

MISCELLANEOUS APPLICATION

(In compliance with rules and regulations pursuant to ORS 520)

ARCO Oil & Gas Company Columbia County 34-4-65  
(Company or operator) (Lease) (Well No.)  
Sec. 4, T. 6N, R. 5W M.B.&M. Surveyed Coordinates: N2°35'51" 1186.71'  
& N87°24'09"E, 606.15' from S/4 Corner, Sec. 4-T6N/R5W  
Wildcat: (or) Field Name: Mist County: Columbia  
Date: July 24, 1990 Signature: Kwang U Park  
Position: District Drilling Superintendent

Use this form for applications to redrill, deepen, rework, abandon, or any other proposed procedure on an existing well.  
This form must be submitted unless verbal approval has been given. This application becomes a permit when signed and dated by DOGAMI in the box below.

The present condition of the well, including complete casing record, is as follows: All depths RKB (RKB-GL = 10')

Casing	Perforations	Current Status
13-3/8", 54.5# @ 40'	2715-2723'	Well is shut in (watered out)
9-5/8", 36# @ 444'	2735-2744'	SITP = 777 psig
5-1/2", 17# @ 3037'	2760-2762'*	SICP = 880 psig

\*Squeezed off; cement retainer @ 2745'.  
Cement plugs: 2945-3037' & 3050-3150'.

Following is a detailed account of proposed work:

Pull tubing. Run & set retrievable packer @ 2729' to isolate water entry from upper perforations. Return to production from lower perforations.

If workover is unsuccessful (water entry continues), plug and abandon the well as follows:

1. Pull packer.
2. RIH w/tbg & set plug from 2745-2600'.
3. WOC; RIH tag top of plug.
4. Fill hole with mud.
5. Set 10' surface plug.
6. Cut casing; remove wellhead.
7. Cap well; reclaim site.

Company/Operator ARCO Oil & Gas Company  
Signature Kwang U Park  
Position District Drilling Superintendent  
Date 7-24-90  
SEND WELL COMMUNICATION TO:  
Name Kwang-U Park  
Address P. O. Box 147  
Bakersfield, CA 93302  
Phone (805) 321-4061

DOGAMI Approved September 25, 1990  
The July 1987 stipulations approved by the State Geologist are conditions of this permit. Notify DOGAMI 24 hours prior to commencing of operations.  
By Dan E. Wermiel, Petroleum Geologist

Form 2 (12/85)

MISCELLANEOUS APPLICATION

(In compliance with rules and regulations pursuant to ORS 520)

ARCO OIL & GAS COMPANY COLUMBIA COUNTY 34-4-65  
(Company or operator) (Lease) (Well No.)  
Sec. 4, T. 6N, R. 5W M.B.&M. Surveyed Coordinates: 1187'N and 606'E of SW Corner, Section 4, T6N, R5W  
Wildcat: (or) Field Name: Mist County: Columbia  
Date: Aug 31st, 1989 Signature: Kwang U Park K. U. Park  
Position: District Drilling Superintendent

Use this form for applications to redrill, deepen, rework, abandon, or any other proposed procedure on an existing well.  
This form must be submitted unless verbal approval has been given. This application becomes a permit when signed and dated by DOGAMI in the box below.

The present condition of the well, including complete casing record, is as follows:

TD: 3382' PBD: 2745'  
Plugs: 3050'-3150' (cement), 2747'-2762' (cement), 2745' (cement retainer)  
Perforations: 2715'-2723' 4 SPF, 2760'-2762' (cement squeezed)  
Casing: 13-3/8" 54.5# Conductor Surface to 40'  
9-5/8" 36# K-55 BTC Surface to 444'  
5-1/2" 17# K-55 LTC Surface to 3037'

Following is a detailed account of proposed work:

1. MIRU crane and perforating company.
2. Install lubricator and pack-off on top of wellhead.
3. RIH through tubing with collar locator and perforating gun.
4. Tie-in and perforate 9' from 2735'-2744', 4 SPF. POOH.
5. Flow test well and return to production.

Company/Operator ARCO OIL & GAS COMPANY  
Signature Kwang U Park K. U. PARK  
Position DISTRICT DRILLING SUPERINTENDENT  
Date  
SEND WELL COMMUNICATION TO:  
Name ARCO OIL & GAS COMPANY ATTN: K. U. PARK  
Address P. O. BOX 147  
BAKERSFIELD, CA 93302  
Phone (805) 321-4060

DOGAMI Approved September 6, 1989  
Notify DOGAMI 24 hours before perf. and flow test.  
By Dennis J. Olmstead

Form 2 (12/85)

MISCELLANEOUS APPLICATION

(In compliance with rules and regulations pursuant to ORS 520)

ARCO Oil & Gas Co., a division of Atlantic Richfield Company Columbia County 34-4-65  
(Company or operator) (Lease) (Well No.)  
Sec. 34, T. 6N, R. 5W M.B.&M. Surveyed Coordinates: N2° 35' 51" W1186.7', S87° 24' 09", E606.15' from S/4 corner of Section 4, T6N, R5W  
Wildcat: (or) Field Name: Mist County: Columbia  
Date: Signature: Position: District Drilling Superintendent

Use this form for applications to redrill, deepen, rework, abandon, or any other proposed procedure on an existing well.  
This form must be submitted unless verbal approval has been given. This application becomes a permit when signed and dated by DOGAMI in the box below.

The present condition of the well, including complete casing record, is as follows:

TD: 3382' (8-1/2" hole) Elevations: G.L. 870.68', K.B. 880.68'  
Plugs: 3050'-3150' (57 sx Class G + 2% CaCl2 @ 15.8 ppg)  
Perforations: 2715'-2723'  
Casing Program: 13-3/8" 54.5# K-55 PE 10' - 40'  
9-5/8" 36# K-55 STC 10' - 444'  
5-1/2" 17# K-55 LTC 10' - 3037'  
2-3/8" 4.6# J-55 EUE 10' - 2657'

Following is a detailed account of proposed work:

1. MIRU drilling rig. Kill well. ND tree. NU 3M BOPE. Contact DOGAMI to witness BOPE test.
2. Close Hydril and establish an injection rate through existing perms 2,715'-2,723'. POOH with tubing.
3. Wireline perforate from 2,760'-2,762' with 4" hollow carrier (17 gram charge) squeeze gun, 4 hpf @ 90°.
4. Set retainer on wireline @ 2,745'.
5. TIH with tubing and stinger. Break circulation. Sting into retainer and establish an injection rate for squeeze.
6. Mix and pump 25 sx Class "G" cement + 2% CaCl2 @ 15.8 ppg. Squeeze 24 sx below retainer. Pull up and reverse 1 sx out of tubing. Mix and pump 30 sx Class "G" cement + 2% CaCl2 balanced plug on top of retainer. POOH to ± 2,000 and circulate clean. Braden head squeeze existing perms from 2,715'-2,723' until TOC is 100' above top perf.
7. Drill out cement and clean out to top of retainer.
8. Rerun 2-3/8" 4.6# J-55 EUE tubing and set tail at 2,657'. ND BOPE. NU tree and test same to 1,500 psi.
9. Wireline perforate with 1-11/16" thru tubing strip guns 2,715'-2,723' KB.
10. Four point test with surface flare, then place well back on production.

Company/Operator ARCO Oil & Gas Company  
Signature Kwang U Park  
Position District Drilling Superintendent  
Date August 31st, 1988  
SEND WELL COMMUNICATION TO:  
Name ARCO Oil & Gas Co. Attn: K.U. Park  
Address P. O. Box 147  
Bakersfield, CA 93302  
Phone (805) 321-4000

DOGAMI Approved Sept. 1, 1988  
By Dennis J. Olmstead

Form 2 (12/85)