

RESERVOIR

# DOME PETROLEUM LIMITED

J. P. GALLAGHER  
PRESIDENT

706-7TH AVENUE SOUTH WEST  
CALGARY, CANADA  
P.O. Box 200

TELEPHONE  
269-4951  
CABLE 99

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				9	3	2	5	

May 13, 1968.

REFERRED TO	DATE	INITIAL
<input checked="" type="checkbox"/> CHIEF		J
<input checked="" type="checkbox"/> DEPT. CHIEF		
SECRETARY		
SPECIAL AGENT		
<input checked="" type="checkbox"/> ASST. CHIEF		J.C.G.
GEOLOGY		
DRAUGHTING		

Petroleum and Natural Gas Branch,  
Department of Mines and Petroleum Resources,  
VICTORIA, British Columbia.

ATTENTION: Mr. J.D. Lineham.

Dear Sir:

RE: Waterflood M.P.R. Submission  
Dome Boundary Lake Waterflood;  
Projects #1 and #2.

Dome Petroleum Limited as project Operator, hereby requests a waterflood M.P.R. of 4,919 barrels per day for Project #1 and a waterflood M.P.R. of 1,484 barrels per day for Project #2 in the Boundary Lake reservoir of the Boundary Lake field.

Approval of a pressure maintenance program, by water injection, for these projects was requested on March 23, 1964, and was granted on May 7, 1964. Water injection commenced on September 29, 1964. Since flood commencement, both projects have been operated with project allowables based on the sum of the 160 acre primary M.P.R.'s.

The attached waterflood performance summary outlines the effectiveness of the waterflood to date, in support of our request for waterflood M.P.R.'s for each Project. The requested M.P.R.'s are based on a waterflood recovery factor of 40.5 percent of the original oil in-place. This recovery factor was obtained from the waterflood studies recently submitted to the Department by Texaco, on behalf of themselves, Imperial and Dome and represents the best estimate of the ultimate waterflood recovery for the Boundary Lake Zone of the Boundary Lake field. Although only portions of the projects in question have been infilled by drilling the 80 acre locations, there is no reason to expect that any significant difference in ultimate recovery will occur between the 160 and 80 acre spacing

DEPT. OF MINES AND PETROLEUM RESOURCES	
REC'D MAY 13 1968	
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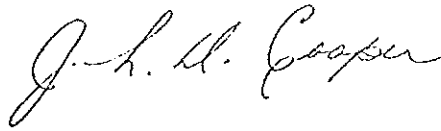
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areas. The main difference in operation of these properties will result from the much longer producing life required to deplete the areas developed on 160 spacing.

Your early consideration and approval of the requested waterflood M.P.R.'s will be greatly appreciated.

Yours very truly,

DOME PETROLEUM LIMITED



J.L.D. COOPER - P. ENG.

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DEPT. OF MINES  
AND PETROLEUM RESOURCES  
Rec'd MAY 14 1968


July 22, 1964

Dome  
Boundary  
Project #1  
Project #2

Dome Petroleum Limited,  
706 - 7th Avenue South West,  
Calgary, Alberta.

Attention: Mr. M. E. McElroy

Project #2

Dear Sir:

Re: Boundary Lake Waterflood Project MPR

Your application dated June 17, 1964 for a project MPR of 2,225 barrels of oil per day for Dome Boundary Lake Waterflood Project No. 1 and a project MPR of 733 barrels of oil per day for Dome Boundary Lake Waterflood Project No. 2 was published in the British Columbia Gazette on June 25 and July 2, 1964.

As no written objections were received by July 17, your application is approved subject to the following conditions:

- (1) The project MPR shall be 2,225 barrels of oil per day for the lands included in Dome Boundary Lake Waterflood Project No. 1. *effective October 1, 1964*
- (2) The project MPR shall be 733 barrels of oil per day for the lands included in Dome Boundary Lake Waterflood Project No. 2. *effective April 1, 1965*
- (3) The lands included in Dome Boundary Lake Waterflood Project No. 1 shall be the spacing areas of the wells listed in Schedule 1 of your application.
- (4) The lands included in Dome Boundary Lake Waterflood Project No. 2 shall be the spacing areas of the wells listed in Schedule 2 of your application.
- (5) The gas-oil ratio and gas-oil ratio adjustment factor shall be calculated and applied on a project basis.
- (6) Production will continue to be reported on an individual-well basis.
- (7) The Branch will observe the production from time to time and the Chief of the Branch may, if in his opinion circumstances warrant it, remove from either project MPR the MPR of any well offsetting producing lands not in the project and return to the well its individual well MPR.
- (8) The gas-oil ratio and gas-oil ratio adjustment factor shall be calculated and applied individually to any well so removed from the project MPR approval.
- (9) Either project MPR may be amended should further wells be added to the project.

*Both Projects effective on day of month following start of water injection*

RESERVOIR

- (10) The approval may be reviewed and the terms of approval may be altered in the light of information arising out of the operation of either project, or out of the operation of other projects in the same zone and field.
- (11) The approval shall become effective in each project upon the first of the month following commencement of waterflooding in the project in question, and notice shall be given to the Chief of the Branch upon commencement of the waterflood.

Yours truly,

J. D. Linoham,  
Chief, P. & N. G. Branch

RESERVOIR

RRM:GC

Dome -  
Boundary  
Project #1  
~~Project #2~~

July 22, 1964

Dome Petroleum Limited,  
706 - 7th Avenue South West,  
Calgary, Alberta.

Attention: Mr. M. E. McElroy

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Re: Boundary Lake Waterflood Project MPR

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RESERVOIR

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Yours truly,

J. D. Linoham,  
Chief, P. & N. G. Branch

RESERVOIR

RRM:GC

Dome Project #1

FIELD Boundary Lake POOL Boundary OPERATOR Dome

UNIT or PROJECT MPR  
REVISIONS

~~2225~~  
2343  
~~2429~~  
4919

EFFECTIVE DATE

~~22-7-64~~  
1-10-64  
1-10-65  
"  
"  
"  
"  
"  
"

CONDITIONS OF APPROVAL

- (1) AMEND AREA Yes..X... No..... (2) AMEND MPR Yes..... No.....
- (3) GAS CREDITS Yes..... No..X... (4) WAIVE GOR FACTORS Yes..... No..X...
- (5) COMMENCE UNIT PRODUCTION COINCIDENT WITH PRESSURE MAINTENANCE Yes..X... No.....
- (6) RESTRICTIONS TO PRODUCTION OF INDIVIDUAL WELLS Yes..... No..X...
- (6a) WELLS (D.A. #)

Producible

WELLS IN UNIT OR PROJECT

488, 528, 550, 573, 666, 642, 764, 768, 808  
1022, 1033, 1064, 1070, 1156, 1440, 1470, 1471, 1665, 1666, 1667, 1668  
1667, 1668, 1669, 1672, 1673, 1674, 1676, 1702.

WELLS WITHIN UNIT BOUNDARIES but EXCLUDED FROM MPR

WELLS WITHDRAWN FROM PRODUCTION

465, 574, 575, 605, 765, 606, 1022, 642.

INJECTION WELLS

GAS

WATER

465, 574, 575, 605, 765, 606, 1022  
(1142 - water source.)

DISPOSAL WELLS

RESERVOIR

# DOME PETROLEUM LIMITED

J. P. GALLAGHER  
PRESIDENT

706-7TH AVENUE SOUTH WEST  
CALGARY, CANADA  
P.O. Box 200

TELEPHONE  
269-4951  
CABLE 991

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May 13, 1968.

REFERRED TO	DATE	INITIAL
<input checked="" type="checkbox"/> CHIEF		J
<input checked="" type="checkbox"/> DEPT. CHIEF		
SECRETARY		
STAFF		
<input checked="" type="checkbox"/> ASSISTANT		K.C.G.
GEOLOGY		
DRAFTING		

Petroleum and Natural Gas Branch,  
Department of Mines and Petroleum Resources,  
VICTORIA, British Columbia.

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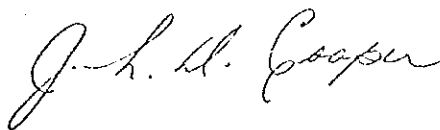


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Yours very truly,

DOME PETROLEUM LIMITED



J.L.D. COOPER - P. ENG.

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DEPT. OF MINES  
AND PETROLEUM RESOURCES  
Rec'd MAY 1 1960


September 16, 1965

*Dome -  
Boundary  
Project #1*

Mr. M. E. McElroy,  
Dome Petroleum Limited,  
706 - 7th Avenue South West,  
Calgary, Alberta.

Dear Sir: Re: Dome Boundary Lake Waterflood Project No. 1

In reply to your letter dated September 14 this  
advises that inclusion of Dome Boundary 6-3-86-14 in the subject  
project is approved effective October 1, 1965.

The amended Project MPR is 2429.

**RESERVOIR**

Yours very truly,

J. D. Lincham,  
Chief, P. & N. G. Branch.

JDL:gc

c.c. W. W. Ross, Accounts  
W. L. Ingram, Development  
R. R. McLeod, Reservoir

September 25, 1964

*Dome -  
Boundary  
Project #1*

Mr. M. E. McElroy,  
Dome Petroleum Limited,  
706 - 7th Avenue South West,  
Calgary, Alberta.

Dear Sir:                      Re: Dome Boundary Lake Waterflood  
Project No. 1

In reply to your letter dated September 21 this  
advises that inclusion of Dome Boundary 14-34-85-14 in  
the subject project is approved effective October 1.

*Also effective  
date of last MPR  
due to commencement  
of water injection*

The amended Project M.P.R. is 2343 as requested.

RESERVOIR

Yours very truly,

J. D. Lincham,  
Chief, P. & N. G. Branch

JDL:gc

c.c. W. W. Ross, Accounts  
W. L. Ingram, Development

U2-8-D3

Chief, P. & N. G. Branch

DEPARTMENT OF MINES  
AND PETROLEUM RESOURCES

VICTORIA, B.C., September 24, 1964

WHEN REPLYING PLEASE REFER  
TO FILE NO. C-13

Re: Memo from W. W. Ross, Concerning Dome  
Boundary Waterflood Project No. 1

The terms of approval of Dome Waterflood Project No. 1 made provision for an increase in the project M.P.R. by the addition of spacing areas not included at the time of the original approval if productive wells were drilled on those spacing areas. Dome Boundary 14-34-85-14, D.A. 1470 was drilled outside the area of the original Project M.P.R., and an M.P.R. of 118 barrels per day from the Boundary Lake Zone was approved for it on 15 July 1964.

The spacing area of this well therefore is eligible for inclusion in the project and the Project M.P.R. may, as a result be increased by 118 barrels per day from 2225 barrels per day to 2343 barrels per day upon inclusion of the spacing area in the project. I would therefore recommend that the Project M.P.R. be so increased upon the inclusion of this spacing area into the waterflood project, subject to any requirement of the Chief Commissioner as to the inclusion of the spacing area in the project.

*R. R. McLeod*  
R. R. McLeod,  
Senior Reservoir Engineer.

RRM:gc

AK111

# DOME PETROLEUM LIMITED

J. P. GALLAGHER  
PRESIDENT

706—7TH AVENUE SOUTH WEST  
CALGARY, ALBERTA

TELEPHONE  
AMHERST 9-4951

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March 23, 1964

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*note: this letter is part of Dome's application for waterflood (dated April 28, 1964)*

Department of Mines and Petroleum Resources,  
Province of British Columbia,  
Victoria, British Columbia

Dear Sirs:

Dome Petroleum Limited hereby requests approval of a scheme to inject water into the Boundary Lake Zone in the following wells:

Dome Boundary	16-12-85-14
Dome Boundary	8-26-85-14
Dome Boundary	8-35-85-14
Dome Boundary	8-2-86-14

*Project #1 and #2*

The scheme is described in detail in the attached report.

Permission is also requested to use for injection purposes, the water produced from the Basal Gething formation in Dome Boundary 6-11-86-14 and from a water supply well proposed to be drilled to the Cadomin formation in Lsd. 2-35-85-14. The nature of the water source is described in detail in the Appendix to the above mentioned report.

All of which is respectfully submitted for your early consideration.

Yours very truly,

DOME PETROLEUM LIMITED



C.S. Dunkley  
Vice-President

~~19951~~

MEM:ag

### BOUNDARY LAKE ENCLOSURES:

1. Stratigraphic cross-section of lower Cretaceous & Jurassic beds, showing the depositional lap-out of the Cadomin Fm. & its relationship to the Basal Gething Sand. (2 copies)
2. Structural cross-section of lower Cretaceous and Jurassic beds from Peace River Canyon to North Boundary Lake. (2 copies)
3. Cadomin Formation - Structure. (1 copy)