.0		AIRLIFT LINE PARTED 2 SECTIONS ABOVE PGB. SLOPE INDICATOR ON R/T HAD KNOCKED OFF COUPLING FROM AIRLIFT											
				LINE JUMPED DIVERS AND UNLATCHED AIRLIFT SECTION FROM POB. RECOVERED PARTED AIRLIFT LINE AND DIVER.											
				REPAIR AIRLIFT AND INSTALL DIVER OPERATED VALVE @ SUCTION END. JUMP DIVERS AND RE-ESTABLISH											
				AIRLIFT TO POB. DIVERS HAD TROUBLE RE-LATCHING AIRLIFT LINE INTO PGB. 3 DIVES (@ 17:00, 20:45 & 00:20 HRS)											
				REQUIRED TO RE-ESTABLISH AIRLIFT TO PGB.											
2:00 3:30		1.5		BREAK CIRC ON DP/CSG. CIRC HOLE CLEAN W/ 150 SPM @ 700 PSI. BRING SUPPLIER II ALONGSIDE TO USE AIR											
				COMPRESSOR FOR BULK SYSTEM (100 HP MOTOR ON BULK AIR COMPRESSOR BURNT UP @ 2230 HRS).											
3:30 4:00		2.5		TEST LINES TO 2000 PSI. BREAK CIRC W/ DOWELL MIX AND PUMP 476 BBLs (2876 SX) A.S.I. CMT W/ 0.3% D-13											
SUBTOTAL HOURS:		24.0		Opr Time		16		Env Alert Status:		BLUE		Kick Tolerance:			
On Site Engineer: G.LALVORD															
Signed: D.BUMGARDNER/B. MORRISON/L. HILL															

Oct. 18, 1993

8:26AM

ARCO ALASKA INC

N03980 P. 14/17

OCS DISTRICT OFFICE

CONFIDENTIAL

PAGE 2 OF 2

OCT 18 1993

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:		MINERALS MANAGEMENT SERVICE					
		ANCHORAGE, ALASKA					
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary		
Pot Water:	186	1,962	Bbl		Rotary	Motor	
Drill Water:	0	3,503	Bbl	Well Daily	0.0	14.2	14.2
Fuel:	5,125	274,554	Gal	Well Cumulative	0.0	24.1	24.1
Barite:	0	0,107	Sx	BHA	0.0	24.1	24.1
Cement: G/AS	0/0	2720/8280	Sx	PERSONNEL ONBOARD			
Supply Vessel Information:				ARCO:		4	
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER	0
IKALLUK			1,585	375,388	18	CONTRACTOR: CANMAR	52
MISCARDO	1544		1,321	360,068	19	CATERER: STANTON	10
KALVIK		1720/G	4,544	58,068	17	CEMENTER: DOWELL	2
SUPPLIER	4123		1,057	54,948	14	WEATHER: HORIZON	2
WEATHER DATA: @ 05:00						SAFETY: HESMEDIC	2
TEMPERATURE	32°	WIND SPEED	28 KTS	DIRECTION	100°	CASING: OBR/HDS	1
VISIBILITY	5 FOG	CEILING	400 OVERCAST	SEAS		CORING: INTEG/CORELAB	
Personnel Accidents:						DST: HRS	
Yes _____ None Reported _____ X							
Description of Accident:						ELECTRIC LOG: SCHLUMBERGER	0
						MUD LOG: SPERRY	5
						MUD ENGR: MI	2
						MWD SERVICE: SPERRY	2
						WELLHEAD: DRILQUIP	1
Well Site Safety: HELD DRILL ON RIG ON 10/13/93						COMMUNICATION: N. S. TELECOM	1
Date Last Kick Drill: 10/3/93						OTHER: Divers/Radio/MMS	8
Date Last BOP Test: 10/11/93 snup 161						VISITORS: SURV. SYSTEMS/MEZO	2
Other Drills-Describe: ABANDON SHIP & FIRE DRILL 10/10/93							
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL	
						94	
		MIXED @ 15.7 PPG. MONITORED ARIPT FOR CEMENT RETURNS (OBSERVED PH INCREASE (8.7 - 9.4) W/ 430 BBL'S					
		CMT PUMPED AND STRONG COLOR CHANGE). DISPLACED CEMENT TO STINGER W/ 19.4 BBL'S SEAWATER IN ORDER					
		TO MONITOR CSG FOR ADDITIONAL SUBSIDENCE. CIP @ 0546 HRS 10/17/93. CHECK FLOATS - OK. MONITOR DP FOR					
		FOR CSG/WELLHEAD SUBSIDENCE. (PLAN TO MONITOR CSG MOVEMENT FOR 30 MIN).					
		NOTE:					
		1) VALVE ADJACENT KILL MUD PITS MISALIGNED AND ALLOWED 18.1PPG & 11.1PPG TO EQUALIZE/MIX INTO					
		14.8 PPG & 13.1 PPG.					
		2) ALL FIBERGLASS REPAIRS COMPLETE ON ALL LIFE BOATS.					
		3) DIVER @ 0700 HRS 10/15/93 OBSERVED FILL 4' TO 6' ABOVE BOTTOM OF GUIDE POSTS.					
		Kulluk Alert Status (Hours)					
		Green	Blue	Yellow	Red	Black	
	Environ.	0	24				ICE COVERAGE PRESENTLY OPEN WATER
	Well	24					
TOTAL HOURS: 24.0		Vessel	24				

On Site Engineer: G. LALVORD

Signed: D. BUMGARDNER/B. MORRISON/L. HILL

DATE: 10/17/93

Oct. 18. 1993 8:19AM CO ALASKA INC

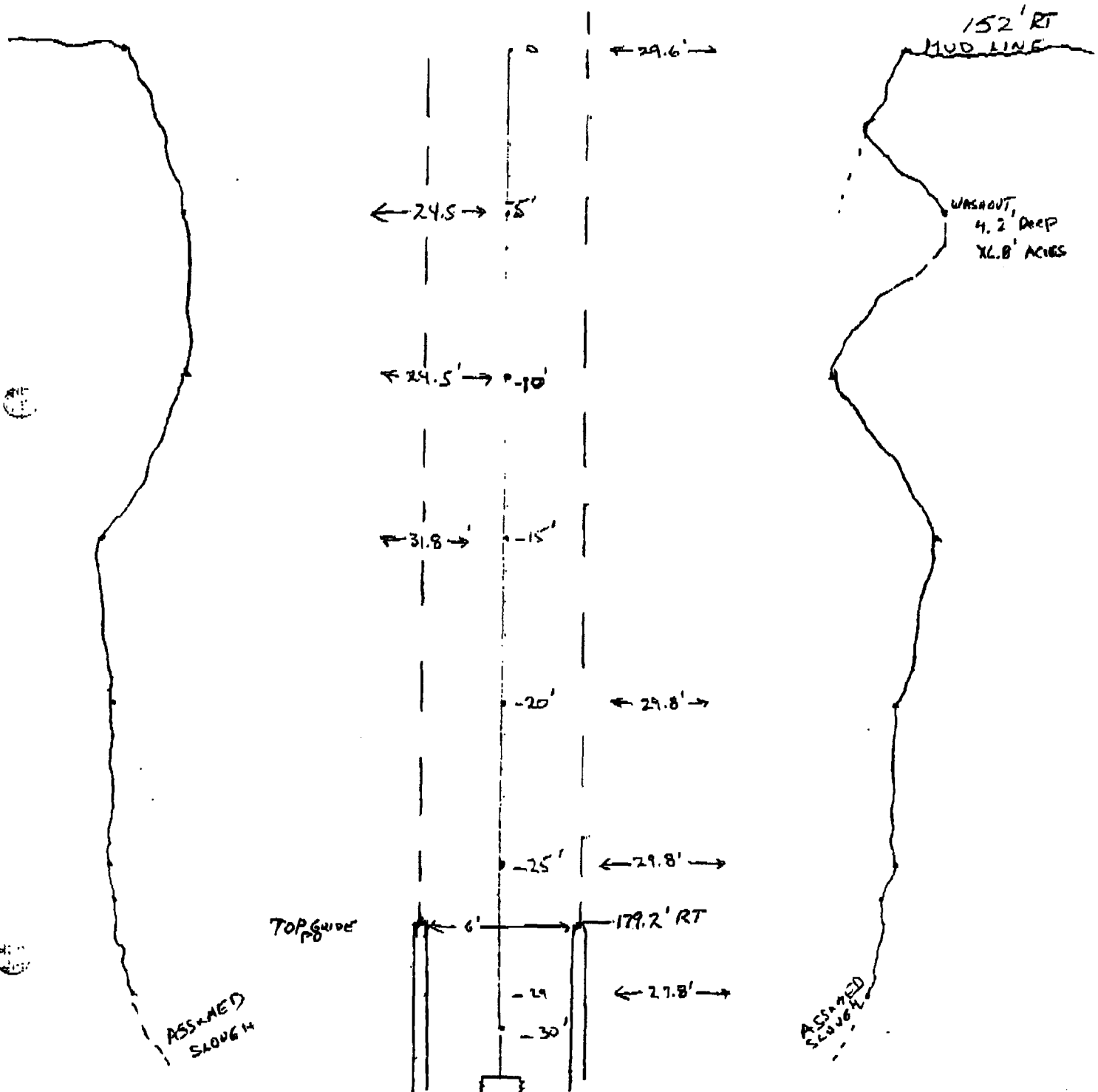
OCS DISTRICT OFFICE
No. 3980 P. 6/17
OCT 18 1993

General Purpose Worksheet

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA

Subject	GLORY HOLE	Page No.	2	of	2
File	Y-1597 #1	By	DCB	Date	10/18/93

ACT / FORWARD AXIS



NO. 317 003

SECURE-FX TRANSMISSION
10/19/93 06:39
ARCO KUULUM II - 907 2651393

OCT 18 1993 PAGE 1 OF 2

PAGE 1 OF 8

MINERAL MANAGEMENT SERVICE

SUBTOTAL HOURS: 22.0	Opt Time 16	Env Alert Status: BLUE	Kick Tolerance: NA
On Site Engineer: G.LALVORD		Signed: D BLUMGARNER/B. MORRISON/L HILL	

Oct. 16, 1993 11:26AM

ARCO ALASKA INC 927 2651393

No. 3955 P. 3/8^{dc}**CONFIDENTIAL**LOCAL PAGE 2 OF 2
ACS DISTRICT OFFICE

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA
Description:

OCT 18 1993

Rig Supply Data:

Pot Water:

Drill Water:

Fuel:

Barite:

Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hours Summary

186

1,982

Bbl

0

3,503

Bbl

3,384

279,679

Gd

0

8,107

Sx

0/3

2720/6339

Sx

Rotary

Motor

Well Daily

0.0

14.2

14.2

Well Cumulative

0.0

24.1

24.1

BHA

0.0

24.1

24.1

PERSONNEL ONBOARD

Supply Vessel Information:

APCO

4

VESSEL

BARITE (SX)

CEMENT (SX)

FUEL USED

FUEL LEFT

POB

PARTNER

0

IKALUK

2,842

376,979

18

CONTRACTOR: CANMAR

52

MSCARDO

1544

3,170

361,387

19

CATERER: STANTON

10

KALVIK

1720/G

10,223

83,613

17

CEMENTER: DOWELL

2

SUPPLIER

4123

1,057

56,004

14

WEATHER: HORIZON

2

WEATHER DATA: @ 05:00

SAFETY: H2S/MEDIC

2

TEMPERATURE

35°

WIND SPEED 8 KTS

DIRECTION

180°

CASING: GSP/HDS

2

VISIBILITY

10 NM

CEILING

6000 OVERCAST

SEAS

0'

CORPUS: INTEQ/CORELAB

Personnel Accidents:

Yes

None Reported

X

DST: HRS

Description of
Accident:

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

2

MUDENGR: MI

2

MWD SERVICE: SPERRY

2

WELLHEAD: DRILQUIP

1

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

COMMUNICATION: N. S. TELECOM

1

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 10/11/93 slump test

OTHER: Divers/Radio/MMS

6

Other Drills-Describe: ABANDON SHIP & FIRE DRILL 10/10/93.

VISITORS: SURV SYSTEMS/MEZO

2

TIME

HFS

OPERATIONS FROM 0800 TO 0800

TOTAL PERSONNEL

92

4:00

5:30

1.5

R/U TO RUN 20" CASING.

5:30

6:00

0.5

RUNNING 20", 133#, X-56, 8-60 CSG.

ALUMINUM WALKWAY THAT WAS DROPPED FROM MOONPOOL DURING AIRLIFT CLEANOUT RECOVERED
FROM PG8 BY DIVERS.NOTE: KALVIK ARRIVED MCKINLEY BAY 2200 HRS 10/15/93. STANDING BY CHANNEL MOUTH - NOT RECEIVING DGPS
SIGNAL.

IKALUK STARTED SEARCHING K-3 LOCATION W/ MESOTECH FOR ACS ORV.

DOWNGRADED ENVIRONMENTAL ALERT STATUS FROM YELLOW TO BLUE @ 1000 HRS 10/5/93

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

Environ.

0

9

15

ICE COVERAGE PRESENTLY OPEN WATER

Well

24

TOTAL HOURS: 24.0

Vessel

24

On Site Engineer: G.LALVORD

Signed: D. BUMGARDNER/B. MORRISON/L. HILL

DATE: 10/18/93

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 9275	Depth: 1020	Prog: 725	Spud Date: 10/13/93 9:00 AM	Days Actual: 129 9.00	Days Planned: 9	Date: 10/15/93
Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 30" @ 285'	Next Casing: 20" @ 1000'	Shoe Test EMW: NA	Formation:		
Operation at 0800: MAKING WIPER TRIP FOR 20" CSG			1993 Proj. Cost \$ 3,000,000	Daily Cost, (\$): \$ 2,000	Accum. Cost, (\$) \$ 2,000	

BIT DATA			MUD DATA				MUD LOG DATA			DRILLING			
Bit #:	1 HR		MW: KWM 11.1	KWM 16.2	Filter Cake:	KWM:	Depth:	20-Oct	Depth:	1020			
Size:	26"		VISC: 48	VISC: 61	%Solids:	%Solids:	Mud Wt:	SW	ROT	150	Torque:		
Make:	HTC		PV: 20	PV: 47	% Sand:	% Sand:	FL Temp:		PU Wt:	150	Jar No.:		
Type:	ATXG1		YP: 32	YP: 81	Ph:	Ph:	BGG:		SO Wt:	150	Jar Hrs.:		
Ser #:	N86BT		Gels: 6/8	Gels: 28/31	Pm:	Pm:	CG:		Pump #1	Data #2	HYDRAULICS		
Depth Out:	SH		API FL: 18	API FL: 18	PI:	PI:	TG:		UNR:	6.5	6.5	Bit ΔP: 510	
Feet:	816		RTHPWL		MI:	MI:	Max Gas:		SPM:	101	100	HHP: 281	
Hours:	24		MBT:		Chlor:	Chlor:	Dc Exp:	0.95	PSI:	1650	1650	HHP/sg in: 5	
WOB:	4/12		CUM CST	SDaily	O/W:	O/W:	Sh Den:	N/A	SPS:	N/A	N/A	ECD: 8.6	
RFM:	120		Kick Tol	NA	Total GPM:	687	Est PP:	8.5	SPP:	N/A	N/A	An Vel OP/DC: 37/41	
Jobs:	3 x 20 1 x 22		Survey No.	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS	
Grade:	SH		1	924	3.00							WTA DEPTH 87'	
												RKB-MSL 65'	
												RKB-ML 152'	
												RKB-WH NA	
												GH Depth 40.5'	
												RKB-BGH 192.5'	

TIME	HRS	OPERATIONS FROM 0800 TO 0600
6:00	6:30	0.5 RIH TO 184'. JUMP DIVERS TO CONFIRM 26" BIT INSIDE 30'.
6:30	10:00	3.5 DIVER ATTEMPTED TO LATCH AIRLIFT TO PGB. TWISTED GUIDE BASE AND DISORIENTATION/VISIBILITY MADE LATCHING DIFFICULT - DIVER OUT OF TIME. RECOVER DIVER. JUMP ADDTNL DIVER - ORIENT AND LATCH AIRLIFT (SUCCESSFULLY) TO PGB. RECOVER DIVER.
10:00	10:30	0.5 CONT RIH TO 205'.
10:30	2:00	15.5 DRILL 26" HOLE FROM 295' TO 1020'
2:00	3:00	1.0 CIRC BOTTOMS UP. SPOT HI-VIS GEL ON BOTTOM.
3:00	4:00	1.0 DROP TOTCO SURVEY POH TO MWD COLLAR FOR WIPER TRIP. RECOVER SURVEY (3" @ 924).
4:00	4:30	0.5 DOWNLOAD LWD DATA.
4:30	6:00	1.5 MU DRILQUIP RUNNING TOOL TO 18-3/4" WHH AND L/D SAME. PREP RIH FOR WIPER TRIP
		RECEIVED OCS DISTRICT OFFICE
		OCT 15 1993
SUBTOTAL HOURS: 24.0	Opr Time 16	Env Alert Status: YELLOW
On Site Engineer: G. LALVORD	Signed: D. BURGNER/B. MORRISON/L. HILL	MINERALS MANAGEMENT SERVICE ANCHORAGE, ALASKA

RECEIVED

TCS DISTRICT OFFICE
PAGE 2 OF 2**CONFIDENTIAL**

OCT 15 1993

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

**Summarized BHA
Description:**

26" BIT, XO, DYNA DRILL, XO, 26" STAB, XO, XO, LWD, 8" DC, 17-1/2" STAB, XO

TOTAL LENGTH- 103.29

MINERALS MANAGEMENT SERVICE
ANCHORAGE, ALASKA**Rig Supply Data:**

Pot Water:

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Drill Water:

Fuel:

Barite:

Cement: G/AS

173

1,611

Bbl

0

3,660

Bbl

5,354

205,060

Gal

0

3,107

Sk

0/0

2720/6336

Sk

Rotary

Motor

Well Daily

Well Cumulative

BHA

0.0

14.2

14.2

0.0

24.1

24.1

0.0

24.1

24.1

PERSONNEL ONBOARD**Supply Vessel Information:**

ARCO:

4

PARTNER:

0

CONTRACTOR: CANMAR

52

CATERER: STANTON

10

CEMENTER: DOWELL

2

WEATHER: HORIZON

2

SAFETY: H2S/MEDIC

2

CASING: GBR/HDS

2

CORING: INTEC/CORELAB

DST: HRS

1

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

2

MUD ENGR: MI

2

MWD SERVICE: SPERRY

2

WELLHEAD: DRILQUIP

1

COMMUNICATION: N. S. TELECOM

1

OTHER: Divers/Radio/MMS

8

VISITORS: SURV SYSTEMS/MMS

2

TOTAL PERSONNEL: 93

Weather Data: @ 06:00

TEMPERATURE

30°

WIND SPEED 16 KTS

DIRECTION

140°

VISIBILITY

3 NM

CEILING 1000' OVERCAST

SEAS

3'

Personnel Accidents:Yes ☒

None Reported

**Description of
Accident:**

RANDY EDMONDSON - ASST DRILLER SMASHED THREE FINGERS ON LEFT HAND.

DROPPED TONGS ON HAND WHILE REDRESSING SAME WORK STATUS PRESENTLY

UNDER REVIEW. ACCIDENT OCCURRED @ 2100 HRS, 10/14/93.

Well Site Safety:

HELD DRILL ON RIG ON 10/13/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 10/11/93 slump test

Other Drills-Describe: ABANDON SHIP & FIRE DRILL 10/10/93.

TIME

HRS

OPERATIONS FROM 0600 TO 0600

NOTE:

1) FUEL TRANSFERS FROM KALVIK TO KULLUK AND MISCAROO COMPLETE @ 1830 HRS, 10/14/93. KALVIK

UNDERWAY TO MCKINLEY BAY @ 2230 HRS, 10/14/93. ETA KALVIK TO MCKINLEY 0230 HRS, 10/16/93.

ARCTIC ENDEAVOUR BARGE LOADOUT NEARLY COMPLETE. APPROX 7 LIFTS REMAINING. LOADING SLOW DUE TO
DECK ICING AND SNOWFALL

2) BOTH CREWS HELD SAFETY MEETINGS REGARDING SHALLOW GAS HAZARDS WHILE DRILLING RISERLESS.

VESSEL ALERT DOWNGRADED TO GREEN (FR YELLOW) @ 1830 HRS FOLLOWING COMPLETION OF FUEL TRANSFERS

Kulluk Alert Status (Hours)

Green Blue Yellow Red Black

Environ.

0

24

ICE COVERAGE PRESENTLY OPEN WATER

Well

24

TOTAL HOURS:

24.0

Vessel

11

13

On Site Engineer: G.L. ALVORD

Signed: D. BUMGARDNER/B. MORRISON/L. HILL

DATE: 10/16/93

Oct. 14. 1993

8:38AM

ARCO ALASKA INC 907 2651393

No. 3877 P. 2/3

G01

CONFIDENTIAL

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Well Name: AX 0276	Depth: 295'	Prog: 91'	Spud Date: 10/13/93 9:00 AM	Days Actual: 128 8.00	Days Planned: 8	Date: 10/14/93
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Contractor/Rig No.: CANMAR/KULLUK	Last Casing: 30" @ 295'	Next Casing: 20" @ 1000'	Shoe Test EMW: NA	Formation:
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Operation at 0600:	1993 Proj. Cost	Daily Cost, (\$):	Accum. Cost, (\$)
LD CADA TOOL	3,144,000	2,400,000	2,183,000

BIT DATA				MUD DATA				MUD LOG DATA				DRILLING			
Bit #:	1 RR			MW: KWM 11.1	KWM 18.2	Filler Cake:	KWM Cake:	Depth:		Depth:					
Size	26"			Visc: 49	Visc: 61	%Solids:	%Solids:	Mud Wt:		ROT		Torque:			
Make:	HTC			PV: 20	PV: 47	%Sand:	%Sand:	FL Temp:		PU Wt:		Jar No.:			
Type:	ATXG1			YP: 32	YP: 81	Ph:	Ph:	BGG:		SO Wt:		Jar Hrs:			
Ser #:	N86BT			Gels: 65	Gels: 20/31	Pm:	Pm:	CG:		Pump #1	Data #2	HYDRAULICS			
Depth				API FL: 18	API FL: 18	PI:	PI:	TG:		LNR	6.6	6.6	Bit AP:		
Out:	SH			HTHPWL		MI:	MI:	Max Gas:		GFM			HHP:		
Feet:	91			MBT:		Chlor:	Chlor:	De Exp:		PSI			HHP/		
Hours:	9.9			CUM CST	Daily	OW:	OW:	Sh Den:		SPS			sq in:		
WOB:	30/40					Total GPM:		Est PP:		GPP:			ECD:		
RFM:	120			Kick Tol:	NA								An Vel		
Jets:	3 x 20			Survey No.	Depth	Angle	Azimuth	TVD					DP/DC:		
	1 x 22														
Grade:															

TIME	HRS	OPERATIONS FROM 0600 TO 0600
6:00	7:30	1.5 PU INNER STRING ASSEMBLY, RIH AND MU CADA TOOL TO 30" AT MOON POOL DECK.
7:30	9:00	0.5 HELD OPERATIONS MEETING W/ OIM & MARINE DEPARTMENT TO DETERMINE ADEQUATE WEATHER WINDOW TO CONDUCT OPERATIONS. LATEST WEATHER FORECAST CONFIRMED W/ FAIRBANKS GIVES A 24 HOUR MINIMUM WEATHER WINDOW. 30" DRILL IN ACTIVITY EXPECTED TO TAKE 18 HOURS.
8:00	9:00	1.0 JUMP DIVER & RIH W/ 30" CASING DRILL ASSEMBLY. DIVER CONFIRMED 30" ENTERED PILOT HOLE. RECOVER DIVER.
9:00	0:30	15.5 SPUD OCS-Y 1597 #1 @ 09:00 10/13/93. DRILL IN 30" CASING FROM 204' TO 296'. ADT = 9.9 HOURS
0:30	1:00	0.5 PUMPED 50 BBL SWEEP AND CIRCULATE 2 HOLE VOLUMES.
1:00	3:00	2.0 RU AND RUN AIR LIFT SYSTEM.
3:00	4:30	1.5 JUMP DIVERS. DIVERS DELAYED DUE TO RUNNING ADDITIONAL MOORING LINES FOR BARGE AND BOATS TO ALLOW SHUTTING DOWN PROPULSION SYSTEMS.
4:30	5:00	0.5 ADJUST COMPENSATOR AND MAKE 3 TURNS TO RIGHT TO RELEASE DRILLING ASSEMBLY FOR DRILL AHEAD. CADA TOOL RELEASED PREMATURELY.
5:00	6:00	1.0 POOH W/ CADA TOOL.
		NOTE: DIVERS REPORTED PGB LEVEL 2' 6" OF CLEARANCE BEYOND GUIDE POSTS. SOFT FILL UP TO PGB GIMBAL.

SUBTOTAL HOURS: 24.0	Op Time 1.6	Env Alert Status: YELLOW	Kick Tolerance: NA
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On Site Engineer: T. E. MAUNDER *TEM* Signed: D. BUMGARDNER/B. MORRISON/L. HILL

Oct. 14, 1993

8:39AM

ARCO ALASKA INC

No. 3877 P. 3/3

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

**Summarized BHA
Description:**(INNER STRING ASSEMBLY)-26" BIT, XO, DYNA DRILL, XO, 26" STAB, XO, XO, LWD, 8" DC, 17-1/2" STAB, XO, RT
TOTAL LENGTH= 109.27**Rig Supply Data:**

Pot Water:

208

Remaining Stock

1,811

Unit

Bbl

Drill Water:

0

3,724

Bbl

Fuel:

5,125

280,444

Gal

Barite:

0

7,918

Sk

Cement: G/GAS

0/0

2803/8339

Sk

Hours Summary

Rotary

Motor

Well Daily

0.0

0.0

0.0

Well Cumulative

0.0

0.0

0.0

BHA

0.0

0.0

0.0

PERSONNEL ONBOARD**Supply Vessel Information:**

VESSEL	BARITE (BX)	CEMENT (BX)	FUEL USED	FUEL LEFT	POB	PARTNER	
IKALUK			2,642	380,408	18	CONTRACTOR, CANMAR	52
MISCAROO	6174		1,849	289,043	19	CATERER, STANTON	10
KALVIK		1720/G	2,298	142,679	17	CEMENTER, DOWELL	2
SUPPLIER	4123		1,585	58,382	14	WEATHER, HORIZON	2
WEATHER DATA: @ 05:00						SAFETY, H2S/MEDIC	2
TEMPERATURE 28° WIND SPEED 17 KTS DIRECTION 120°						CASING, GERVHDS	3
VISIBILITY 15 NM CLOUD 1400 OVERCAST SEAS 3'						COING, INTEQCORELAB	
Personnel Accidents: Yes _____ None Reported _____ X						DST, HRS	3
Description of Accident:						ELECTRIC LOG, SCHLUMBERGER	0
						MUD LOG, SPERRY	2
						MUDENG, MI	2
						MWD SERVICE, SPERRY	2
						WELLHEAD, DRILQUIP	2
Well Site Safety: HELD DRILL ON RIG ON 10/13/93						COMMUNICATION, N. S. TELECOM	1
Date Last Kick Drill: 10/3/93 Date Last BOP Test: 10/11/93 slump test						OTHER, Divers/Radio/MMS	8
Other Drills-Describe ABANDON SHIP & FIRE DRILL 10/10/93.						VISITORS, SURV SYSTEMS/MEZO	2
TIME	HRS	OPERATIONS FROM 0600 TO 0600				TOTAL PERSONNEL	97

NOTE: CROWLEY BARGE ALONGSIDE DISCHARGING CASING, CEMENT AND MUD PRODUCTS MOST OF DAY

BACKLOADED ALL HRS TANKS ON PIPE DECK, SCRUBBER VESSEL, MISC HRS EQUIPMENT AND MUD PRODUCTS.

BARGE CAME ALONGSIDE @ 10:00 CLAIMED DIFFICULTY IN HOLDING POSITION AND SLIPPED MOORINGS @ 15:10. BARGE BACK IN POSITION UNDER #1 CRANE @ 17:10 WITH IKALUK ALONGSIDE FOR MORAL SUPPORT.

MISCAROO ALONG SIDE PUMPING BARITE TO RIG.

KALVIK OFFLOADED FUEL TO IKALUK IN PREPARATION FOR FUEL RUN TO MCKINLEY BAY

VESSEL ALERT UPGRADED TO YELLOW WHILE SUPPLIER II TENDED REFUELING OPERATION.

Kulluk Alert Status (Hours)

Green Blue Yellow Red Black

Environ.

0

24

Well

24

Vessel

13

11

TOTAL HOURS: 24.0

ICE COVERAGE PRESENTLY OPEN WATER

On Site Engineer: T. E. MAUNDER

Signed: D. BURGARNER/S. MORRISON/L. HILL

DATE: 10/14/93

OCT 14 1993
MINERALS MANAGEMENT
ANCHORAGE, ALASKA
SERVICE

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report New Ventures

**Summarized BHA
Description:**(INNER STRING ASSEMBLY)-26" BIT, XO, DYNA DRILL, XO, 26" STAB, XO, XO, LWD, B" DC, 17-1/2" STAB, XO, RT
TOTAL LENGTH- 109.27**Rig Supply Data:**

	Used last 24 hours	Remaining Stock	Unit	Hours Summary		
Pot Water:	208	1,811	Bbl		Rotary	Motor
Drill Water:	0	3,830	Bbl	Well Daily		0.0
Fuel:	4,619	385,588	Gal	Well Cumulative	0.0	0.0
Barite:	882	3,991	Sx	BHA	0.0	
Cement: G/AS	0/0	1712/4272	Sx			

PERSONNEL ONBOARD**Supply Vessel Information:**

VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	ARCO:	
IKALUK			4,491	277,381	18	PARTNER:	0
MISCAROO	6174		3,983	300,892	18	CONTRACTOR: CANMAR	53
KALVIK		1720/G	6,651	250,846	17	CATERER: STANTON	10
SUPPLIER	4123		1,321	59,967	12	CEMENTER: DOWELL	2
WEATHER DATA: @ 05:00						WEATHER: HORIZON	2
TEMPERATURE 27 WIND SPEED 10 K DIRECTION 280°						SAFETY: H2S/MEDIC	2
VISIBILITY 10 NM CEILING 800 OVERCAST SEAS 6						CASING: GBR/MDS	4
Personnel Accidents: Yes _____ None Reported _____ X						CORING: INTEQ/CORELAB	
						DST: HRS	3

**Description of
Accident:**

ELECTRIC LOG: SCHLUMBERGER	0
MUD LOG: SPERRY	2
MUDENG: MI	2
LWD SERVICE: SPERRY	2
WELLHEAD: DRILQUIP	1
COMMUNICATION: N. S. TELECOM	1
OTHER: Divers/Radio/MMS	4
VISITORS: SURV. SYSTEMS/NEZON/ORT	2
TOTAL PERSONNEL:	99

Well Site Safety:

HELD DRILL ON RIG ON 10/3/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 9/21/93

Other Drills-Describe ABANDON SHIP & FIRE DRILL 10/10/93.

TIME	HRS	OPERATIONS FROM 0600 TO 0900	TOTAL PERSONNEL					
			00					
		NOTE: CROWLEY BARGE APPROACHING RIG @ REPORT TIME FOR FURTHER CARGO TRANSFER. ACTUAL CARGO TRANSFERS WILL WAIT UNTIL DAYLIGHT (SUNRISE 08:30). TUG CAPTAIN REPORTS BARGE HAS ICE ON DECK DUE TO SPRAY DURING STORM AND FREEZING TEMPERATURES.						
		MISCAROO ALONG SIDE PUMPING BARITE TO RIG.						
		AS SEA CONDITIONS ALLOW KALVIK WILL OFFLOAD FUEL IN PREPARATION FOR FUEL RUN TO MCKINLEY BAY.						
		Received OCS District Office						
		OCT 13 1993						
		Minerals Management Service Anchorage, Alaska						
		Kulluk Alert Status (Hours)						
		Green	Blue	Yellow	Red	Black		
		Environ.	0		7.5	16.5		ICE COVERAGE PRESENTLY OPEN WATER
		Well	24					
		Vessel	24					
TOTAL HOURS: 24.0								

On Site Engineer: T. E. MAUNDER

Signed: D. BUMGARDNER/B. MORRISON/L. HILL

DATE: 10/13/93

001

PAGE 1 OF 2

Daily Drilling Report - New Ventures

SUBTOTAL HOURS: 24.0	Opr Time 16	Env Alert Status: RED	Kick Tolerance: NA
On Site Engineer: T. E. MAUNDER		Signed: B. CAMPBELL/S. SHULTZ	

CONFIDENTIAL

PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Summarized BHA Description:

Rig Supply Data:

Pot Water:

Drill Water:

Fuel:

Barite:

Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Rotary

Meter

Total

208

1,811

Bbl

0

3,748

Bbl

4,047

300,387

Gal

1,874

4,873

Sx

0/0

1712/4272

Sx

Well Daily

Well Cumulative

BHA

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO:

4

VESSEL

BARITE (SX)

CEMENT (SX)

FUEL USED

FUEL LEFT

POS

PARTNER

0

IKALUK

6174

2,378

281,872

18

CONTRACTOR: CANMAR

52

MISCAROO

1720/G

5,019

304,854

19

CATERER: STANTON

10

KALVIK

5,521

257,198

17

CEMENTER: DOWELL

2

SUPPLIER

4,123

1,321

61,288

15

WEATHER: HORIZON

2

WEATHER DATA:

TEMPERATURE

28

WIND SPEED 35 K W/G 45 K

DIRECTION

240°

VISIBILITY

10 NM

CEILING

11,000

SEAS

13

SAFETY: H2S/MEDIC

2

CASINO: GBR/MDS/ZEE DRL

8

CORING: INTEQ/CORELAB

Personnel Accidents:

Yes

None Reported

X

DST: HRS

3

Description of Accident:

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

2

MUD ENGR: MI

1

MWD SERVICE: SPERRY

2

WELLHEAD: DRILQUIP

1

COMMUNICATION: N. S. TELECOM

1

OTHER: Divers/Radio/MMS

8

VISITORS: SURV. SYSTEMS/MEZO

2

Well Site Safety:

HELD DRILL ON RIG ON 10/3/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 9/21/93

Other Drills-Describe: ABANDON SHIP & FIRE DRILL 10/10/93.

TIME

HRS

OPERATIONS FROM 0600 TO 0600

TOTAL PERSONNEL 98

Received
OCS District Office

OCT 12 1993

Minerals Management Service
Anchorage, Alaska

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

Environ.

0

0

24

ICE COVERAGE PRESENTLY OPEN WATER

Well

24

TOTAL HOURS:

24.0

Vessel

24

On Site Engineer: T. E. MAUNDER

Signed: B. CAMPBELL/S. SHULTZ

DATE: 10/12/93

Oct. 12, 1993 9:56AM

ALASKA INC

Received 2806 P. 2/3
District Office PAGE 1 OF 2**CONFIDENTIAL**

OCT 12 1993

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Minerals Management Service
Anchorage, Alaska

Well Name: AX 9275		Depth: pilot @ 204'		Prog. 4.5		Spud Date:		Days Actual: 125 5.00		Date: 10/11/93	
Contractor/Rig No.: CANMAR/KULLUK		Last Casing: Glory Hole @ 192.5'		Next Casing: 30' @ 300'		Shoe Test EMW:		Formation:			
Operation at 0600: CUTTING 30' CASING/WOW ON RED ALERT						1993 Proj. Cost \$ 4,500,000		Daily Cost, (\$): \$ 36,000		Accum. Cost, (\$): \$ 4,536,000	
BIT DATA		MUD DATA				MUD LOG DATA		DRILLING			
Bit #:		MW: HI-VIS 8.6	KWM 13.4	Filter Cake:	KWM Cake:	Depth:		Depth:			
Size:		Visc: 22	Visc: 47	%Solids:	%Solids:	Mud Wt:		ROT WT:		Torque	
Make:		PV:	PV:	% Sand:	% Sand:	FL Temp:		PU Wt:		Jar No.	
Type:		YP:	YP:	Ph:	Ph:	BGG:		SO WL:		Jar Hrs:	
Ser #:		Gels:	Gels:	Pm:	Pm:	CG:		Pump #1	Data #2	HYDRAULICS	
Depth Out:		API FL:	API FL:	PI:	PI:	LG:		LNR:	7.5	7.5	Bit ΔP:
Feet:		HYDRWL:		MI:	MI:	Max Gas:		SPM:			HHP:
Hours:		MBT:		Chlor:	Chlor:	Dc Exp:		PSI:			HHP/30 in:
WOB:		CUM CST 28000	SDaily 000	O/W:	O/W:	Sh Den:		SPG:			ECD:
TM:		Kick Tol:	NA	Total GPM:		Est PP:		GPP:			An Vel DP/DC:
Jts:		Survey No.	Depth	Angle	Azimuth	TVP	Section	N/E	E/W	Dogleg	ELEVATIONS
Grade:											WTR DEPTH 87'
											RKB-MSL 65'
											RKB-ML 152'
											RKB-WH NA
											GH Depth 40.5'
											RKB-BGH 192.5'
TIME		HRS		OPERATIONS FROM 0600 TO 0600							
6:00 8:30		2.5		MU TORQUE FRAME & DISCHARGE SPOUT ON KELLY. LOWERED GHT TO 26.5' BML. TOOK WEIGHT. REAMED/WASHED DOWN FROM 178.5 TO BOTTOM @ 188'. NO DIFFICULTIES ENCOUNTERED WASHING TO BOTTOM.							
8:30 13:00		4.5		DRILL 24' GLORY HOLE FROM 188' TO GLORY HOLE TD @ 192.5' GLORY HOLE DEPTH 40.5' BML.							
13:00 14:00		1.0		SD INDIVIDUAL CUTTERS. JETTED/AIR LIFTED HOLE W/ MAIN DRIVE RUNNING. SD PUMPS AND AIR LIFTED GLORY HOLE W/ MAIN DRIVE RUNNING.							
14:00 20:30		6.5		PULL AND LD HWDP. GLORY HOLE KELLY. 2 JOINTS 20" RISER. BIT ON SPIDER BEAMS @ 17:30. CLEANED GHT REMOVED SPEAR POINT. MOVED GHT OUT OF MOON POOL AREA.							
20:30 21:30		1.0		RIH W/ MEZOTECH SONAR ON DRILL PIPE. INSPECTED/OBTAINED HOLE PROFILE FROM ML TO GH BOTTOM @ 192.5.							
21:30 22:30		1.0		JUMPED DIVER AND MADE PHYSICAL INSPECTION OF GLORY HOLE. NO PROBLEMS ENCOUNTERED. HOLE OK.							
22:30 2:30		4.0		MU INNER STRING BHA FOR 30' CASING DRILL. STOOD BACK IN DERRICK.							
2:30 3:30		1.0		MU 38" RUNNING TOOL ON DRILL PIPE. STOOD BACK IN DERRICK.							
3:30 4:30		1.0		TRANSFERRED 30" CASING TO CATWALK. STRAPPED SAME. SET UP TO CUT BEVEL ON SHOE JOINT.							
4:30 6:00		1.5		WEATHER CONDITIONS DETERIORATED AND ALERT STATUS UPGRADED TO RED @ 04:45. WOW CONTINUING TO CUT 30" AND MAKE GENERAL PREPARATIONS TO SPUD.							
TOTAL HOURS: 24.0		Opr Time 15		Env Alert Status: RED		Kick Tolerance NA					
On Site Engineer: T. E. MAUNDER				Signed: B. CAMPBELL/S. SHULTZ							

101 NO. 284

36515393 - 907 2651393

06:09

10/12/93

SECURE-FX TRANSMISSION

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OCS District Office

OCT 12 1993

O Alaska, Inc.

Daily Drilling Report - New Ventures

Minerals Management Service
Anchorage, Alaska

**Summarized BHA
Description:**

Rig Supply Data:

Pot Water:

Drill Water:

Fuel:

Berth:

Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Rotary

Motor

Total

213

1,811

Bbl

0

3,944

Bbl

5,046

234,931

Gal

0

6,747

Sx

0/0

1712/2453

Sx

Well Daily

Well Cumulative

BHA

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO

4

VESSEL

BARITE (\$X)

CEMENT (\$X)

FUEL USED

FUEL LEFT

POB

PARTNER:

0

KALVIK

3,698

284,249

18

CONTRACTOR: CANMAR

52

MISCAROO

8174

6,340

809,674

18

CATERER: STANTON

10

KALVIK

1720/G

3,672

332,223

17

CEMENTER: DOWELL

2

SUPPLIER

4123

1,087

62,608

15

WEATHER: HORIZON

2

WEATHER DATA:

TEMPERATURE

34

WIND SPEED 40 K W/ G 50 K

DIRECTION

230°

VISIBILITY

7 NM

CEILING

0,000

SEAS

8

SAFETY: H25/MEDIC

2

CASING: GSP/HDS/ZEE DRL

6

CORING: INTEG/CORELAB

Personnel Accidents:

Yes

None Reported

X

DST: HRS

3

**Description of
Accident:**

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

2

MUD ENG: MI

1

MWD SERVICE: SPERRY

2

WELLHEAD: DRILQUIP

1

COMMUNICATION: N. S. TELECOM

1

OTHER: Divers/Radio/MMS

8

VISITORS: SURV. SYSTEMS/MEZO

2

Well Site Safety:

HELD DRILL ON RIG ON 10/3/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 9/21/93

Other Drills-Describe: BANDON SHIP & FIRE DRILL 10/10/93.

TIME

HRS

OPERATIONS FROM 0800 TO 0800

TOTAL PERSONNEL

08

NOTE: BARGE ENDEAVOR ON LOCATION 08:00 TO 14:30 AND 21:00 TO 09:30. MANAGED TO TRANSFER 30' ARCTIC SET CEMENT AND OTHER CRITICAL CARGO FOR 30' AND 20' OPERATIONS.

MISCAROO DUE ON LOCATION ABOUT 07:30 RETURNING FROM MCKINLEY BAY.

WHILE WORKING ON 30'. CHANGED VX SEAL RING BETWEEN LMRP AND BOP STACK.

KALVIK TRANSFERRED FUEL TO KULLUK IN PREPARATION FOR FUEL RUN TO MCKINLEY BAY.

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

Surviv.

0

22.75

1.25

ICE COVERAGE PRESENTLY OPEN WATER

Well

24

TOTAL HOURS: 24.0

Vessel

24

On Site Engineer T. E. MAUNDER

Signed: B. CAMPBELL/S. SHULTZ

DATE: 10/11/93

10-Oct-93 ARCO ALASKA INC OCS-Y-1597 #1

DEPTH	TIME DRILLED	ROP ft/hr	INVERSE ROP min/ft	WOB klb	ROTARY rpm	FLOW IN gpm	PRESS psi	BIT hrs
153.0	7:15	1.0	60.0	1.8	0	1142	2021	0.8
154.0	8:36	1.6	37.5	1.6	0	1280	2330	1.5
155.0	8:40	1.4	42.9	1.7	0	1235	2232	2.1
156.0	9:10	0.6	100.0	3.9	0	1277	2345	3.5
157.0	10:01	1.3	46.2	3.0	0	1277	2350	4.2
158.0	10:01	1.2	50.0	2.3	0	1285	2340	5.1
159.0	13:03	1.1	54.1	3.3	0	1286	2357	6.4
161.0	14:21	0.9	67.7	3.0	0	1277	2269	7.7
162.0	14:59	1.6	38.6	3.3	0	1293	2379	8.3
163.0	15:38	1.5	39.3	2.0	0	1287	2361	9.0
164.0	16:40	1.0	59.5	1.5	0	1282	2341	10.0
165.0	17:32	1.1	53.0	2.1	0	1282	2343	10.9
166.0	18:10	1.6	37.9	1.4	0	1284	2350	11.5
167.0	18:44	1.7	34.5	3.0	0	1286	2351	12.1
168.0	19:31	1.3	45.8	3.2	0	1116	1918	12.8
169.0	20:19	1.2	49.1	2.2	0	1318	2472	13.7
170.0	20:51	1.9	32.0	2.3	0	1319	2477	14.2
171.0	21:16	2.4	25.3	2.9	0	1317	2471	14.6
172.0	21:47	2.0	30.3	3.3	0	1318	2476	15.1
173.0	22:10	2.6	23.2	3.3	0	1307	2437	15.5
174.0	22:37	2.3	26.6	4.0	0	1304	2422	15.9
175.0	23:08	1.9	31.1	5.0	0	1301	2409	16.5
176.0	23:39	1.9	31.3	6.0	0	1299	2399	17.0
09-Oct-93								
77.0	0:06	2.2	27.0	8.1	0	1298	2395	17.4
178.0	0:56	1.2	50.3	4.7	0	1301	2408	18.3
179.0	1:28	1.9	31.7	3.0	0	1303	2413	18.8
180.0	2:09	1.5	40.3	4.2	0	1301	2405	19.5
181.0	2:47	1.6	38.6	3.6	0	1299	2397	20.1
182.0	3:18	1.9	31.4	5.5	0	1299	2406	20.6
183.0	4:05	1.3	47.5	8.4	0	1303	2422	21.4
184.0	4:37	1.9	31.8	6.6	0	1302	2412	22.0
185.0	5:20	1.4	42.5	6.8	0	1300	2401	22.7
186.0	6:10	1.2	49.6	5.3	0	1301	2408	23.5
187.0	7:11	1.1	52.3	4.1	0	1303	2412	24.5
10-Oct-93								
188.0	10:14	1.0	57.6	4.8	0	1292	2404	26.7
189.0	9:03	6.8	8.8	5.0	0	1290	2402	25.5
190.0	11:21	1.0	61.2	3.3	0	1293	2416	27.8
191.0	12:00	1.6	37.7	3.3	0	1294	2426	28.5
192.0	12:53	1.2	50.6	5.8	0	1295	2427	29.4

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OCT 12 1993

Minerals Management Service
Anchorage, Alaska

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OCT 12 1993

Daily Drilling Report - New Ventures

Planned: Management of Service
Anchorage, Alaska 10/93

1:	Formation:
----	------------

Adm. Cost. (\$)

Abstract

BLID DATA

DRILLING

h:			Torque:	
/ft.:			Jar No.:	
/ft.:			Jar Hrs.:	
	Pump #1	Data #2	HYDRAULICS	
R.	7.5	7.5	Bit ΔP:	
			HHP:	
SL			HHP/ sq in:	
S:			ECD:	
P:			An Vel DP/DC:	
	E/W	Dogleg	ELEVATIONS	
			WTR DEPTH	67'
			RKB-MSL	65'
			RKB-ML	152'
			RKB-WH	NA
			GH Depth	36'
			RKB-BGH	108'

HRS

OPERATIONS FROM 0600 TO 0600

30 KNOTS FROM THE EAST AND BUILT
T 33 KTS, FORECAST TO ABOVE 40 KTS,
OPERATIONS.
HANG GHT BETWEEN SPIDER BEAMS,
FILE DEBRIS ACCUMULATED ON TOOL
@ 06:00. MAKE UP KELLY AND

Click Tolerance: NA

Signed: B. CAMPBELLUS SHULTZ

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000 District Office

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PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

OCT 12 1993

Summarized BHA
Description:

Minerals Management Service
Anchorage, Alaska

Rig Supply Data:

Pat Water:

Drill Water:

Fuel:

Gravel:

Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Rotary

Motor

Total

Well Daily

Well Cumulative

BHA

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO:

3

PARTNER:

0

CONTRACTOR: CANMAR

52

CATERER: STANTON

10

CEMENTER: DOWELL

1

WEATHER: HORIZON

2

SAFETY: H2S/MEDIO

2

CASING: GBR/HOS/ZEE DRL

4

COPIING: INTEQ/CORELAB

DST: HRS

3

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

2

MUD ENGR: MI

1

MWD SERVICE: SPERRY

0

WELLHEAD: DRILQUIP

1

COMMUNICATION: N. S. TELECOM

1

OTHER: Divers/Radio/MMS

8

VISITORS: SURV. SYSTEM/NEZO

2

Personnel Accidents:

Yes

None Reported

X

Description of
Accident:

Well Site Safety:

HELD DRILL ON RIG ON 10/3/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 9/21/93

Other Drills-Describe: ABANDON SHIP & FIRE DRILL 10/3/93.

TIME

HRS

OPERATIONS FROM 0600 TO 0600

TOTAL PERSONNEL: 92

NOTE: BARGE ENDEAVOR WAS RELEASED FROM LOCATION @ 07:30 DUE TO INCREASING SEAS. TRAVERSED TO
BULLEN POINT FOR SHELTERED ANCHORAGE. BARGE BEGAN TRAVELING BACK TO THE RIG @ 22:00. ETA 08:00.

NO COST SHEET IS INCLUDED AT THIS TIME. STEVE EDWARDS DUE OUT TODAY TO RELOAD COST SHEET.

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

Environ.

0

3

21

ICE COVERAGE PRESENTLY OPEN WATER

Well

24

Vessel

24

TOTAL HOURS: 24.0

On Site Engineer: T. E. MALINDER

Signed: B CAMPBELL/S. SHULTZ

DATE: 10/10/93

9:10 AM

ALASKA INC.

॥३॥

No. 3771

P. 2/17-..

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PAGE 1 OF 2

CONFIDENTIAL

Rockwell, Inc.

Daily Drilling Report - New Ventures OCT 12 1993

OCT 12 1993

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PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

OCT 12 1993

Summarized BHA

Description:

Minerals Management Service
Anchorage, Alaska

Supply Data	Fuel Used	Fuel Left	Bar Used	Bar Left	Dist-G	Dist-AB	P-Water	D-Water	Hours Summary			
KULLUK	6335	244143	0	6447	1912	1914	1811	3893		Rotary	Motor	Total
KALVIN	1521	259567			1920		220	0	Well Daily	0.00	0.00	0.00
MISCAROO	1105	278173					377	0	Well Cumulative			
SUPPLIER	528	64986		4123			625	0	BHA			

Anchor Tension	1	2	3	4	5	6	7	8	9	10	11	12	PERSONNEL
Normal													ARCO 3
Peak													MMS 1
RISER TENSIONS													DRILL CONTR: 53

RISER ANGLE: N/A	OFFSET: N/A	CATERPILLAR: 10
------------------	-------------	-----------------

WEATHER DATA:	TEMP 33	CHILL FACTOR 3	CEILING 400'	VISIBILITY 2-1/2	MEDIC 1
	WIND VEL 27	WIND DIRECTION 90	CONTROL RM HEADING 2	ROLL 1°	E-LOG 0
SEA CONDITIONS	WAVE HT. 5	PERIOD 4	DIRECTION 90	PITCH 1°	CEMENTER 1
	SWELL HT. 0	PERIOD N/A	DIRECTION N/A	HEAVE >1'	MUD ENGR 1

ICE CONDITIONS:		SPRINT 2
-----------------	--	----------

		AK SAFETY 1
--	--	-------------

Personnel Accidents:	Yes _____	None Reported X	DRILL CLIP 1
----------------------	-----------	-----------------	--------------

Accident Description		DIVERS: 5
----------------------	--	-----------

		SURVEYOR: 4
--	--	-------------

		TESTING 4
--	--	-----------

Well Site Safety: HELD DRILL ON RIG ON 10/03/93		OTHER 9
---	--	---------

Date Last Kick Drill: 10/03/93

Date Last BOP Test: 09/21/93

Other Drills-Describe: ABANDON SHIP & FIRE DAILY 10/03

TELECOM 1

ICE ADV 2

TIME	HRS	OPERATIONS FROM 0600 TO 0600	TOTAL 92
------	-----	------------------------------	----------

		NOTE: BARGE ENDEAVOR ALONGSIDE UNLOADING KALVIN 17
--	--	--

		CARGO REQ'D FOR DRILLING OPS. WEATHER MISCAROO 18
--	--	---

		DETERIORATING AND EXPECT WILL HAVE SUPPLIER 15
--	--	--

		3-4 HRS OFFLOADING TIME LEFT. JENKINS 18
--	--	--

		TOTAL 160
--	--	-----------

		NOTE: NO COST SHEET INCLUDED AT THIS
--	--	--------------------------------------

		TIME. NEWLY FORMATTED REPORT WILL BE
--	--	--------------------------------------

		LOADED TODAY.
--	--	---------------

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On Site Engineer T. E. MAUNDER

Signed: B. CAMPBELL/S. SHULTZ

DATE: 10/09/93

Oct. 10. 1993

9:19AM

ALASKA INC

No. 3771

P. 12/17

Received
OCS District Office

OCT 12 1993

Minerals Management Service
Anchorage, Alaska

09-Oct-93 ARCO ALASKA INC OCS-Y-1597 #1

DEPTH	TIME	ROP	INVERSE	WOB	ROTARY	FLOW	PRESS	BIT
feet	DRILLED	ft/hr	ROP min/ft	klb	rpm	IN gpm	psi	hrs
153.0	7:15	1.0	60.0	1.8	0	1142	2021	0.8
154.0	8:36	1.6	37.5	1.6	0	1280	2330	1.5
155.0	8:40	1.4	42.9	1.7	0	1235	2232	2.1
156.0	9:10	0.6	100.0	3.9	0	1277	2345	3.5
157.0	10:01	1.3	46.2	3.0	0	1277	2350	4.2
158.0	10:01	1.2	50.0	2.3	0	1285	2340	5.1
159.0	13:03	1.1	54.1	3.3	0	1286	2357	6.4
161.0	14:21	0.9	67.7	3.0	0	1277	2269	7.7
162.0	14:59	1.6	38.6	3.3	0	1293	2379	8.3
163.0	15:38	1.5	39.3	2.0	0	1287	2361	9.0
164.0	16:40	1.0	59.5	1.5	0	1282	2341	10.0
165.0	17:32	1.1	53.0	2.1	0	1282	2343	10.9
166.0	18:10	1.6	37.9	1.4	0	1284	2350	11.5
167.0	18:44	1.7	34.5	3.0	0	1286	2351	12.1
168.0	19:31	1.3	45.8	3.2	0	1116	1918	12.8
169.0	20:19	1.2	49.1	2.2	0	1318	2472	13.7
170.0	20:51	1.9	32.0	2.3	0	1319	2477	14.2
171.0	21:16	2.4	25.3	2.9	0	1317	2471	14.6
172.0	21:47	2.0	30.3	3.3	0	1318	2476	15.1
173.0	22:10	2.6	23.2	3.3	0	1307	2437	15.5
174.0	22:37	2.3	26.6	4.0	0	1304	2422	15.9
175.0	23:08	1.9	31.1	5.0	0	1301	2409	16.5
176.0	23:39	1.9	31.3	6.0	0	1299	2399	17.0
09-Oct-93								
177.0	0:06	2.2	27.0	8.1	0	1298	2395	17.4
178.0	0:56	1.2	50.3	4.7	0	1301	2408	18.3
179.0	1:28	1.9	31.7	3.0	0	1303	2413	18.8
180.0	2:09	1.5	40.3	4.2	0	1301	2405	19.5
181.0	2:47	1.6	38.6	3.6	0	1299	2397	20.1
182.0	3:18	1.9	31.4	5.5	0	1299	2406	20.6
183.0	4:05	1.3	47.5	8.4	0	1303	2422	21.4
184.0	4:37	1.9	31.8	6.6	0	1302	2412	22.0
185.0	5:20	1.4	42.5	6.8	0	1300	2401	22.7
186.0	6:10	1.2	49.6	5.3	0	1301	2408	23.5
187.0	7:11	1.1	52.3	4.1	0	1303	2412	24.5
188.0	7:29	3.2	16.5	2.2	0	1286	2357	24.7

CONFIDENTIAL

OCT 08 1993

PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Minerals Management Service
Anchorage, Alaska

Well Name:	AX 9275	Depth:	Prog.	Spud Date:	Days Actual:	Days Planned:	Date:
OC5-Y-1597 #1	PSTD: ML		0		122 2.00	1	10/8/93

Contractor/Rig No.: CANMAR/KULLUK	Last Casing:	Next Casing:	Shoe Test EMW:	Formation:
--------------------------------------	--------------	--------------	----------------	------------

Operation at 0600:	1993 Proj. Cost	Daily Cost, (\$):	Accum. Cost, (\$)
PREPARING TO BEGIN EXCAVATING GLORY HOLE	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00

BIT DATA				MUD DATA				DRILLING DATA					
Bit #:				MW: HI-VIS 8.6	KWM 13.4	Filler Cake:	KWM Cake:	Depth:		Depth:			
Size:				Visc: 88	Visc: 47	%Solids:	%Solids:			POT			
Make:				PV:	PV:	% Sand:	%Sand:	Mud Wt:		WT:		Torque:	
Type:				VP:	VP:	Ph:	Ph:	FL Temp:		PU Wt:		Jar No.:	
Ser #:				Gels:	Gels:	Pm:	Pm:	BGG:		SO Wt:		Jar Hrs:	
Depth				API FL:	API FL:	PI:	PE:	CG:			Pump #1	Data #2	HYDRAULICS
Out:				RTHPWL		MI:	MI:	TG:		LNR:	6.6	6.6	Bit ΔP:
Feet:													
Hours:				MBT:		Chlor.:	Chlor.:	Max Gas:		SPM			HHP:
				CUM CST 20007	\$Daily 20007	O/W:	O/W:	Dc Exp:		PSI:			HHP/ sq in.
WOB:						Total GPM:		Sh Den:		SPS:			ECD:
PPM:				Kick Tol.	NA			Est PP:		GPP:			An Vel OP/DC:
Jets:				Survey No.	Depth	Angle	Azimuth	TVD	Section	N/S	E/W	Dogleg	ELEVATIONS
Grade:													WTR DEPTH
													RKB-MSL
													RKB-ML
													RKB-WH
													GH Depth
													RKB-BGH

[illegible]

Oct. 8, 1993

8:30AM

ALASKA INC 907 2651393

Received: 10/8/93 P. 3/11
OCC District Office

002

CONFIDENTIAL

PAGE 2 OF 2

OCT 08 1993

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures Minerals Management Service

Anchorage, Alaska

Summarized BHA
Description:

Rig Supply Data:

Pot Water:

Drill Water:

Fuel:

Barite:

Cement: G/AS

Used last 24 hours

Remaining Stock

Unit

Hours Summary

Rotary

Motor

Total

Well Daily

Well Cumulative

BHA

PERSONNEL ONBOARD

Supply Vessel Information:

ARCO:

3

PARTNER:

0

CONTRACTOR: CANMAR

52

CATERER: STANTON

10

CEMENTER: DOWELL

1

WEATHER: HORIZON

2

SAFETY: H2S/MEDIC

2

CASING: GBR/HDS/ZEE DRL

4

CORING: INTEQ/CORELAB

WEATHER DATA:

TEMPERATURE

37

WIND SPEED

20 KTS

DIRECTION

230°

VISIBILITY

15 NM

CEILING

8,000

SEAS

4

Personnel Accidents:

Yes

None Reported

X

DST: HRS

3

Description of
Accident:

ELECTRIC LOG: SCHLUMBERGER

0

MUD LOG: SPERRY

2

MUD ENGR: MI

1

MUD SERVICE: SPERRY

0

WELLHEAD: DRILQUIP

0

COMMUNICATION: N. S. TELECOM

2

OTHER: Divers/Radio/MMS

0

VISITORS: Nonech

1

Well Site Safety:

HELD DRILL ON RIG ON 10/3/93

Date Last Kick Drill: 10/3/93

Date Last BOP Test: 9/21/93

Other Drills-Describe: ABANDON SHIP & FIRE DRILL 10/3/93.

TIME

HRS

OPERATIONS FROM 0600 TO 0800

TOTAL PERSONNEL: 91

AS SEAS MODERATED, RAN REMAINING 4 ANCHORS. 3 OF 4 SETS ARE BRUCE ANCHORS AND WILL REQUIRE
PIGGY BACKING WHEN SEAS ALLOW. LWT ANCHORS PRESENTLY ON KALVIK WILL BE TRANSFERED TO IKALUK.SEA CONDITIONS HAVE NOT ALLOWED FUEL TRANSFER FROM MISCAROO TO ANY VESSELS. PLAN TO RELEASE
MISCAROO WITHOUT TRANSFERING FUEL FOR RUN TO MCKINLEY BAY FOR BARITE.

NO COST SHEET IS INCLUDED AT THIS TIME. NEWLY FORMATTED REPORT WILL BE LOADED LATER TODAY.

Kulluk Alert Status (Hours)

Green

Blue

Yellow

Red

Black

Environ.

0

2.5

21.5

ICE COVERAGE PRESENTLY OPEN WATER

Well

24

TOTAL HOURS: 24.0

Vessel

24

On Site Engineer: T. E. MAUNDER

Signed: B. CAMPBELL/S. SHULTZ

DATE: 10/8/93

No. 3693 P. 247
Received NO. 255 001
OCS District Office

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PAGE 1 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Anchorage, Alaska

[illegible]

CONFIDENTIAL

OCT 07 1993 PAGE 2 OF 2

ARCO Alaska, Inc.

Daily Drilling Report - New Ventures

Minerals Management Service
Anchorage, Alaska

Summarized BHA Description:							
Rig Supply Data:		Used last 24 hours	Remaining Stock	Unit	Hours Summary		
For Water:	186	1,811	Bbl		Rotary	Motor	Total
Drill Water:	0	3,952	Bbl	Well Daily			
Fuel:	3,762	255,169	Gal	Well Cumulative			
Barite:		5,887	Sr	BHA			
Cement: G/AS		1712/882	Sx				
Supply Vessel Information:				PERSONNEL ONBOARD			
				ARCO:	2		
VESSEL	BARITE (SX)	CEMENT (SX)	FUEL USED	FUEL LEFT	POB	PARTNER:	
IKALUK	2205		5,263	204,552	18	CONTRACTOR: GANMAR	
KALVIK		1720	6,240	341,801	17	CATERER:	
MISCAROO			4,755	293,231	17	CEMENTER: DOWELL	
SUPPLIER	4,123		1,321	86,571	18	WEATHER:	
WEATHER DATA:				SAFETY: H2S/MEDIC/ICE			
TEMPERATURE	33.4°F	WIND SPEED	14 KNOTS	DIRECTION	130°	CASING: ZEE/GBA/HDS	
VISIBILITY	15 MILES	CEILING	UNLIMITED	SEAS	7 @ 7 SEC	DST-DH: HFS	
Personnel Accidents: Yes _____ None Reported <u>X</u>				DST-SURF: HFS			
Description of Accident:		ELECTRIC LOG: SCHLUMBERGER				0	
		MUD LOG: SPERRY				2	
		MUD ENGR: M				1	
		MWD SERVICE: SPERRY				0	
		WELLHEAD: DRILQUIP				0	
Well Site Safety:		HELD DRILL ON RIG ON 10/3/93				COMMUNICATION: N S TELECOM	
Date Last Kick Drill: 10/3/93		Date Last BOP Test: 9/21/93				OTHER: divers/radio/etc	
Other Drills-Describe: ABANDONSHIP AND FIRE DRILL 10/3/93						VISITORS	
TIME	HRS	OPERATIONS FROM 0800 TO 0800				TOTAL PERSONNEL	
						89	
NOTE: DIVERS WERE JUMPED TO INSPECTED FAIRLEADS PRIOR TO PRETENTIONING							
PRELIMINARY POSITION:							
BASED ON DATA COLLECTED OVER A 1 1/2 HR PERIOD							
LAT: 70° 13' 22.41"							
LONG: 145° 28' 57.18"							
AT REPORT TIME COLLECTING DATA OVER 8 HOUR PERIOD FOR FINAL POSITIONING							
NOTE: FINAL FUEL STRAPS ON VESSELS AT RIG RELEASE KUVLUM 3 SEE SUBMISSION FAXED WITH THIS REPORT.							
NOTE: ELEVATIONS KNOWN AT REPORT TIME:							
WATER DEPTH: 87'							
RKB-MSL: 85'							
RKB-ML: 152'							
Green Blue Yellow Red Black							
Environ		22	1	1	Ice coverage presently		
Well		24	open water				
TOTAL HOURS:		24	Vessel		24		
On Site Engineer:				Signed: B. CAMPBELL SHULTZ		DATE: 10/7/93	