

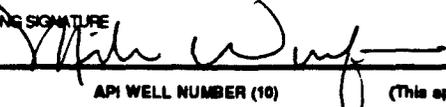


## 21. COMMENTS

**WARNING:** PUBLIC LAW 97-451 provides civil and criminal penalties for false or inaccurate reporting. Failure to report as required under the terms of the lease, permit, or contract may result in suspension of operations or other enforcement actions.

CONTACT NAME (First, MI, Last) T.W. McKay	PHONE NUMBER (10) (907) 285-8890	EXTENSION NUMBER (4)
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AUTHORIZING NAME (First, MI, Last) M.B. Winfree	TITLE New Ventures Area Drilling Engineer
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AUTHORIZING SIGNATURE 	DATE YYMMDD (6) 93-02-05
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API WELL NUMBER (10) (This space is for MMS use)

STATE (2)	COUNTY (3)	SEQUENCE (5)
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55-171-00009

ASSIGNED BY

BRIAN F. SCHOOF

DATE

5/7/93

CONDITIONS OF APPROVAL FOR SPECIAL CIRCUMSTANCES: ARE ATTACHED  NONE

APPROVED BY

Orig. Sgnd. By Brian Schoof

TITLE

DISTRICT SUPERVISOR

DATE

6/25/93

**PAPERWORK REDUCTION ACT STATEMENT:** The Paperwork Reduction Act of 1980 (44 U.S.C. 3601 et seq.) requires us to inform you that this information is being collected to obtain knowledge of equipment and procedures to be used in drilling operations. This information will be used by MMS District Supervisors to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Response to this request is mandatory (43 U.S.C. 1334).

Public reporting burden for this form is estimated to average 1/2 hour per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 2300, Minerals Management Service, 381 Eiden Street, Herndon, VA 22070-4817; and Office of Management and Budget, Paperwork Reduction Project (OMB No. 1010-0044), Washington, D.C. 20503.

## ATTACHMENTS

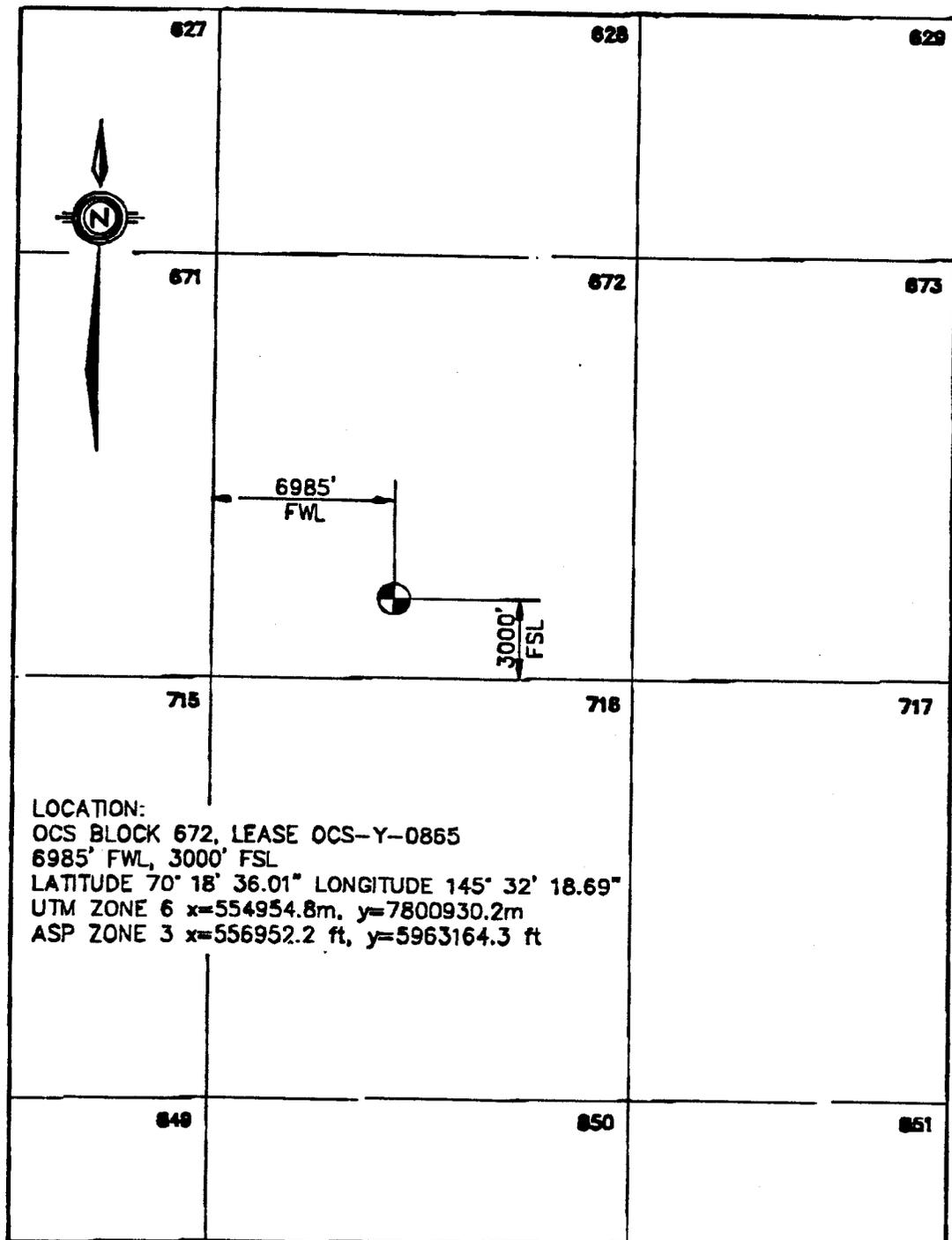
The following check list is provided for your convenience: (Refer to 30 CFR 250.64 for complete details)

a. Mobile drilling units \*\* Vessel Certifications and Inspections for 1993 operations will be scheduled later; certifications exist for 1992 operation.

- 1. Environmental and operational maximums of unit
- 2. Vessel certification
  - (a) American Bureau of Shipping classifications, and
  - (b) U.S. Coast Guard
    - (1) Certificate of Inspection (U.S. flag vessel), or
    - (2) Letter of Compliance (foreign flag vessel)
- 3. Operating or design limitations and applicable contingency plans.
- 4. Program for drilling from floater or semisubmersible without returns

b. All APD's

- 1. Location plat at 2000'/1" scale
- 2. Design criteria for well control
- 3. BOP equipment program
- 4. Casing program
- 5. Drilling prognosis
- 6. Cementing program
- 7. Mud program
- 8. Directional survey program (directional wells)
- 9. Plot of estimated pore pressures and formation fracture gradients
- 10. Hydrogen sulfide contingency plan
- 11. Any additional information required



Received  
OCS District Office

AUG 06 1993  
Minerals Management Service  
Anchorage, Alaska

ARCO KUVLUM #2  
BLOCK 672  
FINAL WELL POSITION

SUBMIT: Original,  
two copies, and one  
public information  
copy.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
MINERALS MANAGEMENT SERVICE

OMB APPROVAL NO. 1010-0044  
EXPIRES: OCTOBER 31, 1994

APPLICATION FOR PERMIT TO DRILL						INITIAL DRILLING OF WELL ONLY
1. FIELD NAME <i>Wildcat</i>		2. MMS LEASE UNIT OR COMM. NO. (6) <i>Y 0865 0</i>		3. MMS OPERATOR NUMBER (5) <i>00635</i>		
4. OPERATOR WELL NUMBER (6) <i>2</i>	5. TYPE OF WELL (1) <i>E</i>	LEAVE BLANK		6. ESTIMATED ELEVATION (5) <i>RKB-MSL=66'</i>		
7. OPERATOR NAME AND ADDRESS (SUBMITTING OFFICE) <i>ARCO Alaska, Inc. P.O. Box 100360 Anchorage, AK 99510-0360</i>			8. PROPOSED WELL DEPTH (5) <i>MD 12000' TVD 12,000'</i>		9. ESTIMATED WATER DEPTH (5) <i>96</i>	
10. PROPOSED LOCATION OF WELL (12)  Surface: <i>7000' FWL &amp; 3000' FSL Block 672</i>  Production zone: <i>Same</i>  Total depth: <i>Same</i>			11. OPERATING AREA CODE (2) <i>FI</i>		12. BLOCK NUMBER (6) <i>0672</i>	
14. OPERATOR LEASE UNIT OR COMMUNITIZATION NAME <i>Kuvlum</i>			15. RIG/PLATFORM NAME <i>BeauDril Kulluk</i>		16. RIG TYPE (2) <i>SS</i>	
17. DISTANCE IN FEET FROM NEAREST WELL DRILLING, PRODUCING, OR ABANDONED (6) <i>18922'</i> <i>Kuvlum #1</i>		18. DISTANCE IN MILES FROM PROPOSED (3) LOCATION TO NEAREST SHORELINE <i>12.5</i>		19. APPROXIMATE START DATE (6) YYMMDD <i>93 08 01</i>		
20. PROPOSED CASING AND CEMENTING PROGRAM <i>(Attach complete well prognosis)</i>						
HOLE SIZE (4)	CASING SIZE (4), LB/FT (5) & GRADE	SETTING DEPTH		QUANTITY OF CEMENT (Cu. Ft./type)		
		MD (5)	TVD (5)			
<i>N/A</i>	<i>30" 310# X-52</i>	<i>300'</i>	<i>300'</i>	<i>30" to be drilled in, no cement required</i>		
<i>26"</i>	<i>20" 133# X-56</i>	<i>1000'</i>	<i>1000'</i>	<i>1650 ft3 Arctic Set I-Permafrost Cement</i>		
<i>17-1/2"</i>	<i>13-3/8" 68# L-80</i>	<i>4000'</i>	<i>4000'</i>	<i>1730 ft3 Lead, 575 ft3 Class G Tail Cement</i>		
<i>12-1/4"</i>	<i>9-5/8" 53.5# L-80</i>	<i>10000'</i>	<i>10000'</i>	<i>630 ft3 Lead, 1250 ft3 Class G Tail Cement</i>		
<i>8-1/2"</i>	<i>7" 35# L-80</i>	<i>12000'</i>	<i>12000'</i>	<i>Contingency Liner, 500 ft3 Class G Cement</i>		
<i>Actual cement volumes will be based on caliper logs, hole conditions &amp; hydrocarbon intervals encountered</i>						
<b>CASING DESIGN SAFETY FACTORS</b>						
CASING SIZE	COLLAPSE	TENSION	BURST	ASSUMPTIONS USED TO ARRIVE AT THESE VALUES: <i>(Attach a separate sheet, if necessary, showing all assumptions and calculations)</i>		
<i>30"</i>	<i>(See text in APD package attached)</i>			<i>Structural Casing</i>		
<i>20"</i>		<i>Conductor Casing</i>				
<i>13-3/8"</i>		<i>Surface Casing</i>				
<i>9-5/8"</i>		<i>Intermediate/Production Casing</i>				
<i>7"</i>		<i>Contingency Liner</i>				

PROPRIETARY

**APPLICATION FOR PERMIT TO DRILL**

FORM MMS-331C

PAGE 2

**21. COMMENTS**

The Kuvlum #2 well (OCS-Y-0865-1, Block 672) is a follow-up delineation well to the Kuvlum #1 well drilled in 1992.  
The Kuvlum #2 is being permitted to a depth of 12,000', however the planned depth is 10,000'.

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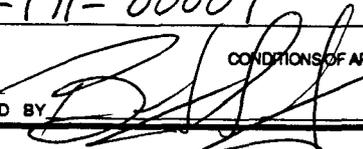
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AUTHORIZING NAME (First, MI, Last) M.B. Winfree	TITLE New Ventures Area Drilling Engineer	
AUTHORIZING SIGNATURE 	DATE YYMMDD (6) 93-02-05	

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STATE (2)	COUNTY (3)	SEQUENCE (5)
55-171-00009		

ASSIGNED BY BRIAN F. SCHOOF DATE 5/7/93

CONDITIONS OF APPROVAL FOR SPECIAL CIRCUMSTANCES ARE ATTACHED  NONE

APPROVED BY  TITLE Dist. Supervisor DATE 5/18/93

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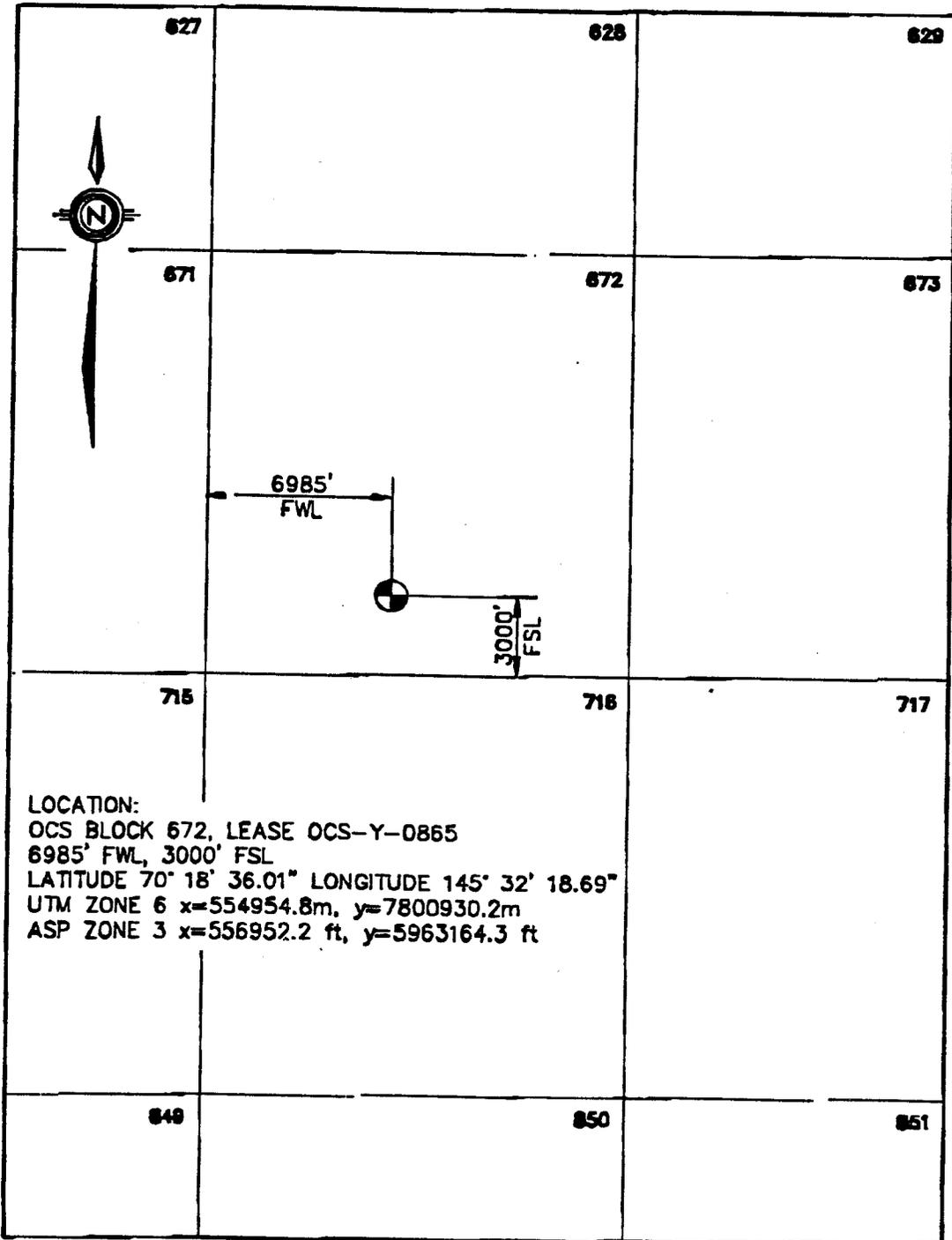
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AUG 06 1993  
Minerals Management Service  
Anchorage, Alaska

**ARCO KUVLUM #2  
BLOCK 672  
FINAL WELL POSITION**