

HJR

36

VISUAL AIDS OF TESTIMONY
GIVEN BY
PERCY A. PAYNE
BEFORE
THE HOUSE SPECIAL COMMITTEE
ON OIL & GAS
ALASKA STATE LEGISLATURE
ON
HOUSE JOINT RESOLUTION #36

APRIL 26, 1991

ARCTIC OPERATIONS

PREVENTION/CONTROL

CLEAN-UP CAPABILITIES

ADDITIONAL

ARCTIC DRILLING PRECAUTIONS

- TWO SHELL DRILLING FOREMEN ARE ON THE RIG AT ALL TIMES**
- TWO ADDITIONAL LEVELS OF EXPERIENCED CONTRACTOR SUPERVISION**
- ALL DRILLING CREW SUPERVISORS AND MARINE CREWS ARE EXPERIENCED IN ARCTIC DRILLING OPERATIONS**
- DRILLING, PETROPHYSICAL AND GEOLOGICAL TECHNICAL SUPPORT ON RIG AT ALL TIMES**
- CONTINUOUS, ONSITE MMS SUPERVISION**
- COMPLETE REDUNDANT SET OF SUBSEA WELL CONTROL EQUIPMENT**
- ONSITE OIL SPILL CONTROL BARGE**

TRAINING

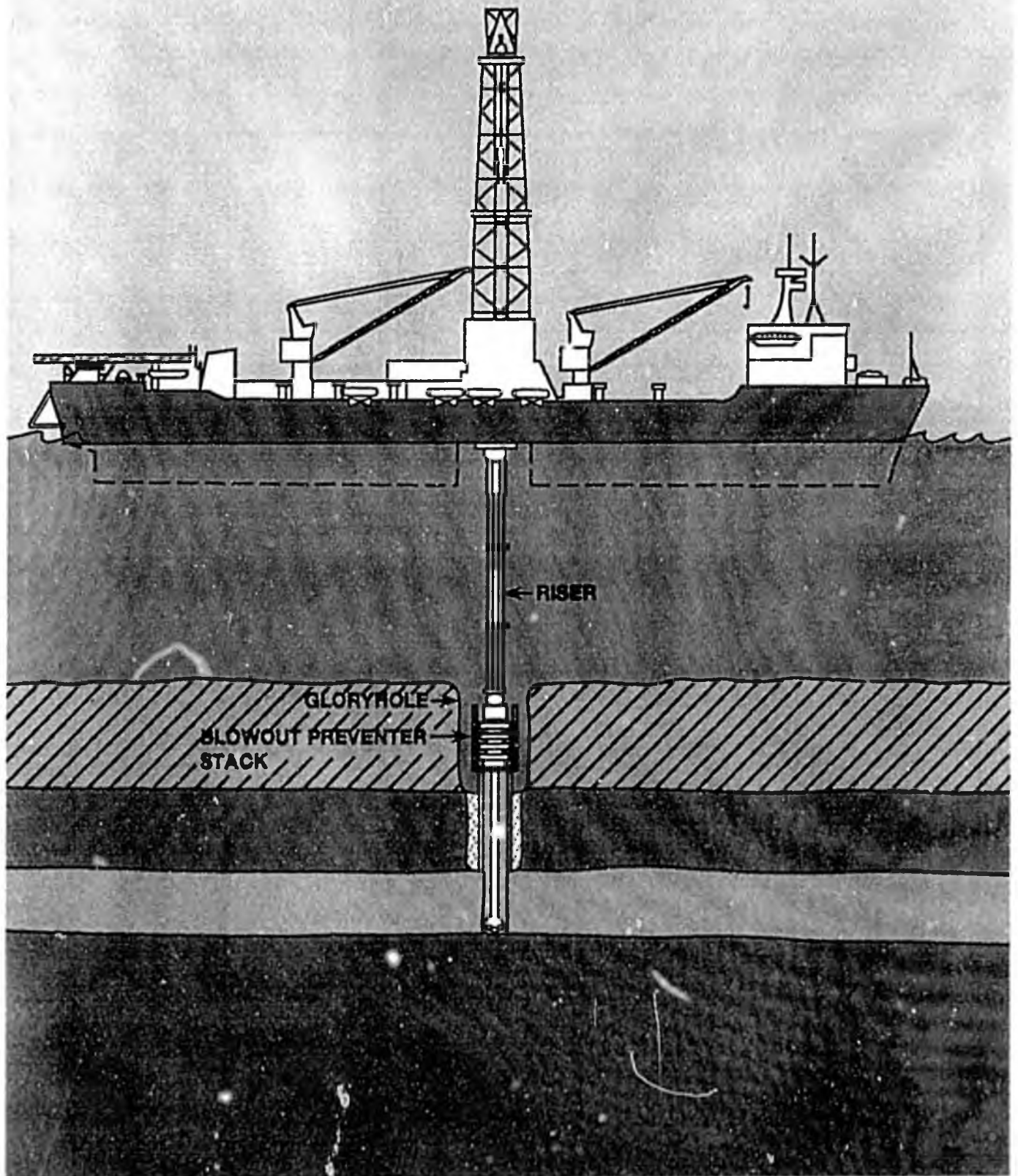
- SHELL DRILLING FOREMEN, CANMAR RIG MANAGERS, RIG SUPERVISORS AND DRILLERS CERTIFIED BY MMS-APPROVED WELL CONTROL FACILITY

- ALL DRILL CREWS SUBJECTED TO
 - FREQUENT, UNANNOUNCED, MMS-MONITORED WELL CONTROL DRILLS
 - WEEKLY FIRE, FIRST AID DRILLS

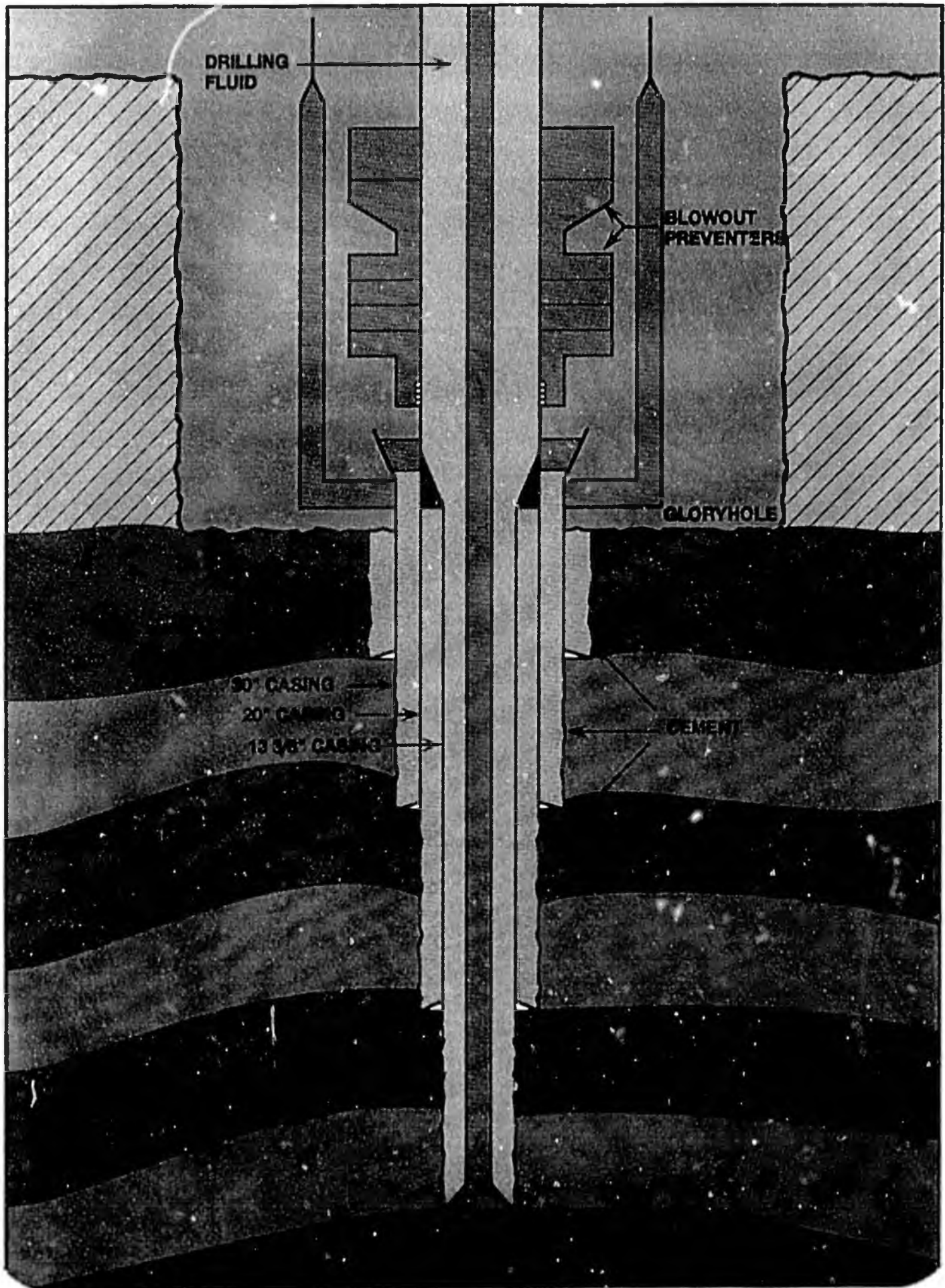
- ALL MARINE CREWS ATTEND OIL SPILL TRAINING

- ALL PERSONNEL ON THE RIG ATTEND
 - AN ENVIRONMENTAL AND CULTURAL TRAINING PROGRAM
 - H2S TRAINING AND WEEKLY H2S DRILLS
 - ABANDON RIG DRILLS

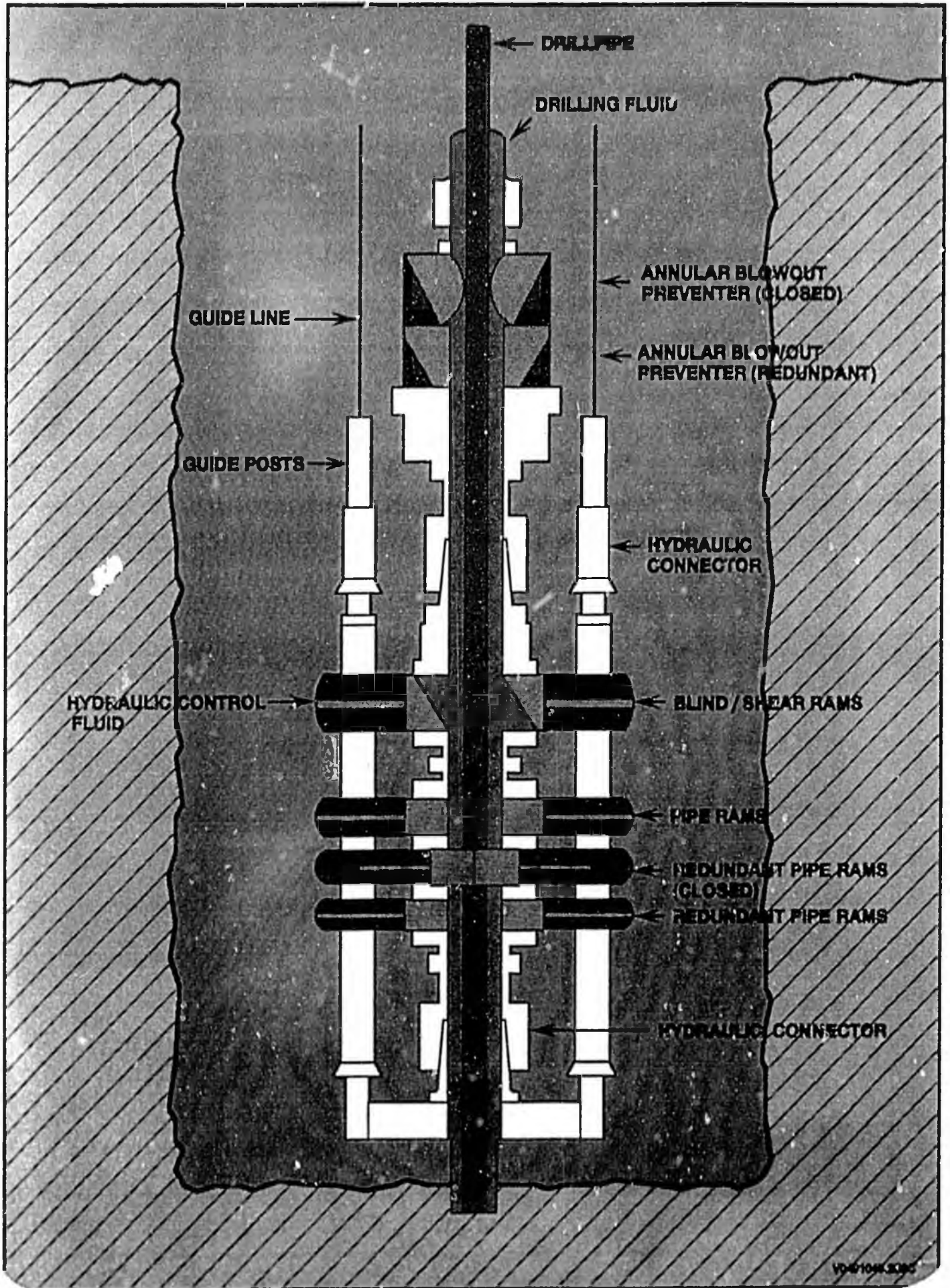
MAJOR ARCTIC OFFSHORE DRILLING COMPONENTS



GENERALIZED ARCTIC WELL SKETCH



ARCTIC SUBSEA BLOWOUT PREVENTER STACK

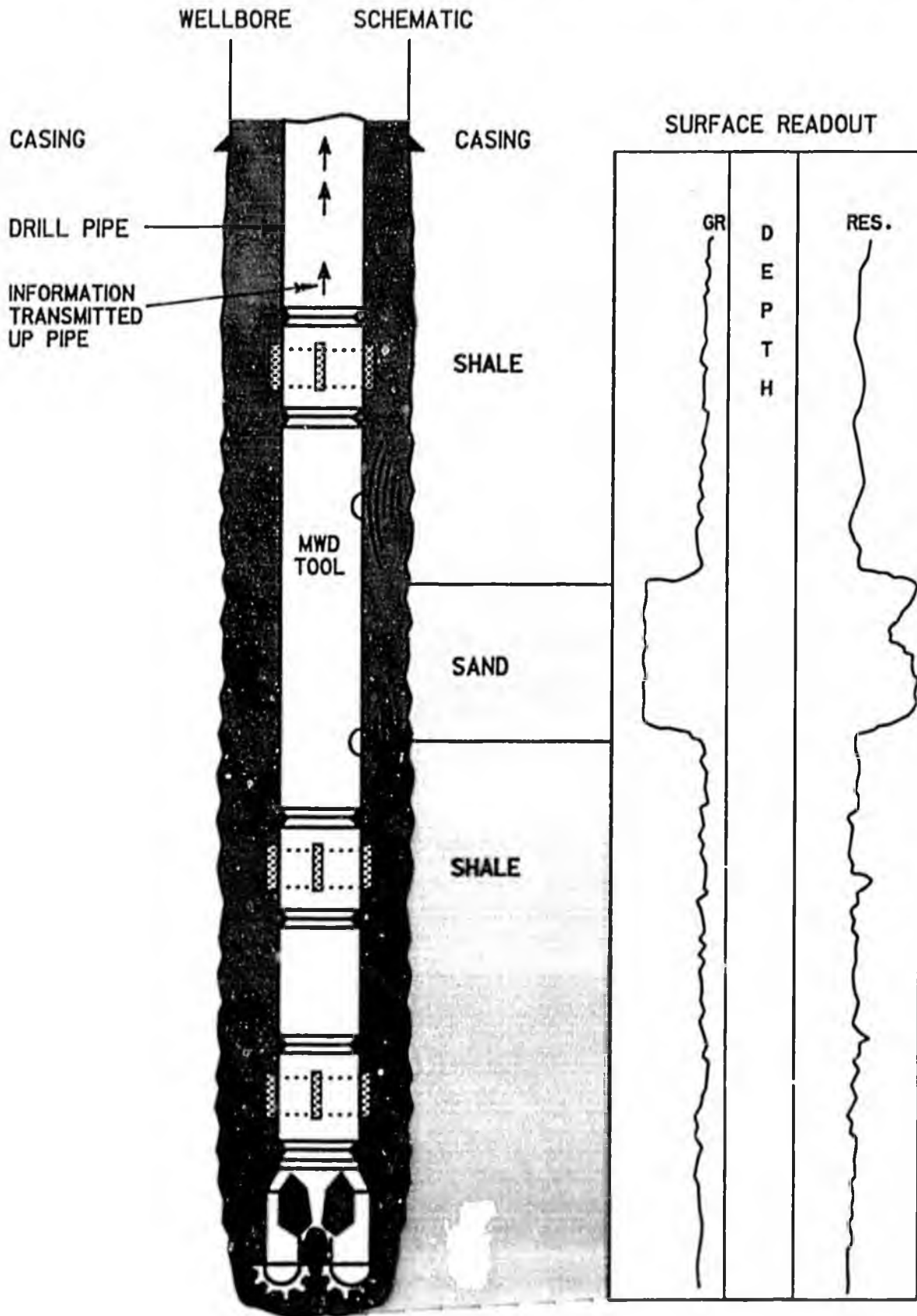




WELL FLOW INDICATORS

- DRILL CUTTINGS EXAMINATION**
- DETECTORS MONITOR**
 - THE TYPE AND QUANTITY OF FORMATION GAS IN THE RETURNING DRILLING FLUID**
 - THE TEMPERATURE OF THE MUD RETURNS**
 - THE DRILLING RATE OF PENETRATION**
 - COMPARISON OF THE DRILLING FLUID FLOW RATE INTO AND OUT OF THE HOLE**
 - EVIDENCE OF FLOW FROM THE WELL BORE WITH THE PUMPS SHUT OFF**
 - VOLUME OF FLUID REQUIRED TO FILL THE HOLE WHILE PULLING THE DRILLSTRING OUT OF THE HOLE**
- MEASUREMENT-WHILE-DRILLING SYSTEMS**

MEASUREMENT WHILE DRILLING TOOL



OPERATIONS CURTAILMENT PLAN

- PLAN DETAILS ENVIRONMENTAL CONDITIONS UNDER WHICH SWEPI WILL CEASE OR NOT INITIATE OPERATIONS**
- POTENTIAL WEATHER CONDITIONS AND THE ICE CONDITIONS NECESSARY TO ACHIEVE A GIVEN "ALERT LEVEL" ARE DEFINED**
- THE PLAN DEFINES THE RESPONSIBILITIES AND PROCEDURES FOR THE DRILL CREWS, DRILLSHIP AND SUPPORT VESSEL MARINE CREWS AT EACH "ALERT LEVEL"**

ICE MONITORING

- **ICE MOVEMENT MONITORED AND PREDICTED TO DETERMINE ICE ALERT LEVELS USING:**
 - **SATELLITE ICE IMAGERY**
 - **SLAR (SIDE LOOKING AIRBORNE RADAR) FLIGHTS**
 - **HELICOPTER ICE OVERFLIES**
 - **SUPPORT FLEET RECONNAISSANCE**
 - **TRANSMITTING BUOYS PLACED ON ICE**
 - **VISUAL TRACKING OF NEARBY ICE FLOES**

- **TWO ICE OBSERVERS ON THE RIG AT ALL TIMES ANALYZE AND PREDICT ICE MOVEMENT**

CHUKCHI SEA OIL SPILL RESPONSE OBJECTIVES

- TO GENERATE & MAINTAIN AN AWARENESS FOR "SPILL PREVENTION".
- TO PROVIDE AN IMMEDIATE OIL SPILL RESPONSE CAPABILITY "ONSITE".
- TO PROVIDE MAJOR OIL SPILL RESPONSE CAPABILITY INVOLVING A DEDICATED TUG & BARGE IN THE VICINITY OF THE DRILLSITE.
- TO PROVIDE CLASSROOM AND HANDS-ON TRAINING FOR SHELL'S ONSITE SPILL RESPONSE TEAM, TUG & BARGE PERSONNEL AND MAJOR SPILL RESPONSE TEAM.

PARTICIPANTS:

SHELL, ACS, CROWLEY, CANMAR, SPILTEC, AND ALASKA NATIVES (BARROW, WAINWRIGHT, PT. LAY & PT. HOPE)

OIL SPILL CONTROL

OPTIONS

Physical Removal

Burning

Chemical Treatment

Natural Dispersion

Shoreline Protection & Cleanup

CHUKCHI SEA DRILLING PROJECT

ONSITE OIL SPILL RESPONSE

PURPOSE: To clean up fuel transfer type spills and provide initial containment for major spill (blowout)

DEPLOYMENT TIME: Immediate

CONTAINMENT:

- 2000' containment boom
- 1000' fire resistant boom

RECOVERY:

- Vessels - Explorer III, Robert Lemeur, Supplier III & IV, 2 - 26' boats
- Sorbents
- 2 Skimmers
- 4 Transfer Pumps

STORAGE: 250 barrels

CHUKCHI SEA DRILLING PROJECT OIL SPILL RESPONSE BARGE

PURPOSE: TO SERVE AS PRIMARY RESPONSE TO MAJOR SPILL

DEPLOYMENT TIME: ONSITE - APPROXIMATELY 4-8 HOURS

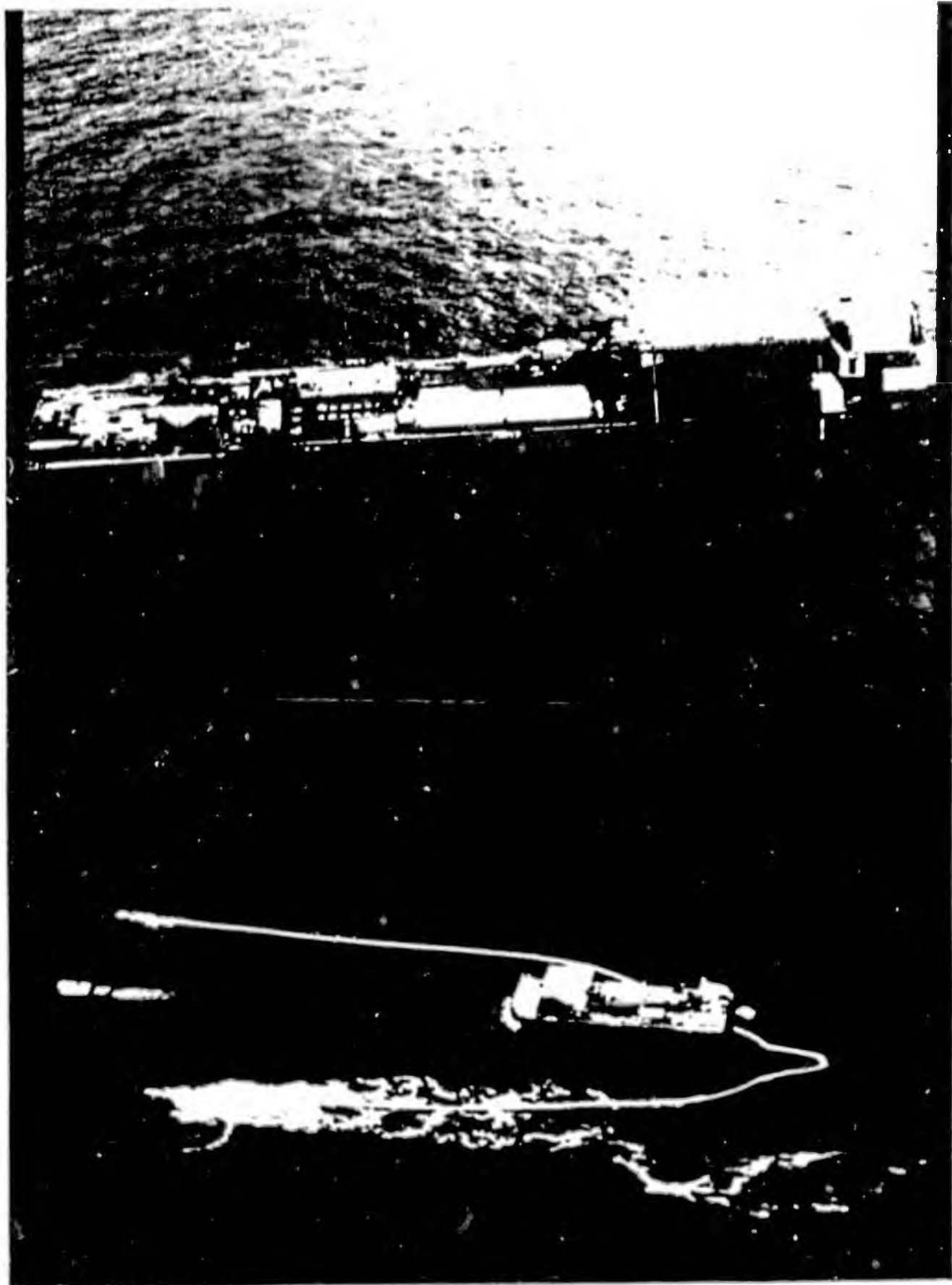
CONTAINMENT:

- 3,500' CONTAINMENT BOOM
- 2,600' FIRE RESISTANT BOOM
- 1,000' NOFI HIGH SEAS BOOM
- 1,000' NOFI HIGH SEAS BOOM W/OIL TRAWL

RECOVERY:

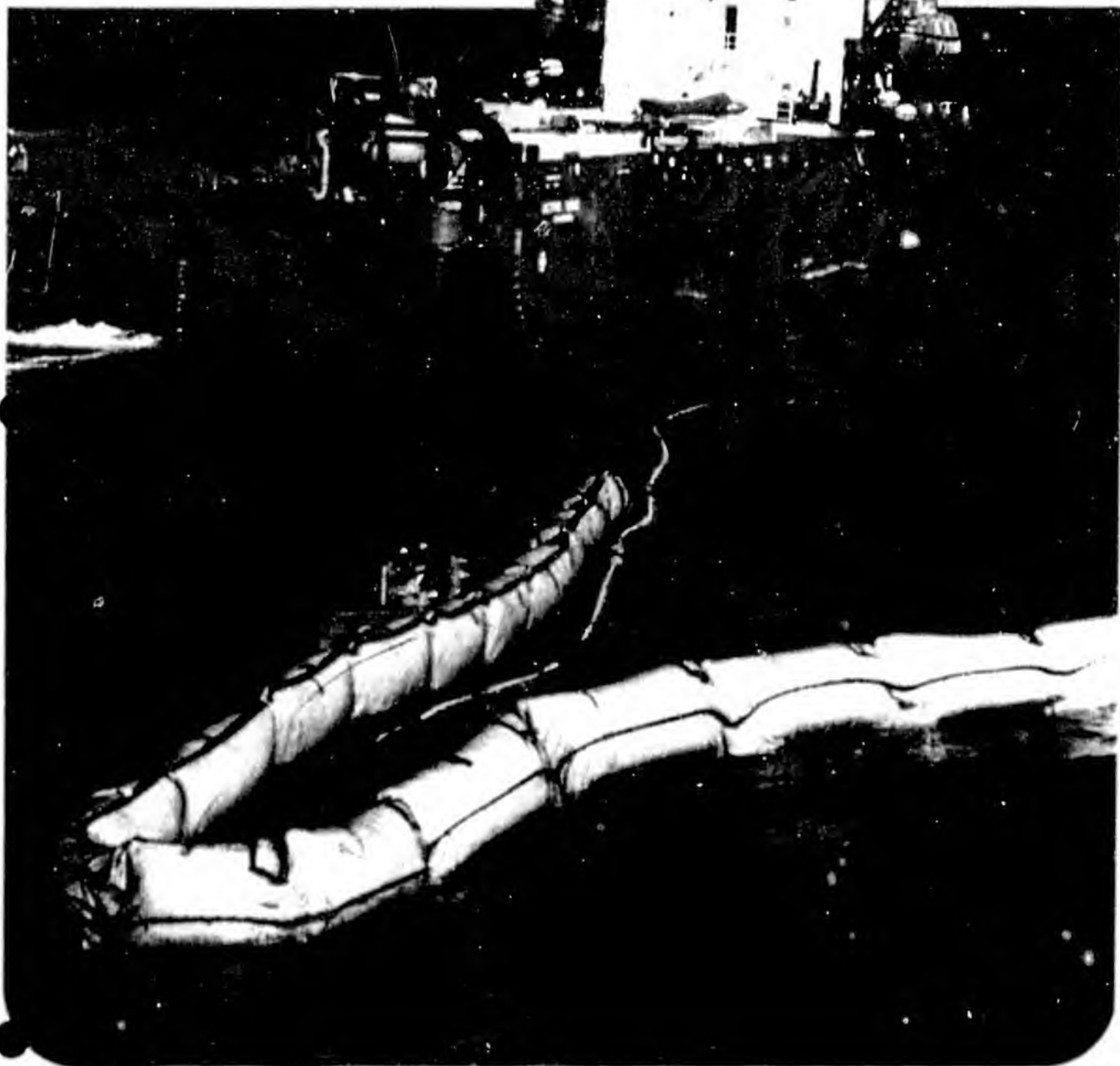
- VESSELS - 105' X 400' BARGE W/TUG, 4 - 26-36' BOATS,
2 - 18' AVONS
- 1 TRANSREC 250 SKIMMER SYSTEM RATED AT 37,000 BBLs/DAY
- 1 DESMI OCEAN SKIMMER RATED AT 10,000 BBLs/DAY
- 11 OTHER SKIMMER SYSTEMS
- SEPARATORS - 600 BBLs ON DECK
- 2 HELITORCHES
- 1 DISPERSANT BUCKET + 30 BBLs DISPERSANT
- SORBENTS

STORAGE: 2,100 BBLs ABOVE DECK
MINIMUM 35,000 BBLs BELOW DECK
END OF SEASON 67,000 BBLs + BELOW DECK



FRAMO OIL RECOVERY SYSTEM

- Highest recovery rate obtained
- Combined oil recovery and transfer system
- Two vessel operation
- Increased towing speed
- Newly designed clogging free pump
- Instrumentation of boom and skimmers
- Cassette recovery units
- Automated emulsion breaker system

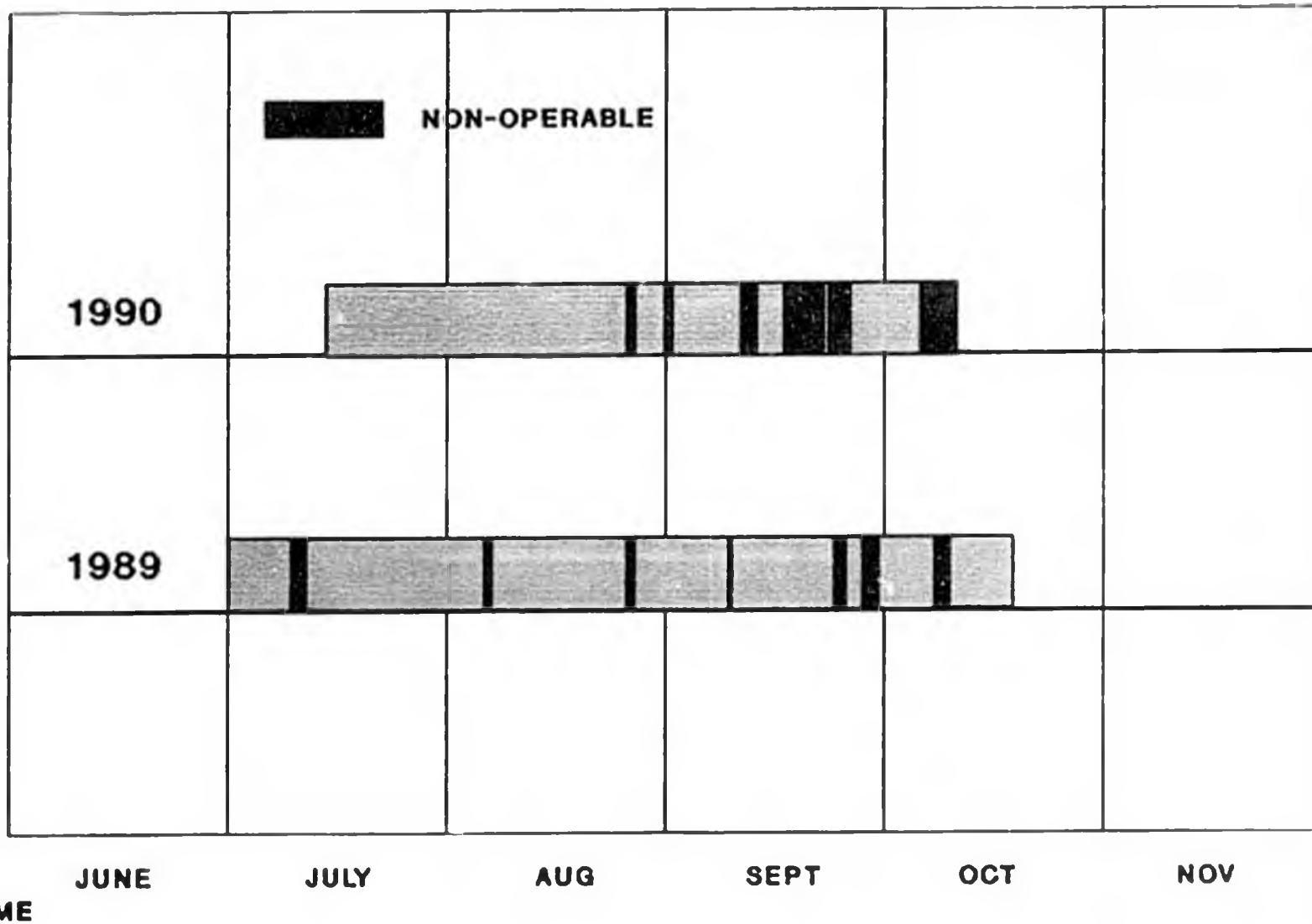


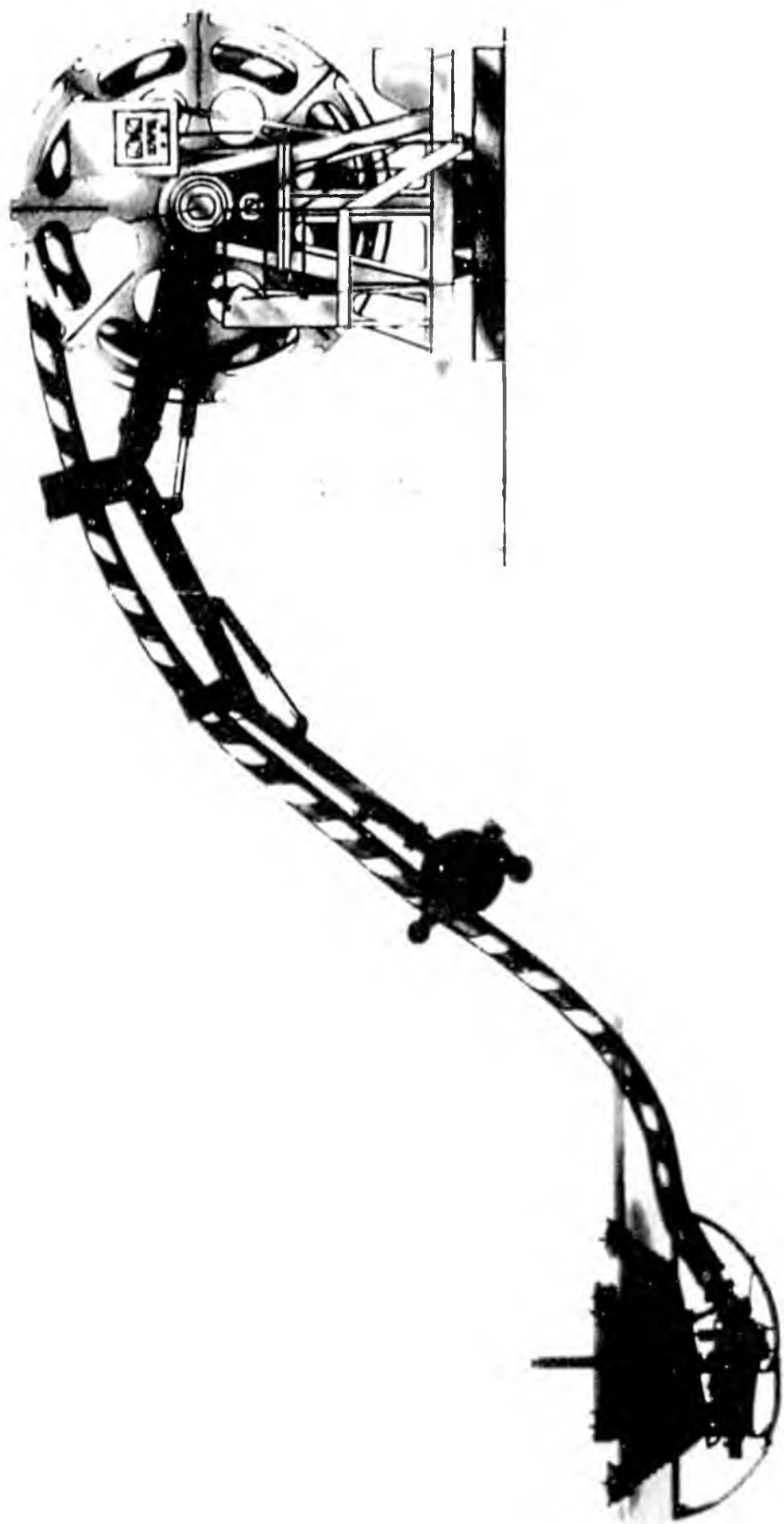
FRAMONDEO TRANSFER SYSTEM 350

CHUKCHI SEA DRILLING PROJECT

OPERATING TIME - NOFI BOOM

HS ≤ 8 FEET







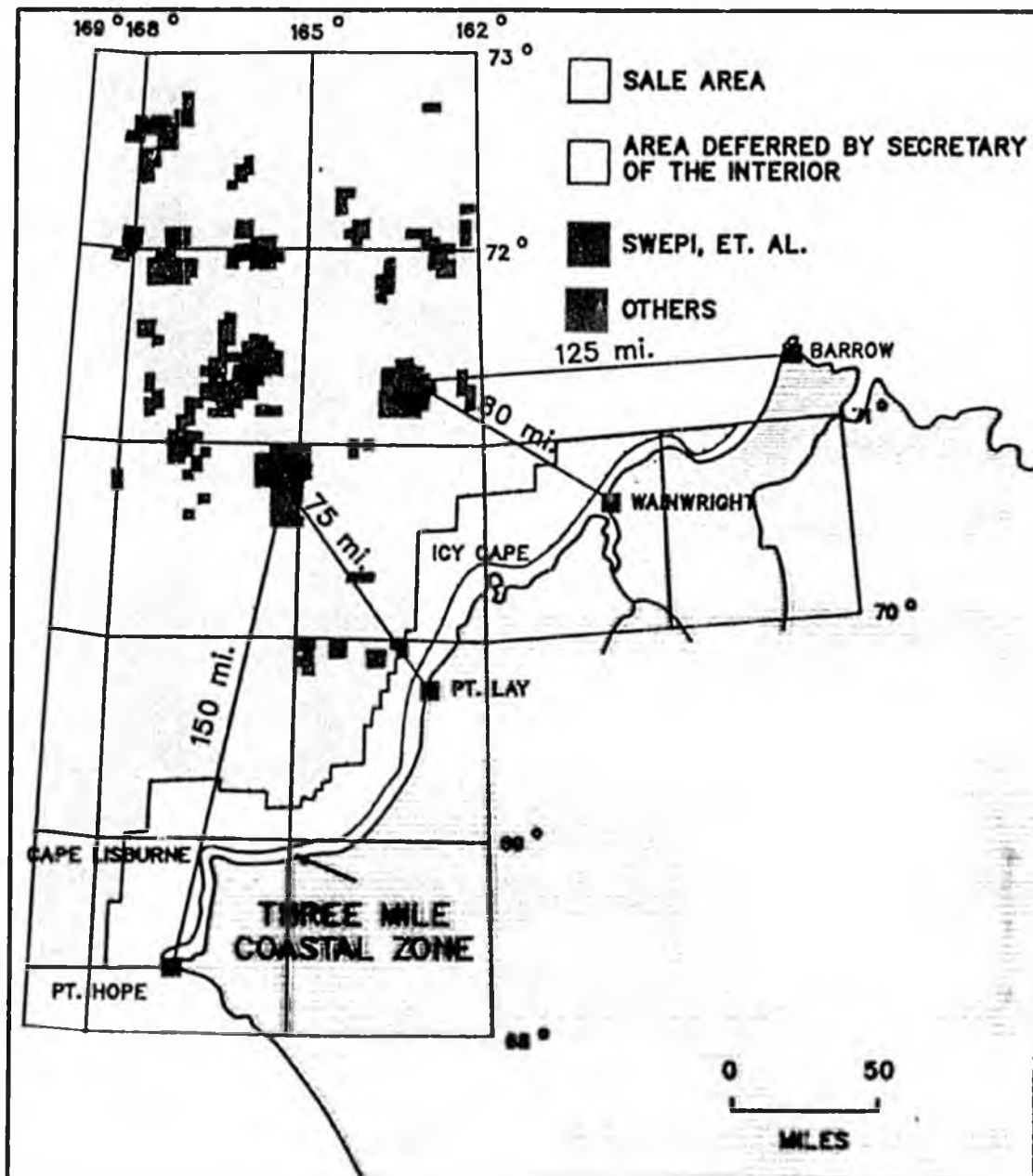




CHUKCHI SEA
1989/1990 OPERATING UPDATE
1991 PLANS

JANUARY, 1991

CHUKCHI SEA LEASE SALE #109

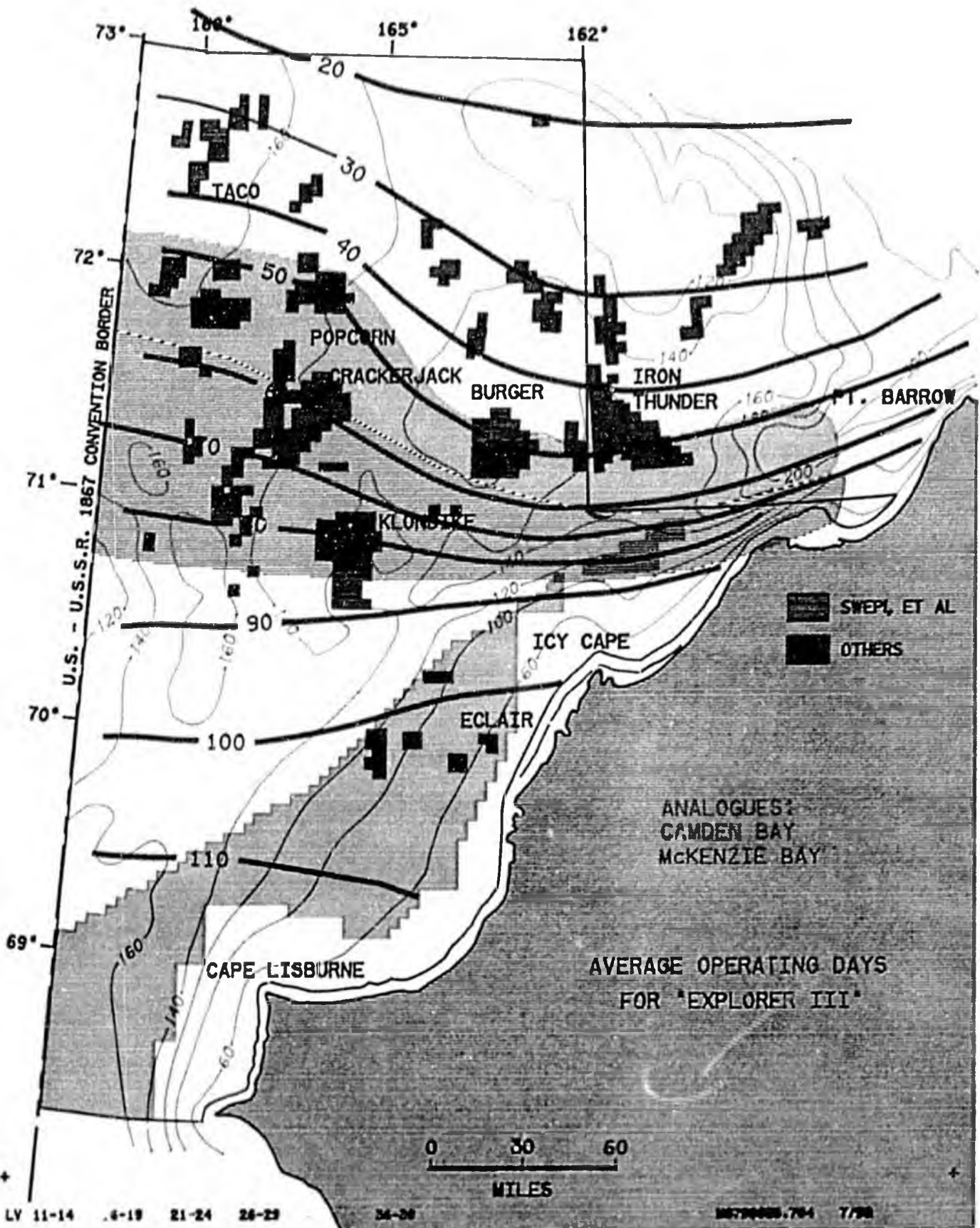


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LEASE SALE 109 RESULTS

- DEPICTS THE SALE RESULTS FROM OCS SALE 109.
- THE TRACTS AWARDED TO SHELL AND ITS PARTNERS ARE DEPICTED IN RED.
- BIDS WERE SUBMITTED BY SIXTEEN COMPANIES AS SOLE BIDS OR IN BID GROUPS. 651 BIDS (AN ALL TIME RECORD FOR AN OCS LEASE SALE IN ALASKA) WERE SUBMITTED. IN TOTAL, 351 TRACTS RECEIVED BIDS. HIGH BIDS AMOUNTED TO ALMOST \$.5 BILLION.
- SWEPI, BIDDING ALONE OR WITH PARTNERS, WAS THE HIGH BIDDER ON 165 OF 187 ON WHICH WE BID; ALMOST A 90% SUCCESS RATE. OUR TOTAL HIGH BIDS AMOUNTED TO ALMOST \$391 MILLION (\$271 MM SWEPI SHARE). OF THE 165 TRACTS AWARDED, 43 ARE SWEPI ONLY TRACTS.
- AS SHOWN, THE PRINCIPAL INTEREST PROSPECTS ARE AT LEAST 75-80 MILES OFFSHORE, AND THEREFORE, EXPLORATION ACTIVITY WILL HAVE MINIMAL LOCAL COMMUNITY IMPACT.

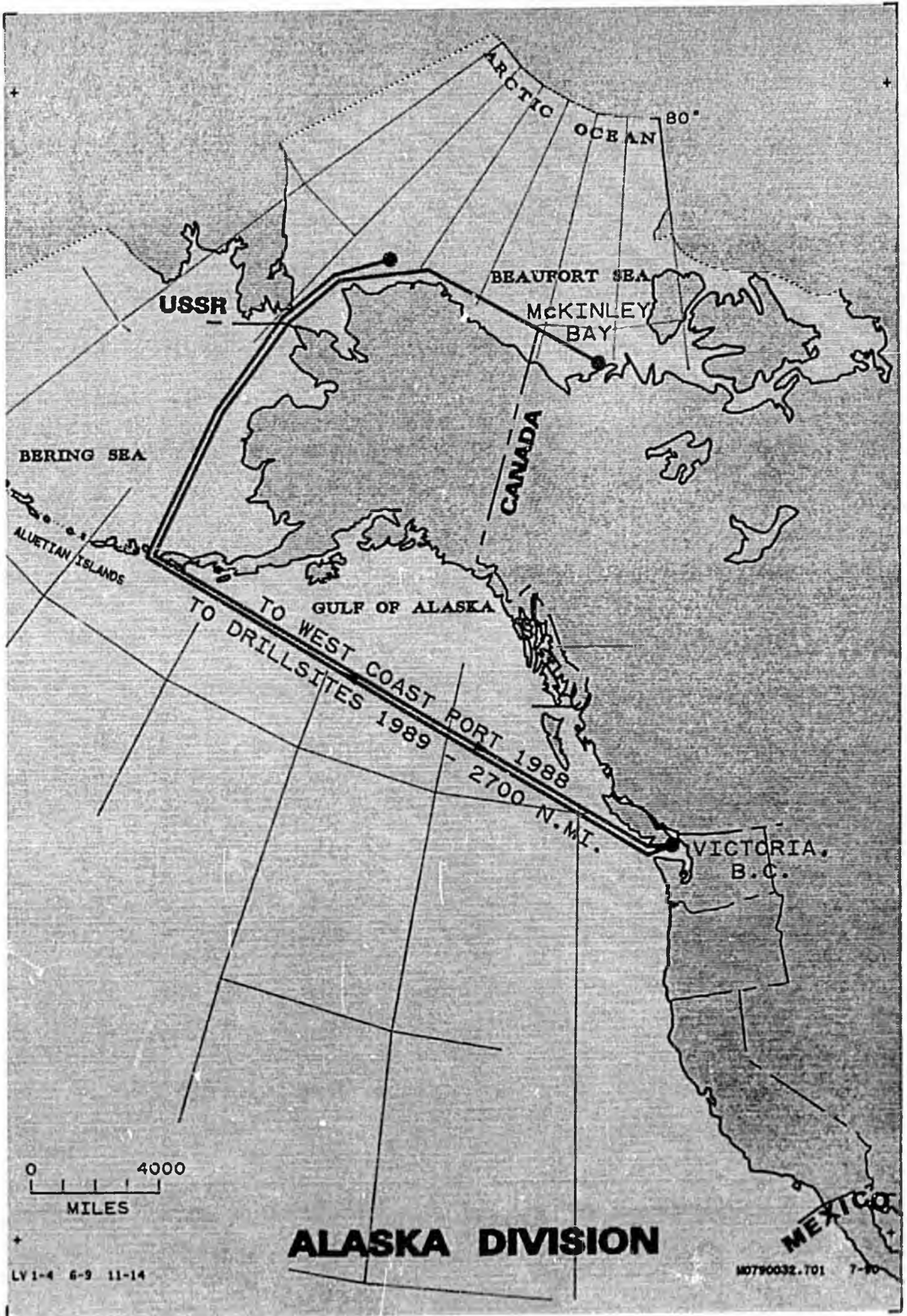
NORTH ALASKA, CHUKCHI SEA AREA



PROSPECTS AND ENVIRONMENT

- THIS FIGURE OF THE CHUKCHI SEA PORTRAYS THE POSITION OF KLONDIKE, CRACKERJACK, POPCORN, AND BURGER RELATIVE TO WHAT WE FORECAST AS THE AVERAGE OPERATING DAYS/YEAR FOR OUR CANMAR FLEET.
- MOST OF OUR MAJOR PROSPECTS ARE RELATIVELY FAR OFFSHORE, FAR FROM THE AREA OF THE SPRING BOWHEAD WHALE MIGRATION. WE SUBMITTED TWO EXPLORATION PLANS FOR THE CHUKCHI (NEAR OFFSHORE AND REMOTE OFFSHORE PLANS). BOTH ARE APPROVED. THE LOWERMOST GREEN AREA DEPICTS THE AREA COVERED BY THE NEAR OFFSHORE PLAN. WHALE MONITORING WOULD BE REQUIRED IF DRILLING OCCURRED IN THIS AREA DURING WHALE MIGRATION, HOWEVER, WE HAVE NO PLANS TO DRILL DURING THIS TIME.
- WATER DEPTHS ARE PORTRAYED IN BLUE CONTOURS. OUR PRIMARY PROSPECTS LIE IN 120-150 FEET OF WATER.
- VIRTUALLY ALL OF THE MAJOR PROSPECTS ARE IN AREAS THAT SHOULD HAVE OPERATING CONDITIONS EQUAL TO OR BETTER THAN AREAS IN THE ARCTIC IN WHICH THE INDUSTRY HAS DEMONSTRATED THEIR CAPABILITY ALREADY.
- THE UPPER, GREEN COLOR BAND IS IN AN AREA IN THE CHUKCHI THAT SHOULD HAVE ICE CONDITIONS SIMILAR TO THOSE IN THE U.S. BEAUFORT WHERE INDUSTRY HAS DRILLED WITH FLOATING EQUIPMENT.
- THE LOWER, PURPLE COLOR BAND IS SIMILAR TO THE MACKENZIE BAY AREA OF CANADA.

- THUS, INDUSTRY HAS DEMONSTRATED THEY CAN OPERATE IN THE ENVIRONMENT WHERE MOST OF OUR MAJOR PROSPECTS ARE LOCATED. THIS AREA INCLUDES 2/3 OR MORE OF THE SALE AREA.
- CONTOURS DEPICTED ON THE LAST OVERLAY PORTRAY THE "AVERAGE" PREDICTED PRODUCTIVE DAYS AVAILABLE DURING THE YEAR FOR THE EXPLORER III FLEET DUE TO ICE AND WAVES. THIS PREDICTION WAS FORMULATED USING OVER 20 YEARS OF ICE HISTORY DATA.
- IN TWO YEARS OF DRILLING OPERATIONS, ICE CONDITIONS HAVE BEEN MUCH BETTER THAN PREDICTED BY THIS HISTORICAL MODEL. IN GENERAL, WE HAVE DRILLED IN OPEN WATER CONDITIONS. SEASON LENGTHS HAVE AVERAGED APPROXIMATELY 50% LONGER THAN ANTICIPATED.



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MILES

ALASKA DIVISION

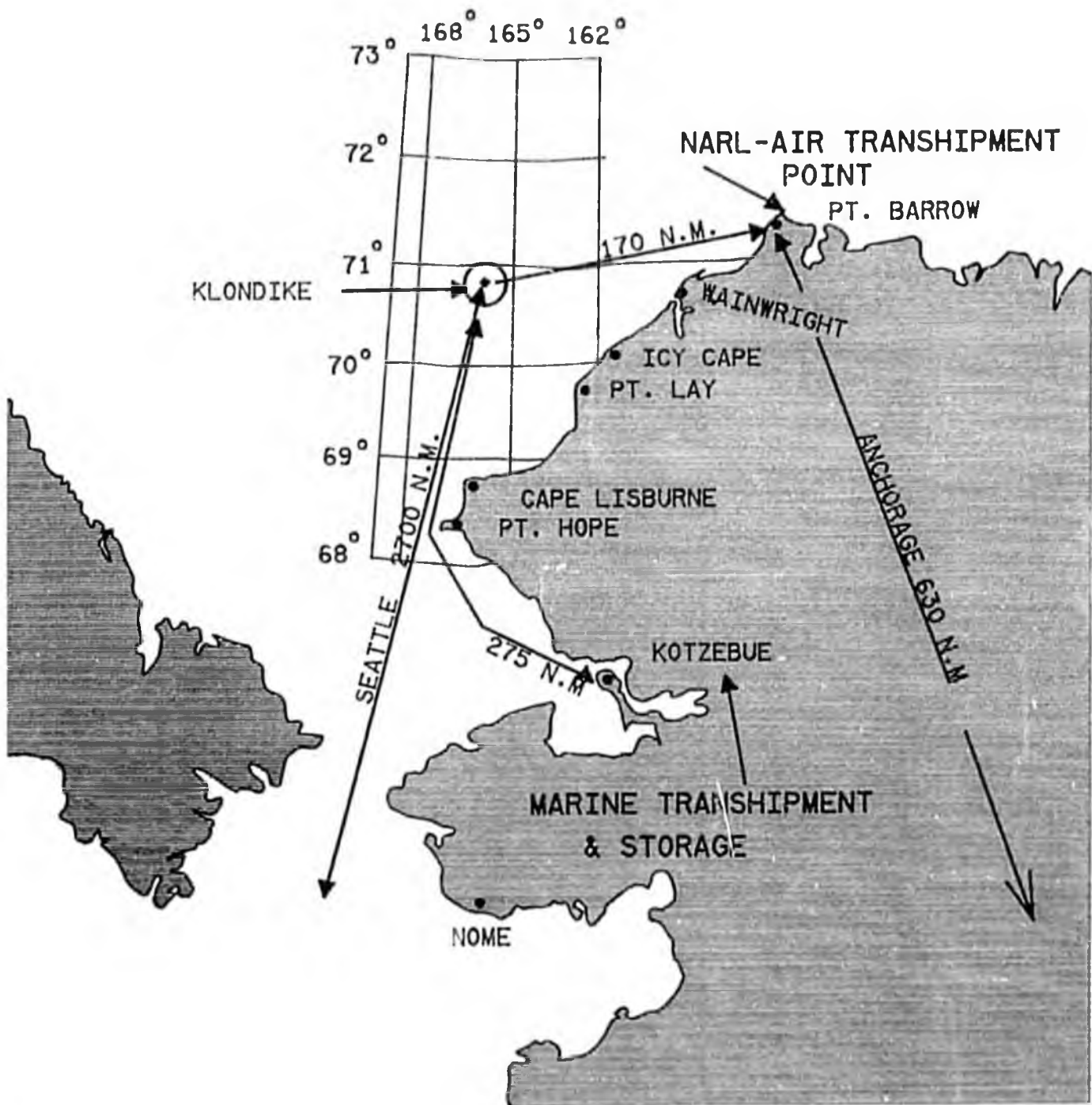
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DRILLSHIP MOVEMENT TO SITE

- ° PT. BARROW IS ONE OF THE LAST PLACES TO OPEN TO NAVIGATION EACH YEAR. THIS WAS ONE REASON, ALONG WITH THE DESIRE TO MAKE SOME MODIFICATIONS TO THE DRILLING SYSTEM, THAT CAUSED SWEPI TO ELECT TO MOBILIZE TO THE WEST COAST IN 1988.
- ° EXPLORER III AND 3 SUPPORT VESSELS LEFT MCKINLEY BAY IN EARLY SEPTEMBER 1988 BOUND FOR THE NEAREST WARMWATER PORT WITH DRYDOCKING FACILITIES, THAT IS, VICTORIA, IN CANADA. THIS INITIAL MOBILIZATION REQUIRED 16 DAYS AND COVERED 3400 N.M.
- ° IN VICTORIA, ALL VESSELS WERE DRYDOCKED AND INSPECTED AND ALL REQUIRED CERTIFICATIONS OBTAINED. SOME ADDITIONS WERE MADE TO THE DRILLING SYSTEM TO ENHANCE CAPABILITY; SPECIFICALLY A TOP DRIVE UNIT WAS ADDED.
- ° THE 2700 N.M. MOBILIZATION ROUTE TO THE DRILLSITES REQUIRES ABOUT 11 DAYS. THE DRILLING FLEET DEPARTED VICTORIA IN LATE JUNE IN 1989 AND 1990.

NORTH ALASKA
**CHUKCHI SEA DRILLING PROGRAM
LOGISTICAL SYSTEM**

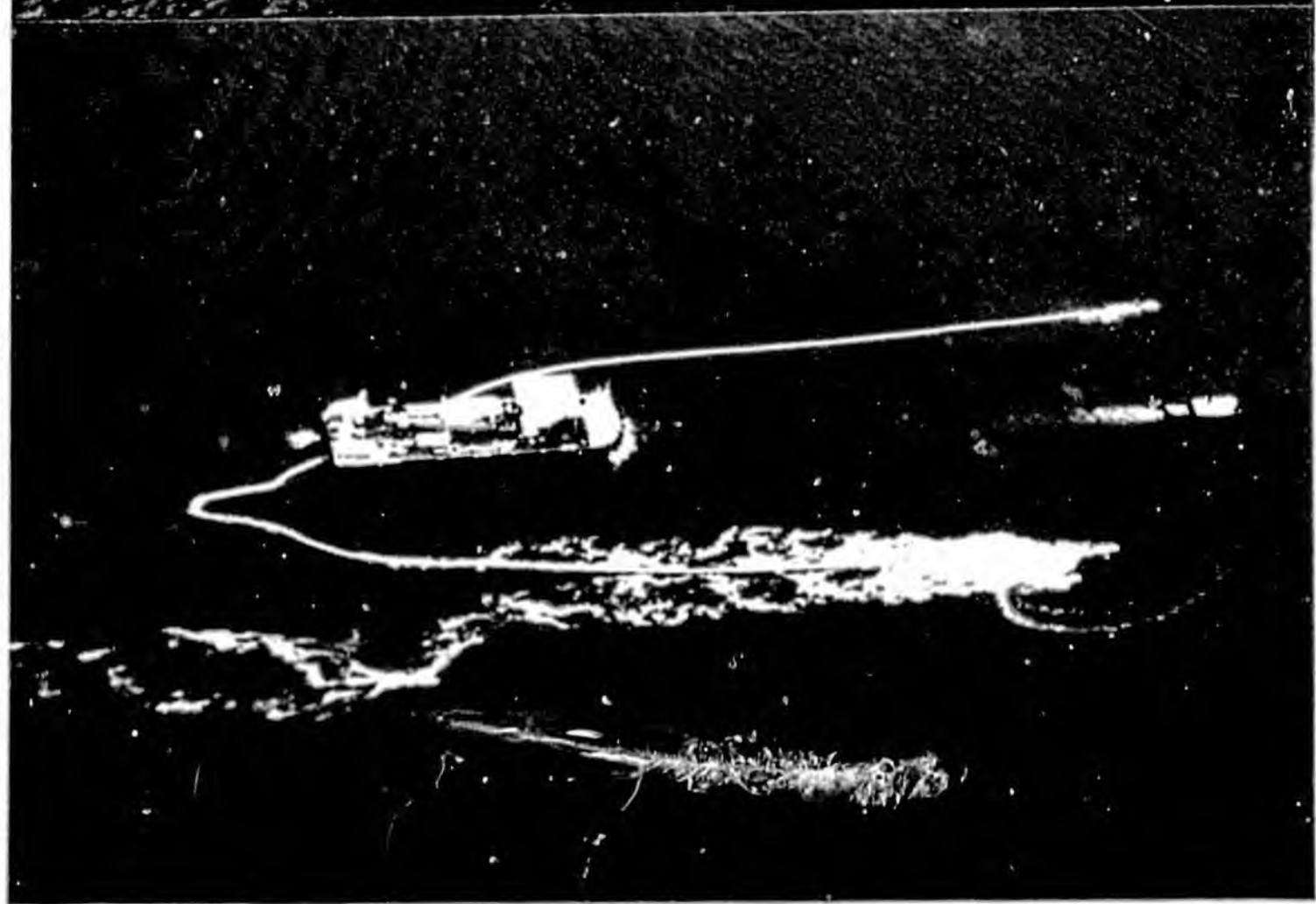
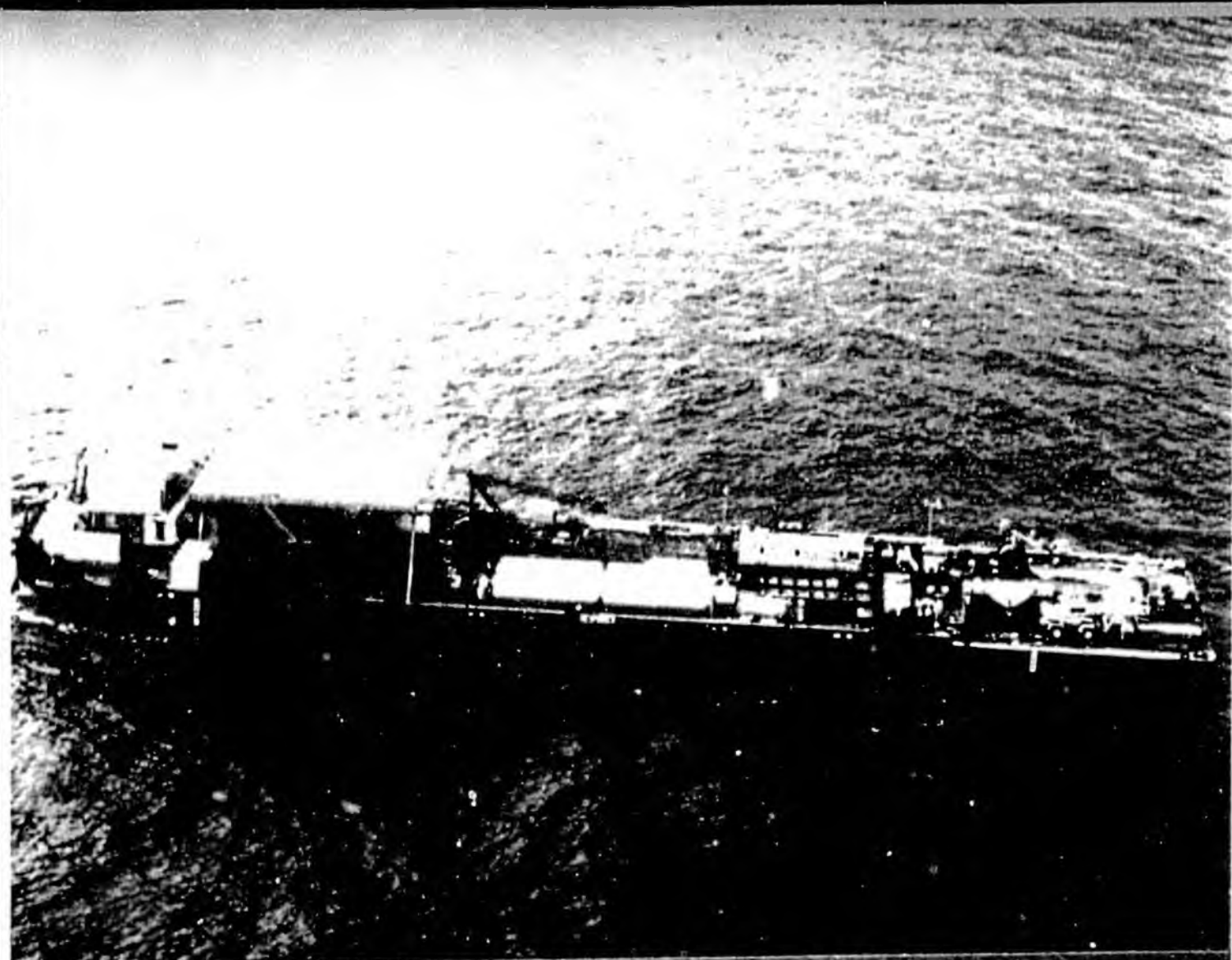


LOGISTICS

- PORTRAYED ARE THE LOGISTICS OF OUR EXPLORATION PLANS AFTER THE EXPLORER III AND ITS SUPPORT VESSELS ARRIVE IN THE CHUKCHI FROM VICTORIA.
- THE ONSHORE SUPPORT FOR THIS PROJECT CONSISTED OF LOGISTICAL SUPPORT FOR TRANSFER OF MANPOWER, RESUPPLY OF PERISHABLE GOODS, AND VERY LIMITED RESUPPLY OF EXPENDABLE MATERIALS USED IN THE EXPLORATION DRILLING ACTIVITIES. BARROW WAS THE BASE FROM WHICH THE DRILLING CREWS, SERVICE COMPANY PERSONNEL AND OTHER SUPPORT SERVICES WERE TRANSPORTED VIA HELICOPTER TO AND FROM THE DRILLING UNIT. LIMITED MARINE OPERATIONS WERE CONDUCTED FROM KOTZEBUE. (WE USED EXISTING FACILITIES. THERE WAS NO NEED FOR ANY NEW CONSTRUCTION.)
- WE SIGNED CONTRACTS WITH ERA (BASED IN ALASKA) TO PROVIDE TWO SUPER PUMA HELICOPTERS TO PROVIDE AIR TRANSPORTATION TO THE RIG. WE OPERATED THE HELICOPTERS FROM THE UKPEAGVIK INUPIAT CORPORATION - NAVAL ARCTIC RESEARCH LAB (UIC-NARL) CAMP NEAR BARROW UTILIZING THE EXISTING COMPLEX. DRILLING CREWS WERE PRIMARILY CANADIAN AND WERE TRANSPORTED TO BARROW FROM CANADA VIA CHARTERED AIRCRAFT. NORMALLY PERSONNEL WERE TRANSPORTED DIRECTLY TO AND FROM WILEY POST-WILL ROGERS AIRPORT FROM THE HELIPORT AT NARL CAMP. OCCASIONALLY, PERSONNEL WERE HOUSED OVERNIGHT AT THE UIC CAMP WHEN WEATHER OR COMMERCIAL AIR TRANSPORTATION SCHEDULING DICTATED. ERA AVIATION MAINTAINED A STAFF OF SOME TWELVE (12) EMPLOYEES AT NARL TO MAINTAIN AND OPERATE THE HELICOPTERS. A SHELL STAFF

PERSON WAS ASSIGNED FULL TIME TO THE NARL FACILITY FOR THE DURATION OF THESE ACTIVITIES TO FACILITATE TRANSFER OF PERSONNEL AND EQUIPMENT TO AND FROM THE AIRPORT, THE CAMP, AND THE OFFSHORE LOCATION.

KOTZEBUE WAS CHOSEN AS THE MOST LIKELY LOCATION FOR ANY OF OUR MARINE SUPPLY REQUIREMENTS. ALTHOUGH, AS SHOWN, IT IS SOME 275 MILES FROM OUR TYPICAL DRILLING LOCATIONS, IT IS THE CLOSEST FACILITY THAT CAN SUPPLY THE NECESSARY INFRA-STRUCTURE AS WELL AS A SOMEWHAT PROTECTED HARBOR AREA FOR OUR OIL SPILL RESPONSE EQUIPMENT. THE INITIAL OIL SPILL EXERCISE/DEMONSTRATION TOOK PLACE IN KOTZEBUE HARBOR, HOWEVER, TRAINING WITH THE CREWS OCCURRED WITH THE BARGE AT THE DRILL SITE AS WELL AS IN KOTZEBUE. DURING A SUBSTANTIAL PORTION OF THE DRILLING SEASON, THE BARGE REMAINED AT OR NEAR THE DRILL SITE, RETURNING TO KOTZEBUE AS NEEDED FOR DRILLING SUPPLIES OR PROTECTION DURING SEVERE STORMS. THE BARGE AND TUG IS OWNED AND OPERATED BY CROWLEY MARITIME CORPORATION WHO OPERATE OTHER BARGE AND TUG OPERATIONS FROM KOTZEBUE. IN ADDITION TO OIL SPILL RESPONSE, THIS U.S. REGISTERED BARGE AND TUG PROVIDED A MARINE RESUPPLY CAPABILITY IN SUPPORT OF THE EXPLORATION DRILLING ACTIVITY. THE MARINE RESUPPLY REQUIREMENTS WERE VERY LIMITED. THE DRILLING VESSELS, DUE TO THEIR SIZE, CARRY ESSENTIALLY ALL OF THE EQUIPMENT AND MATERIALS REQUIRED FOR ONE DRILLING SEASON.



RESUPPLY/OIL SPILL RESPONSE BARGE

• DEPICTED IS OUR OIL SPILL RESPONSE/RESUPPLY BARGE. THE LOWER PHOTOGRAPH WAS TAKEN DURING A SPILL EXERCISE WITH TWO BOOMS DEPLOYED. FOR SIZE COMPARISON, THE BARGE IS 100' LONGER THAN A FOOTBALL FIELD. THE BARGE WAS NEAR THE DRILLING FLEET THROUGHOUT THE DRILLING SEASON EXCEPT FOR TWO SUPPLY RUNS DURING NONCRITICAL WELL OPERATIONS. THE BARGE WAS MADE AVAILABLE FOR IMMEDIATE RESPONSE TO ANY MAJOR SPILL.

• FOR A MAJOR SPILL, SWEPI HAS THE DIVERSITY OF NUMEROUS HEAVY-DUTY OPEN-OCEAN RECOVERY SYSTEMS SUITABLE FOR WORKING IN THE CHUKCHI SEA. SWEPI PURCHASED SIGNIFICANT NEW (\$1.4 MILLION) OIL SPILL RECOVERY EQUIPMENT FOR THE 1989 SEASON. OTHER OIL SPILL EQUIPMENT AND RESPONSE SYSTEMS TO BE USED ON THE BARGE BELONGED TO VARIOUS EQUIPMENT COOPS OF WHICH SHELL IS A MEMBER. SWEPI ALSO SPENT AN ADDITIONAL \$1.5MM ON NEW EQUIPMENT AND BARGE MODIFICATIONS IN PREPARATION FOR THE 1990 DRILLING SEASON.

• OIL SPILL RESPONSE TUG & BARGE SUPPORT FUNCTIONS DURING OFFSHORE DRILLING OPERATIONS:

- BASE OF OPERATIONS DURING MAJOR OIL SPILL
- COMMAND & CONTROL CENTER
- PRIMARY DOWNSTREAM OIL RECOVERY UNIT
- PRIMARY OIL/WATER SEPARATION & STORAGE UNIT
- SPILL EQUIPMENT STORAGE & MAINTENANCE CENTER
- HELIPORT FOR AERIAL SURVEILLANCE & DISPERSANT APPLICATION
- BACKUP (EMERGENCY) HELIPORT FOR DRILLSHIP
- TRAINING CENTER FOR OIL SPILL EXERCISES

- STORAGE & TRANSPORT OF DRILLING EQUIPMENT/SUPPLIES FOR DRILLSHIP
- STORAGE & TRANSPORT OF FUEL FOR DRILLSHIP, HELICOPTERS, & SUPPLY BOATS
- BACKUP FOR EMERGENCY EVACUATION, MEDICAL SUPPORT, & FIREFIGHTING

• THE BARGE WAS FULLY STAFFED AT ALL TIMES. PERSONNEL UNDERWENT CONTINUAL TRAINING SINCE SPILL RESPONSE READINESS WAS THEIR NO. 1 RESPONSIBILITY.

• THE BARGE AND ITS EQUIPMENT ARE DESIGNED TO MANAGE A MAJOR SPILL (BLOWOUT MODEL 5,000 B/D).

• THE BARGE CONTAINS A TOTAL OF 8,100' OF BOOM:

- 2,000' OF 18" PLUS 1,500' OF 8" KEPNER BOOM
- 2,600' OF 3M FIRE BOOM
- 1,000' OF NOFI OCEAN BOOM WITH NORWEGIAN OIL COLLECTION TRAWL DESIGNED FOR HIGH SEA CONDITIONS
- 1,000' OF NOFI OCEAN BOOM WITHOUT COLLECTION TRAWL

• NUMEROUS RECOVERY SYSTEMS ARE DEPICTED WHICH PROVIDE RECOVERY WELL IN EXCESS OF OUR MODEL BLOWOUT RATE. THE CENTERPIECE OF OUR RECOVERY SYSTEM, THE TRANSREC SKIMMER SYSTEM, ALONE HAS RECOVERY CAPACITY IN EXCESS OF OUR DESIGNED SPILL RATE OF 5,000 BPD. THE ACTUAL DESIGN CAPACITY OF THE TRANSREC IS OVER 37 THOUSAND BB/D. THE NEW DESMI SYSTEM HAS A DESIGN CAPACITY OF OVER 10 THOUSAND B/D.

• 4 SHELL OWNED AND BUILT MUNSON BOATS ARE AVAILABLE ON THE BARGE FOR BOOM DEPLOYMENT. 2 - 18' AVON RIGID HULL INFLATABLES ARE ALSO ON BOARD. THIS BRINGS THE TOTAL COUNT TO 8 EXCLUSIVE OF THE CANMAR FLEET WHEN THE ONSITE EQUIPMENT IS INCLUDED.

• SUFFICIENT DISPERSANT IS ONBOARD TO TEST THE FEASIBILITY OF WIDESCALE APPLICATION. ALTHOUGH PRIOR APPROVAL FOR DISPERSANT USAGE HAS NOT BEEN GRANTED AS YET FOR THE CHUKCHI SEA AREA, EFFORTS WILL CONTINUE, ON OUR PART, TO SEEK THIS APPROVAL IN ORDER TO EXPEDITE USAGE WHERE APPLICABLE. (PRIOR APPROVAL HAS BEEN OBTAINED TO ALLOW THE FOSC TO AUTHORIZE BURNING).

• DUE TO THE SIZE OF THE BARGE, SIGNIFICANT STORAGE IN CLASS "A" QUALIFIED TANKS IS AVAILABLE FOR RECOVERED CRUDE. INITIALLY, ALMOST 37,000 BARRELS OF TANK STORAGE IS AVAILABLE. THIS VOLUME INCREASES BY WELL OVER 50% AS THE ONBOARD DIESEL FUEL IS DEPLETED BY THE DRILLING FLEET.

1989/90 BARGE OPERATIONS

- DURING THE 1989 AND 1990 DRILLING SEASONS, THE BARGE WAS WITHIN 4 HOURS OF THE DRILL SITE ALMOST 100% OF THE TIME WHILE DRILLING BELOW 20" CASING.*

- EXTENSIVE OIL SPILL TRAINING WAS CONDUCTED BY THE BARGE AND CANMAR CREWS DURING THE JUNE/SEPTEMBER PERIOD. CUMULATIVE TRAINING WITH THE BARGE DURING THIS 3 MONTH PERIOD OF BARGE OPERATION IS ABOUT 5 MAN YEARS.

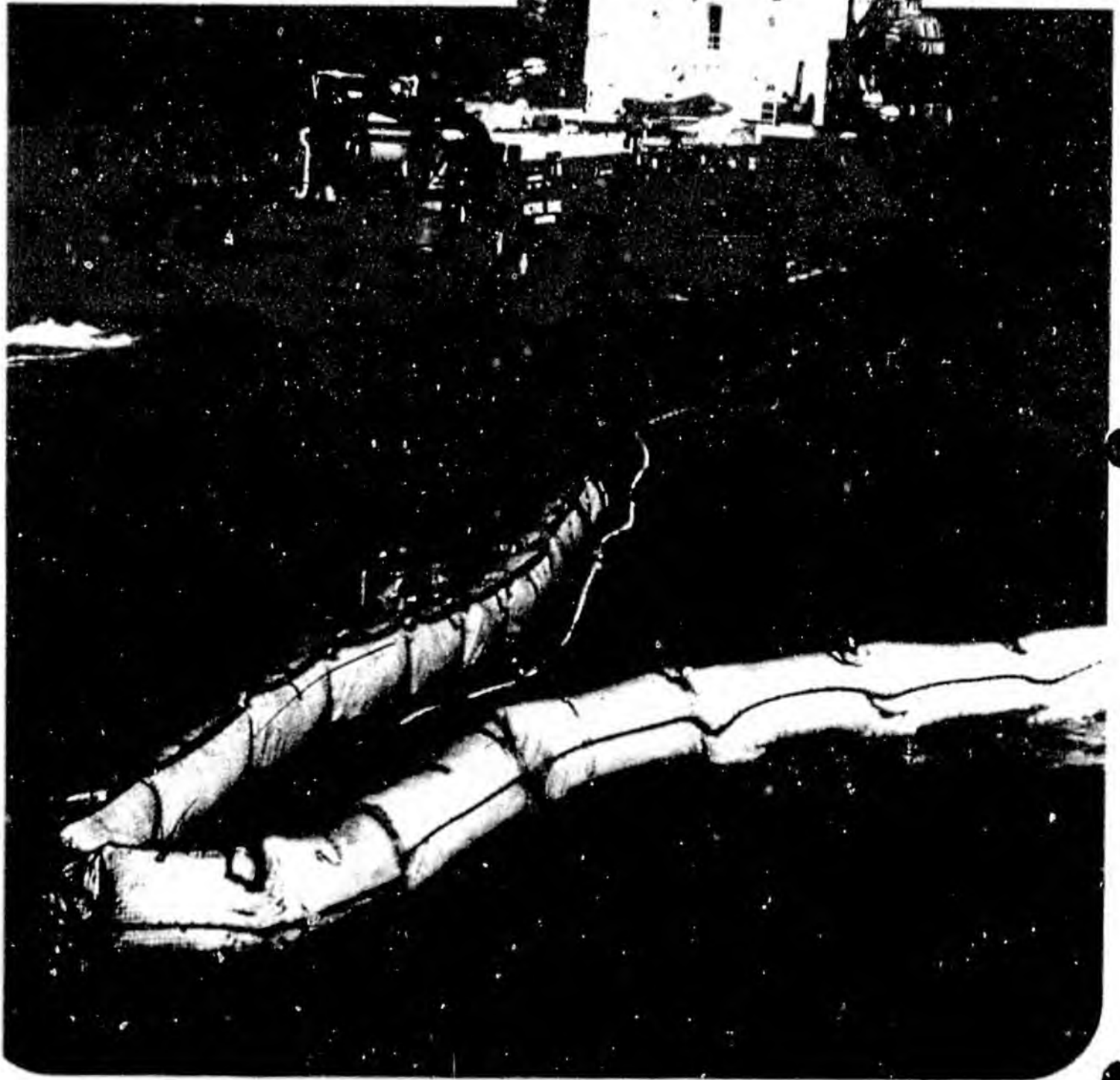
- IN ADDITION TO THE EXTENSIVE OIL SPILL TRAINING, DAILY SAFETY TRAINING IS PART OF THE ROUTINE. ALMOST 1,000 MAN HOURS OF SAFETY TRAINING IS CONDUCTED FOR THE BARGE CREWS DURING THE SAME 3 MONTH PERIOD.

- IN TWO YEARS OF OPERATION, SWEPI AND ITS PARTNERS HAVE SPENT \$13MM EQUIPPING AND OPERATING THE BARGE IN THE CHUKCHI.

- DURING 1989, A RESUPPLY WAS MADE TO KOTZEBUE AFTER 9-5/8" WAS CEMENTED AT KLONDIKE BUT RETURNED PRIOR TO COMMENCEMENT OF DRILLING OPERATIONS.

FRAMO OIL RECOVERY SYSTEM

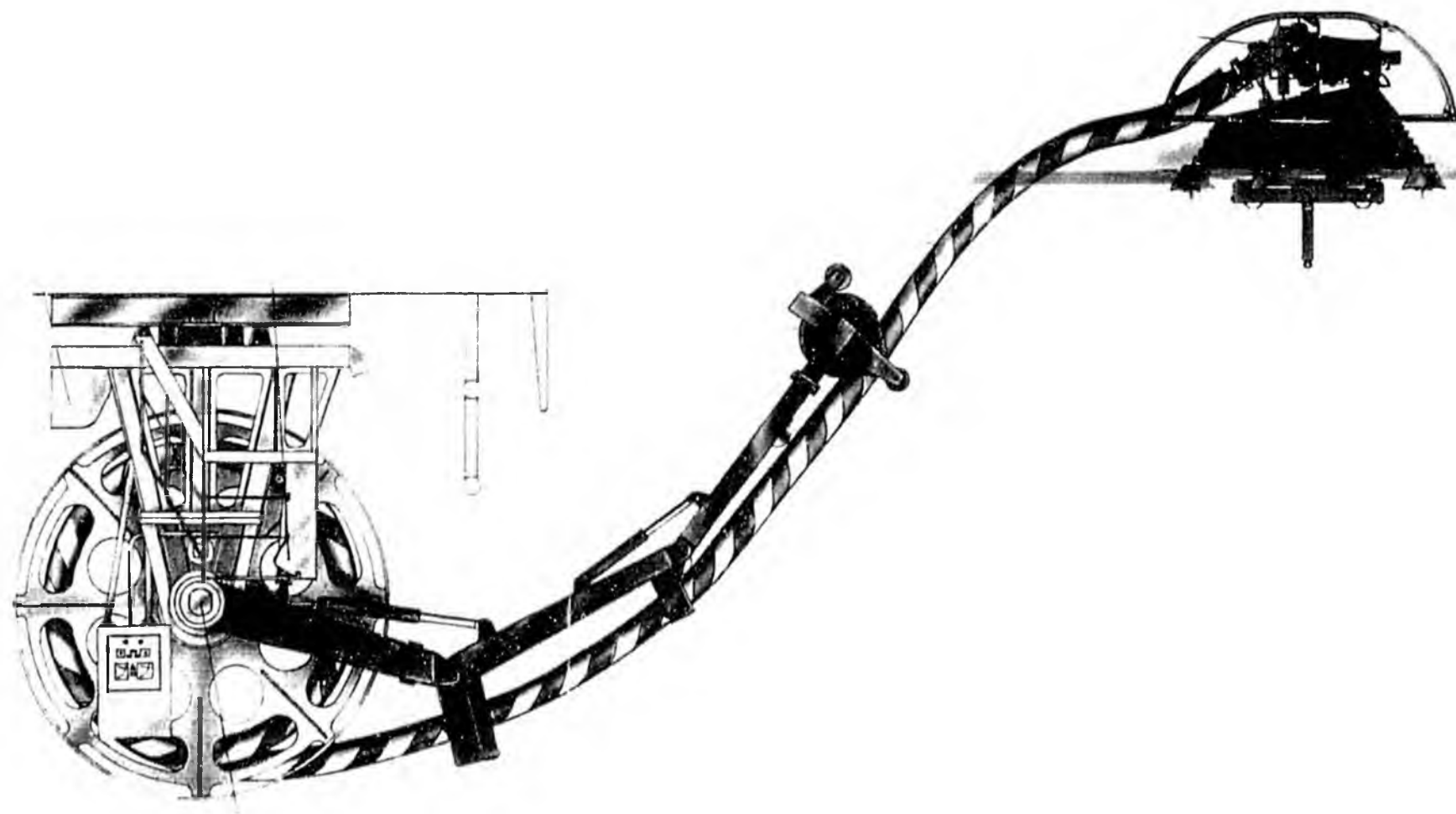
- Highest recovery rate obtained
- Combined oil recovery and transfer system
- Two vessel operation
- Increased towing speed
- Newly designed clogging free pump
- Instrumentation of boom and skimmers
- Cassette recovery units
- Automated emulsion breaker system



FRAMONORO TRANSREC SYSTEM 350

NORWEGIAN OIL TRAWL AND BOOM

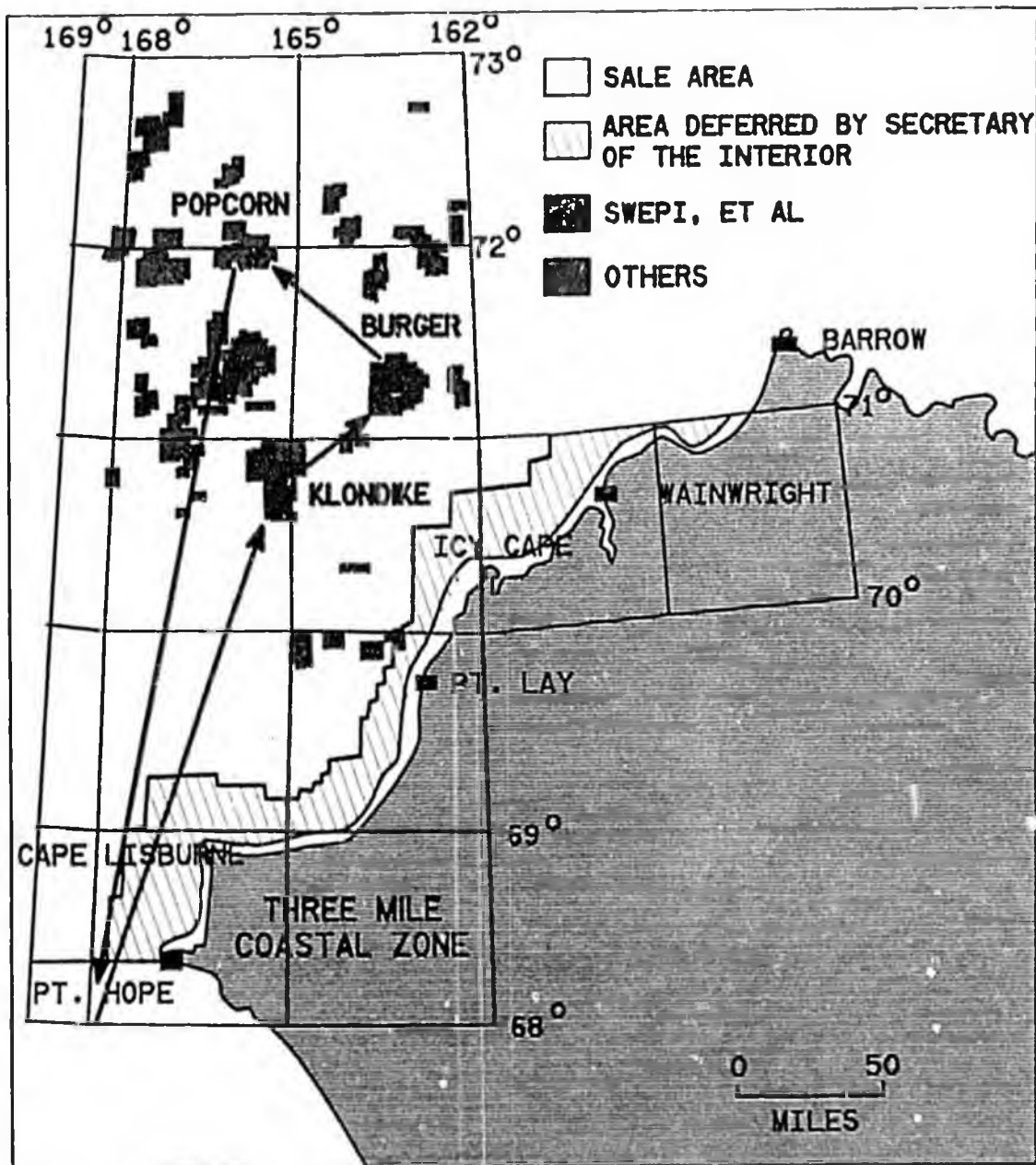
- ° THIS PICTURE ILLUSTRATES SOME OF THE NEW EQUIPMENT THAT SWEPI PROVIDED TO ENHANCE OUR OIL SPILL RESPONSE CAPABILITY.
- ° ONE OF THE MOST ADVANCED OFFSHORE RECOVERY SYSTEMS THAT CAN BE OBTAINED IS THE NORWEGIAN OIL TRAWL - OIL BOOM - TRANSREC (TRANSFER/RECOVERY) SKIMMER SYSTEM. THIS SYSTEM IS CURRENTLY IN USE THROUGHOUT THE NORWEGIAN SECTOR OF THE NORTH SEA.
- ° THESE SYSTEMS WERE PROTOTYPE TESTED BEGINNING IN 1983 TO MEET THE CHALLENGING CONDITIONS OF THE NORTH SEA. TODAY THE NORWEGIAN OPERATOR ALLIANCE (NOFO) HAVE SOME 8,750 METERS OF THE OIL BOOM AVAILABLE AND 14 TRAWL/TRANSREC SKIMMER SYSTEMS LOCATED IN CENTRAL LOCATIONS ALONG THE NORWEGIAN COAST. IN ADDITION, EXXON NORWAY JUST RECEIVED 2 TRANSREC'S.
- ° THE NORWEGIAN OIL TRAWL AND BOOM HAVE BEEN DEVELOPED TO OPERATE IN UP TO 6 METER WAVES AND CONTINUE TO PROVIDE HIGH RECOVERY RESULTS.



FRAMO/NOFO TRANSREC SYSTEM

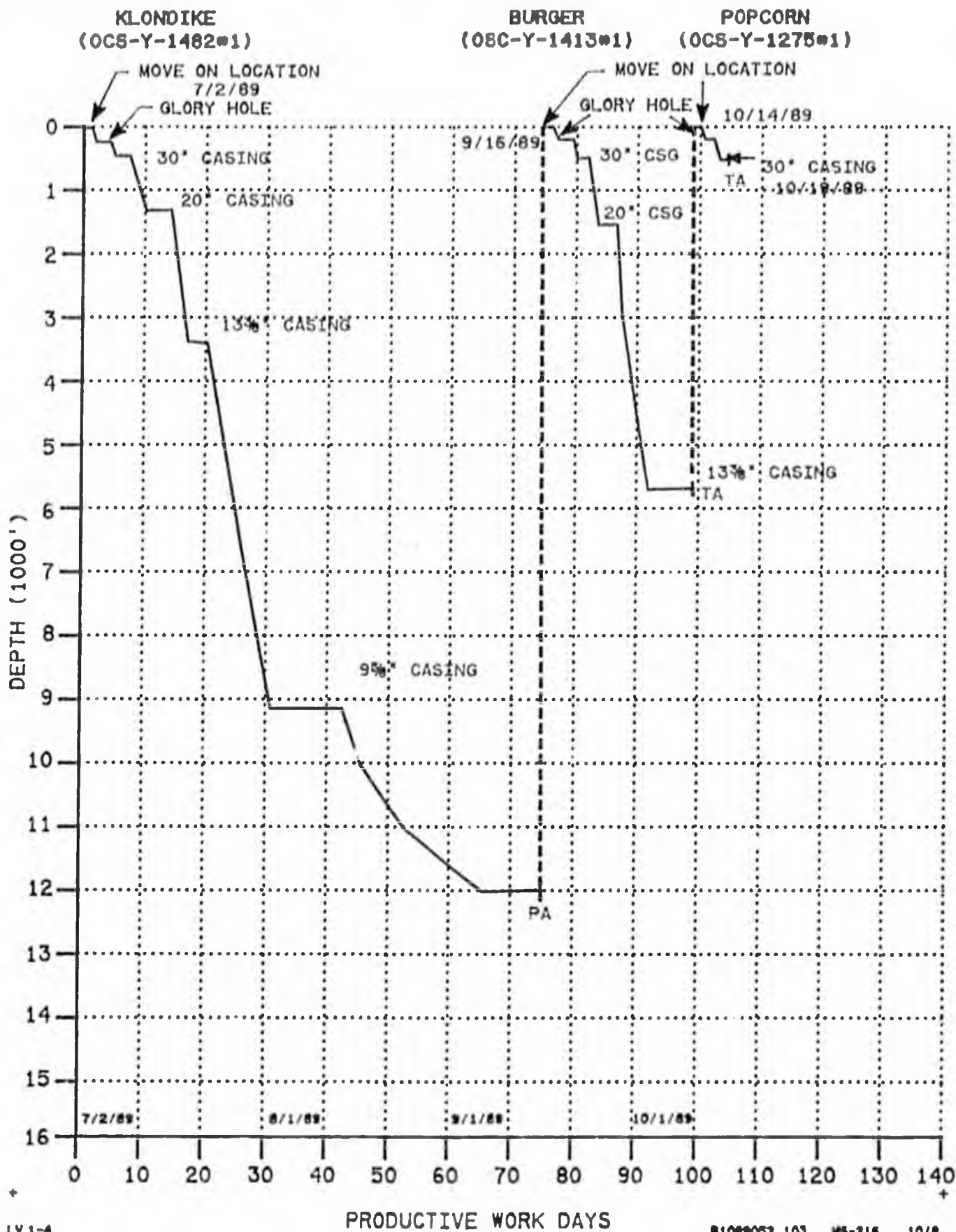
- THIS SKIMMER IS THE STATE OF THE ART EQUIPMENT DESIGNED TO RECOVER OIL AND TRANSFER OIL/WATER EMULSION OF HIGH VISCOSITY. THIS SYSTEM IS USED IN CONJUNCTION WITH THE NORWEGIAN OIL TRAWL AND BOOM.
- THE SKIMMER IS MANUFACTURED BY FRANK MOHN A/S (FRAMO) OF NORWAY.
- IT WAS DEVELOPED IN CLOSE COOPERATION WITH NORWAY'S NORTH SEA OPERATORS CLEAN SEAS ASSOCIATION (NOFO) AND IS THE MAIN OIL SPILL RECOVERY SYSTEM FOR THE NORWEGIAN SECTOR (NOFO HAS 14 SYSTEMS EMPLOYED).
- SWEPI WAS THE FIRST U.S. ORGANIZATION TO OBTAIN THIS EQUIPMENT, A TRANSREC 250 SYSTEM. ALYESKA HAS PURCHASED 2 TRANSREC 350 SYSTEMS SINCE THE VALDEZ SPILL AND HAS 2 MORE ON ORDER. ALASKA CLEAN SEAS AND THE BEAUFORT COOP (CANADA) HAVE PURCHASED 2-250 TRANSRECS. THE USSR HAS RECENTLY ACQUIRED 9 OF THESE SYSTEMS AND HAS PLACED ORDERS FOR AN ADDITIONAL 6. DUE TO NEW REGULATIONS, IT IS ANTICIPATED THAT 25 ADDITIONAL SYSTEMS WILL BE PLACED IN THE BRITISH SECTOR OF THE NORTH SEA.
- A SPECIALLY DESIGNED PUMP HAS MADE THIS RECOVERY SYSTEM CAPABLE OF WORKING WITH DIFFERENT EMULSIONS INCLUDING VISCOUS CRUDES, DEBRIS AND SOLIDS. THE SYSTEM IS REMOTELY OPERATED, AND HAS YIELDED THE BEST RECOVERY RESULTS WITH THE HIGHEST EFFICIENCY OF ANY DESIGN SO FAR TESTED OFFSHORE IN THE NORTH SEA.

CHUKCHI SEA 1989 DRILLING PROGRAM



CHUKCHI SEA DRILLING

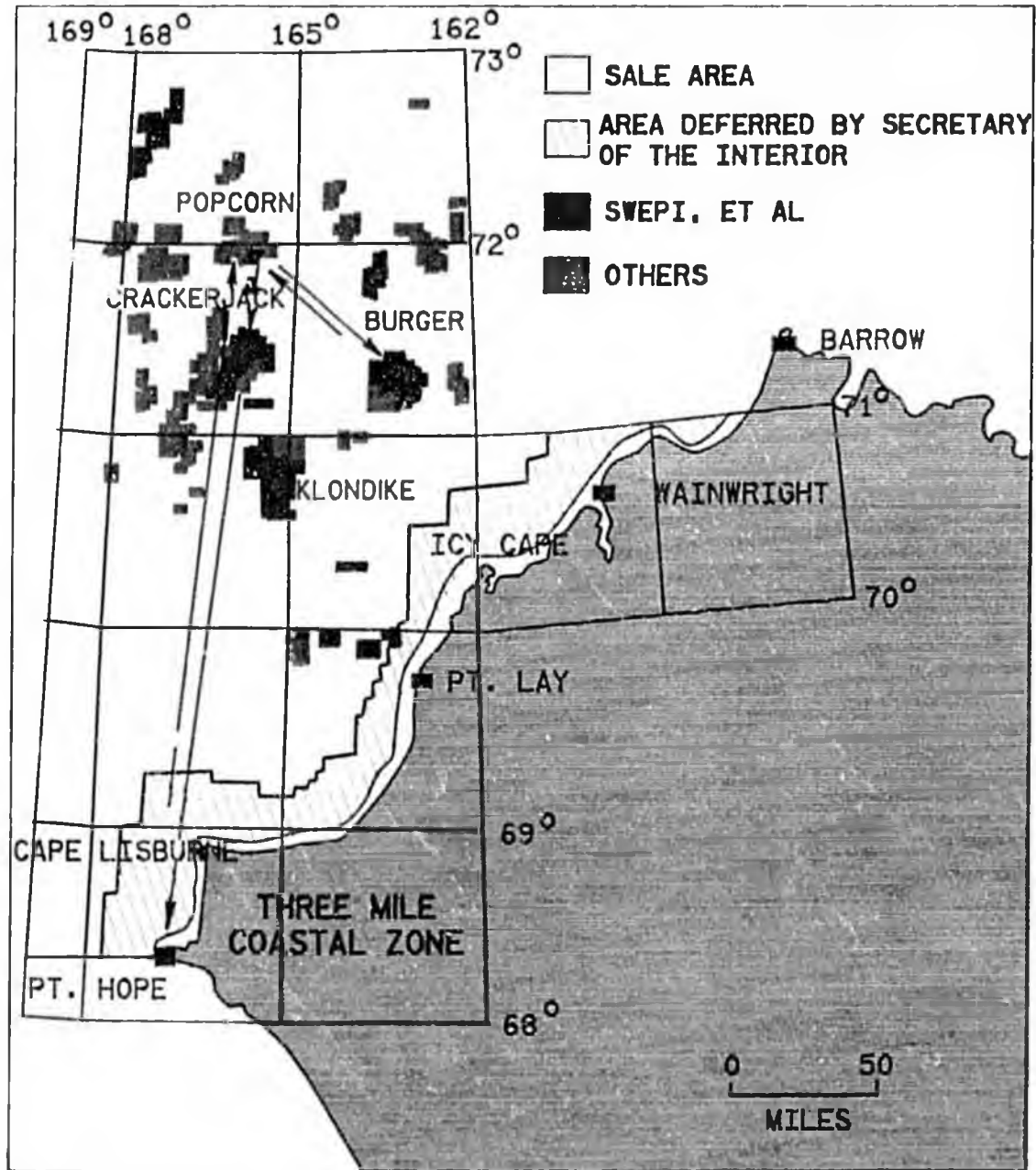
1989 SEASON



OPERATING RESULTS - 1989

- THE TWO FIGURES SUMMARIZE OUR 1989 DRILLING ACTIVITY.
- WE MOBILIZED THE FLEET IN MID-JUNE. AFTER TRAVELING APPROXIMATELY 2,700 MILES, WE MOVED ON PROSPECT KLONDIKE IN EARLY JULY.
- AFTER DRILLING AND EVALUATING THE PROSPECT KLONDIKE WELL TO A TOTAL DEPTH OF SLIGHTLY BELOW 12,000', THE WELL WAS ABANDONED.
- THE FLEET WAS MOVED TO PROSPECT BURGER ON SEPTEMBER 16TH.
- AFTER SETTING 13-3/8" CASING TO A DEPTH SLIGHTLY IN EXCESS OF 5,500' AT BURGER, THE FLEET WAS MOVED TO PROSPECT POPCORN ON OCTOBER 14TH.
- AT POPCORN, A GLORYHOLE WAS DRILLED AND 30" WAS SET TO 550' PRIOR TO BEING DRIVEN OFF BY ICE. THIS WAS ACTUALLY THE ONLY DOWNTIME DUE TO ICE DURING THE ENTIRE '89 SEASON.
- 1989 OPERATIONS ON LOCATION IN THE CHUKCHI WERE SHUT DOWN ON OCTOBER 19TH.
- THE FLEET ARRIVED BACK IN VICTORIA ON NOVEMBER 1ST.

CHUKCHI SEA 1990 DRILLING PROGRAM

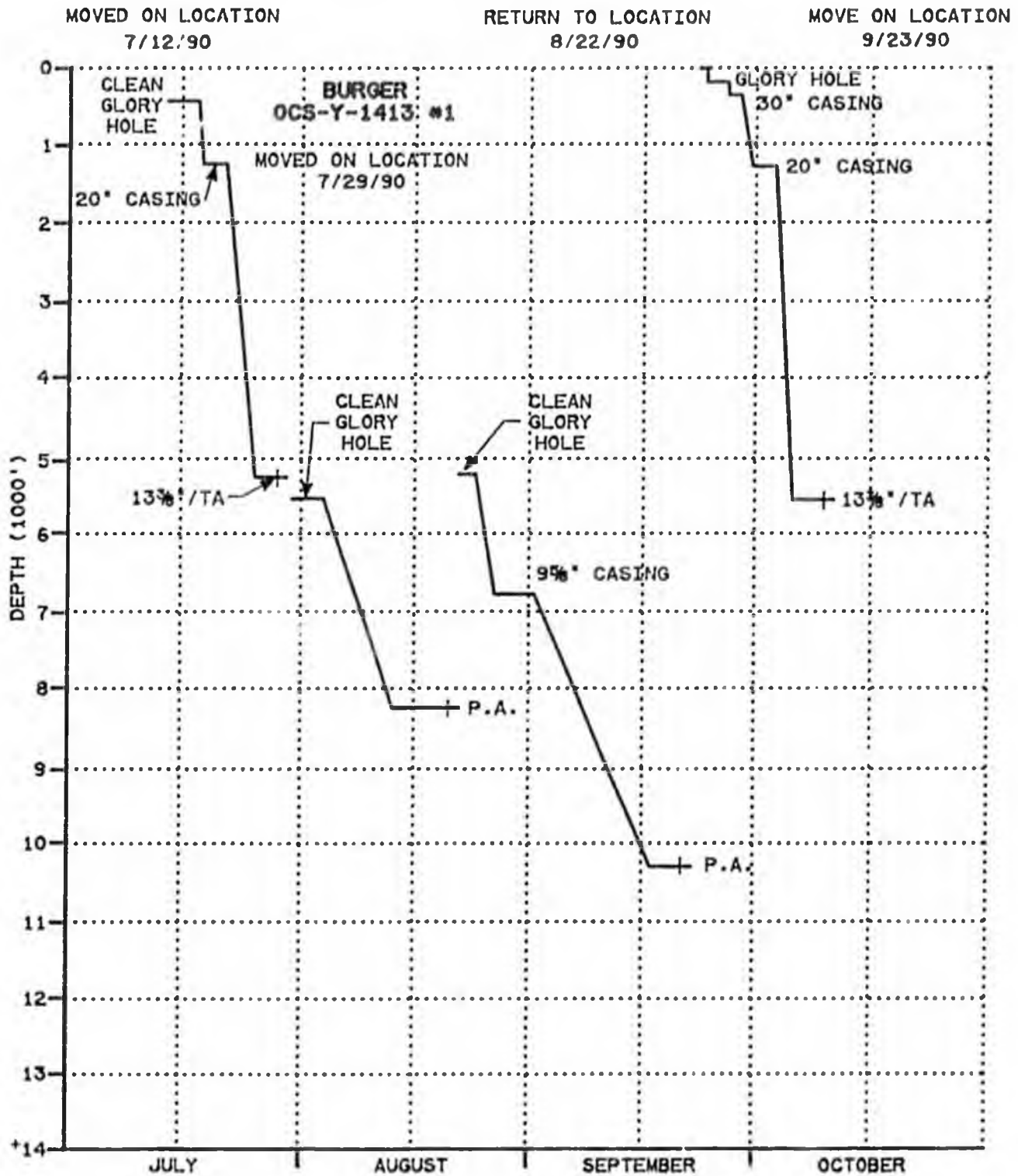


CHUKCHI SEA DRILLING 1990 SEASON

POPCORN
OCS-Y-1275 #1

POPCORN
OCS-Y-1275 #1

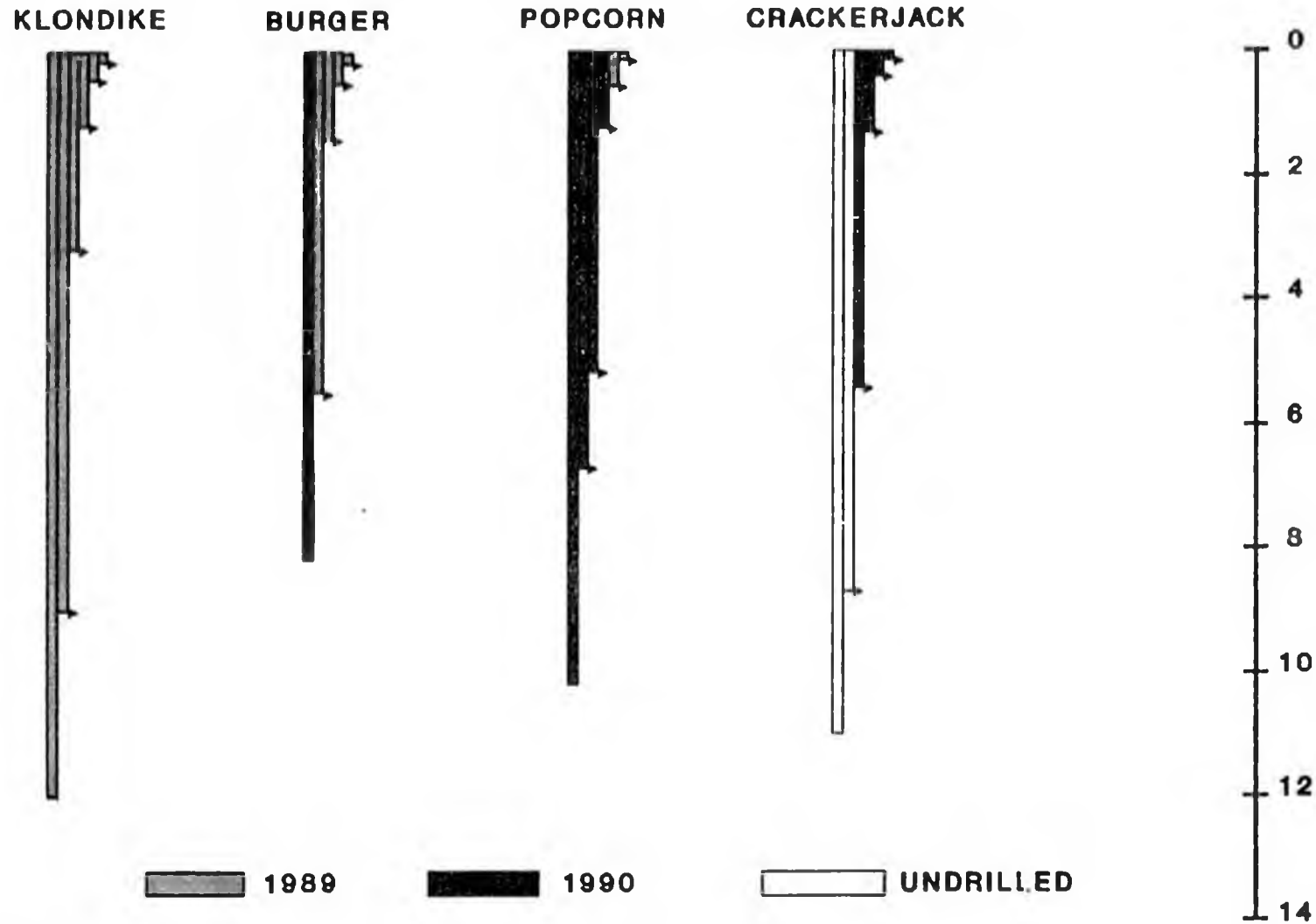
CRACKERJACK
OCS-Y-1312 #1



OPERATING RESULTS - 1990

- THESE TWO FIGURES SUMMARIZE THE 1990 DRILLING ACTIVITY.
- THE FLEET WAS MOBILIZED FROM VICTORIA LATE IN JUNE AND ARRIVED AT THE POPCORN PROSPECT ON JULY 12. ALTHOUGH OUR FIRST TARGET WAS BURGER, ICE CONDITIONS PREVENTED MOVING ONTO THAT SITE.
- BY JULY 29, THE ICE HAD CLEARED BURGER AND THE 13-3/8 CASING HAD BEEN SET AT 5200 FEET AT POPCORN SO THE EXPLORER III WAS MOVED TO BURGER. THE DRILLSHIP COMPLETED DRILLING BURGER FROM 5500 FEET TO 8200 FEET ON AUGUST 22.
- EXPLORER III WAS MOVED BACK TO POPCORN AND COMPLETED THAT WELL AT 10,200 FEET ON SEPTEMBER 22.
- EXPLORER III THEN ANCHORED UP ON CRACKERJACK AND STARTED DRILLING ON SEPTEMBER 23. DRILLING PROCEEDED QUITE RAPIDLY ON CRACKERJACK AND THE 13-3/8 CASING WAS SET AT 5500 FEET ON OCTOBER 11.
- CHUKCHI SEA OPERATIONS WERE TERMINATED ON OCTOBER 11 AND THE DRILLING FLEET BEGAN THE TRANSIT TO VICTORIA, ARRIVING VICTORIA ON OCTOBER 22.

CHUKCHI SEA DRILLING PROJECT WORK PROGRESS BY YEAR



WELL-WORK

DRILLING PROGRESS 1989/90
CASING ILLUSTRATION

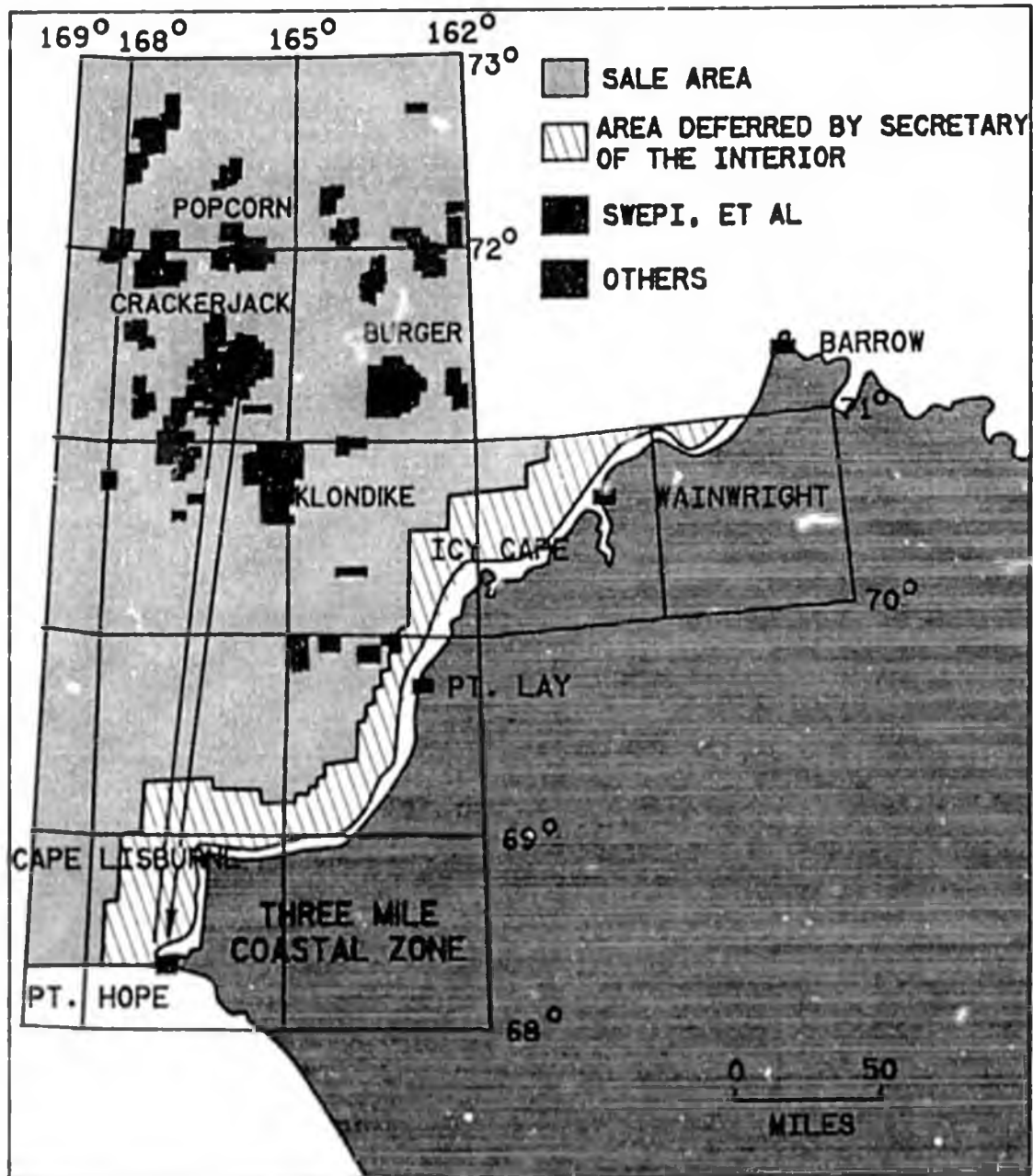
THIS VUGRAPH ILLUSTRATES THE DRILLING PROGRESS MADE EACH YEAR WITH COLOR CODED CASING DIAGRAMS.

A LITTLE OVER 3-1/2 WELLS HAVE BEEN COMPLETED IN TWO YEARS. THIS FAR EXCEEDED OUR EXPECTATIONS AT THE ONSET OF THE PROJECT WHICH WAS TO DRILL ONE WELL PER YEAR.

TWO REASONS ARE PRIMARILY RESPONSIBLE FOR THIS:

- 1) IN GENERAL, THE ICE CONDITIONS HAVE BEEN MUCH BETTER THAN ANTICIPATED.
- 2) DRILLING EFFICIENCY WITH MINIMAL TROUBLE TIME HAS EXCEEDED EXPECTATIONS.

CHUKCHI SEA 1991 PROPOSED ACTIVITY



1991 PROPOSED ACTIVITY

- THIS FIGURE SUMMARIZES THE PLAN FOR 1991.
- THE MOBILIZATION WILL BE TIMED TO ARRIVE AT THE CRACKERJACK SITE AROUND THE MIDDLE OF JULY WITH THE INITIAL SOLE OBJECTIVE OF FINISHING THE CRACKERJACK WELL TO 11,000 FEET.
- ADDITIONAL USAGE OF THE FLEET AFTER COMPLETION OF CRACKERJACK WILL DEPEND ON GEOLOGIC REVIEW OF DATA OBTAINED FROM PREVIOUSLY DRILLED PROSPECTS.

MARINE MAMMAL ISSUES

WHALES / SEALS

- INCIDENTAL TAKE RULING
- LETTER OF AUTHORIZATION

POLAR BEAR / WALRUS

- TRUSTEES OF ALASKA VS. DOI AND SWEPI
- INCIDENTAL TAKE RULING
- SCIENTIFIC PERMIT

MARINE MAMMAL ISSUES

WHALES/SEALS

- ADMINISTERED BY THE NATIONAL MARINE FISHERIES SERVICE (NMFS).
- REGULATIONS FOR THE NON-LETHAL TAKING OF WHALES AND SEALS BECAME EFFECTIVE IN AUGUST 1990 FOR A PERIOD OF 5 YEARS. SWEPI APPLIED FOR AND RECEIVED A LETTER OF AUTHORIZATION TO OPERATE UNDER THESE REGULATIONS IN 1990.
- INDUSTRY AND THE ALASKA ESKIMO WHALING COMMISSION (AEWC) HAVE AGREED ON SOME AMENDMENTS TO THE REGULATIONS AND HAVE JOINTLY FILED A PETITION WITH NMFS TO AMEND (11/26/90). THESE AMENDMENTS MERELY CLARIFY THE ANTICIPATED AMOUNT OF OPERATIONAL ACTIVITY. IN RETURN THE AEWC HAS AGREED NOT TO CHALLENGE THE AMENDED RULES NOR TO PRESS FOR A DRILLING MORATORIUM.
- SWEPI WILL APPLY FOR A RENEWAL OF ITS LETTER OF AUTHORIZATION AT LEAST 90 DAYS PRIOR TO ITS 1991 OPERATIONS.

POLAR BEAR/WALRUS

- ADMINISTERED BY THE FISH AND WILDLIFE SERVICE (FWS).

POLAR BEAR/WALRUS

- TRUSTEES OF ALASKA VS. DOI AND SWEPI - IN 1990, THE TRUSTEES OF ALASKA REQUESTED THE DOI TO REVISE OR SUSPEND SWEPI'S CHUKCHI EXPLORATION PLAN BECAUSE OF THEIR CLAIM OF SWEPI'S UNLAWFUL TAKES OF WALRUSES DURING 1989 OPERATIONS IN THE CHUKCHI SEA. THE REQUEST WAS DENIED. THE TRUSTEES FILED SUIT APPEALING THE DECISION OF THE DIRECTOR OF THE MMS DENYING TRUSTEES' REQUEST. THIS SUIT HAS BEEN REMANDED TO THE U. S. DISTRICT COURT IN ANCHORAGE BY THE NINTH CIRCUIT COURT OF APPEALS.
- RULE MAKING -- SWEPI FILED A PETITION FOR RULE MAKING WITH FWS ON MARCH 30, 1990 TO PERMIT THE INCIDENTAL TAKE OF WALRUSES AND POLAR BEARS ASSOCIATED WITH ITS EXPLORATORY OPERATIONS IN THE CHUKCHI SEA.
- SWEPI ANTICIPATES THAT A PROPOSED RULE WILL BE PUBLISHED BY FWS IN EARLY 1991.
- A FINAL RULE IS EXPECTED FROM FWS PRIOR TO SWEPI'S 1991 OPERATIONS. A LETTER OF AUTHORIZATION WILL ALSO BE REQUIRED, BUT CANNOT BE OBTAINED PRIOR TO THE ISSUANCE OF A FINAL RULE.
- SCIENTIFIC PERMIT FOR INCIDENTAL TAKES - EBASCO OBTAINED A SCIENTIFIC PERMIT FOR INCIDENTAL TAKES RELATIVE TO THEIR MONITORING PROGRAM STUDIES CONDUCTED IN 1989-90. THIS PERMIT EXPIRED IN 1990. THIS PERMIT WILL BE RENEWED BY EBASCO TO COVER A CONTINUATION OF OUR MONITORING PROGRAM ACTIVITIES IN 1991.

5/2/91

AMENDMENT 1

by MacLean

IN THE HOUSE
TO: CS HJR 36 (O&G)

page 3, line 4: after "conducted"

insert

"before further oil and gas exploration and development activities take place in the Beaufort and Chukchi seas"

Discussion

Industry has promised for more than a decade that it would adequately respond to an Arctic oil spill. It is obvious that without development of new technologies this is impossible. Only by encouraging the industry to move forward with an aggressive research and development program and providing a meaningful incentive to undertake such an effort by withholding these sales (ie., the Beaufort and Chukchi seas) will the situation ever improve.

AMENDMENT 2

by MacLean

IN THE HOUSE
TO: CS HJR 36 (O&G)

page 1, line 8: after "that"

delete

"the coastal plain of the Arctic National Wildlife
Refuge contains"

page 1, line 9: after "reserves"

Insert

"exist onshore"

ALASKA STATE LEGISLATURE



Representative Eileen Panigeo MacLean
Co-Chair House Finance Committee
P.O. Box 830
Barrow, Alaska 99723

WHILE IN JUNEAU
Box V
Juneau, Alaska 99811
465-4525
465-4833

HOUSE OF REPRESENTATIVES

District 22

North Slope
Borough

Anaktuvuk Pass
Atkasuk
Barrow
Kaktovik
Nuiqsut
Point Hope
Point Lay
Wainwright

Northwest Arctic
Borough

Ambler
Buckland
Deering
Kiana
Kivalina
Kobuk
Kotzebue
Noatak
Noorvik
Selawik
Shungnak

MEMORANDUM

DATE: 5/2/91

TO: Members of the House Resources Committee

FROM: Representative Eileen P. MacLean *Eileen Panigeo MacLean*

SUBJ: HJR 36

The purpose of HJR 36 is to send a message to the U.S. Congress that the Alaska State Legislature is concerned about offshore oil exploration, development, and tanker transportation activities in the Arctic waters of the Beaufort and Chukchi seas. The resolution encourages onshore oil development before such activity offshore is considered.

The Department of Interior expects to lease forty million acres of the Beaufort and Chukchi waters as early as the summer of 1991. The Interior's interest in these waters may be at least partly the result of having little new offshore land to lease for oil development. Last year, President Bush put vast tracks off the coasts of California, Florida, New England, and the Northwest off-limits to further leasing for up to 10 years.

The Cook Inlet and Prince William Sound spills evidence the oil industry's lack of capability to effectively respond to and clean-up an oil spill in warmer, ice-free waters. In the Arctic such industrial activity becomes even more precarious because of the extreme environmental conditions. Harsh storms occur without warning and the waters are frozen over for a good part of the year.

The findings of the Alaska Oil Spill Commission, the Arctic Research Commission, and the Mineral Management Service itself have determined that there exists no effective oil spill response options for remote arctic waters. There are few methods except burning to recover oil from the sea.

As part of the 1990 Oil Pollution Act, Congress acknowledged that there is not sufficient data available on offshore industrial activity and directed the Secretary of the Interior to develop an extensive report on a variety of issues relating to the impact of potential oil spills and seismic activity in the Arctic ocean, with particular attention to Native concerns. This report is expected to be released in May of 1991. Nevertheless, the lease sales are proceeding without review of the report's findings.

In addition, the resolution states support for further oil and gas development onshore given that the oil industry is more capable of responding to, containing, or cleaning up a significant spill on land than in the ocean. Onshore development at Prudhoe Bay has demonstrated no significant impact on wildlife. In the event of a spill, material is concentrated on a section of the tundra, more easily manageable than in the ocean, where rapid wave action serves to spread the oil uncontrollably over a wider area.

Included in member's packets, there are several letters/resolutions of support from various organizations in my district, along with comments made by Minerals Management Service and the state administration on lease sale 124, scheduled for June 1991. Additionally, a copy of the outline for the report mandated by Congress is included for review.

I thank the committee members for their support.

RES

CS FOR HOUSE JOINT RESOLUTION NO. 36 (O&G)

IN THE LEGISLATURE OF THE STATE OF ALASKA

SEVENTEENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE SPECIAL COMMITTEE ON OIL AND GAS

Offered: 4/29/91

Referred: Resources

Sponsor(s): REPRESENTATIVES MACLEAN, Hudson, Jacko, Koponen, Donley, Finkelstein, Brown, Ivan, Kubina, Ulmer

A RESOLUTION

1 Relating to off-shore oil exploration, development, and tanker transportation activities in
2 the Beaufort and Chukchi seas.

3 BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

4 WHEREAS the state supports the prudent and orderly development of the state's oil and gas
5 reserves in an environmentally sound manner; and

6 WHEREAS the state has been responsive to the nation's need to decrease its dependence on
7 foreign oil; and

8 WHEREAS there is a high probability that ^{the} coastal plain of the Arctic National Wildlife
9 Refuge contains ^{economically recoverable oil reserves, and} ^{exist onshore}

10 WHEREAS the oil industry has demonstrated that properly regulated onshore oil and gas
11 exploration, development, and transportation can occur in an environmentally sound manner; and

12 WHEREAS, following an expedited environmental assessment by the Outer Continental Shelf
13 Task Force, the President announced in June 1990 the closure until the year 2000 of large outer
14 continental shelf tracts off the coasts of California, Florida, New England, and the Northwest to oil and
15 gas leasing and activities; and

16 WHEREAS the Outer Continental Shelf Task Force has not yet been asked by the President to

1 complete a similar environmental assessment for off-shore areas totalling some 40,000,000 acres in the
2 Beaufort and Chukchi seas, which are scheduled for leasing by the federal government in 1991; and

3 WHEREAS Alaskan water, particularly arctic water, deserves the same, if not higher, scrutiny
4 regarding the wisdom and environmental safety of oil and gas activities as was given to water offshore
5 of the contiguous states; and

6 WHEREAS the Beaufort and Chukchi seas are among the world's most dynamic and relatively
7 unspoiled wildlife habitats, containing critical feeding and breeding grounds, rest and brooding areas,
8 and migratory corridors where a wide variety of marine mammal, bird, and fish species concentrate; and

9 WHEREAS the Inupiat people largely derive their nutritional needs and cultural identity through
10 the traditional harvest of marine species, particularly the endangered bowhead whale and other marine
11 mammals; and

12 WHEREAS the Chukchi and Beaufort seas are characterized by extreme weather conditions,
13 including prolonged ice cover and darkness, frigid temperatures, high winds and waves, and low
14 visibility; and

15 WHEREAS the Alaska Oil Spill Commission, the Arctic Research Commission, and the Minerals
16 Management Service have each acknowledged that effective oil spill response options under certain arctic
17 conditions for remote arctic waters remains undemonstrated; and

18 WHEREAS the Oil Pollution Act of 1990, P.L. 101-380, 104 Stat. 484, directed the Secretary
19 of the Interior, in consultation with the Governor of Alaska, to prepare an extensive report on a variety
20 of issues relating to offshore oil spill contingency planning in the Arctic, including compilations of
21 known data relating to potentially affected wildlife resources; existing drilling and spill response
22 technology; past, present, and proposed exploratory operations; and, specifically, Native Alaskan
23 concerns; and

24 WHEREAS initial scientific data indicates that marine mammals and birds in the Arctic react
25 to industrial noises, including noise from drilling, icebreaker, seismic activities, aircraft overflights and
26 other vessel disturbances;

27 BE IT RESOLVED that the Alaska State Legislature believes that the oil industry has yet to
28 conclusively demonstrate the ability to adequately respond to, contain, or clean up a significant oil spill
29 in arctic water under commonly occurring environmental conditions; and be it

30 FURTHER RESOLVED that the Alaska State Legislature believes that lease sales in the
31 Beaufort and Chukchi seas must be approached in an extremely cautious way with complete participation
32 by the people residing in the affected areas who are the most knowledgeable about arctic conditions; and

1 be it

2 **FURTHER RESOLVED** that the Alaska Legislature believes that the report mandated by the
3 Congress in the Oil Pollution Act of 1990 should be reviewed and an environmental assessment of off-
4 shore industrial operations in the Arctic be conducted; and be it **Insert Am # 1**

5 **FURTHER RESOLVED** that the Alaska State Legislature believes that more research is needed,
6 and urges industry to continue to undertake that research, focusing on the unique and unpredictable
7 conditions found in the Arctic, in terms of oil spill contingency plans and the effect of exploration and
8 development in general as well as specific research to determine the effect of industrial noise on marine
9 mammals and especially on the bowhead whale.

10 **COPIES** of this resolution shall be sent to the Honorable George Bush, President of the United
11 States; to the Honorable Dan Quayle, Vice-President of the United States and President of the U.S.
12 Senate; to the Honorable Robert C. Byrd, President Pro Tempore of the U. S. Senate; to the Honorable
13 George J. Mitchell, Majority Leader of the U. S. Senate; to the Honorable Thomas S. Foley, Speaker
14 of the U.S. House of Representatives; to the Honorable Manuel Lujan, Jr., Secretary of the Interior; to
15 Barry Williamson, Director of the Minerals Management Service; and to the Honorable Ted Stevens and
16 the Honorable Frank Murkowski, U.S. Senators, and the Honorable Don Young, U.S. Representative,
17 members of the Alaska delegation in Congress.

NORTH SLOPE BOROUGH TESTIMONY ON HRJ 36
HOUSE SPECIAL COMMITTEE ON OIL AND GAS
APRIL 15, 1991

The issues dealt with in HJR 36 can quickly become very complicated if you let them. Inconsistencies in the administration and interpretation of local, state and federal laws by state and local agencies has made the reviews of offshore lease sales, exploration and oil spill contingency plans, and related matters far more complex than they need have been. In the process, the views and concerns of Alaska's northern coastal residents have been obscured by scientific, legalistic, and economic debates which have failed to produce more than paper assurances that industrial operations can be conducted offshore in the Arctic without risking significant harm to the marine environment and the Inupiat Eskimo culture. Simple, critical questions have remained unanswered as the interest in offshore exploration in arctic waters has intensified in recent years. This resolution sponsored by Representative MacLean and others does nothing more than demand that the State of Alaska better investigate and understand the risks of these activities before continuing to support them. Every statement in the resolution is true, and to the extent that negative statements can be proven, each can be substantiated by the scientific and anecdotal records.

If you objectively examine the available data on arctic wildlife resources, the dependence on them among our Native residents, the lack of definitive data regarding the impacts of noise and oil on subsistence resources, the harsh realities of the arctic environment, and the limitations of oil spill response options in the Arctic, we believe that you will find our concerns and recommendations reasonable.

Testimony on HJR 36

Robert R. Griffeth

Senior Consultant, Environmental Affairs-Offshore

ARCO Alaska, Inc.

April 26, 1991

My name is Bob Griffeth. I am a member of the Environmental Sciences Department staff at ARCO Alaska, Inc. Thank you for this opportunity to offer some commentary on HJR 36.

Among the duties I perform in my assignment with ARCO are organizing and presenting the environmental orientation programs associated with exploratory drilling projects; overseeing the marine mammals scientific and monitoring programs for offshore exploratory operations; coordinating and maintaining cooperative programs with North Slope Inupiat villages; and serving as principal liaison with North Slope villages oil spill response teams.

Much of the testimony and discussion focusing on House Joint Resolution 36, which this committee is considering, directly touches areas of my professional activities. Therefore, I would like to take this opportunity to comment on three particularly relevant areas: (1) The recent history of cooperative programs between offshore oil and gas industry operators and North Slope Native communities. (2) The design and results of marine mammals science and monitoring programs. And (3) the village oil spill response teams which serve as observers, advisers, and participants for industry's offshore oil spill contingency planning and response preparedness.

Since the earliest days of petroleum exploration and development on the North Slope, industry has recognized both the advisability and desirability of fostering programs of mutual benefit to itself and to the resident Inupiat communities. In the early years, these efforts were primarily directed to training and employment opportunities. Such programs remain strong and active today. In other instances the basis for cooperation keys off of joint business ventures between industry and the Native regional and village corporations. Here again, joint venture programs continue to be an essential and vital feature of industry-local resident relations.

In more recent times, the overriding concerns of the area have come to be offshore oil exploration activities that are viewed by some as potentially harmful to marine mammal subsistence resources or in conflict with Native subsistence pursuits. The bowhead whale hunt has been the focal point of this concern for North Slope residents and industry operators alike since both parties are, at times, environmentally constrained to simultaneously operate during the open water conditions when the annual fall whale migration through the Beaufort Sea occurs.

For the past five years, a Cooperative Program for the Beaufort Sea (commonly referred to as the Oil/Whalers Agreement) has been in effect between the Alaska Eskimo Whaling Commission, the whaling captains' associations of Nuiqsut and Kaktovik (which, along with Barrow, constitute the only Beaufort whaling villages) and industry. Prior to the open water season, whaling captains and industry representatives meet to work out a communications system between the parties that prevents use conflicts

between active whaling crews and industry operations. This cooperative effort has succeeded. It has also produced additional benefits to both parties. Industry has been allowed to proceed with exploratory activity and in the process has become very familiar with, and keenly sensitive to, both the practical and cultural dimensions of the Inupiat subsistence hunt. Safety assistance has also been provided to whaling crews in distress on certain occasions. Most of all, the focus on whaling and the fall bowhead migration has created a situation in which industry has proved itself both willing and able to work cooperatively with the Native subsistence communities on what is chief among their concerns about offshore exploration.

While this example touches on the experience gained from cooperative efforts between industry and Inupiat whalers from the Beaufort Sea communities; other efforts have involved environmental projects, archaeological and cultural matters, and local community activities. Without question, however, our highest mutual priority continues to be gaining a better understanding of the dynamics of the offshore arctic environment and scientific and monitoring studies of marine mammals there.

ARCO, and other industry offshore operators, have recognized that the local expertise and deep knowledge possessed by subsistence hunters absolutely must be incorporated in any study or monitoring programs. Effectively, this is done in two ways. First, by consulting with both whaling captains' associations and the North Slope Borough's Department of Wildlife Management in the design and scientific assessment of results of studies. Second, by including experienced Inupiat monitors in the actual field work associated with the studies. This approach has vastly enriched the quality

and credibility of study results. The benefits to both industry and the whaling communities are obvious. Industry operators can tailor their operations to cause the least possible interference with the subsistence hunt; the whaling community can, in turn, reinforce with hard scientific evidence its long held view that the bowhead whale population is healthy and can sustain an annual take of up to fifty animals. Both of these benefits have been realized from studies conducted over the past several years. I would be happy to supply additional information on these efforts to the committee. I can provide for the record, a detailed report of cooperation and consultation undertaken between industry and the whaling communities and final study reports from recent science and monitoring programs, if you would like to include them.

The final matter which I would like to touch on concerns the extent to which industry consults and incorporates the knowledge of local residents in dealing with oil spill preparedness and response. This committee recently received written testimony saying that ". . . local knowledge of experience[d] whaling captains and hunters and researchers continue[s] to be overlooked. I would like to see our local experts actively participate in the assessment of the oil industr[y's] ability to clean up an oil spill. This includes monitoring oil spill clean up drills that the state calls for occasionally to see if the oil industry is ready to respond to a spill."

There has been similar testimony from several other witnesses at previous hearings on this Resolution.

Local captains, hunters and residents have shared in the development of our Arctic programs. In the summer of 1989, ARCO recruited and provided oil spill response technician training (a 40 hour course) to ten residents each in the villages of Nuiqsut and Kaktovik. Members of these two teams included whaling captains (such as Mickey Agiak and George Kaleak of Kaktovik) and crew members (such as Isaac Nukapigak and Tony Cabinboy of Nuiqsut). Each of these individuals plus other team members fully participated in on-site oil spill response drills and demonstrations under all types of environmental conditions (open water, broken ice, and solid ice) at two different Beaufort Sea offshore exploratory drilling locations in 1989 and 1990. In late summer 1990 the initial phases of training were completed for a third ten-member team which included representatives from the Barrow volunteer fire department. Presently, the Alaska Clean Seas Co-op and response organization is continuing and expanding the village response team program in North Slope Borough communities.

This training program serves both the needs of oil companies operating in the area and the continuing needs of North Slope communities. Trained team members have reviewed contingency plans and have offered suggestions that resulted in specific improvements. The North Slope Borough has been an active partner in staging and supporting the training program.

I wish to conclude by stating that ARCO Alaska, Inc. and other offshore Arctic operators, fully intends to maintain the patterns of consultation and cooperation we have established over the years. As has been discussed by some individuals recently, a more formal regional citizens advisory group for

the Beaufort and Chukchi lease sale areas may be established. ARCO would welcome and support such a development.

Thank you for the opportunity to share this information with you. If you have any questions, I would be happy to respond.

ALASKA STATE LEGISLATURE

Representative Eileen Panigo MacLean
Co-Chair House Finance Committee
P.O. Box 830
Barrow, Alaska 99723



WHILE IN JUNEAU
Box V
Juneau, Alaska 99811
465-4525
465-4833

HOUSE OF REPRESENTATIVES

District 22

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Borough

Anaktuvuk Pass
Atkasuk
Barrow
Kaktovik
Nulqsut
Point Hope
Point Lay
Wainwright

Northwest Arctic
Borough

Ambler
Buckland
Deering
Kiana
Kivalina
Kobuk
Kolzebue
Noatak
Noorvik
Selawik
Shungnak

MEMORANDUM

DATE: 4/3/91

TO: Representative Bill Hudson, Chair
Oil and Gas Committee

FROM: Representative Eileen P. MacLean, Co-Chair *E.P.M.*
House Finance Committee

RE: Request for Scheduling

I would like to request that HJR 36, regarding off-shore oil exploration, development, and tanker transportation activities in the Beaufort and Chukchi seas, be scheduled for a hearing in the Oil and Gas Committee as soon as possible.

While I support responsible onshore development of the Arctic National Wildlife Refuge, I am deeply concerned about offshore oil and gas activities, which could potentially decimate marine mammals and foul the environment, if a mishap were to occur.

As early as this summer, the Department of Interior proposes to conduct oil and gas lease sales of forty million acres of these waters, without the ability to adequately respond to, contain, or clean up a significant oil spill in arctic water under commonly occurring environmental conditions.

Congress has acknowledged that effective oil spill response options for remote arctic waters remain undemonstrated and therefore mandated preparation of an extensive report on a variety of issues relating to offshore oil spill contingency planning in the Arctic, with particular attention to be given to Native concerns.

The Resolution raises concern about the lease sales proceeding in the Arctic before the Congress, and the public have the opportunity to review the report.

The bill further encourages the Department of Interior to give the Beaufort and Chukchi seas the same scrutiny as waters in the lower 48 states, which were declared off limits to oil and gas leasing and development activities in June 1990.

If you have any questions regarding the resolution, please contact me or Deborah Driver, my Legislative Assistant.

Thank you very much for your Co-Sponsorship of the resolution.

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

WALTER J. HICKEL, GOVERNOR

400 WILLOUGHBY AVENUE
JUNEAU, ALASKA 99801-1796
PHONE: (907) 465-2400
FACSIMILE: (907) 586-2754

April 12, 1991

The Honorable Bill Hudson, Chair
House Special Committee for Oil and Gas
P.O. Box V
Juneau, AK 99811

Dear Representative Hudson:

Subject: HJR 36, which relates to off-shore oil exploration, development, and tanker transportation activities in the Beaufort and Chukchi seas.

Position: The Department of Natural Resources opposes this resolution. The statements it contains are so strong that, if the resolution is enacted, it will directly affect the state's ability to continue oil and gas leasing offshore or near water bodies. We ask the Committee and the Legislature to carefully consider the unsubstantiated statements in this resolution, as well as the subsequent implications for the state's own oil and gas leasing program, before moving it to the next committee of referral.

Many federal offshore areas in Alaska have already been leased. The Hickel administration has taken a strong stance with the federal government to ensure that federal sales are as protective of subsistence activities and have as high a standard for oil spill prevention as state sales. A resolution of this type does not help these efforts.

The resolution appears to mix concerns about tanker accidents such as the Exxon Valdez with concerns about the risks of offshore oil and gas exploration and development. Before the Legislature commits itself to these statements it should make certain they are substantiated.

Recommendation: Allow the federal Minerals Management Service (MMS) an opportunity to appear before the committee and explain the results of noise studies and other studies that relate to the resolution's statements, as well as to describe federal oil spill prevention and clean-up requirements for offshore Alaska exploration and development. Recognize the high standards of protection and prevention established by the state for offshore oil and gas exploration, development and transportation. Amend the resolution accordingly.

Sincerely,


Harold C. Heinze
Commissioner

**STATE OF ALASKA
1991 LEGISLATIVE SESSION**

BILL NO. HJR 36

Revision Date: _____ Department Affected: Natural Resources
 Title: Off Shore Oil Exploration BRU: Petroleum Management
Development & Transportation Components: _____
 Sponsor: Rep. Maclean, Rep. Hudson
 Requestor: House Oil & Gas Committee COMPONENT SERIAL NO. _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND&STRUCTURES						
GRANTS,CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL						
---------	--	--	--	--	--	--

REVENUE	*	*	*	*	*	*
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FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of Current year impact:

ANALYSIS: (Attach a separate page if necessary)

- * If this Resolution is enacted, it could directly affect state oil and gas leasing policy and revenues.

Prepared by: Carol Wilson Phone: 465-2400
 Division: Commissioner's Office Date: 11-Apr-91

Approved by Commissioner: Harold Heinze *HC Heinze* Date: 11-Apr-91
 Agency: Department of Natural Resources

Distribution (by preparer) : Legislative Finance, legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

January 15, 1991

Pamela A. Bergmann
Regional Environmental Assistant
Office of Environmental Affairs
U.S. Department of the Interior
1689 C Street, Room 119
Anchorage, Alaska 99501-5126

Dear Pamela:

The meeting in Kotzebue was very helpful. The schedule for reviewing your report to Congress does not leave us much time to comment, but we appreciate any opportunity to express our concerns regarding oil development and transportation in the Arctic.

Based on the Kotzebue meeting, we will not focus on oil tankers, but instead we will address oil issues in a broader context. Furthermore, you indicated that you are more interested in a listing of concerns. If more detail is needed, please contact us.

We also wish to receive a review copy of the draft report prior to its completion and submittal to Congress.

Below is a list of our major concerns relative to oil development and transportation in the Arctic:

A. Exploration Phase

1. Successful exploration will result in development activities, regardless of the extent of knowledge concerning environmental and social impacts. While we are not opposed to exploration, we do not believe that exploration should proceed until the environmental and socioeconomic impacts of such activities are better understood and effective measures for

mitigating those impacts have been developed and are in place.

2. Oil spill response technology in the Arctic is unproven and at present inadequate. Too little thought has been given to oil spill cleanup under Arctic conditions by the industry and the federal government.

B. Development Phase

1. Impacts, both positive and negative, on communities that serve as the base of operations or support for development activities need to be thoroughly assessed. This is especially critical for smaller Native communities.
2. Impacts on larger communities, such as regional centers like Kotzebue, that are not physically close to the lease area but still function as a supply center or support base must also be addressed. Often, the extent of the area impacted by OCS activities is greater than the federal government or industry recognizes.
3. The potential for oil spills increases and a spill could occur at any time, under any conditions.

C. Production Phase

1. The likelihood of a spill of major proportions increases substantially during the production phase. Again, a spill can occur under any circumstances and at any time of year.
2. Oil spill response technologies are unproven in the Arctic. Even MMS points out that the present technology and industry capabilities are inadequate for a spill in ice-covered waters (Chukchi Sea OCS Lease Sale #126 DEIS).
3. The industry and the federal government don't appear to be as diligent as warranted about identifying and mitigating adverse impacts from OCS activities in environmentally sensitive and climatically harsh regions. Areas of concern include offshore regions that host migratory marine mammals as well as onshore areas that provide habitat for a variety of species important as subsistence resources.
4. A conscientious and meaningful effort to provide opportunities for training and employment of local

residents should be considered an integral part of any planning activities for oil development in the Arctic.

5. Options for transporting oil from the Arctic must be carefully and thoroughly evaluated. Before any decisions are reached as to transporting oil by tanker, for example, a thorough assessment of the applicability of existing facilities should be conducted. To the extent possible, existing infrastructure should be utilized for future oil production.
6. If oil is transported by tanker, adequate oil spill response equipment must be available in a number of locations along the coast of Alaska, as far south as the Aleutians or the Alaska Peninsula, to ensure rapid deployment and effective cleanup. (This is an example of how more widespread OCS impacts are than the federal government and industry seem to acknowledge).

D. Subtitle C, Section 8902 Report Annotated Outline

1. A description of subsistence resources and the likely impacts on subsistence as a result of an oil spill needs to recognize the geographic extent of subsistence activities. Impacts from an oil spill will not be confined to marine mammals, fish and seabirds, and the coastal residents who use them, but will impact inland and terrestrial species and subsistence activities as well. This is due to the traditional sharing of subsistence resources by the Iñupiaq people. Coastal peoples trade their subsistence resources for those obtained by upriver and inland peoples. Thus, a severe reduction in coastal resources will increase the pressures on and the demand for inland resources. Furthermore, inland people travel to the coast to hunt and fish, supplementing subsistence resources they obtained inland. Finally, migration of animals, such as caribou, can be disrupted in one location due to development activities but result in negative impacts elsewhere. This can happen if, for example, the caribou alter their migration routes, making it more difficult for subsistence hunters to find them and to obtain enough animals for their needs.
2. The report also needs to recognize the seasonality of the rural economy (cash and subsistence). A major oil spill and cleanup effort in the spring and summer will occur at the busiest time of year in rural Alaska. This is when nearly all major con-

struction takes place, as well as commercial fishing and other significant economic activities (such as tourism). Extensive local hiring efforts to combat an oil spill will compete directly with the already high demands for labor during this time of year. Summer is also a critical time of year for subsistence activities. During this time, it would be very disruptive if not impossible to mount a sizeable cleanup operation out of a community like Kotzebue. The services and facilities of a regional center are generally taxed by normal summer activities, let alone a massive cleanup effort or staging operation. Consideration needs to be given in project planning to mounting a large scale effort while minimizing detrimental impacts to the local community(ies). Furthermore, local projects could be severely impacted if a large number of resident laborers opt for higher paying jobs with industry should a spill occur. Given the brevity of the construction season, loss of one summer could be ruinous to a project.

3. Alaska should be afforded a timely and meaningful opportunity to review oil exploration, development and production plans for Canadian activities, particularly if oil is to be transshipped through Alaskan or American waters, or piped across Alaska.
4. The Northwest Arctic Borough should be consulted throughout all phases of oil exploration, development and production. As we have stated above, the Borough is likely to experience impacts from oil activities, even if the activity is to the north in the Beaufort Sea. The Borough has done extensive planning through its coastal management, comprehensive planning and economic development programs, and has numerous policies in place relevant to the types of impacts that may result from various aspects of oil development.
5. Section III.B.1. addresses public sector contingency plans for oil spills. Consideration should be given in this section to the Northwest Arctic Borough (and the North Slope Borough) coastal management programs. Although these plans are not likely to focus specifically on oil spills, they do consider the resources, both human and natural, of the coastal areas within each jurisdiction. They also identify critical areas where development should either be restricted or prevented. This is germane, for example, to the location of onshore facilities such as staging areas.
6. Section III.B.2.c.ii. talks about local contingency plan requirements of the Northwest Arctic Borough

for oil activities in the North Slope Borough. We assume this refers to oil activities in the Northwest Arctic Borough. The Northwest Arctic Borough has no jurisdiction in the North Slope Borough.

NANA Regional Corporation commented on the DEIS for the Chukchi Sea Lease Sale #126. The majority of our comments and concerns are as equally relevant to this matter as they were to the proposed lease sale. Pertinent portions of these comments are summarized here for your information.

Our major concern centers on the unproven ability of the oil industry to safely drill in Arctic waters, to prevent significant accidents or oil spills, and lastly to clean up a spill of any magnitude effectively and quickly.

In fact, the DEIS for Lease Sale #126 is quite pessimistic about the ability of the oil industry to clean up an oil spill in Arctic waters, particularly in the presence of ice. As noted in Appendix L of the DEIS, MMS' own evaluation of the response and cleanup capabilities of the industry found that the majority of the equipment tested performed below ratings. In the case of application in the Chukchi Sea, summer sea conditions would preclude effective use of response equipment for 9% to 24% of the time. Ice cover, which typically occurs 9 months of the year, eliminates standard application of most mechanical response equipment.

The scenarios for mobilizing spill response teams and equipment center on transporting said teams from Barrow, Deadhorse or the Canadian Arctic. However, the minimum response times often exceed the critical initial response time required to contain and clean up the oil. In other words, the response teams will arrive too late. And once they get to the scene of the spill, they will be using equipment and techniques that, by MMS' own admission, are likely to be ineffective and made even more so by the extreme weather and sea conditions that are common to the Beaufort and Chukchi Seas.

There is a real danger in transporting oil by tanker in waters that are covered by ice substantial portions of the year. A tanker that becomes grounded or damaged by pack ice will produce an oil spill of the greatest magnitude under the worst possible conditions for an effective spill response and cleanup. One technique discussed in the Lease Sale #126 DEIS for dealing with oil spills in pack ice is to burn the oil when it reaches the top of the ice. However, as the DEIS notes, the requirements for dealing with a multitude of melted pools of ice and oil would be a "logistical nightmare". Moreover, oil spilled in the early winter is likely to remain underneath the ice for the entire winter before the ice starts melting. There was little discussion addressing the effects of significant quantities of oil trapped underneath pack ice for extended periods of time. It was noted, however, that oil trapped in pack ice may move considerable distances before the ice melts, further complicating the oil spill cleanup. Moreover, such trapped

oil may be slower to lose its volatile and therefore toxic components.

To quote the findings of the DEIS, "industry could effectively clean up an oil spill in moving ice only if the spill is a platform blowout that could be set on fire without endangering platform integrity." The implications of this statement are that the industry is severely limited in its ability to respond to oil spills of any other source or cause. In light of the severe weather conditions commonly experienced in Arctic waters, this admission is quite unsettling. As noted in the DEIS (page II-55), even recovery of most of the oil spilled from a platform is unlikely.

We hope that these comments are useful in your efforts to respond to the mandates of the Oil Pollution Act of 1990. If we may be of further assistance or can provide additional information, please contact me at the letterhead address or call 265-4100.

Sincerely,

John A. L. Rense
Vice President, Resources

cc: Walter Sampson
Vice President, Lands

Chuck Greene, Mayor
Northwest Arctic Borough

EB/111



Alaska Environmental Lobby, Inc.

P.O. Box 22151 Juneau, Alaska 99802

907-463-3366
Fax 907-463-3312

POSITION PAPER HJR 36

The Alaska Environmental Lobby supports HJR 36, relating to off-shore oil exploration, development, and tanker transportation activities in the Beaufort and Chukchi seas. The resolution states the following:

1.) The Alaska State Legislature believes that the oil industry has yet to conclusively demonstrate the ability to adequately respond to, contain, or clean up a significant oil spill in arctic waters under commonly occurring environmental conditions. The oil industry's incapability was clearly demonstrated in Prince William Sound; the problems faced in the relatively calm waters of the Sound would be magnified in the Arctic seas. In a hearing on this resolution, a resident of Kaktovik told of at least one incident when an oil clean-up training session had been cancelled because it was "too windy".

2.) The Alaska State Legislature believes that lease sales in the Beaufort and Chukchi Seas must be approached in an extremely cautious way with complete participation by the people residing in the impacted areas who are most knowledgeable about arctic conditions. Also, in public testimony, several community members from Barrow and Kaktovik supported this resolution describing the unpredictability of the Arctic environment, as well as the effects industry has on marine life and a subsistence lifestyle.

3.) The Alaska State Legislature believes that the report mandated by Congress, in the Oil Pollution Act of 1990, should be reviewed and an environmental assessment of off-shore industrial operations in the Arctic be conducted before further oil and gas exploration and development activities take place in the Beaufort and Chukchi Seas. Simply put, not enough attention has been given to Arctic seas and it is only fair that the Arctic is given the same scrutiny as other states before lease sales proceed. Until this is done, the proverbial cart is before the horse.

In conclusion, the resolution emphasizes the need for more research on Arctic conditions, both in terms of oil spill contingency plans and impacts on marine life. The Lobby feels this is an important issue in a state dependent upon oil for revenue. This resolution gives environmental concerns and community involvement priority.

prepared for AEL by Krista Maciolek, 4/26/91.

BRISTOL BAY NATIVE ASSOCIATION

P.O. BOX 310
DILLINGHAM, ALASKA 99576
PHONE (907) 842-5257

April 25, 1991

Representative Bill Hudson
Chairman, House Oil & Gas Committee
P.O. Box V
Juneau, Alaska 99811

Dear Representative Hudson:

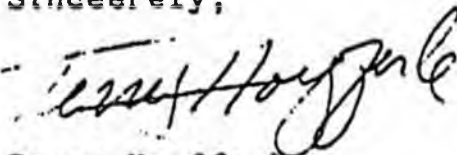
I am writing to you on behalf of the members of the Bristol Bay Native Association in support of HJR 36 which is currently in your committee.

BBNA adamantly opposes offshore oil development. Recent and current developments in national oil policy make this a pressing issue, particularly in Alaska where our coastal weather conditions and recent experience with the Exxon Valdez clean up are vivid in our being. While certain differences exist between the Siberian/Bering Sea weather factory and conditions of the Japanese Current/North Pacific zone, and between the biosphere of Bristol Bay and that of the Chukchi Sea, the overriding fact of our total dependence on the sea remains the same.

Please pass HJR 36 out of the oil and gas committee as soon as possible - while its influence on national oil policy might be the greatest.

Thank you.

Sincerely,


Terry Hoeffler
Executive Director

cc: Representative George Jacko
Senator Fred Zharoff
Members, House & Senate Oil & Gas Committees
Senator Ted Stevens
Senator Frank Murkowski
Congressman Don Young

NORTH SLOPE BOROUGH

RESOLUTION SERIAL NO. 12-91

A RESOLUTION SUPPORTING PASSAGE OF A RESOLUTION BY THE STATE LEGISLATURE OPPOSING OFFSHORE OIL AND GAS ACTIVITIES

WHEREAS, Offshore industrial activity presents a grave threat to the arctic marine environment and the Inupiat subsistence culture, and

WHEREAS, it would be of great importance to the North Slope Borough in representing its positions to have a resolution passed by the State Legislature opposing continued offshore industrial activity;

NOW THEREFORE BE IT RESOLVED:

The North Slope Borough Assembly supports passage of the attached resolution introduced by Representative Eileen MacLean and co-sponsored by others by the Alaska State Legislature.

INTRODUCED: April 2, 1991

ADOPTED: April 2, 1991

D. Linn Lewis
PRESIDENT
Date: 4-2-91

ATTEST:

Angela Johnson
CLERK
Date: 4-3-91

John K. ...
MAYOR
Date: 4-3-91

NORTHWEST ARCTIC BOROUGH

P.O. BOX 1110

KOTZEBUE, AK 99752

(907) 442-2500 / FAX 442-2930

April 5, 1991

Rep. Eileen Panigeo MacLean
Rm. 507, Capitol
P.O. Box V
Juneau, Ak 99811

RE: House Joint Resolution No.38 Before the House Special Committee
on Oil and Gas, Resources

Dear Ms. MacLean,

The Northwest Arctic Borough has reviewed the joint house resolution introduced by Representatives MacLean, Hudson, Jacko, Koponen, Donley, Finkelstein, Brown, Ivan, Kubina and Ulmer relating to off-shore oil exploration, development, and tanker transportation activities in the Beaufort and Chukchi Seas.

We believe that the oil industry currently does not have the capability to effectively and adequately respond to, contain, or clean up a significant oil spill in arctic waters of the Beaufort and Chukchi Seas, let alone respond to, contain, or clean up an oil spill in the "ice-free" waters of Prince William Sound. Other spills in Cook Inlet and in the continental states along with the example of Prince William Sound, point out the glaring insufficiency and inefficiency of the oil industry's preventative safety measures and responses to spills in warm, ice-free and readily accessible waters.

The Arctic waters in the Beaufort Sea and even-more-so in the Chukchi Sea, breed some of the most inhospitable weather conditions in the world and the industry's oil spill response options for remote arctic waters remain undemonstrated and have been acknowledged by the Alaska Oil Spill Commission, the Arctic Research Commission, and the Minerals Management Service.

There remains no viable late season response options in the event of a well blowout in the late season drilling time table. In the event of a late season blowout, no one can drill a diversion well once the ice pack moves in. The industry and other illustrious dreamers claim that ice-breakers can keep a drill site relatively ice-free to drill, but whose ice breakers, the United States? Our ice breaking capabilities remain something to be desired of, as demonstrated by the two gray whales trapped in the ice off Barrow. An oil spill under these conditions will have multi year devastating effects on the sensitive arctic

Page two
letter in Support of House Joint Resolution No. 36

environment, wildlife resources, the minute elements of the fragile food chain and the subsistence lifestyles of the Inupiat people.


There exist many unanswered questions and oil spill scenarios to allow additional oil lease sales to occur and yet the distinguished Secretary of the Interior is preparing to offer over 40 million acres in offshore tracts to the oil industry.

We firmly believe that the Secretary of the Interior should not proceed with the planned lease sales in the Arctic until he, the Congress, and the public have the opportunity to review the comprehensive report on the state of oil spill contingency planning in arctic waters. The Oil Pollution Act of 1990, P.L. 101-380, 104 Stat. 484, mandates the Secretary of the Interior to produce such a report no later than May 1991.

In conclusion, the Northwest Arctic Borough fully supports and is in favor of enacting House Joint Resolution No. 36 which would petition the Secretary of Interior to cancel or hold off the planned offshore lease sales in the Arctic until he, the Congress and the public have the opportunity to review the report that was mandated by Congress.

Thank you for the opportunity to respond to a sensible and logical resolution as introduced and referred to the House Special Committee on Oil and Gas, Resources.

Sincerely,


Chuck J. Greene
Mayor



Alaska Eskimo Whaling Commission
P.O. Box 570
Barrow, Alaska 99723
Phone: (907) 852-2392

April 2, 1991

Representative Eileen MacLean
Co-Chair House Finance Committee
Box V
Juneau, Alaska 99811

Dear Eileen:

The Alaska Eskimo Whaling Commission supports your resolution relating to off-shore oil exploration, development and tanker transportation activities in the Beaufort and Chukchi seas.

Those who are most affected by industrial activities have been voicing their doubts about the ability of the oil companies to clean and contain an oil spill under Arctic sea-ice conditions. One hunter, in particular, came to ARCO's recent public meeting in Barrow and said he was trained as a local oil spill response team member, but felt that his training was very inadequate and the equipment was insufficient after seeing the amount of equipment used in Valdez.

This is unsettling at best, since our identity as Inupiaq people is so closely tied to our subsistence way of life. If you need any help from AEWK regarding this resolution, please don't hesitate to call. Good luck, and thank you for all that you are doing for us.

Sincerely,

Beverly Patkotak Grinage
Executive Director

ARCTIC MARINE RESOURCES COMMISSION
725 Christensen Drive
Anchorage, Alaska 99501

Phone: 279-6519 FAX: 258-6688

April 2, 1991

Representative Eileen MacLean
Co-Chair House Finance Committee
Box V
Juneau, Alaska 99811

Dear Representative MacLean:

The Arctic Marine Resources Commission (AMRC) board met yesterday, and unanimously supported your resolution regarding offshore oil exploration in the Beaufort and Chukchi seas.

Board members of the AMRC are:

Chairman:

Gordon Ito - Chukchi Sea Fishermen's Co-op, Kotzebue

Vice Chairman:

Marie Adams - Alaska/Inuvialuit Beluga Whale Committee, Barrow

Secretary/Treasurer:

Jerry Ivanoff - Bering Sea Fishermen's Association, Unalakleet

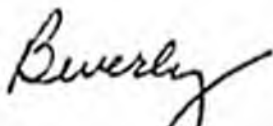
Board member:

Burton Rexford - Alaska Eskimo Whaling Commission, Barrow

As you are aware, the main purpose of the AMRC is to provide a structured forum for handling issues that arise between local interests and resource companies targeting oil and gas development in Arctic waters.

We believe your request is critical for the protection of our marine resources, and hope that it passes the Legislature successfully. If you need any assistance from the AMRC, please don't hesitate to call Jon Zuck at 279-6519.

Sincerely,



Beverly Parkotak Grinage
for the Arctic Marine Resources Commission

STATEMENT OF OLIVER LEAVITT

Good evening. My name is Oliver Leavitt. I am an Inupiat whaling captain and a resident of Barrow, Alaska. I am also the President of the North Slope Borough Assembly and the Vice President of Arctic Slope Regional Corporation.

The questions we are considering here this evening have to do with the use of the Arctic Ocean for the development and transportation of oil and the impact of these activities on our survival as a people.

As a lifelong resident of the North Slope of Alaska, I have witnessed many changes over the last twenty years. Many of these changes -- increased economic opportunity for our people, significantly improved educational facilities and opportunities, and substantially improved living conditions -- have resulted from the discovery and development of the oil resources on the North Slope. We appreciate these changes in our lives that have resulted from oil development on the North Slope.

Prior to the development of the oil resources at Prudhoe Bay, our people were extremely concerned about the effects of oil development on the fish and land wildlife resources on which our people depend. Over the years, we have become convinced that onshore oil and gas development can occur in a manner that does not adversely affect these fish and wildlife resources.

However, our concerns about offshore activities, including oil and gas exploration, production and transportation in the Arctic Ocean, have not been relieved. These activities, using unproven technology and accompanied by insufficient oil spill clean-up equipment, pose a direct threat to our marine subsistence resources.

We have seen our bowhead whales move farther offshore when industrial activity is taking place. We have seen the disastrous consequences of a tanker spill in the relatively calm waters of Prince William Sound, an area free of pack and shore ice.

Far from being convinced that oil can be developed or transported safely in Arctic waters, we remain deeply troubled by the prospect of increased oil and gas activities in the Arctic Ocean. We therefore welcome this study by the United States Department of the Interior and applaud the action of the Congress in directing this study.

As I stated, the discovery and development of oil on the North Slope has brought unprecedented economic opportunity to our people. We also are acutely aware of the importance of these oil resources to our nation and to our national security. However, we must stress the importance of balancing these energy needs against the reality that subsistence hunting continues to provide the principal source of food and livelihood in the majority of our Arctic Native villages.

A substantial portion of our subsistence resources are taken from the waters of the Arctic Ocean. This subsistence hunting, especially the hunt of the bowhead whale, not only provides nutrition to our people, it is the life blood of our living Inupiat culture.

We believe a delicate balance can and must be struck between the competing interests of oil development and the subsistence use of marine resources. However, achieving this balance requires that the exploitation of oil resources in the Arctic proceed according to two fundamental imperatives.

First and foremost, to the greatest extent feasible, oil development and transportation activities should be focused on land rather than in the OCS. Over the past twenty years, we have witnessed an ever-improving ability of the oil industry to explore for and develop oil resources on the North Slope in a manner that does not adversely impact the freshwater fish and the non-marine wildlife resources on which we depend.

We now believe that onshore oil and gas exploration and development can occur in an environmentally sensitive manner. We therefore would urge that oil and gas exploration and development activities be focused onshore rather than offshore in northern Alaska.

We also strongly recommend that transportation of oil and gas resources in the Arctic Ocean be limited to the minimum distances necessary to transport those resources to onshore transportation networks, utilizing the Trans-Alaska Pipeline System or other onshore transportation facilities.

We are all well aware of the risks associated with the offshore transportation of oil. These risks are greatly multiplied when oil is transported through Arctic sea ice. The technology for this type of transportation is unproven and the risks of an oil spill are significant.

Given the very brief window provided by the open water season in the Arctic, any offshore transportation plan ultimately will include transportation through sea ice.

Any spill of crude oil in the Arctic Ocean could devastate the subsistence resources upon which most of our villages rely as their primary food source. As you will come to understand as you listen to the comments made here this evening, even a brief interruption in the availability of these reserves would place many of our villages at serious risk from lack of adequate nutrition.

A clear, simple and acceptable alternative to tankering is provided by over-land transportation systems. Any plan to

transport oil in the Arctic, be it transportation by the United States or by Canada, should be based on the use of an over-land system.

If for any reason an over-land system is not feasible, we strongly urge the use of double hull tankers accompanied by ice breakers and a barge equipped with containment and clean-up equipment. This system should substantially reduce the possibility of a significant and disastrous oil spill.

The second imperative is that, in addition to transportation, any oil exploration or development undertaken in the OCS should occur only in the immediate presence of state-of-the-art containment and clean-up equipment.

We are told that the risks of an oil spill from offshore exploratory drilling are small. Nonetheless, they do exist.

During the gray whale rescue a few years ago, we saw first hand the near impossibility of moving heavy equipment from Prudhoe Bay to Barrow during ice cover. Had this incident been a blowout from an exploratory well, the results could have been disastrous.

The extreme conditions created by Arctic weather and sea ice make it imperative that all companies -- and countries --

operating in the Arctic OCS be required to have response and containment equipment immediately available, and that the available equipment be capable of handling a spill of a worst-case magnitude.

In conclusion, it is our view that the most effective means of dealing with an oil spill in the Arctic Ocean is to keep one from happening. This can be accomplished by confining oil development and transportation to land.

If an offshore spill does occur, from whatever source, whether tankering or drilling and whether the source is under the United States or Canadian jurisdiction, state-of-the-art containment and clean-up equipment must be immediately available.

Finally, your study should clearly document the health risks our people face if we are forced to confront a spill in our marine hunting grounds. A contingency plan must be developed for providing adequate food, preferably traditional foods, to our people in the event of a catastrophe.

I hope that these points are of use to you in conducting your study and I thank you for the opportunity to speak to you today. I would be happy to answer any questions that you may have.

REPORT TO CONGRESS
OIL POLLUTION ACT OF 1990
SUBTITLE C, SECTION 8302

ANNOTATED OUTLINE

I. INTRODUCTION

Background and Objectives of Report

Describe legislative requirement and report objectives and assumptions.

II. EXISTING CONDITIONS IN THE BEAUFORT AND CHUKCHI SEA AREAS

A. Natural/Physical Environment

Briefly describe the characteristics of the natural/physical environment in the Beaufort and Chukchi Sea areas that are taken into account during oil exploration, development, production, and transportation as well as during oil-spill response planning and response (e.g., weather, ice conditions, and water depth).

B. Native Interests and Concerns

1. Background Information

a. Demographics

Briefly describe the locations and numbers of Native people who could potentially be affected by an oil spill in the Beaufort and Chukchi Seas. The section should focus on Native people in coastal communities in the North Slope Borough, Northwest Arctic Borough, and the Bering Strait Coastal Resources Service Area (from Cape Prince of Wales north).

b. Subsistence Resources

Briefly describe subsistence resources at risk (e.g., whales, seals, walrus, polar bears, and migratory waterfowl), and generally identify their seasonal distributions. Briefly describe subsistence hunting activities (emphasizing offshore hunting), subsistence regulations (i.e., harvest quotas for bowhead whales) and the importance of those resources to Native people (e.g., food, clothing, crafts, cultural traditions).

2. Native Concerns Regarding Oil Spills and Oil-Spill Cleanup Activities

Briefly describe Native concerns regarding oil spills and oil-spill cleanup activities. Native concerns may include, but are not limited to, potential: disruptions to subsistence activities (e.g., disruptions resulting from noise or the physical presence of vessels or humans); reductions in wildlife populations (e.g., reductions due to alteration of normal distribution patterns or due to wildlife killed by a spill); limitations in access to wildlife resources; contamination of food; and disruption of lifestyles. In addition, the existence and adequacy of emergency relief and general assistance, and Native participation in preparedness and response activities may also be a Native concern.

C. Oil Exploration, Development, Production, and Transportation

1. Canada

Briefly describe the status of Canadian plans for developing the Amalagak field and subsequent transportation of oil produced from the field (identify open-water months when transportation could occur). Also describe other relevant exploration, development, production, and transportation activities associated with Canadian oil fields that could result in a spill that enters the Beaufort or Chukchi Seas.

2. United States

- a. Outer Continental Shelf
- b. State Waters
- c. Onshore (only facilities where oil spills could enter the Beaufort or Chukchi Seas)

Identify and briefly summarize existing and proposed oil exploration, development, production, and transportation activities.

III. EXISTING OIL SPILL MEASURES

A. Oil Spill Prevention

Oil Exploration, Development, Production, and Transportation Regulations and Stipulations

1. Oil Exploration, Development, and Production

Briefly describe Federal, state/provincial, and local regulations and stipulations (in the United States and Canada) for oil spill prevention.

2. Oil Transportation

Briefly describe United States and Canadian Federal and state/provincial regulations for preventing oil spills associated with oil pipelines and oil tankers. Also briefly describe regulations concerning the location of tanker traffic in the Beaufort and Chukchi Seas, regulations requiring double hulls for tankers, and regulations regarding limits of liability for oil spills from tankers.

B. Oil Spill Contingency Planning/Coordinated Actions

1. Public Sector Contingency Plans

a. International Contingency Plans

- i. United States/Canada
- ii. United States/U.S.S.R.
- iii. International Convention
- iv. Arctic Nations Memorandum of Understanding

b. National Contingency Plans

- i. Canada
- ii. United States

c. Regional Contingency Plans

United States (i.e., Alaska
Regional Response Team's
contingency plan)

d. State/Provincial Contingency Plans

- i. Yukon Territory and Northwest Territory
- ii. State of Alaska

e. Local Contingency Plans

- i. U.S. Coast Guard Marine Safety Office
Plan for Western Alaska
- ii. Borough and/or Village Plans

2. Contingency Plan Requirements for Private Industry

a. Federal Requirements

- i. Minerals Management Service Requirements for Oil Exploration, Development and Production Activities on the Outer Continental Shelf
- ii. Canada Oil and Gas Lands Administration Requirements for Offshore Oil Exploration, Development, and Production
- iii. Bureau of Land Management Requirements for Oil Transportation through the Trans-Alaska Pipeline

b. State/Provincial Requirements

- i. Alaska Department of Environmental Conservation Requirements for Oil Transportation and Oil Exploration, Development, and Production on State Lands and in State Waters
- ii. Canadian Provincial Requirements, if Applicable

c. Local Requirements

- i. North Slope Borough Requirements for Oil Exploration, Development, Production, and Transportation on North Slope Borough Lands
- ii. Northwest Arctic Borough Requirements for Oil Exploration, Development, Production, and Transportation on North Slope Borough Lands (if Applicable)
- iii. Canadian Local Requirements, if Applicable

Each section should briefly summarize contingency planning requirements and any requirements that affect private interests.

3. Private Industry Contingency Plans

- a. Oil Company Contingency Plans for Exploration, Development, Production, and Transportation

- b. Oil Spill Cooperatives
 - i. Alaska Clean Seas
 - ii. Alyeska Pipeline Service Company
 - iii. Cook Inlet Resource Organization
 - iv. Marine Spill Response Corporation
 - v. Beaufort Sea Oil Spill Equipment Cooperative
 - vi. Canadian West Coast Cooperative
 - vii. Canadian East Coast Cooperative

Each of the contingency plans should be briefly described, including resources for containing and recovering discharges of oil. In addition, a summary of any Native involvement in the plan's preparation (if any) should be included as well as how the plan addresses Native interests (if it does).

C. Oil Spill Response

- a. Minor Discharge of Oil (i.e., less than 10,000 gallons)

United States

- a. Oil Industry
 - b. U.S. Coast Guard
 - c. State of Alaska
- b. Medium Discharge of Oil (i.e., 10,000 to 100,000 gallons)
 - i. International (if Applicable)
 - ii. United States
 - a. Oil Industry
 - b. U.S. Coast Guard
 - c. State of Alaska
 - iii. Canadian Organizations (if Applicable)
 - a. Oil Industry
 - b. Canadian Coast Guard

- c. Major Discharge of Oil (i.e., over 100,000 gallons)
 - i. International
 - ii. United States
 - a. Oil Industry
 - b. U.S. Coast Guard
 - c. State of Alaska
 - iii. Canadian Organizations
 - a. Oil Industry
 - b. Canadian Coast Guard

This section should briefly describe how a response would be organized and implemented for containing and recovering minor, medium, and major discharges of oil in the Beaufort and Chukchi Seas, and any provisions for Native involvement.

- D. Research on Oil Spill Response Technologies for the Arctic
 - 1. International
 - 2. United States
 - 3. State of Alaska

This section should briefly describe existing and planned research on oil-spill response technologies for the Arctic. Approximate funding amounts and sources should also be included.

IV. RECOVERY OF DAMAGES

A. International

Identify and describe any international damage assessment provisions. Describe any provisions that would allow Native people to recover damages from an oil spill.

B. National

Identify and describe the Federal natural resource damage assessment process. Identify and describe any other Federal process(es) that would allow Native people to recover damages from an oil spill.

C. State of Alaska

Identify and describe the State of Alaska's damage assessment process and any other State of Alaska process that would allow Native people to recover damages from an oil spill.

V. IDENTIFICATION OF ISSUES

A. Contingency Plans/Coordinated Actions

Identify Native issues associated with contingency plans/coordinated actions (e.g., Native involvement in developing and exercising contingency plans; adequacy of the contingency plans).

B. Recovery of Damages

Identify areas within existing damage assessment/recovery legislation where Native interests are taken into account. Discuss provisions for emergency relief.

C. Other Issues

Identify other relative issues.

VI. FINDINGS

A. Contingency Plans/Coordinated Actions

Summarize findings based on information in Sections III and V.

B. Recovery of Damages

Summarize findings based on information in Sections IV and V.

C. Other Issues

Summarize findings based on information in Sections III and V.

SALE 124 EIS

(3) Locally Available Spill-Cleanup Equipment: The MMS, Alaska OCS Region, requires a lessee who wishes to drill to have an initial spill-response capability of 1,000 bbl per day. To date, during drilling of exploration wells in the Beaufort Sea, this requirement has been met with equipment warehoused at Deadhorse by ABSORB and with equipment positioned onsite by individual lessees.

(4) Mobilization Time: The MMS, Alaska OCS Region, requires that initial mobilization and deployment of response equipment be undertaken within 6 to 12 hours of a spill, geography permitting. However, the spiller must be prepared to respond before the spill reaches shore (in less than 6 hours, if necessary). Only onsite equipment and that which could be transported from Deadhorse by helicopter could meet this guideline for deployment for most of the sale area. The limited geographic and temporal presence of open water and slow vessel speeds in broken ice would preclude timely transport of spill equipment by sea. For large spills—those that could exceed the local cleanup-response capability—the MMS, Alaska OCS Region, requires that additional equipment be made available onsite within 48 hours. Additional response equipment to handle a large spill would be available from a multitude of sources.

Equipment stored at Deadhorse or airlifted to Deadhorse would be capable of meeting the criteria of the 48-hour-response time set by MMS. Additional, slower arriving equipment would still be useful in case of a major spill; but MMS would not consider such equipment in judging whether oil-spill-contingency plans met the MMS 48-hour-response criteria. Once spill-cleanup equipment reaches Deadhorse or Prudhoe Bay, it could be transported relatively quickly to the spill site only if it could be carried by helicopter and then only if weather permitted. A helicopter could reach any point in the sale area within 3 hours.

(5) Effectiveness of Oil-Spill Cleanup At Sea: The 6-to-12-hour and 48-hour response times required of drilling lessees by the MMS, Alaska OCS Region, are mobilization and deployment requirements. Cleanup would continue as long as necessary, without any timeframe or deadline. For example, a winter spill in pack ice might require initial onsite response followed by further cleanup of oil melting out and pooling on top of the ice in late spring or summer.

Mechanical cleanup at sea is usually much more effective on low-viscosity or medium-viscosity oils than on high-viscosity oils. A low-viscosity oil could be a diesel or a fresh, light crude. A medium-viscosity oil could be a lubricating oil or a light, flowing emulsion. A high-viscosity oil would be a weathered crude, bunker oil, or thick emulsion. An oil such as Prudhoe Bay crude would initially have low viscosity but would quickly weather and form a high-viscosity emulsion.

Because of natural dispersion, oil slicks in the open ocean are seldom tracked for more than about 10 days before the oil becomes too dispersed to locate or identify as a slick (USDOL, MMS, Gulf of Mexico [GOM] OCS Region, 1983). Out of necessity or otherwise, natural dispersion has frequently been the chosen response technique in Alaskan waters.

Uncontained burning also is a possible spill remedy. Experiments suggest that burn efficiencies on the order of 50 to 60 percent may be possible if the spill can be immediately set on fire (Laperriere, 1984). However, any delay in ignition would decrease combustion efficiency. The effectiveness of mechanical recovery and in situ burning of spilled oil at sea decreases rapidly with increasing sea state (roughness of the sea), while the effectiveness of dispersants and natural dispersion increases. Mechanical cleanup becomes nonfunctional between International Sea States 3 and 4. Question 1

During the months of July through September in the small fraction of the Beaufort Sea Planning Area with open water, sea states of 3 or greater occur from 13 to 30 percent of the time, and sea states of 4 or greater occur 9 to 18 percent of the time. Ice cover the remainder of the year would eliminate both high sea states and standard uses of most mechanical-cleanup equipment.

The review of the historical record of oil-spill cleanup at sea as contained in Section IV.B.5 of the Final Regional EIS (USDOL, MMS, GOM OCS Region, 1983) is incorporated by reference; a summary of this review follows. Offshore containment and cleanup are major tasks. Weather, sea conditions, and crew fatigue become critical factors; and cleanup at sea is generally only marginally effective. Recovery of oil usually ranges between 5 percent and 15 percent of that spilled. For example, in the Exxon Valdez oil spill, at-sea recovery of oil was estimated by Exxon at 0.01 percent through the first 2 weeks and 7 percent through the first 3 weeks (Oil Spill Intelligence Report, 1989a,b). Inshore (harbor) containment and cleanup operations generally occur in calmer waters and closer to logistical bases. Inshore operations are, therefore, more effective, with recovery of spilled oil on the order of 20 to 50 percent.

Historical demonstrations of the effectiveness by actual spill-response efforts in the Beaufort Sea are few and disappointing. Crowley Barge Tanker 570 spilled 1,600 barrels of heating fuel near Flaxman Island on August 20, 1988, apparently after ice ruptured one tank on the barge, with the leak not being immediately detected. Oil-spill-response equipment was mobilized from Barrow and Deadhorse, but an overflight was unable to locate any spilled fuel and none was recovered. In September 1985, an exploration spill of 2,440 bbl of diesel occurred from the Minuk I-53 artificial island in the Canadian Beaufort Sea during an intense storm (Birchard and Nancarrow, 1986). Plans were made only to apply dispersants and only if the slick approached shore. The slick did not approach shore, and 4 days after the storm ceased the slick had disappeared through natural dispersion and evaporation. No fuel was recovered. Canadian researchers released a total of 63 bbl of crude in field dispersant tests in the Canadian Beaufort Sea in August 1986 (Swiss and Vanderkooy, 1988). Application of even extremely high, up to a 1:2 dispersant-to-oil ratio, did not increase the rate of dissipation of the crude over that caused by natural dispersion on an untreated control slick.

(6) Effectiveness of Oil-Spill Cleanup in Ice: When a spill is dispersed far from its source or when ice is moving, containment and cleanup are more difficult. Planning of effective surface response with mechanical equipment to spills in pack ice has generally required that an icebreaker (or icebreaking-supply ship) be locally stationed in summer as a dedicated oil-recovery vessel (see Appendix M). An on-station icebreaker also would be necessary in winter.

In situ burning of spilled oil during heavy ice periods may be a more promising approach. Exposed oil would be ignited whenever possible. Existing response capabilities are more effective on landfast ice than on broken or pack ice. Spills in the latter two sorts of ice would be easiest to burn if the spill were contained within a small area close to its source. The ice itself can be useful in restricting the spreading of the oil, keeping the oil thicker and more amenable to burning. Experiments conducted to date indicate that in situ burning should be a more effective technique for spill response in the Arctic than is mechanical recovery in more temperate climates.

The presence of landfast ice may actually improve response effectiveness by limiting the movement and spread of the oil and by providing a safe work platform for the cleanup. The only documented success story for offshore spill response in the Beaufort Sea was a planned experimental spill under landfast ice in the Canadian Beaufort Sea (Buist, Pistruzak, and Dickens, 1981). In this exercise, a total of 119 bbl of crude were spilled under landfast ice three times during the winter to simulate undersea oil blowouts. The following spring, 79 percent of the residual weathered (unevaporated) oil was manually recovered or burned as the oil surfaced on the ice prior to breakup. In winter 1977, 140 bbl of No. 2 diesel were spilled from an onshore tank at Nome, saturating adjacent snow and soil, with some diesel penetrating the ice cover of the Snake River (Allen, 1978). One-third of the spill was recovered, half of this amount by rope mops extended below the ice cover on the Snake River.

Spill-response efforts in the pack ice zone covering 90 percent of the sale area are undocumented and more problematic, particularly in winter. The January 1984 Cepheus spill of aviation fuel into broken ice in Anchorage harbor illustrates one problem with spill response in broken ice (USDOL, MMS, Alaska OCS Region, 1985a). The Coast Guard attempted to monitor movement of 5,000 bbl of spilled fuel by several techniques, only to conclude that none of the available state-of-the-art techniques could distinguish spilled aviation fuel from broken ice. None of the fuel was recovered.

Subarctic Prince William Sound is much more logistically accessible and protected than the open pack-ice zone in the Beaufort Sea Planning Area; yet even shoreline cleanup operations for the Exxon Valdez spill were stopped in mid-September 1989 out of concern for worker safety during the cold and dark winter.

In the Bering Sea, the F/V Milos Reefer grounded on St. Matthew Island in November 1989, spilling at least 5,600 bbl of its 9,000 bbl of mostly bunker and diesel fuel (Akre, 1989a,b,c). Poor weather and logistics ended up prohibiting a response, even though response vessels did reach the site. The initial response vessel, the USCG cutter Mideast, took 6 days to get to the site; the second response vessel, the Fireball, coming from Kodiak with the bulk of the response equipment, arrived onsite 11 days after the spill. No cleanup or offloading of the still-leaking ship was attempted in 1989 because of the severe weather and approach of winter, and any further efforts have been deferred until summer 1990, following the retreat of the Bering Sea seasonal ice pack.

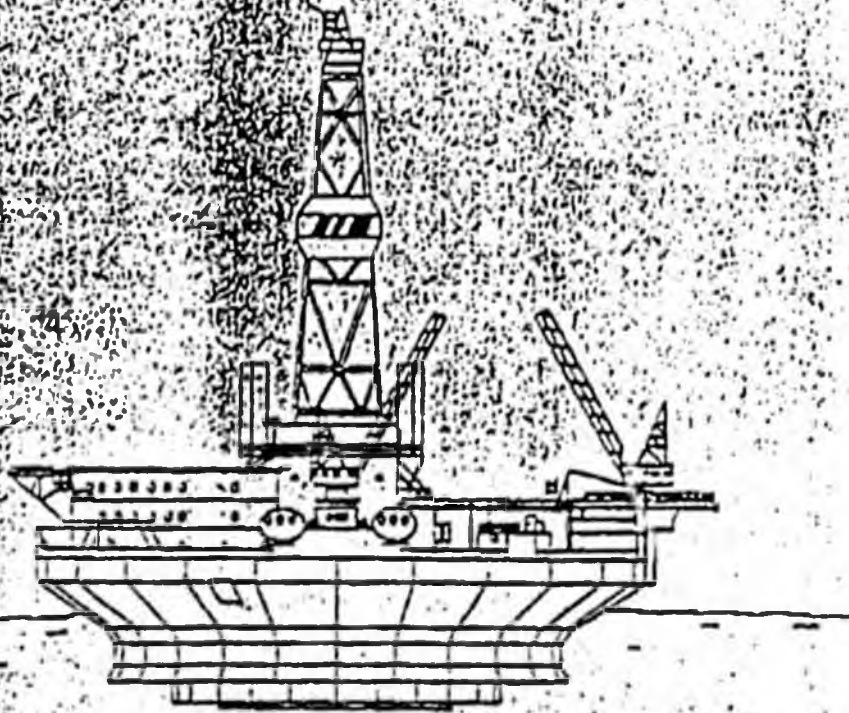
This confidence in burning is unsupported by any evidence

winter is easier than broken ice - which presents safety risks as well as technical difficulties

EXPLORATION PLAN

Exploration Plan

OCS Lease Sale Areas 109 and 97
Chukchi and Beaufort Seas, Alaska



Prepared for
Texaco Producing Inc.
Anchorage, Alaska

Prepared by
ENSR Consulting and Engineering
Anchorage, Alaska

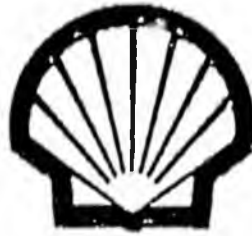
April 1990

TEXACO

During the ice-free period (July through October), storm surges do occur in the prospect areas. However, severe surges appear uncommon; a surge of 3.5 m (19 ft) occurred at Barrow in October 1963 and was thought to depict a 125-year event. Surges of 2 to 3 m (6 to 10 ft) are considered 10-year events (Brower *et al.*, 1988).

10.5 Visibility and Ceiling

There is a probability that fog may occur in the area throughout the year. This probability is higher in nearshore areas owing to the temperature difference between land and water masses. During the period when sea ice covers the area, the percent frequency of fog is 10 percent nearshore decreasing to less than 5 percent offshore. However, during open-water periods, this percent frequency rises. For instance, in the period of June through September the percent frequency may be as high as 30 offshore and 20 nearshore (Brower *et al.*, 1988). Tables 10-11 through 10-14 provide a summary of visibility and ceiling data for the prospect areas during the months of June through September.



Exploration Plan

OCS Lease Sale Area 109

Chukchi Sea, Alaska

Remote Offshore Prospects

Shell Western E&P Inc.

601 West Fifth Avenue • Suite 810
Anchorage, Alaska 99501

December 1988

SHELL

of the time (Wise, et al., 1981). Sustained winds of 50 to 56 knots, with higher gusts, have been recorded (Wilson, et al., 1982).

Offshore winds are also reported by the U.S. Naval Weather Service and are summarized on Tables 10-7 through 10-10 for the months of June through September. During the early summer (June and July) winds typically are out of either a general northerly or southerly direction. During August and September, they are more commonly out of the northeast. Mean speed are typically in the range of 10 to 15 knots.

10.4 Storm Occurrences

In the Chukchi Sea lease area, storm events are possible throughout the entire open water period from mid-June through November. October is the month of the most frequent storms in the Chukchi Sea. Storm movement is generally parallel to the Chukchi Sea coastline moving from the Bering Sea towards the Beaufort Sea.

Thirteen storm surges have been documented (Brower, et al., 1977) between 1960 and 1977 for the Chukchi and Beaufort Seas. The most severe recorded storm in the vicinity of Barrow produced westerly winds with sustained speeds of 42 knots and gusts to 64 knots, waves to 10 feet high, and a storm surge of 10 feet.

10.5 Visibility and Ceiling

Fog may be present in the Sale 109 area at anytime throughout the year (Brower, et al., 1977). During the period when sea ice covers the Chukchi Sea, fog occurs about 10 percent of the time. However, during open-water periods, fog becomes more common. In May through September, fog may occur between 20 and 30 percent of the time. Tables 10-11 through 10-14 provide a summary of visibility and ceiling data for the offshore areas during the months of June through September.

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Anchorage, Alaska

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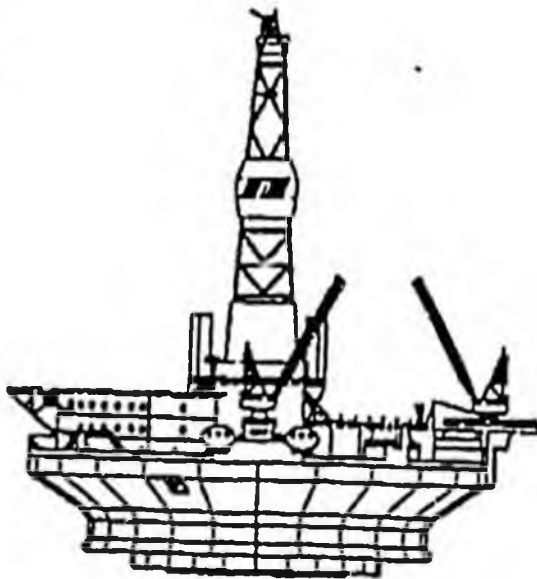
A Report Prepared for

REGIONAL SUPERVISOR
FIELD OPERATION
MINERALS MANAGEMENT SERVICE



CHEVRON U.S.A. INC.
6001 BOLLINGER CANYON ROAD
SAN RAMON, CALIFORNIA 94583-9432

EXPLORATION PLAN WEST MAKTAR PROSPECT Beaufort Sea, Alaska



HARDING LAWSON ASSOCIATES
801 EAST 57TH PLACE
ANCHORAGE, ALASKA 99518

JULY 1990

CHEVRON

Harding Lawson Associates

Table 10-1. Mean and Extreme Air Temperature Summary for Barter Island, Alaska (°F)

Month	Mean Temperature	Mean Maximum Temperature	Mean Minimum Temperature	Highest Recorded Temperature	Lowest Recorded Temperature
January	-14.3	-7.8	-20.8	39.0	-54.0
February	-20.3	-14.1	-26.5	37.0	-59.0
March	-15.4	-8.6	-22.3	36.0	-51.0
April	-0.8	7.2	-8.8	43.0	-38.0
May	20.8	26.0	15.4	52.0	-16.0
June	34.2	38.1	30.2	68.0	13.0
July	39.9	45.1	34.7	78.0	24.0
August	39.1	43.7	34.3	72.0	24.0
September	31.5	35.1	27.8	64.0	4.0
October	15.3	20.3	10.2	46.0	-26.0
November	-0.1	5.7	-6.1	37.0	-51.0
December	-12.1	-6.5	-18.9	37.0	-51.0
ANNUAL	9.8	15.4	4.1	78.0	-59.0

Source: AEIDC, 1986.

10.3 Sky Cover and Visibility

Cloudy weather is prevalent along the Beaufort Sea coast. For over half of each year, the West Maktar Prospect area has low clouds with more than 50 percent coverage. Low clouds are defined as having bases less than 8,000 feet (2,600 meters) (AEIDC/NCC, 1988). Low clouds with more than 50 percent coverage occur most frequently in the summer. During August, September, and October, 50 percent and greater cloud coverage averages 23 days per month. Mostly clear skies are defined as total cloud coverage of 25 percent or less (AEIDC/NCC, 1988). Mostly clear skies occur an average of only 5 days per month during the same period (AEIDC/NCC, 1988).

Sky cover and visibility can be closely related. Low visibility can be caused by low clouds as well as dense fog, heavy precipitation, dust, and smoke. In general, visibility is good for most of the year near West Maktar Prospect. In Marine Area B, aircraft are restricted to Instrument Flight

CHEVRON

Harding Lawson Associates

Rules (IFR) flying an average of 45 days per year. Low visibility conditions can restrict even IFR aircraft operations. The frequency of low visibility conditions near West Maktar Prospect is presented in Table 10-2. The occurrence of "poor" and "optimum" visibility conditions is also presented in Table 10-2.

As shown by Table 10-2, periods of low visibility do not occur often, but are most frequent during August and September. Offshore operations are most likely to be affected by low visibility during these months. Poor visibility, which may restrict offshore operations, occurs much more frequently and uniformly throughout the year. Poor visibility is most frequent in July and August. In general, optimum conditions occur most frequently in the winter.

Darkness, while usually not a problem itself, aggravates the visibility restrictions caused by other conditions. The sun does not crown the horizon in the Beaufort Sea from mid-November to mid-February. A few hours of twilight are experienced from November to December and from mid-January to mid-February. Total darkness is experienced throughout December and part of January (ARCO Alaska, Inc., 1985).

Table 10-2. Frequency of Visibility Conditions Near West Maktar Prospect

Month	Low Visibility Conditions (days)	Poor ^a Visibility Conditions (days)	Optimum ^b Visibility Conditions (days)
January	3	10	6
February	2	10	4
March	<2	10	6
April	<2	11	5
May	<2	11	3
June	2	10	4
July	2	12	5
August	3	12	3
September	3	11	2
October	<2	9	3
November	2	9	5
December	<u>2</u>	<u>11</u>	<u>5</u>
TOTALS	19+	126	51

^a Any one of the following constitutes poor conditions: Low cloud ceiling (LCC) <300 feet or visibility <1 nautical mile.

^b Optimum conditions: LCC > 5000 feet (or no LCC), visibility ≥ 5 nautical miles, and wind 11-21 knots.

Source: AEIDC/NCC, 1988

Testimony on HJR 36

Robert R. Griffeth

Senior Consultant, Environmental Affairs-Offshore

ARCO Alaska, Inc.

April 26, 1991

My name is Bob Griffeth. I am a member of the Environmental Sciences Department staff at ARCO Alaska, Inc. Thank you for this opportunity to offer some commentary on HJR 36.

Among the duties I perform in my assignment with ARCO are organizing and presenting the environmental orientation programs associated with exploratory drilling projects; overseeing the marine mammals scientific and monitoring programs for offshore exploratory operations; coordinating and maintaining cooperative programs with North Slope Inupiat villages; and serving as principal liaison with North Slope villages oil spill response teams.

Much of the testimony and discussion focusing on House Joint Resolution 36, which this committee is considering, directly touches areas of my professional activities. Therefore, I would like to take this opportunity to comment on three particularly relevant areas: (1) The recent history of cooperative programs between offshore oil and gas industry operators and North Slope Native communities. (2) The design and results of marine mammals science and monitoring programs. And (3) the village oil spill response teams which serve as observers, advisers, and participants for industry's offshore oil spill contingency planning and response preparedness.

Since the earliest days of petroleum exploration and development on the North Slope, industry has recognized both the advisability and desirability of fostering programs of mutual benefit to itself and to the resident Inupiat communities. In the early years, these efforts were primarily directed to training and employment opportunities. Such programs remain strong and active today. In other instances the basis for cooperation keys off of joint business ventures between industry and the Native regional and village corporations. Here again, joint venture programs continue to be an essential and vital feature of industry-local resident relations.

In more recent times, the overriding concerns of the area have come to be offshore oil exploration activities that are viewed by some as potentially harmful to marine mammal subsistence resources or in conflict with Native subsistence pursuits. The bowhead whale hunt has been the focal point of this concern for North Slope residents and industry operators alike since both parties are, at times, environmentally constrained to simultaneously operate during the open water conditions when the annual fall whale migration through the Beaufort Sea occurs.

For the past five years, a Cooperative Program for the Beaufort Sea (commonly referred to as the Oil/Whalers Agreement) has been in effect between the Alaska Eskimo Whaling Commission, the whaling captains' associations of Nulqsut and Kaktovik (which, along with Barrow, constitute the only Beaufort whaling villages) and industry. Prior to the open water season, whaling captains and industry representatives meet to work out a communications system between the parties that prevents use conflicts

between active whaling crews and industry operations. This cooperative effort has succeeded. It has also produced additional benefits to both parties. Industry has been allowed to proceed with exploratory activity and in the process has become very familiar with, and keenly sensitive to, both the practical and cultural dimensions of the Inupiat subsistence hunt. Safety assistance has also been provided to whaling crews in distress on certain occasions. Most of all, the focus on whaling and the fall bowhead migration has created a situation in which industry has proved itself both willing and able to work cooperatively with the Native subsistence communities on what is chief among their concerns about offshore exploration.

While this example touches on the experience gained from cooperative efforts between industry and Inupiat whalers from the Beaufort Sea communities; other efforts have involved environmental projects, archaeological and cultural matters, and local community activities. Without question, however, our highest mutual priority continues to be gaining a better understanding of the dynamics of the offshore arctic environment and scientific and monitoring studies of marine mammals there.

ARCO, and other industry offshore operators, have recognized that the local expertise and deep knowledge possessed by subsistence hunters absolutely must be incorporated in any study or monitoring programs. Effectively, this is done in two ways. First, by consulting with both whaling captains' associations and the North Slope Borough's Department of Wildlife Management in the design and scientific assessment of results of studies. Second, by including experienced Inupiat monitors in the actual field work associated with the studies. This approach has vastly enriched the quality

and credibility of study results. The benefits to both industry and the whaling communities are obvious. Industry operators can tailor their operations to cause the least possible interference with the subsistence hunt; the whaling community can, in turn, reinforce with hard scientific evidence its long held view that the bowhead whale population is healthy and can sustain an annual take of up to fifty animals. Both of these benefits have been realized from studies conducted over the past several years. I would be happy to supply additional information on these efforts to the committee. I can provide for the record, a detailed report of cooperation and consultation undertaken between industry and the whaling communities and final study reports from recent science and monitoring programs, if you would like to include them.

The final matter which I would like to touch on concerns the extent to which industry consults and incorporates the knowledge of local residents in dealing with oil spill preparedness and response. This committee recently received written testimony saying that ". . . local knowledge of experience[d] whaling captains and hunters and researchers continue[s] to be overlooked. I would like to see our local experts actively participate in the assessment of the oil industr[y's] ability to clean up an oil spill. This includes monitoring oil spill clean up drills that the state calls for occasionally to see if the oil industry is ready to respond to a spill."

There has been similar testimony from several other witnesses at previous hearings on this Resolution.

Local captains, hunters and residents have shared in the development of our Arctic programs. In the summer of 1989, ARCO recruited and provided oil spill response technician training (a 40 hour course) to ten residents each in the villages of Nuiqsut and Kaktovik. Members of these two teams included whaling captains (such as Mickey Agiak and George Kaleak of Kaktovik) and crew members (such as Isaac Nukapigak and Tony Cabinboy of Nuiqsut). Each of these individuals plus other team members fully participated in on-site oil spill response drills and demonstrations under all types of environmental conditions (open water, broken ice, and solid ice) at two different Beaufort Sea offshore exploratory drilling locations in 1989 and 1990. In late summer 1990 the initial phases of training were completed for a third ten-member team which included representatives from the Barrow volunteer fire department. Presently, the Alaska Clean Seas Co-op and response organization is continuing and expanding the village response team program in North Slope Borough communities.

This training program serves both the needs of oil companies operating in the area and the continuing needs of North Slope communities. Trained team members have reviewed contingency plans and have offered suggestions that resulted in specific improvements. The North Slope Borough has been an active partner in staging and supporting the training program.

I wish to conclude by stating that ARCO Alaska, Inc. and other offshore Arctic operators, fully intends to maintain the patterns of consultation and cooperation we have established over the years. As has been discussed by some individuals recently, a more formal regional citizens advisory group for

the Beaufort and Chukchi lease sale areas may be established. ARCO would welcome and support such a development.

Thank you for the opportunity to share this information with you. If you have any questions, I would be happy to respond.



United States Department of the Interior



MINERALS MANAGEMENT SERVICE

ALASKA OUTER CONTINENTAL SHELF REGION
949 E. 36TH AVENUE, ROOM 110 ANCHORAGE, AK 99508-4302

APR 23 1991

Representative Bill Hudson,
Chairman
House Special Committee on
Oil and Gas
Alaska State Legislature
P.O. Box V
Juneau, Alaska 99811

Dear Representative Hudson:

I appreciated the opportunity to testify to the committee on the proposed HJR 36 on April 22, 1991. I am enclosing a copy of information relating to the Minerals Management Service's regulatory program, environmental studies, and other background material, some of which I presented and discussed during my testimony and which I believe the committee will find useful in its further discussions regarding HJR 36.

I would be glad to answer any questions or provide any additional information.

Sincerely,

Irven F. Palmer, Jr.
Regional Director

cc:ing

Enclosure

**MINERALS MANAGEMENT SERVICE
INFORMATION RELEVANT TO PROPOSED HJR 36**

Background

Offshore oil and gas leasing, exploration and development and production is not new to the Beaufort and Chukchi Seas. The State of Alaska has conducted 13 lease sales which included offshore lands in the Beaufort Sea and has more planned. The Federal Government has held four sales in the Beaufort Sea including the joint Federal/State sale in 1979 and one in the Chukchi Sea.

Twenty-five exploratory wells have been drilled in the Beaufort and Chukchi Seas on Federal leases; over 100 wells have been drilled on State submerged lands in the Beaufort Sea and over 60 wells have been drilled in the Canadian Beaufort Sea. The Endicott Development Project on State submerged lands has been producing offshore oil since 1987.

Oil Pollution Act Report

One of the recommendations of HJR 36 is that Federal offshore lease sales in the Arctic not proceed until the Secretary, the Congress, and the public have had the opportunity to review a report required by Section 8302 of the Oil Pollution Act of 1990 (OPA). The OPA does not require, and the Congressional history of the OPA does not suggest, that the Outer Continental Shelf (OCS) leasing program be delayed pending completion of the report. The report will not provide new information on the lease sales planned for this summer.

The current plan is that a draft will be available for public review in May and the final report delivered to the Congress in August.

The OPA directs the report to cover three subjects: recovery of damages, contingency plans, and coordinated actions in the event of an oil spill in the Arctic Ocean. The language of Section 8302 shows that the principle impetus for the report is concern over spills resulting from tankering of crude oil from the Canadian Beaufort, and the administrative and legal mechanisms for recovery of damages from such oil spills.

The report will include information on Federal, State, local and Canadian and private contingency plans and requirements, but will not address the adequacy of spill-response preparedness, current state-of-the-art technology for spill response, or the effects of industrial noise or spills on wildlife in the region.

Environmental Studies and Assessments

The Minerals Management Service (MMS) has spent over \$245 million dollars in environmental studies for the Alaska OCS Region since 1974. Over one half of that total has been directed at the Arctic. Approximately \$22 million has been spent on studies directly related to bowhead whales.

The MMS studies program has addressed a comprehensive list of subjects:

- o Oil-spill fates and effects;
- o Social, and economic and subsistence effects;
- o Living resources;
- o Endangered species;
- o Environmental monitoring;
- o Pollutant transport;
- o Environmental geology; and
- o Ecosystems.

Organizations other than the MMS have also funded OCS-related studies. The National Marine Fisheries Service (NMFS), the State of Alaska, the North Slope Borough, the Alaska Eskimo Whaling Commission, the Union of Soviet Socialist Republic, Canada and the oil industry have funded almost \$24 million on bowhead whale studies through 1989.

The MMS has prepared seven Environmental Impact Statements (EIS's) for OCS lease sales in the Beaufort and Chukchi Seas. These EIS's have gone through extensive public review and comment, and are based on the most current scientific data and information.

The EIS's are comprehensive analyses of the potential effects of oil and gas activities on the natural and human environments. Through the EIS process, including State and public review, the MMS identifies and mitigates potential effects.

The MMS has also prepared environmental assessments (EA's) on each of the 21 exploration plans (EP's) which have been submitted for the Beaufort Sea and the 3 plans for the Chukchi Sea. The EA's analyze potential environmental effects, and incorporate any information that may have become available since the last EIS.

Arctic waters have been subjected to considerable environmental assessment. Since the OPA report is limited in scope, as directed by the Congress, it will not modify the results of those assessments.

EFFECTS OF NOISE ON MARINE MAMMALS

There have been several studies on the effects of industrial noise on marine mammals, particularly bowhead whales.

Studies on the effects of industrial noise on marine mammals conclude that while marine mammals react to industrial noise, the reactions are localized and short term.

The MMS has evaluated the potential effects of oil and gas activities on marine mammals in EIS's prepared for OCS sales, most recently Sales 124 and 126.

The Sale 124 EIS concludes that potential effects to marine mammals from noises are low.

The EIS analyses are conservative. The EIS does not assume that special mitigating measures will be in place or that spilled oil will be contained, removed, or cleaned up. The MMS has developed mitigating measures specifically for the protection of bowhead whales and subsistence hunting, including effects from noise. These measures include requirements for site-specific monitoring for the presence of whales and effects on their behavior. The MMS also requires that lessees consult with, and coordinate their activities with local subsistence communities to avoid and minimize interference. Limitations are also placed on seismic operations during the bowhead whale migration and lessees are warned to keep their operations, including vessels and aircraft, at specified distances from marine mammal and bird concentrations.

The NMFS, after reviewing the available scientific information on noise effects on bowhead whales, concluded in the Arctic Regional Biological Opinion "that although some impacts [from noise] to individuals [bowhead whales] may occur, anticipated proposed exploratory activities will not produce noise levels expected to reduce appreciably the likelihood of survival and recovery of the bowhead whales by reducing the reproduction, numbers, or distribution of the species."

In their final regulations for the non-lethal incidental taking of marine mammals adopted in July 1990 for oil and gas exploration and seismic activities in the Beaufort and Chukchi Seas, the NMFS further concluded there would be no significant impact on the populations of marine mammal and that there would be no unmitigable adverse impacts on the availability of the species for subsistence use if certain conditions are met. The conditions required by the NMFS regulations are site-specific monitoring programs and coordination between industry and subsistence communities similar to MMS lease terms.

Postlease Regulatory Program

The MMS has a stringent regulatory program to ensure that offshore oil and gas operations are conducted in a safe and environmentally-sound manner.

This program establishes specific requirements and standards for offshore operations, includes a comprehensive permitting process involving a thorough review of each proposal, and a compliance and inspection program to ensure that each activity is conducted in accordance with regulatory and lease requirements.

Major components of the program include well control and spill prevention.

Before any exploration or development activity can begin, an EP or development and production plan must be approved by the MMS. Each plan undergoes public review and comment and an EA is prepared. The State must also concur that the plan is consistent

Inspection and Compliance

The MMS has a very stringent inspection program in Alaska.

In the Alaska OCS Region, we maintain an inspector on each offshore drilling rig on a continuous or near-continuous basis to ensure that all applicable requirements are being met and that the well is being drilled in a safe manner. We observe all critical operations such as mandatory testing of blowout preventors.

Oil Spills

There have been no blowouts resulting in the release of crude oil from nearly 10,000 exploratory wells drilled on the OCS. The blowouts which have occurred were gas blowouts mostly in areas where shallow gas is prevalent.

Because of the Exxon Valdez spill, many question industry's ability to respond to a major oil spill, such as a blowout from an exploratory well in the Arctic.

It is important to distinguish between oil spills resulting from tanker accidents and spills that could occur from offshore oil and gas operations.

In contrast to tankers, OCS exploration and development and production operations are confined to specific locations where we require onsite spill-response teams and equipment tailored to the type of activity, environmental conditions, and maximum anticipated spill.

Spills from OCS exploratory drilling and production activities would not result in large instantaneous spills such as a tanker spill.

Spill response would be much more effective on a smaller continuous spill that provides continuous fresh oil in moderate volumes than a response to a single massive release of oil, such as occurred from the Exxon Valdez.

The MMS has taken prudent and effective steps to significantly reduce the risk of a spill and to ensure that industry utilizes the best available equipment and technology to drill and produce oil in the Arctic, and to respond to a spill.

There have been substantial improvements in oil-spill-response technology as a result of research and testing by the MMS in concert with Environment Canada and others, and as a result of the State's Tier II program.

In situ burning is a major response strategy for the Arctic, particularly for environmental conditions which might preclude or limit a mechanical response.

Research and testing of in situ burning in test tanks, offshore field trials, and under actual spill conditions have provided documentation on the effectiveness of in situ burning.

Other recent initiatives such, as Alaska Clean Seas' expanded equipment inventories and response organizations, the Regional Response Team's Memorandum of Understanding for preapproval to use in situ burning in the Beaufort and Chukchi Seas, and development of other guidelines and checklists, have improved and facilitated response capabilities and preparedness in the Arctic.

Conclusion

Based on the past drilling and production history in the Arctic and the comprehensive environmental studies and evaluations which have been conducted, the MMS is confident that offshore oil exploration and development in the Beaufort and Chukchi Seas can continue to be conducted in an environmentally-sound manner.

There is ample information regarding the risks of oil and gas operations to proceed with the proposed Beaufort and Chukchi lease sales.

Regulatory requirements for oil-spill-response preparedness, advances in technology in oil-spill response, including in situ burning, and a stringent regulatory and inspection program to prevent oil spills assure that operations are conducted in an environmentally-sound manner.

The MMS requires that industry demonstrate an acceptable level of spill-response preparedness and that current technology is suitable for the maximum anticipated spill which could occur from such activities.

Several oil and gas lease sales and exploration drilling have been conducted in the Beaufort and Chukchi Seas starting with the joint Federal/State Beaufort Sea lease sale in 1979 and there has been a very thorough analysis of all potential effects, including State and local involvement, leading up to each proposed Beaufort and Chukchi lease sale.

The MMS believes that proceeding with the decision-making process for planned Arctic OCS lease sales using the mandated and administrative coordination processes in place is appropriate and little would be gained by delaying the sales for review of the report being prepared under the requirements of Section 8302 of the OPA of 1990. Simply put, the report is not going to shed much light on most of the issues raised in HJR 36.

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

WALTER J. HICKEL, GOVERNOR

HJR 36 - BEAUFORT AND CHUKCHI SEA EXPLORATION DRILLING MORATORIUM

Level of Activity

To date, there have been few exploratory drilling operations in the Chukchi Sea and Beaufort Sea Outer Continental Shelf (OCS).

- Chukchi Sea:**
- * Drilling only during summer open water period.
 - * Shell Western has drilled in 1989, 1990, and plans to drill in 1991.
 - * Texaco may drill in 1992.
- Beaufort Sea:**
- * Nearshore drilling in winter and offshore drilling in summer open water period.
 - * Arco drilled during winter of 1990 and may drill in winter of 1991.
 - * Amoco may drill offshore during summer of 1991.

Oil Spill Prevention and Response

The U.S. Department of the Interior, Minerals Management Service (MMS) requirements establish a level of response preparedness similar to those outlined in draft State oil-spill regulations and HB 587.

- Spill Drills:**
- * Two oil spill response drills each year.
 - * North Slope Borough and State agencies are invited to attend all drills. DEC staff have attended all drills.
- Monitoring & Inspection**
- * An MMS Inspector is stationed on offshore drill ships to inspect spill prevention and emergency response systems.
 - * MMS inspects onsite response equipment on a daily basis, and attendant vessel equipment weekly.

* MMS inspects offsite equipment inventories annually, prior to the open-water drilling season.

* Companies are required to have a scheduled maintenance program for response equipment. MMS inspects company records for compliance with the maintenance schedule.

Spill Technology: * MMS sponsored the Alaska Arctic Offshore Oil Spill Response Technology Workshop in November-December 1988.

* MMS, in cooperation with Environment Canada and U.S. Coast Guard, has initiated a major effort to refurbish the only spill response test facility in the United States (OHMSETT) to test Arctic spill containment and cleanup technologies.

Local Involvement: * The industry's spill response co-operative, Alaska Clean Seas, is working with the Arctic Slope Regional Corporation to train residents of North Slope villages in oil spill response and cleanup.

* The Arctic Marine Resources Commission participates as a member of DEC's HB 587 Technical Implementation Work Group.