

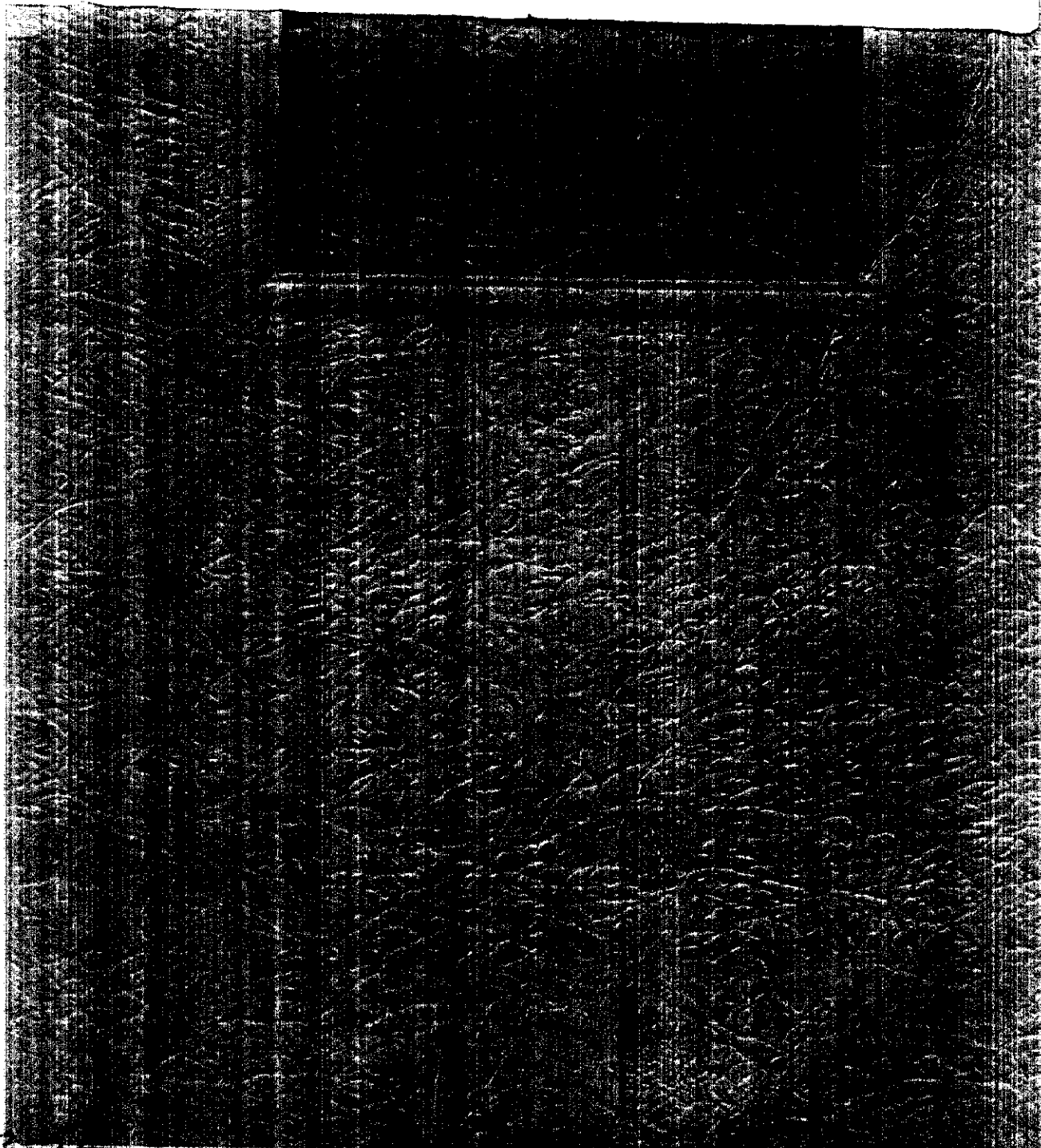
This Unitization Order registered under Document 843-0 on the 12th day of August, 1971, on the following Crown Petroleum and Natural Gas Leases

Lease 29 - L.S.'s 9 - 10 - 15 - 16 of Sec. 4, Twp. 10, Rge. 28 W.P.M.

Lease 54 - L.S.'s 4 - 5 of Sec. 10, Twp. 10, Rge. 28 W.P.M.

  
T. Morgan.

Chief Mining Recorder.





## MANITOBA REGULATION 94/71

Being

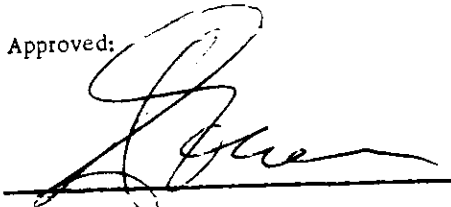
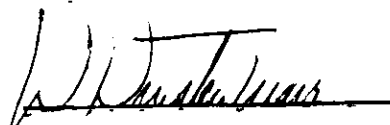
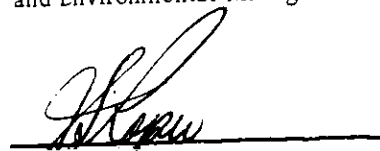
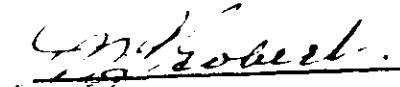
THE OIL AND NATURAL GAS CONSERVATION BOARD  
UNITIZATION ORDER NO. 11Pertaining to the Unitized Management Operation and Further  
Development of Daly Unit No. 1.Made and passed pursuant to "The Mines Act", Cap. M160, R. S. M.,  
1970, and amendments thereto, by The Oil and Natural Gas Conservation  
Board, of Manitoba.

(Filed June 24/71)

1. Effective at the hour of seven o'clock in the forenoon, Central Daylight Time,  
on the first day of July, 1971, that a certain part of the Daly Field, to be  
known as the Unit Area, shall be operated as a unit in accordance with the Plan  
for Unit Operation Governing the Unitized Management Operation and Further  
Development of Daly Unit No. 1, dated October 20, 1970, and amended  
January 6, 1971, and shall be known as the Daly Unit No. 1.
2. Excerpts from the Plan, namely: Parts XXII, XXIII, and XXIV here attached,  
are for publication in The Manitoba Gazette for the information of the public.

Oil and Natural Gas Unitization Order No. 11, made and passed this 17th day  
of June, A. D., 1971, at the City of Winnipeg, in the Province of Manitoba, by The  
Oil and Natural Gas Conservation Board.

Approved:

Sidney Green,  
Minister of Mines, Resources  
and Environmental Management.W. Winston Mair,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.J. S. Roper,  
Deputy Chairman,  
The Oil and Natural Gas  
Conservation Board.M. J. Gobert,  
Member,  
The Oil and Natural Gas  
Conservation Board.

Printed by R. S. Evans - Queen's Printer for the Province of Manitoba.



AUG 20-71 <sup>MINE</sup><sub>8RES</sub> 26359\*\*\*\*\*6.00

PLAN FOR UNIT OPERATION  
GOVERNING THE UNITIZED MANAGEMENT  
OPERATION AND FURTHER DEVELOPMENT OF  
DALY UNIT NO. 1  
(AMENDED)

**CERTIFIED CORRECT**

*John P. [Signature]*  
*Chairman*  
*Deputy*

October 20, 1970



PLAN FOR UNIT OPERATION  
GOVERNING THE UNITIZED MANAGEMENT  
OPERATION AND FURTHER DEVELOPMENT OF  
DALY UNIT NO. 1

October 20, 1970  
as amended Jan. 6, 1971



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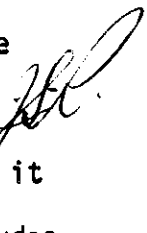
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PLAN FOR UNIT OPERATION  
GOVERNING THE UNITIZED MANAGEMENT  
OPERATION AND FURTHER DEVELOPMENT OF  
DALY UNIT NO. 1

PART I

INTERPRETATION

- |                                     |  |
|-------------------------------------|--|
| References to terms and expressions | 1.01 This Plan shall be construed with reference to "The Interpretation Act" and the terms and interpretation of "The Mines Act" and regulations thereunder.   |
| Definitions                         | 1.02 In this Plan unless the context otherwise requires:   |
| "Accounting Procedure"              | (a) "Accounting Procedure" means the rules, provisions and conditions set forth in Part XXVI hereof;   |
| "Common Account"                    | (b) "Common Account" means the account set up and maintained by Unit Operator on behalf of the Working Interest Owners as provided in Part VIII hereof;  |
| "Conservation Board"                | (c) "Conservation Board" or "Board" means the Oil and Natural Gas Conservation Board;  |
| "Effective Date"                    | (d) "Effective Date" means the hour of seven o'clock <sup>DAYLIGHT</sup> in the forenoon, Central Standard Time, on the first day of <u>JULY</u> A.D., 1971;  |
| "Gas"                               | (e) "Gas" means natural gas both before and after it has been subjected to any processing and includes all fluid hydrocarbons not defined as Oil;  |
| "Investment Account"                | (f) "Investment Account" means the account set up and maintained by Unit Operator on behalf of the Working Interest Owners as provided in Part X hereof;   |



"Leases"

(g) "Leases" means severally and collectively the petroleum and natural gas leases, petroleum leases, natural gas leases, subleases, agreements to grant a lease and any other agreements whether similar or dissimilar to the foregoing covering the lands described in Part XXII hereof;

"Oil"

(h) "Oil" means crude oil and all other hydrocarbons regardless of gravity, that are or can be recovered in liquid form from a pool through a well by ordinary production methods;

"Operating Committee"

(i) "Operating Committee" means the committee created pursuant to Part V hereof;

"Outside Substances"

(j) "Outside Substances" means all substances obtained from any sources other than the Unitized Strata for injection into the Unitized Strata;

"Participating Interest"

(k) "Participating Interest" means with respect to each Working Interest Owner the sum of the products obtained by multiplying its respective working interest in each Tract by the respective Tract Participation of each such Tract;

"Royalty Owner"

(l) "Royalty Owner" means a person, other than a Working Interest Owner, who has any interest in a right to receive a portion of the Unitized Substances or a portion of the proceeds from the sale thereof, including a reversionary interest, a royalty interest reserved to the lessors named in any lease, and any overriding royalty interest, or an interest in a payment under; or encumbrance on,



- a Lease that does not carry with it the right to search for or produce the Unitized Substances;
- "Salt Water Disposal Well" (m) "Salt Water Disposal Well" means those wells drilled for the purpose of, or converted to, salt water disposal;
- "Spacing Unit" (n) "Spacing Unit" means the area allocated by any governmental body having jurisdiction with respect thereto for each well drilled for the purpose of producing Oil and Gas from the Unitized Strata;
- "Tract" (o) "Tract" means each parcel of land described as such and given a Tract number in Part XXII hereof;
- "Tract Participation" (p) "Tract Participation" means the percentage set forth for each Tract in Part XXIV hereof;
- "Unit Area" (q) "Unit Area" means and comprises the lands set forth and described in Part XXII hereof and included within the boundaries of the solid black outline on the map shown in Part XXIII hereof, insofar as these lands relate to the Unitized Strata, excepting, however, those lands, if any, shown cross-hatched in Part XXIII hereof;
- "Unit Facilities" (r) "Unit Facilities" means all tangible property of every kind, nature and description (excepting Unitized Substances, Unit-Operated Wells, rental equipment and Unit Operator's exclusively owned equipment) in the possession of Unit Operator hereunder acquired from a Working Interest Owner pursuant to the provisions of Part X hereof, together with all facilities and equipment pur-



chased, constructed or acquired by Unit Operator pursuant hereto;

"Unit Operated Wells"

(s) "Unit Operated Wells" means all wells (including wells drilled for the production of Unitized Substances, wells drilled for the purpose of water disposal and wells drilled for the purpose of pressure maintenance operations or secondary recovery operations) in the possession of Unit Operator hereunder, whether acquired from a Working Interest Owner or drilled by Unit Operator pursuant to the terms hereof, but excluding Unit Facilities in and on the said wells;

"Unit Operator"

(t) "Unit Operator" means the person appointed to manage and conduct the operations hereunder who shall be a Working Interest Owner unless the Operating Committee unanimously otherwise agrees;

"Unitized Strata"

(u) "Unitized Strata" means the Lodgepole formation, (Souris Valley Beds) of the Mississippian age underlying the lands described in Part XXII hereof, as same as are shown on the electrical log of Rundle Cruickshank Daly #14-4-10-28 in Legal Subdivision Fourteen (14), of Section Four (4), Township Ten (10), Range Twenty-Eight (28), West of the First (1st) Meridian in the Province of Manitoba between the interval 2386 feet and 2696 feet as measured from the Kelly bushing. The Souris Valley beds consists of submembers sometimes known as the Upper Daly, Middle



Daly (First Crinoidal), Lower Daly (Main Crinoidal)  
Cruickshank Shale facies, Cruickshank Crinoidal facies,  
Cromer Shale facies and Basal Limestone facies.

"Unitized  
Substnaces"

(v) "Unitized Substances" means the Oil and Gas that  
are within or are produced from the Unitized Strata;

"Well"

(w) "Well" means any well within the Unit Area which  
has been drilled to the Virden Souris Valley Beds  
of the Lodgepole Formation of the Mississippian Age  
for the production of Oil and Gas which at some time  
since being drilled has produced a minimum of one (1)  
barrel of Oil per day for at least one month's  
duration;

"Working Interest  
Owners" (x)

"Working Interest Owner" means a person who has the  
right, in whole or in part, to search for and produce  
and to appropriate the Unitized Substances, either  
for himself or for others having an interest therein,  
or for both, whether such right is derived from own-  
ership in fee simple or from a lease.

## PART II

### UNIT OPERATION

Unit Name

2.01 The name of the Unit shall be "Daly Unit No. 1"  
(hereinafter sometimes call the "Unit").

Operation as  
A Unit

2.02 On and after the Effective date, the respective  
interests of the Working Interest Owners and Royalty  
Owners, in and to the Unit Area, the Unitized Strata  
and the Unitized Substances, shall be unitized for the  
purpose of carrying out in the Unit Area and the



Unitized Strata any and all operations which may at any time and from time to time be deemed necessary or advisable by the Operating Committee for the purpose of preventing waste, obtaining ultimately the greatest possible recovery of the Unitized Substances and accomplishing the more efficient and more economical development and production of the Unitized Substances under prudent and proper operations and practices to the end that all operations for drilling and producing and all other operations in the Unitized Strata may be conducted without regard to the separate Leases or boundary lines of separate Tracts within the Unit Area and as though the Unitized Strata were covered by a single Lease subject to all the terms and conditions hereof.

Effect of Unit  
Operation

2.03 Without limiting its general effect, the unitization shall have the following specific effects:

Amendment of  
Leases

(a) On and after the Effective Date, the terms and provisions of the Leases are hereby amended to the extent necessary to make them conform to the terms and provisions hereof and, the Leases as amended, shall continue in full force and effect.

Continuation  
of Leases

(b) Any operations conducted with respect to the Unitized Strata, or production of Unitized Substances shall, except for the purposes of determining payments to Royalty Owners, be considered as operations upon or production from each Tract and such operations or production shall operate to continue in force and effect each Lease



as if such operations had been conducted and a Well had been drilled on and was producing from each Spacing Unit or portion thereof covered by each Lease.

Authority for  
Operations

2.04 The Working Interest Owners are hereby collectively authorized to develop and operate the Unitized Strata without regard to the separate Leases or the boundary lines of separate Tracts within the Unit Area, and to drill, use and produce such wells as the Operating Committee deems advantageous to operations on or production from the Unitized Strata, to abandon such wells as they deem unnecessary and in general to do all other things that the Operating Committee deems advisable for the purpose of accomplishing the most efficient and most economical development and operation of the Unitized Strata. Without limiting the generality of the foregoing, the Working Interest Owners are hereby authorized to inject Oil, Gas, water, or other substances, or any combination of them into the Unitized Strata and from time to time to convert and use as injection wells any well now drilled or hereafter drilled into the Unitized Strata.

Royalty Owners  
Not Obligated to  
Pay Unitization  
Costs etc.

2.05 Nothing contained in this Plan shall be construed as imposing upon any Royalty Owner any obligation to pay for any of the expenses of the unitization herein provided for or for any of the costs and expenses incurred in operations hereunder unless



such Royalty Owner is obligated to pay for the same by the terms of any Lease.

### PART III

#### TRACT PARTICIPATION

Determination  
of Tract  
Participation

- 3.01 The Tract Participation of each Tract is shown in part XXIV hereof and was determined with respect to all Tracts by the following factors;
- (a) A current production factor;  
such factor is the percentage calculated by dividing the 1969 oil production of such tract by the oil production for all tracts during the same interval and multiplying by forty one hundredths (40/100) and;
  - (b) An average monthly oil production factor penalized for water production, such a factor is arrived at by:
    - (i) determining average monthly Oil production of the Tract by dividing its cumulative oil production to December 31, 1969 by the number of calendar months since the Well on such Tract first went on production, provided that the first calendar month shall not be counted as such unless the Oil production from the well on any such Tract for that calendar month was greater than one-half (1/2) of the Oil production from such well for the next succeeding month;
    - (ii) Calculating a fractional water cut for the Tract by dividing the water production for the interval set out in paragraph (a) hereof by the sum



of its water and oil production for the same period;

PROVIDED THAT, with respect to these tracts which

did not produce during the interval referred to, the

fractional water cut shall be calculated by dividing

the water production for each such Tract during the

consecutive twelve month period that ends with the last

recorded production by the sum of such Tracts water

and oil production for the same period;

(iii) Multiplying the average monthly Oil production

for the tract obtained in (i) by the fraction one

minus the water cut appropriate to the Tract as

determined in (ii);

(iv) Dividing the product obtained in (iii) for

the Tract by the sum of all the products obtained in

(iii) for all the Tracts and multiplying by sixty-

one hundredths (60/100).

3.02 The total of the Tract Participations for all Tracts shall at all times equal one hundred (100%) percent.

3.03 This Part III is explanatory and the Tract Participations shown in Part XXIV shall be deemed to be correctly made in accordance with this Part III.

#### PART IV

##### ALLOCATION OF PRODUCTION

Allocation  
to Tracts

4.01 All Unitized Substances produced and saved shall



be apportioned among and allocated to the several Tracts in accordance with their respective Tract Participations. The amount of Unitized Substances so allocated to each Tract, and only that amount, regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the Well or Wells, if any, on such Tract, shall for all intents, uses and purposes, be deemed to have been produced from such Tract.

**Delivery of  
Unitized  
Substances  
in Kind**

4.02 The Working Interest Owners entitled to the Unitized Substances allocated to each Tract shall have the right to take such Unitized Substances in kind. Such Working Interest Owners shall have the right to construct, maintain and operate within the Unit Area all necessary facilities for taking production in kind provided the same are so constructed, maintained and operated as not to interfere with unit operations. Any extra expenditures incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the Working Interest Owner receiving the same.

**Distribution  
Within Tracts**

4.03 The Unitized Substances allocated to each Tract shall be distributed by the Working Interest Owners of such Tract among, or accounted for, to the persons entitled to share in the production from such Tract in the manner provided for in the Lease covering such Tract. The Royalty Owners shall accept royalty calculated on the allocated pro-



Failure to  
Take in Kind

production in full settlement, satisfaction and discharge of the obligation of any Working Interest Owner to make royalty payments on Unitized Substances under their respective Leases.

4.04 To the extent that any Working Interest Owner entitled to take and receive in kind any portion of the Unitized Substances shall fail to take or otherwise adequately dispose of the same currently as and when produced, then so long as such conditions continue, Unit Operator, as agent and for the account and at the expense of such Working Interest Owner may, and upon the instructions of the Operating Committee shall, in order to avoid curtailing the operation of the Unitized Strata, dispose of such production and the account of such Working Interest Owner shall be credited therewith as having received the same. The proceeds of the sale of the Unitized Substances so disposed of by Unit Operator shall be paid to the Working Interest Owner entitled thereto. The authority of the Unit Operator to enter into contracts for the sale of such production shall be limited to contracts that are limited in time to the minimum needs of the industry and in any event not exceeding one (1) year. Any Working Interest Owner not taking in kind may revoke at will Unit Operator's authority hereunder by notice in writing to Unit Operator and by taking in kind all of its share of production not previously contracted for sale.



Over Production

4.05

- (a) A proper and timely gauge shall be made of all tanks delivered to Unit Operator to ascertain the amount of Oil in such tanks as of the Effective Date. If any wells producing into such tanks have made more than their cumulative production allowable as set by the Conservation Board, the amount of such over-production of Oil then in such tanks which has been produced from the Souris Valley Beds members of the Lodgepole Formation of the Mississippian Age shall be deemed to be Unitized Substances. Except as aforesaid the Oil in such tanks shall remain and be at the risk of and be the property of the Working Interest Owner owning the same prior to the Effective Date, and upon request shall be delivered in kind to such Working Interest Owner, or, in the absence of such request, shall be sold by Unit Operator for the credit of and on behalf of such Working Interest Owner at not less than the prevailing wellhead price, and the proceeds thereof shall be paid by the purchaser directly to such Working Interest Owner.
- (b) If any production in excess of the cumulative production allowable of any Tract as of the Effective Date was sold prior to the Effective Date, the Unit Operator during the month or months next following the Effective Date shall withhold from the Unitized Substances which, except for the provisions of this subparagraph, would have been



allocated to a Tract or Tracts from which the Oil sold was produced in excess of the cumulative production allowable, an amount equal to such excess production on the Effective Date, and the amount or amounts so withheld shall be reallocated to all of the Tracts in proportion to their respective Tract Participations. Such withholding and reallocation shall be continued until the full amount of any such excess production in respect to any Tract or Tracts has been withheld and reallocated.

(c) No allowance shall be made to any interested person for any under-production of Oil from its Wells prior to the Effective Date.

**Royalty on Outside Substances**

4.06 If any Outside Substance is injected into the Unitized Strata, any like substance contained in Unitized Substances subsequently produced and sold or used for other than operations hereunder, shall be deemed to be an Outside Substance until the volume of such Outside Substance injected into the Unitized Strata is recovered. No payments shall be due or payable to Royalty Owners on any substance which is deemed to be an Outside Substance.

**Use of Unitized Substances**

4.07 The Working Interest Owners may use as much of the Unitized Substances (excluding Oil) as they deem necessary for the operation and development of the Unitized Strata, including, but not limited to, their injection into the Unitized Strata and in the operation of any plant or plants handling Unitized Substances. No royalty or other payment shall be



payable in respect thereto or in respect to Unitized Substances unavoidably lost. Such Unitized Substances so used, injected or lost shall be excluded in allocating production.

PART V.

ORGANIZATION OF THE  
OPERATING COMMITTEE

Operating  
Committee

5.01 There is hereby created an Operating Committee which shall be composed of one representative of each Working Interest Owner designated as hereinafter provided.

Representatives  
on the Operating  
Committee

5.02 Each Working Interest Owner shall, at least ten (10) days prior to the Effective Date, designate by notice in writing to the Chairman of the Conservation Board the name and address of its representative on the Operating Committee and shall further designate an alternate representative, or alternate representatives on the Operating Committee who, in the absence of the designated representative, shall have the rights and powers of such representative. In the event any Working Interest Owner fails to designate a representative on the Operating Committee as aforesaid the Chairman of the Conservation Board shall designate the Working Interest Owner himself as such representative or in the case of a Working Interest Owner that is not a natural person shall designate any member or officer of such Working Interest Owner as such representative.

Organization  
Meeting of the  
Operating  
Committee

5.03  
(a) The Chairman of the Conservation Board shall, at least five (5) days prior to the Effective Date, select the representative of a Working Interest Owner to act as



chairman pro tem of the organization meeting of the Operating Committee and shall forthwith forward the name and address of each Working Interest Owner's representative, or alternate representative, or alternate representatives, to the person so selected.

(b) The Chairman pro tem of the Operating Committee shall call and hold an organization meeting of the Operating Committee prior to the Effective Date.

(c) The Operating Committee, at such organization meeting shall appoint the Unit Operator, and the chairman pro tem of such organization meeting shall promptly notify the Chairman of the Conservation Board of such appointment and thereafter the representative of Unit Operator shall act as Chairman of each meeting of the Operating Committee without in any manner restricting or limiting his rights to represent Unit Operator as a Working Interest Owner.

**Change of  
Representative**

5.04 Each Working Interest Owner may change its designated representative, or designated alternate representative, or alternate representatives, by notice in writing to the Chairman of the Operating Committee and the Chairman of the Conservation Board. Nothing herein shall preclude two (2) or more Working Interest Owners from designating one (1) member on the Operating Committee to represent them and to vote and act for them thereon and such member shall, if so required by his principals cast his vote for each principal separately.

**Voting Interest**

5.05 Each member of the Operating Committee, in voting on all matters coming before the Operating Committee,



shall have a voting interest equal to the Participating Interest of the Working Interest Owner represented.

#### Meetings

5.06 The Operating Committee shall meet on the call of Unit Operator, or at the request of a representative of any Working Interest Owner. Unit Operator shall notify all members of the Operating Committee in writing at least ten (10) days in advance of any meeting of the time and place of the proposed meeting, and of the specific matters affecting unit operations which will be presented, discussed and voted upon at such meeting, and no other matters shall be voted upon at such meeting unless each Working Interest Owner is represented thereat and agrees that such further matters may be voted upon.

#### Voting by Telegram, etc.

5.07 Any member of the Operating Committee not represented at any particular meeting may vote, by letter or telegram addressed to and received by the Unit Operator prior to the hour fixed for the meeting, on any question presented thereat of which it has been notified. Members so voting shall be considered present as regards such matters on which they so vote, but not for other purposes.

#### Polls

5.08 Any question within the province of the Operating Committee to decide may be determined in the absence of a formal meeting by a poll of all of the individual representatives. If such poll is taken it shall be conducted by the Unit Operator, either by letter



or telegram, and he shall keep a written record of the results and report the results thereof to the Working Interest Owners within a reasonable time, either by notice in writing to each of them, or by report to them at the next meeting. The voting interests necessary to act upon and determine matters or questions submitted by letter or telegram shall be the same as otherwise herein provided for. Such vote shall be made within not less than fifteen (15) days of the giving of such notice; PROVIDED, THAT, any failure to vote within the stipulated time, shall be considered as an affirmative vote.

Minutes of  
Proceedings

5.09 Unit Operator shall keep minutes of the proceedings of each meeting of the Operating Committee and a copy thereof shall be forwarded to each member thereof. Such minutes need not be a verbatim record of all the proceedings, but shall show the names of the representatives present at the meeting, all motions and resolutions offered or acted upon, together with the results of such action and such other formal action as may be taken by the Operating Committee, and shall include a record of all matters voted on by letter or telegram ballot since the date of the last meeting.

PART VI

POWERS AND DUTIES OF  
THE OPERATING COMMITTEE

Voting

6.01 The Working Interest Owners acting through the Operating Committee and Unit Operator shall carry out the purposes of this Plan and shall determine and decide



all matters by concurring vote of members of the Operating Committee representing at least two (2) Working Interest Owners owning at least seventy-five (75%) percent of the Participating Interests and such vote shall be binding on all Working Interest Owners; PROVIDED, HOWEVER, that any abstention or other failure to vote shall be considered as an affirmative vote.

Quorum

6.02 At any meeting of the Operating Committee a quorum shall consist of the representatives personally present of not less than two (2) of the Working Interest Owners having, in the aggregate, seventy-five (75%) percent or more of the total Participating Interest.

Rights Granted  
the Operating  
Committee

6.03 All rights, powers, privileges and duties hereunder not specifically delegated to Unit Operator or reserved to the individual Working Interest Owners are hereby granted collectively to the Operating Committee. Without limiting the generality of the foregoing, the following rights and powers are granted to the Operating Committee:



- (a) To instruct Unit Operator concerning all unit operations ~~for the production of Unitized Substances;~~
- (b) To approve or disapprove the drilling of additional wells to the Unitized Strata either for the production of water, Unitized Substances or for injection purposes;
- (c) Subject to the rights of Unit Operator pursuant to Section 7.04 hereof, to approve or disapprove in whole or in part each and every estimate and item of expenditures submitted by Unit Operator, except those that were included in a previous approved budget;
- (d) To appoint an Audit Committee to represent all Working Interest Owners, to arrange proper annual audits of the accounts of Unit Operator with respect to the operation and development of the Unit Area, approve or disapprove the same and make available to the Working Interest Owners the results of such audit;
- (e) To fill any vacancy occurring in the position of Unit Operator; PROVIDED, THAT, no Unit Operator shall vote to succeed itself in the position of Unit Operator;
- (f) To represent, or determine who shall represent, the Working Interest Owners before any governmental body having jurisdiction with respect to matters pertaining to unit operations; PROVIDED, HOWEVER, that this shall never be construed as authorization to speak on behalf of any Working Interest Owner dissenting from the views to be expressed or to prevent any Working Interest Owner from presenting its own view on such matters;



- (g) To appoint and grant powers to such committees as they may deem proper and requisite;
- (h) To approve an annual budget as in Section 8.04 hereof provided;
- (i) To approve the method of disposal of surplus Major Material;
- (j) To amend Part XXVI hereof from time to time whether in whole or in part; PROVIDED, THAT, no amendment increasing the charges to be made by Unit Operator under Section 26.07 (k) hereof shall become effective until the approval of the Conservation Board to such increase in charges has been obtained.

#### PART VII

#### POWERS AND DUTIES OF UNIT OPERATOR AND CHANGE OF UNIT OPERATOR

#### Powers and Duties

- 7.01 Unit Operator shall, subject to the provisions hereof and orders given or imposed by the Operating Committee as herein provided;
- (a) Have exclusive charge, management and control of the development, operation and production of the Unitized Strata, and shall have the right and duty to conduct all operations in connection therewith including, but not limited to the following: the drilling, operating, maintaining, repairing, suspension and abandonment of all Unit Operated Wells whether for production, injection or water supply, including wells drilled after the date hereof and wells taken over under the provisions hereof; and the installation, construction and operation of



Unit Facilities of whatsoever character necessary or convenient for the conduct of operations hereunder;

- (b) Conduct operations in a good and workmanlike manner and in the absence of specific instructions from the Operating Committee shall have the right and duty to act in accordance with what a prudent operator would do under the same or similar circumstances;
- (c) Keep true and correct books, accounts and records of its operations hereunder, and shall furnish to each Working Interest Owner, on or before the fifteenth (15th) day of each month, a statement of the amount of production from the Unitized Strata, sales and inventory during the preceding calendar month;
- (d) Keep the lands and leases used in connection with unit operations free from liens and encumbrances occasioned by its operations, excepting the lien of Unit Operator granted hereunder and excepting liens in connection with which there is a bona fide dispute;
- (e) Freely consult with the Operating Committee and keep it advised of all matters arising in connection with unit operations, which Unit Operator, in the exercise of its best judgment, considers important. Unit Operator shall furnish to the members of the Operating Committee such reports in connection with unit operations as the Operating Committee may direct.

**Hiring of  
Employees**

- 7.02 Unit Operator shall fix the number of, hire and dismiss and pay and supervise all employees required for the operations hereunder and shall determine the



hours of labour and compensation to be paid to such employees. Such employees shall be the employees solely of Unit Operator.

**Letting of  
Contracts**

7.03 Unit Operator shall let all contracts for the drilling, reworking, deepening, plugging back of, or other operations in connection with any Unit Operated Well on a competitive basis at the usual rates and terms prevailing in the area; PROVIDED, HOWEVER, that Unit Operator shall have the right to use its own equipment in carrying out such drilling, reworking, deepening, plugging back of, or other operations in connection with any Unit Operated Well;

**Unit  
Operator's  
Authority for  
Expenditures**

7.04 In addition to any expenditures which Unit Operator is specifically authorized to make, Unit Operator is authorized to make an expenditure not in excess of Five Thousand (\$5,000.00) Dollars in respect to any single undertaking without the approval of the Operating Committee. Unit Operator, may, without approval of the Operating Committee, take such action and make such expenditures for the Common Account as it may deem necessary in order to protect life or property. Within ten (10) days after taking any such action or making such expenditures, Unit Operator shall advise the Operating Committee of such action and expenditures.

**Unit  
Operator to  
Have Rights  
of Working  
Interest Owner**

7.05 Unit Operator shall continue to have all the rights, duties and liabilities of a Working Interest Owner in addition to its rights, duties and liabilities as Unit Operator as long as it continues to own a



**Change of  
Operator**

working interest in the Unit Area.

**7.06 Unit Operator:**

- (a) Shall forthwith cease to act as Unit Operator in the event it should become bankrupt or insolvent, or make any general assignment for the benefit of creditors;
- (b) May be removed as Unit Operator by an affirmative vote of members of the Operating Committee representing Working Interest Owners, other than Unit Operator, who own at least eighty-five (85%) percent of the remaining Participating Interests;
- (c) May resign at any time upon one hundred and eighty (180) days' written notice to the Operating Committee and to the Board.

**Release from  
Duties**

**7.07** In the event of a removal or resignation of Unit Operator pursuant to paragraphs (b) or (c) of Section 7.06, Unit Operator shall be released from its duties and obligations hereunder at the hour of seven o'clock in the forenoon, Central Standard Time on the first day of the calendar month following the expiration of one hundred and eighty (180) days from the date of delivery of notice of such removal or resignation, or such earlier date as a successor Unit Operator shall have been designated by the Operating Committee, and shall have assumed the duties of Unit Operator.

**Surrender of  
Operating  
Rights**

**7.08** At the effective time of the release from its duties of any Unit Operator, or upon the selection of a successor Unit Operator, the preceding Unit



Operator shall surrender possession of, and delivery to, the successor Unit Operator the exclusive charge, management and control of the development, operation and production of the Unitized Strata and all Unit Operated Wells, Unit Facilities, common funds in the possession of Unit Operator and all production, if any, which has not theretofore been delivered in kind, or sold, copies of all pertinent books of account and records of the unit operations and all documents, agreements and other papers relating thereto. Upon the transfer and delivery thereof, the preceding Unit Operator shall be released and discharged from and the successor Unit Operator shall assume all duties and obligations of Unit Operator hereunder except the unsatisfied duties and obligations of the preceding Unit Operator accrued prior to the effective time of the change of Unit Operator and for which the preceding Unit Operator shall, notwithstanding its release or discharge, continue to remain liable.

**Selection of  
Successor Unit  
Operator**

7.09 Forthwith upon the removal or resignation of Unit Operator, or at any time when there is no Unit Operator, the Operating Committee shall select a successor Unit Operator to take office contemporaneously with the effective time of the release from its duties of Unit Operator.

**Audit**

7.10 The Operating Committee shall cause an audit of the accounts of the preceding Unit Operator with respect to the operation and development of the Unit



Area to be made forthwith to the effective time of the appointment of a successor Unit Operator.

PART VIII

EXPENDITURES AND LIABILITIES

Common Account

8.01 Unit Operator shall set up a Common Account on behalf of the Working Interest Owners for all costs and expenses incurred by it and all monies received by it in connection with the development and operation of the Unit and all of the said costs and expenses shall be charged, and all of the said monies shall be credited to the Working Interest Owners in accordance with the provisions hereof.

Charges to  
Common Account

8.02 Subject to the other provisions hereof, all costs, expenses and liabilities, whether contractual or tortious, incurred by Unit Operator on account of the operations hereunder shall be for the Common Account and shall be borne by the Working Interest Owners in proportion to their respective Participating Interests.

Unit Operator  
to Make Initial  
Payment

8.03 Unit Operator shall initially pay and discharge all costs and expenses incurred in the operations hereunder. Unit Operator shall bill each Working Interest Owner for its share of all costs and expenses and each Working Interest Owner shall reimburse Unit Operator for its share of such costs and expenses in accordance with the provisions of Part XXVI hereof.. Each Working Interest Owner shall pay all such bills within thirty (30) days after receipt thereof, and should any Working Interest Owner fail to pay its



proportionate share of such costs and expenses within the said thirty (30) day period, the same shall, at Unit Operator's discretion bear interest at the rate of six (6) percent per annum from the end of the said period until paid, which interest shall be for Unit Operator's sole account, and Unit Operator shall have the right at its option at any time thereafter, such default continuing, to enforce the lien hereinafter provided for upon the respective interests of such Working Interest Owner.

Annual Budget,  
etc.

8.04 As soon as practicable after the Effective Date hereof, Unit Operator shall prepare a budget of estimated costs and expenses for the period from the Effective Date to the 31st day of December A.D. 1971 and on or before the first day of each November after the Effective Date shall prepare a budget of estimated costs and expenses for the ensuing calendar year. Such budget shall set forth the estimated costs and expenses by quarterly periods. Budgets so prepared shall be subject to adjustment and correction by the Working Interest Owners from time to time whenever it shall appear that an adjustment or correction is proper; PROVIDED, HOWEVER, that is Unit Operator's total expenditures for the year are within ten (10) percent of those costs and expenses approved in any budget, such expenditures shall be considered as having been approved. A copy of each such budget and adjusted budget shall be promptly furnished each Working Interest Owner.

Approval of the budget by the Working Interest



Advances to  
Unit Operator  
- Capital Fund

Owners shall constitute authorization to the Unit Operator to make the expenditures therein detailed.

8.05 Unit Operator, in lieu of advancing monies for the capital expenditures of unit operations may, at its election, require the Working Interest Owners to advance their respective proportionate share of such capital expenditures by submitting to each Working Interest Owner on or before the last day of each calendar month an estimate of such capital expenditures for the succeeding calendar month based on an approved budget of estimated costs and expenses or authority for expenditure together with a request for payment of such proportionate share. Within fifteen (15) days from the receipt of such request each Working Interest Owner shall pay its proportionate share to Unit Operator. If any Working Interest Owner defaults in respect to such request for payment, the same shall, at Unit Operator's discretion, bear interest at the rate of six (6%) percent per annum from the end of the said fifteen (15) day period until paid, which interest shall be for the Unit Operator's sole account. The accounts between the Working Interest Owners shall be adjusted to actual costs by Unit Operator in the month's statement following the month covered by the estimate.

Advances to  
Unit Operator  
- Operating Fund

8.06 Unit Operator, in lieu of advancing monies for the costs and expenses incurred in the maintenance and operation of the Unit Area may, at its election, require the Working Interest Owners to advance their



respective proportionate share of such costs and expenses by submitting to each Working Interest Owner on or before the last day of any calendar month a request for an operating fund equal to one-twelfth (1/12th) of the expenses as approved in the annual budget of estimated expenditures for the unit operation. Within thirty (30) days from the receipt of such request, each Working Interest Owner shall pay its proportionate share to Unit Operator. If any Working Interest Owner defaults in respect of such request for an operating fund, the same shall, at Unit Operator's discretion, bear interest at the rate of six (6%) percent per annum from the end of the said thirty (30) day period until paid, which interest shall be for the Unit Operator's sole account. After the establishment of this operating fund, which will be separate from that required in Section 8.05 hereof, and which shall at no time exceed one (1) month's estimated expenditures, each Working Interest Owner shall remit to the Unit Operator its proportionate share of each month's actual billing within thirty (30) days of receipt, thus maintaining the operating fund intact. The adequacy of the fund in relation to current expenses will be reviewed annually or more often upon request by a Working Interest Owner and adjustments made as required.

Unit Operator's Lien

8.07 Unit Operator shall, subject to sub-section (4) (k) (i) (A) and (B) of Section 7:6 of "The Mines Act",



have a lien upon the interest of each Working Interest Owner in any unsold Unitized Substances, upon the proceeds of the sale of any Unitized Substances, and upon the interest of each Working Interest Owner in the Unit Facilities and upon the title of each Working Interest Owner to and in the Unit Area and the Unitized Strata. Such lien shall have priority over any lien by any Working Interest Owner.

In the event of the failure of any Working Interest Owner to pay its share of the costs and expenses incurred hereunder when due, as provided herein, Unit Operator shall be entitled at any time, and from time to time, to collect and receive the proceeds of the sale of all or any part of such Working Interest Owner's share of the Unitized Substances, including the proceeds from previously executed sale contracts made by or for such defaulting Working Interest Owner. Unit Operator shall apply all such sums so collected against the defaulting Working Interest Owner's unpaid bills, the excess of such proceeds over the unpaid bills, if any, to be paid to the Working Interest Owner entitled thereto and all sums so applied shall be considered as received from such defaulting Working Interest Owner within the meaning of the provisions contained in Section 8.08 hereof relating to contributions by the other Working Interest Owners to Unit Operator in the case of default in payment when due. Unit Operator may likewise take any other credit due any



such defaulting Working Interest Owner pursuant hereto and apply the same against amounts due from such Working Interest Owner. The rights granted to Unit Operator in this Section shall not be construed as exclusive remedies but shall be in addition to all rights, privileges and remedies afforded Unit Operator by other provisions hereof and by law. Service of a true copy of this Plan shall constitute written authorization on the part of such defaulting Working Interest Owner for such purchaser to pay the proceeds from such sale to Unit Operator during such default, but such purchaser shall not be considered as having been notified of such authorization prior to the time of such service. Books and records kept by Unit Operator with respect to operations hereunder shall constitute conclusive proof of the existence or non-existence of any such default insofar as the right of Unit Operator to collect proceeds from the sale of all or any part of the defaulting Working Interest Owner's share of the Unitized Substances is concerned, subject, however, to all rights of inspection, verification and audit provided herein.

**Contributions  
to Unit Operator  
Upon Failure to  
Collect Certain  
Debts**

8.08 If Unit Operator shall not have received full reimbursement for any indebtedness that may become due and payable by any Working Interest Owner to Unit Operator after reasonable efforts by Unit Operator to obtain such reimbursement, each of the Working Interest Owners, upon the request of Unit Operator,



shall, unless contrary to any then existing law, contribute to the reimbursement of Unit Operator the portion of any such unsatisfied amount equal to the portion that such Working Interest Owner's Participating Interest bears to the total Participating Interests of all of the Working Interest Owners exclusive of the Participating Interest of the defaulting Working Interest Owner; and thereupon, each Working Interest Owner so contributing shall be proportionately subrogated to Unit Operator's rights and lien under Section 8.07 hereof.

Pre-unit  
Expense

8.09 Each Working Interest Owner shall pay a part of the reasonable cost, as approved by the Operating Committee, of unitizing the Unit Area in proportion to its Participating Interest hereunder.

Commingling  
of Funds

8.10 No funds received by Unit Operator hereunder need be segregated by Unit Operator or maintained by it as a joint fund but may be commingled with its own funds.

#### PART IX

#### RESPONSIBILITY FOR PAYMENTS

9.01 Each Working Interest Owner shall pay or be responsible for the payment of and shall indemnify all other Working Interest Owners, including Unit Operator, against any liability for any Lease rentals, taxes (excepting any taxes assessed on Unit Facilities which shall be paid by Unit Operator and charged to the Common Account), royalties, overriding royalties, oil payments, net profit contracts and all payments



out of, or burdens on, the Lease or Leases and Tracts contributed by it and received into the Unit Area.

PART X

DELIVERY OF WELLS AND EQUIPMENT  
INVESTMENT ACCOUNT

Delivery of  
Wells

10.01 Each Working Interest Owner shall, as of the Effective Date, contribute to the Working Interest Owners, acting through Unit Operator, the exclusive use for all purposes of all of its Salt Water Disposal Wells shown listed in Part XXI hereof which, in the opinion of the Operating Committee, are in bona fide use as of the Effective Date and all wells, both active and inactive, that it has in the Unit Area, together with all information, or true copies thereof, that it has obtained in connection with the drilling, testing, completing and operating of said contributed wells, such as drilling logs, electrical logs, records of coring, testing and special work of every nature, laboratory analyses, records of the amount of production obtained and all other information pertinent to the said wells and Leases of the Working Interest Owners. Each Working Interest Owner shall also contribute to the Working Interest Owners, acting through Unit Operator, without compensation, the non-exclusive use of roads, dikes, ditches, fire walls, pits, and fences it holds in connection with its operations in the Unit Area.



Warranty

10.02 Unit Operator shall, within sixty (60) days of the delivery of any well, or wellsite and operating equipment, carry out such tests as may be necessary to determine its mechanical condition as of the Effective Date and, in the event any such well or wellsite and operating equipment is in sound mechanical condition it shall be accepted by Unit Operator and thereupon become a Unit Operated Well, or Unit Facility. In the event that any such well or wellsite and operating equipment is not in sound mechanical condition as determined by the Operating Committee, the Working Interest Owner who contributed such well or wellsite and operating equipment shall, within thirty (30) days after being requested to do so by Unit Operator as instructed by the Operating Committee, install the equipment necessary to place such well or wellsite and operating equipment in sound mechanical condition or pay to Unit Operator, for the credit of the Common Account, in cash, the cost of purchasing and/or installing such equipment.

Within sixty (60) days of the delivery of any roads, dikes, ditches, fire walls, pits, and fences Unit Operator shall determine which of them, if any, require additional expenses in order to permit efficient operation or to comply with government regulations or to honour surface leases. Unit Operator shall prepare an estimate of expenditure and after approval of the Operating Committee, the Working Interest Owner who contributed the properties at



fault shall perform the work at its own cost and expense, or if such Working Interest Owner elects not to perform the work it shall be done by Unit Operator and charged to the Working Interest Owner at fault.

**Controllable  
Material**

10.03 As of the Effective Date all wellsite and operating equipment and salt water disposal facilities in, on and serving the Unit Area used in the normal operation of the Unit Operated Wells as required by the Operating Committee shall be delivered to and taken over separate and apart from the unitization of the working interests and production affected herein and shall become Unit Facilities.

Wellsite and operating equipment shall include by way of example, "Controllable Material" as herein- after defined, but shall not include warehouses, warehouse stocks, lease houses, camps and office buildings, automobiles and other service equipment which shall remain the separate property of the several owners thereof.

For the purposes of this Part X "Controllable Material" shall be all material from time to time classified as such by the Operating Committee, but shall exclude surface and production casing, casing bowl and casing hanger and flow lines.



Appointment of  
Inventory  
Committee

10.04 The Operating Committee shall appoint an Inventory Committee for the purpose of making an inventory of the Controllable Material taken over by Unit Operator. Each Working Interest Owner, upon request by the Inventory Committee, shall submit to the Inventory Committee promptly a complete inventory in writing of all said Working Interest Owner's Controllable Material so delivered to Unit Operator and a description of the condition of each item at the time of such delivery. In the event a Working Interest Owner has failed to supply such inventory as aforesaid, the Inventory Committee shall proceed to inventory such Working Interest Owner's Controllable Material and shall supply such Working Interest Owner with a copy thereof which shall be binding upon such Working Interest Owner unless it protests or questions such inventory within fifteen (15) days of the receipt thereof. Said Inventory Committee shall take promptly an inventory of all said Controllable Material and check the same against the aforesaid inventories furnished by the Working Interest Owners. Such inventories shall then be priced at current new price, as defined in Part XXVI, by the Inventory Committee and submitted to the Operating Committee, who will determine the percentage of current new price which should be attributable to such Controllable Material. Copies of these priced inventories will then be furnished to all Working Interest Owners for their approval.



Working  
Interest  
Owner's Initial  
Share in Unit  
Facilities

10.05 Upon approval of the priced inventories report by the Operating Committee, each Working Interest Owner shall have, subject to Section 10.07 hereof, an initial share in the Unit Facilities which is equal to the proportion (expressed as a percentage) that the value of the Controllable Material delivered by it to Unit Operator is to the total value of all Controllable Material delivered by all of the Working Interest Owners to Unit Operator.

Investment  
Account

- 10.06 Unit Operator shall set up an Investment Account for Unit Facilities which shall be calculated at the end of each calendar year and shall be;
- (a) The total value of all Controllable Material delivered by all of the Working Interest Owners to Unit Operator pursuant to this Part X; plus
  - (b) The total value of all Controllable Material subsequently acquired for the Unit, the cost of which shall be borne by the Working Interest Owners in accordance with their respective Participating Interests; less
  - (c) The total value of all Controllable Material subsequently sold, junked or otherwise disposed of.

For the purposes of calculating the Investment Account, Controllable Material which has been sold, junked or otherwise disposed of shall be given the same value as it was given when it was originally delivered to or acquired by Unit Operator. At the end of any calendar year the Investment Account



shall be the net of paragraphs (a) plus (b) less (c) of this Section 10.06.

Working  
Interest  
Owner's Share  
in Investment  
Account

10.07 Each Working Interest Owner shall have a net credit in the Investment Account which shall be the value of all Controllable Material delivered by it to Unit Operator, plus its share of the value of all Controllable Material subsequently acquired for the Unit, less its share of the value of Controllable Material sold, junked or otherwise disposed of from the Unit. The relationship, expressed as a percentage, between each Working Interest Owner's net credit and the sum of the net credits of all Working Interest Owners shall be its percentage share of the Investment Account. Such percentage shall be carried to five decimal places and rounded to the nearest four decimal places and shall be calculated at the end of each calendar year.

Proceeds from  
Disposal of  
Unit Facilities

10.08 Notwithstanding the provisions of Part VIII hereof the proceeds from disposal of Unit Facilities whether Controllable Material or otherwise up to the end of the first calendar year shall be credited to each Working Interest Owner in accordance with its respective initial percentage share established under Section 10.05 and, thereafter, such proceeds shall be credited to each of them in accordance with their respective percentage share calculated in accordance with Section 10.07.



PART XI

SURFACE RIGHTS

List of  
Easements, etc.

11.01 As soon as reasonably possible after the Effective Date, each Working Interest Owner shall submit to Unit Operator a list of all easements, rights-of-way, surface leases, rights-of-entry and other surface rights which it holds and which are required in connection with unit operations together with particulars thereof, including rentals payable, if any.

Unit Operator  
to Advise Surface  
Rights Required

11.02 Unit Operator shall, as soon as reasonably possible after the receipt of the aforesaid lists, advise each Working Interest Owner in writing which, if any, of its said surface rights will be required for the operations hereunder. Each Working Interest Owner shall, upon request in writing by the Unit Operator, assign such rights to Unit Operator. Any such assignment shall, unless contrary to any then existing law, contain a provision permitting the assignor of the same the use thereof for exploration and production operations for strata other than the Unitized Strata without interfering with unit operations.

Surrender of  
Surface Rights

11.03 Unit Operator may also from time to time surrender said surface rights, or any of them, that are no longer required for the operations hereunder, provided that Unit Operator shall have cleaned up the surface to the satisfaction of any governmental body having jurisdiction with respect thereto and;



PROVIDED, FURTHER, that Unit Operator shall give the Working Interest Owner who assigned the same sixty (60) day's notice of surrendering such surface rights and such Working Interest Owner may elect to receive from Unit Operator an assignment of such surface rights. Any surface rights not required for the operations hereunder may be held or disposed of by the Working Interest Owner holding the same in such manner as it may deem fit.

Surface  
Charges to  
Common Account

11.04 After the Effective Date hereof all costs of surface rights required for the operations hereunder and all liabilities accruing in connection therewith shall be for the Common Account.

Fee Simple

11.05 Where a Working Interest Owner holds in fee simple surface rights used in connection with the Unit or where a Working Interest Owner has made arrangements with the owner of any such surface rights for the use of them without cost to such Working Interest Owner, Unit Operator may use the same, provided that such Working Interest Owner shall be entitled to receive as rental therefor an amount commensurate with rentals paid for other surface rights of a like nature in the Unit Area.

Unit Operator  
May Acquire  
Additional  
Surface Rights

11.06 Unit Operator shall also have the right to acquire such additional surface rights as are necessary for the operations hereunder, and the expense thereof, including rentals, shall be charged to the Common Account.



Unit Operator may also, with approval of the Operating Committee, enter into an agreement with any Working Interest Owner for the right to share in the use of such Working Interest Owner's surface rights on a basis to be mutually agreed upon between them, and the cost thereof as so agreed shall be charged to the Common Account. Unit Operator may also, with the approval of the Operating Committee enter into agreements with any of the Working Interest Owners or other persons for the non-exclusive use and partial maintenance of any roadways, access road, or similar surface right and the cost or proceeds thereof shall be charged or credited to the Common Account.

## PART XII

### INDEMNITY

#### Liability for Loss of Title

12.01 In the event any Working Interest Owner does not have the right to develop and operate any Tract in which such Working Interest Owner claims to have a working interest insofar as such Tract comprises the Unitized Substances, any loss resulting therefrom shall be borne by the contributing Working Interest Owner and to that end, such Working Interest Owner shall indemnify and hold harmless Unit Operator and all other Working Interest Owners from any and all liability, loss, cost or damage sustained by them and resulting from the failure to have such right;



PROVIDED, HOWEVER, that to the extent that such liability, loss, cost or damage is based upon the value of the Unitized Substances produced from such Tract, such indemnity shall be limited to an amount equal to the value of that portion of Unitized Substances allocated hereunder to such Tract.

Maintenance  
of Leases

12.02 Each Working Interest Owner shall do all necessary acts and things and make all payments required in order to maintain the Lease or Leases covering the Tracts contributed hereto by it in full force and effect during the term hereof, excepting only obligations arising out of or accruing with respect to the Unitized Strata and not required to be performed by such Working Interest Owner; PROVIDED, HOWEVER, in the event any Working Interest Owner shall fail or refuse to do any act or thing or make any payment required as aforesaid, Unit Operator, on behalf of and for the Common Account, shall have the right to perform such act or make any such payment so required as aforesaid, and thereupon any monies expended by Unit Operator in connection therewith shall be charged to the account of such Working Interest Owner, and Unit Operator shall have the same rights and privileges with respect to enforcing the payment of such amounts owed by such Working Interest Owner as are given to Unit Operator with respect to any other amount owed by a Working Interest Owner to Unit Operator hereunder.



Liability for  
Loss of Title  
to Wellsite and  
Operating  
Equipment

12.03 Each Working Interest Owner shall be liable to each other Working Interest Owner, including Unit Operator for any and all liability, loss, cost or damage sustained by them and resulting from any claim or any cause of action arising in consequence of any failure or deficiency in such Working Interest Owner's title to any wellsite and operating equipment, or other facility taken over by Unit Operator, or in consequence of any action of such Working Interest Owner with respect thereto.

PART XIII

APPROVAL OF TITLES

Titles  
Committee

13.01 There shall be a Titles Committee appointed by the Operating Committee which shall examine the titles to all Tracts in the Unit Area. Each Working Interest Owner in the Unit Area shall, upon request, submit to the Titles Committee all other title data and information as may be requested by the Titles Committee affecting the title to its Tracts within the Unit Area. The Titles Committee shall in writing, and within a reasonable time, recommend to the Operating Committee the approval or disapproval of title documents submitted to them pursuant to this Section. Upon the acceptance of the recommendation of the Titles Committee by the Operating Committee, the title documents accepted



shall be deemed to have been approved by the Operating Committee; PROVIDED, THAT, no approval of title documents by the Operating Committee shall be construed as a warranty or certification of title in and to any portion of the Unit Area or the Unitized Substances.

PART XIV

DISPUTES

Disputes and  
Non-approved  
Titles

- 14.01 If there is now or should hereafter be any dispute involving the working interest in a Tract then the Working Interest Owner concerned shall immediately give written notice thereof to Unit Operator and upon the receipt of such written notice or in the event that the Operating Committee does not approve the title documents to any Tract as in Section 13.01 provided, Unit Operator shall:
- (a) sell the Unitized Substances allocated to the Tract in respect of which the title documents have not been approved by the Operating Committee, or in respect of which the dispute arises;
  - (b) pay out of the proceeds of the sale
    - (i) the portion of the costs and expenses allocated or apportioned to the Tract, and
    - (ii) the amount of money properly payable to the Royalty Owner of the Tract pursuant to the provisions of this Section and the Lease pertaining to the Tract (unless any such dispute involves the ownership of the royalty interest in the Tract) and such payment shall be deemed conclusively to be a payment by the person who is



subsequently declared to be the owner of the working interest in such Tract on a final determination of the dispute;

- (c) pay the balance of the proceeds to a trust company to be held by it until settlement has been reached by the persons interested therein or until a judge of Her Majesty's Court of Queen's Bench for Manitoba has made an order with respect thereto.

In the event that any such dispute results in a change of ownership in a working interest in a Tract such change shall not retroactively affect any vote taken pursuant to the terms of Part VI hereof.

#### PART XV

#### FILING

- 15.01 Unit Operator shall file this Plan with the Department of Mines and Natural Resources for the Province of Manitoba and with the appropriate Land Titles Office for the Province of Manitoba in accordance with the provisions of "The Mines Act".

#### PART XVI

#### TRANSFER OF INTEREST

Plan Binding  
on Successors

- 16.01 This Plan shall be binding upon every owner of any lands, Leases and interests in minerals covered hereby who acquires the same regardless of the manner in which the same shall have been acquired.

Assignments,  
etc. Subject to  
Terms of Plan

- 16.02 Any disposition of any interest owned by any Working Interest Owner in any land or part thereof in the Unit Area shall be made expressly subject to all the terms and provisions hereof. Such disposition of any interest whether expressly so provided or not, shall



operate to impose upon the person or persons acquiring such interest its or their proportionate part of all costs and expenses and other obligations, if any, chargeable hereunder to the interest affected by such disposition, and shall likewise operate to give and grant to the person or persons acquiring such interest its or their proportionate part of all Unitized Substances and other benefits which may accrue thereto under the provisions hereof.

When Change  
of Ownership  
Binding

16.03 No change in ownership of any interest or rights hereunder (by whatever means accomplished) of any Working Interest Owner shall be binding on Unit Operator or the other Working Interest Owners until Unit Operator has been furnished with notice of such change by the person claiming the benefit thereof, and such change shall become effective at seven o'clock in the forenoon, Central Standard Time on the first day of the month following the month in which the person acquiring such interest delivers to Unit Operator the original or certified copies of all instruments, documents and other information necessary in Unit Operator's opinion to establish a complete chain of title. No other kind of notice, whether actual or constructive, shall be binding on Unit Operator or the other Working Interest Owners.

Disposition  
Must Include  
Related Interest  
in Unit Facilities  
or Unit Area

16.04 Notwithstanding the foregoing, no interest in the Unit shall be disposed of unless such transaction shall include a like disposition of a related interest in the Unit Facilities and likewise, no disposition of any interest in the Unit Facilities shall be effective



unless such transaction shall include a like disposition of a related working interest in the Unit Area, it being the intention hereunder that no working interest in the Unit Area shall be owned apart from a related interest in the Unit Facilities, and vice versa.

No Working Interest Owner shall dispose of an interest in the Unit Area unless such disposition shall cover its entire interest in a Tract which is subject thereto, or covers an undivided interest in its entire interest in each such Tract.

Any attempted disposition by any means in violation of the provisions of this Section shall be a nullity insofar as the other Working Interest Owners are concerned.

Assignment  
not to Relieve  
from Obligations

16.05 No disposition shall operate to relieve any Working Interest Owner of any obligation hereunder which accrued or was incurred prior to the effective date of such disposition.

Unit Operator  
not to Assign  
Rights

16.06 Unit Operator shall not assign its right to conduct operations hereunder.

No Surrender  
of Lease  
Without Consent

16.07 No Working Interest Owner shall surrender or release its interest in any Lease covering any portion of the Unitized Strata without the written consent of the Operating Committee, and the approval of the Conservation Board.

What Term  
"disposition"  
Includes

16.08 The term "disposition" as used in this Part shall include, but not be limited to, the following: transfer, assignment, conveyance, and sale.

The term "disposition" as used in this Part shall



not apply to a disposal by way of mortgage, pledge or hypothecation; PROVIDED, THAT, the mortgagee or pledgee shall hold its security subject to all the terms of this Plan and upon any realization or foreclosure of the security, the purchaser, mortgagee or pledgee, as the case may be, shall become bound by all the terms of this Plan.

#### PART XVII

##### INDIVIDUAL RIGHTS AND PRIVILEGES OF THE WORKING INTEREST OWNERS

#### **Access to Unit Area**

17.01 Each Working Interest Owner shall be entitled, at its own sole risk and expense, to have access to the Unit Area at all reasonable times upon notice to Unit Operator for the purpose of inspecting and observing unit operations, to have access at all reasonable times upon notice to Unit Operator to any and all information pertaining to the Unit Operated Wells, the records of production and the records of all other unit operations, to be present during the drilling, testing and completion of all Unit Operated Wells and to make copies of well logs, drilling progress and casing reports, and reports of production and storage. The presence of a Working Interest Owner or its representative on the Unit Area or on the premises and their activities in connection therewith shall be at the sole risk and expense of such Working Interest Owner.



Plan Affects  
Only Unitized  
Strata

17.02 This Plan affects only the Unitized Strata. Each Working Interest Owner may, to the extent it may otherwise be entitled, conduct, at its own cost, risk and expense, operations on its Tracts for the discovery and/or production of other than Unitized Substances; PROVIDED, HOWEVER, that such operations shall be conducted in such a manner as to interfere as little as possible with the operations hereunder. Such Working Interest Owner shall take all reasonable precautions customary in the industry and as may be required by the Conservation Board and by Unit Operator to protect from waste, pollution, drainage and damage, the Unitized Substances and the Unitized Strata.

Abandonment  
of Wells

17.03 If Unit Operator, with the approval of the Operating Committee, should decide to abandon any Unit Operated Well prior to the termination hereof, Unit Operator shall give to the Working Interest Owner of the Tract on which such well is located written notice of such decision, stating whether or not a drilling rig is in place at such well, and said Working Interest Owner shall have the right and option for a period of forty-eight (48) hours if a drilling rig is in place, or a period of sixty (60) days if no drilling rig is in place, after receipt of such notice to notify Unit Operator of its election to take over said well, and deepen or plug back said well to other than the Unitized Strata. Within



ten (10) days after said Working Interest Owner has so notified Unit Operator, said Working Interest Owner shall pay to Unit Operator the value of the well equipment as determined in accordance with the provisions of Part XXVI hereof less the cost of salvaging the same as estimated and fixed by the Operating Committee, and at the same time shall agree by letter addressed to Unit Operator;

- (a) To case or seal off the Unitized Strata in said well in an efficient and workmanlike manner and in accordance with the applicable laws, rules, regulations and orders;
- (b) to produce such well, if the same is produced, from other than the Unitized Strata while this Plan is in force;
- (c) on the ultimate abandonment of said well, to plug and abandon it in a workmanlike manner and in accordance with the applicable laws, rules, regulations and orders.

It is understood, however, that such Tract shall continue to have allocated to it a percentage share of the Unitized Substances produced and saved from the Unit Area in accordance with its Tract Participation despite the cessation of the production therefrom and the abandonment of any Unit Operated Well or all wells thereon. In the event that the Working Interest Owner of such Tract does not elect to take over such well, Unit



Operator shall proceed properly to plug and abandon the same in accordance with the applicable laws, rules, regulations and orders, and shall salvage such casing and other equipment therefrom as is reasonably practicable, for the Investment Account.

Upon the abandonment of any well hereunder, the Working Interest Owner, or Unit Operator, as the case may be, abandoning same shall clean up the surface at the wellsite to the satisfaction of any governmental body having jurisdiction with respect thereto, and to the reasonable satisfaction of the owner and/or occupier thereof.

#### PART XVIII

##### INSURANCE

##### Workman's Compensation

18.01 Unit Operator shall comply with all laws relating to Workman's Compensation in the Province of Manitoba.

##### Insurance

18.02 Unit Operator shall carry, for the Common Account, such insurance as may be approved by the Operating Committee and shall notify each Working Interest Owner in writing currently as to the kind and amounts of such insurance. Notwithstanding anything herein contained each Working Interest Owner shall have the right to be a self-insurer as to its interest in the Unit Facilities.



**Contractor's  
Insurance**

18.03 Unit Operator shall require all contractors employed by it to comply with all laws relating to Workmen's Compensation in the Province of Manitoba and to carry such insurance as may be from time to time approved by the Operating Committee.

**Settlement  
of Claims**

18.04 Unit Operator may settle any claim arising out of unit operations and not discharged by insurance as herein provided, but no claim shall be settled by Unit Operator in an amount in excess of Two Thousand (\$2,000.00) Dollars unless Unit Operator first obtains the approval of the Operating Committee to such settlement.

**Unit Operator's  
Liability**

18.05 Unit Operator, as such, shall not be liable to the Working Interest Owners for any loss or damage except for loss or damage resulting from gross negligence or wilful misconduct of Unit Operator, or any of its employees exercising supervisory functions, and each Working Interest Owner proportionate to its Participating Interest herein, hereby indemnifies and holds harmless Unit Operator, as such, against any claim of, or liability to, any third person resulting from any act or omission of Unit Operator in acting upon instructions from the Operating Committee expressed or implied or otherwise in carrying out the provisions hereof; PROVIDED, HOWEVER, that Unit Operator shall not be indemnified or held harmless for any loss, damage, claim or liability resulting from the



gross negligence or wilful misconduct of Unit Operator or any of its employees exercising supervisory functions, but no act or omission of Unit Operator shall, of itself, be deemed gross negligence or wilful misconduct if such act or omission is done or omitted at the instructions of, or with the concurrence of, the Operating Committee.

## PART XIX

### GENERAL

#### No Right of Partition

19.01 No Working Interest Owner or Royalty Owner shall claim the benefit of any laws or statutes of the Province of Manitoba relating to partitioning of real or personal property and no person shall resort to any action at law or in equity to partition the aforesaid Unit Facilities and lands affected by this Plan, including the Unitized Strata.

#### Force Majeure

19.02 All obligations hereunder shall be suspended while, but only so long as, any person is prevented from complying therewith, in whole or in part, by strikes lockouts or other industrial disturbances, fire, explosion, war, civil disturbances, tempest, floods, acts of God, or the Queen's enemies, unavoidable accidents, uncontrollable delays in transportation, Federal, Provincial or Municipal laws, rules, regulations or orders, inability to obtain necessary materials in open market, inadequate facilities for the transportation of materials or for the



disposition of Unitized Substances, or any other cause, whether similar or dissimilar to the foregoing, beyond the reasonable control of such person; PROVIDED, HOWEVER, that performance shall be begun or resumed within a reasonable time after such cause has been removed; and PROVIDED, FURTHER, that no person shall be required against its will to adjust or settle any labour dispute; and also PROVIDED, FURTHER, that lack of funds shall not be construed as a cause beyond the reasonable control of any person. This Plan shall not terminate while operations hereunder are prevented by reason of any of the aforesaid causes.

No Co-operative  
Marketing

19.03 Nothing herein shall be construed as providing directly or indirectly for any co-operative or joint sale or marketing of Unitized Substances.

Titles  
Unaffected by  
Unitization

19.04 Nothing herein shall be construed as a transfer of title to, or interest in, the Leases, Tracts or Unitized Strata or in the Unitized Substances before the production thereof.

Duties  
Separate not  
Joint or  
Collective

19.05 The duties and obligations hereunder shall be separate and not joint or collective, and nothing contained herein shall ever be construed to create a partnership of any kind, or an association, or as imposing any partnership duties, obligations or liabilities.

Individual  
Obligation

19.06 Except as otherwise expressly provided herein, each Working Interest Owner shall be individually



responsible only for its own obligations as set out herein, and shall be liable only for its proportionate share of the costs and expenses and liabilities.

PART XX

TERM OF PLAN

**Term of Plan**

20.01 This Plan shall remain in full force and effect so long as Unitized Substances are produced or are capable of being produced from the Unitized Strata in paying quantities and as long as operations are conducted on the Unit Area, and thereafter until all Unit Operated Wells have been abandoned and plugged, or otherwise disposed of, and all personal property has been salvaged and all real estate has been disposed of by Unit Operator. Notwithstanding anything herein contained, this Plan shall, subject to the approval of the Conservation Board, terminate and be at an end upon the concurring vote of a majority of the Working Interest Owners owning at least ninety-five (95%) percent of the Participating Interests and such vote shall be binding upon all the Working Interest Owners and the Royalty Owners.

**Rights on  
Termination  
of Plan**

20.02 Upon the termination of this Plan, all rights in and to the Tracts shall revert to the owners and lessees thereof, and Unit Operator shall arrange for the salvaging, liquidation and other distribution of the Unit Facilities. The owner of the



working interest in any such Tract desiring to take over and continue to operate a Unit Operated Well located thereon may do so by notifying Unit Operator in writing of its election to take over said well and by paying Unit Operator, for the benefit of all Working Interest Owners, the fair net salvage value of the equipment used in the operation of such well and by agreeing to plug the well in accordance with the applicable laws, rules, regulations and orders at his expense at such time as it is abandoned.

With respect to all wells not taken over by individual Working Interest Owners, Unit Operator shall salvage as much of the casing and equipment in or on such wells as can economically and reasonably be salvaged and shall cause such wells to be properly plugged and abandoned in accordance with the applicable laws, rules, regulations and orders.

- |  |       |  |
|--|-------|--|
| Salvage Costs                                  | 20.03 | The Working Interest Owners shall share the cost of salvaging, liquidation, or other distribution of assets and properties used in the development and operation of the Unitized Strata in proportion to their respective interests in the Unit Facilities.  |
| On Termination of Plan - Operation Shall Cease | 20.04 | Upon termination of this Plan the further development and operation of the Unit Area as a Unit shall be abandoned, unit operations shall cease, and thereafter the Working Interest Owners and the Royalty Owners shall be governed by the terms and provisions of the Leases affecting the separate Tracts. |



Working  
Interest Owners  
to Advise  
Royalty Owners  
of Termination

20.05 The Working Interest Owners shall advise their respective Royalty Owners of the termination of this Plan within thirty (30) days of such termination.

Rehearing,  
Amendments, etc.

20.06 No application for a rehearing of the matters herein provided for, or for any amendments to this Plan in any respect, shall be heard by the Conservation Board within three (3) years of the Effective Date unless;

- (a) a majority of the Working Interest Owners, owning at least seventy-five (75%) percent of the Participating Interests have agreed in writing to such application for a rehearing of the matters herein provided for, or for amendments to this Plan, or
- (b) the Conservation Board, on its own motion, decides to hold a rehearing, or
- (c) the Conservation Board, after full consideration of the application of any Working Interest Owner, decides that such application should be heard.



PART XXI

WELLS DELIVERED TO UNIT OPERATOR PURSUANT TO PART X.

|                                    |  |
|------------------------------------|--|
| Basco Daly 2-4-10-28               | R. B. Exp. Thomson Daly 13-33-9-28     |
| Chevron Daly 12-3-10-28            | R. B. Exp. Grieve Daly 3-5-10-28       |
| Chevron Daly 13-3-10-28            | Rundle Cruickshank Daly 11-4-10-28     |
| Chevron Daly Prov. 9A-4-10-28      | Rundle Cruickshank Daly 12-4-10-28     |
| Chevron Daly Prov. 10-4-10-28      | Rundle Cruickshank Daly 13-4-10-28     |
| Chevron Daly Prov. 15-4-10-28      | Rundle Cruickshank Daly 14-4-10-28     |
| Chevron Daly Prov. 16-4-10-28      | Rundle Cruickshank Daly WIW 12-4-10-28 |
| Chevron Daly 1A-9-10-28            | Rundle M & H Daly 1-5-10-28            |
| Chevron Daly 2-9-10-28             | Rundle M & H Daly 2-5-10-28            |
| Chevron Daly 3-9-10-28             | Rundle M & H Daly 7-5-10-28            |
| Chevron Daly 4-9-10-28             | Rundle M & H Daly 8-5-10-28            |
| Chevron Daly 5-9-10-28             | Rundle M & H Daly 9-5-10-28            |
| Chevron Daly 7-9-10-28             | Rundle M & H Daly 10-5-10-28           |
| Chevron Daly 8-9-10-28             | Rundle M & H Daly 16-5-10-28           |
| Chevron Daly Prov. 4-10-10-28      | Scurry Cruickshank Daly 3-4-10-28      |
| Chevron Daly Prov. 5-10-10-28      | Scurry Cruickshank Daly 4-4-10-28      |
| Recovery Daly 1-8-10-28            | Scurry Cruickshank Daly 5-4-10-28      |
| R. B. Exp. Thomson Daly 10-32-9-28 | Scurry Cruickshank Daly 6-4-10-28      |
| R. B. Exp. Thomson Daly 15-32-9-28 |  |
| R. B. Exp. Thomson Daly 16-32-9-28 |  |



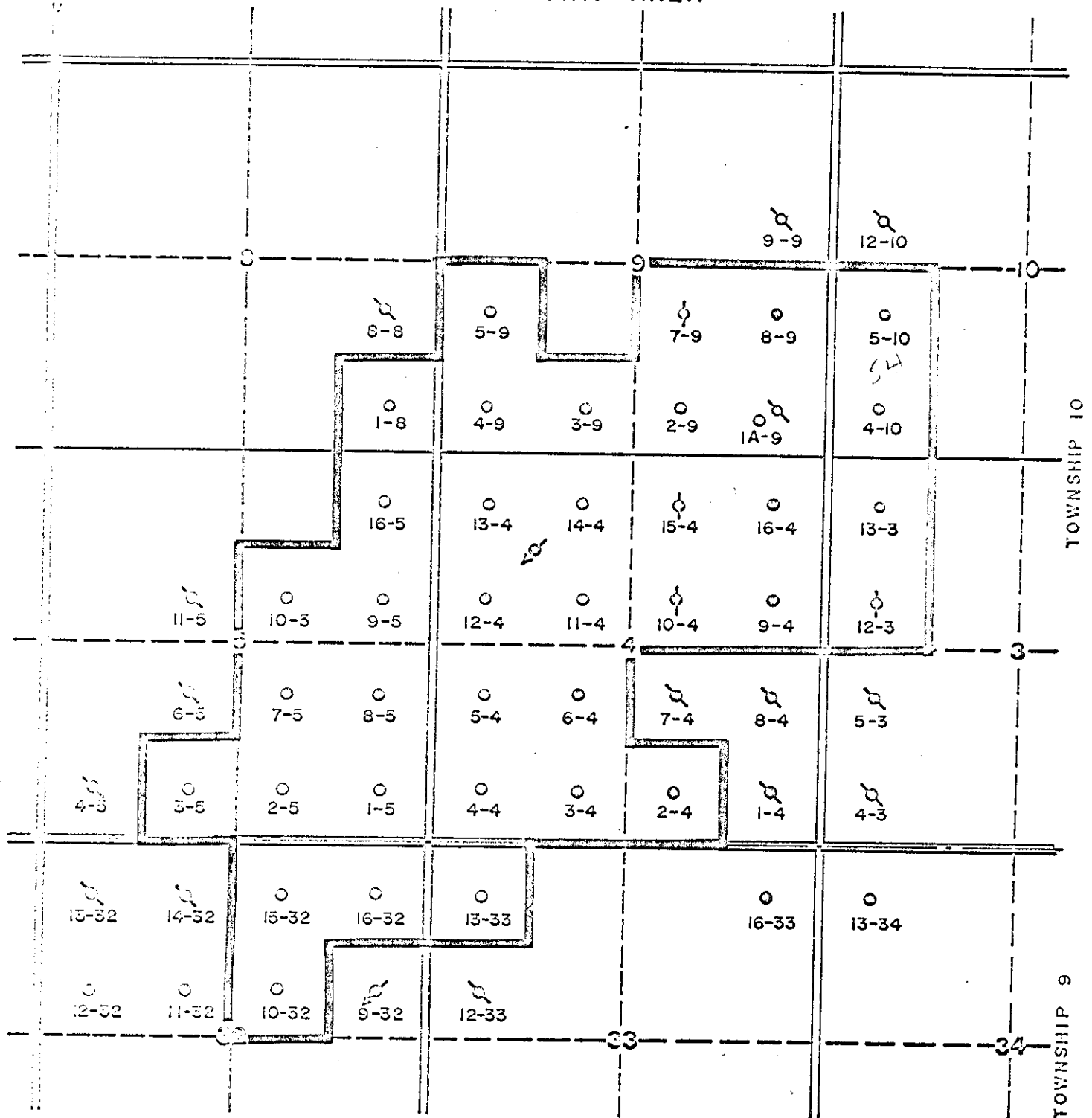
PART XXII

THE LANDS IN THE PROVINCE OF MANITOBA WHICH COMPRISE  
THE DALY UNIT NO. 1 ARE AS FOLLOWS:

| <u>TRACT NUMBER</u> | <u>LEGAL DESCRIPTION</u>    | <u>TRACT NUMBER</u> | <u>LEGAL DESCRIPTION</u>    |
|---------------------|-----------------------------|---------------------|-----------------------------|
|                     | <u>TOWNSHIP 10 RANGE 28</u> |                     | <u>TOWNSHIP 10 RANGE 28</u> |
| 2-4                 | LSD. 2, SECTION 4           | 3-5                 | LSD. 3, SECTION 5           |
| 12-3                | LSD. 12, SECTION 3          | 11-4                | LSD. 11, SECTION 4          |
| 13-3                | LSD. 13, SECTION 3          | 12-4                | LSD. 12, SECTION 4          |
| 9-4                 | LSD. 9, SECTION 4           | 13-4                | LSD. 13, SECTION 4          |
| 10-4                | LSD. 10, SECTION 4          | 14-4                | LSD. 14, SECTION 4          |
| 15-4                | LSD. 15, SECTION 4          | 1-5                 | LSD. 1, SECTION 5           |
| 16-4                | LSD. 16, SECTION 4          | 2-5                 | LSD. 2, SECTION 5           |
| 1-9                 | LSD. 1, SECTION 9           | 7-5                 | LSD. 7, SECTION 5           |
| 2-9                 | LSD. 2, SECTION 9           | 8-5                 | LSD. 8, SECTION 5           |
| 3-9                 | LSD. 3, SECTION 9           | 9-5                 | LSD. 9, SECTION 5           |
| 4-9                 | LSD. 4, SECTION 9           | 10-5                | LSD. 10, SECTION 5          |
| 5-9                 | LSD. 5, SECTION 9           | 16-5                | LSD. 16, SECTION 5          |
| 7-9                 | LSD. 7, SECTION 9           | 3-4                 | LSD. 3, SECTION 4           |
| 8-9                 | LSD. 8, SECTION 9           | 4-4                 | LSD. 4, SECTION 4           |
| 4-10                | LSD. 4, SECTION 10          | 5-4                 | LSD. 5, SECTION 4           |
| 5-10                | LSD. 5, SECTION 10          | 6-4                 | LSD. 6, SECTION 4           |
| 1-8                 | LSD. 1, SECTION 8           |                     |                             |
|                     | <u>TOWNSHIP 9 RANGE 28</u>  |                     |                             |
| 10-32               | LSD. 10, SECTION 32         |                     |                             |
| 15-32               | LSD. 15, SECTION 32         |                     |                             |
| 16-32               | LSD. 16, SECTION 32         |                     |                             |
| 13-33               | LSD. 13, SECTION 33         |                     |                             |



PART XXXIII  
MAP OF UNIT AREA





PART XXIV

| <u>TRACT NUMBER</u> | <u>TRACT PARTICIPATION</u> | <u>TRACT NUMBER</u> | <u>TRACT PARTICIPATION</u> |
|---------------------|----------------------------|---------------------|----------------------------|
| 2-4                 | 1.00403                    | 3-5                 | 1.43709                    |
| 12-3                | .13561                     | 11-4                |                            |
| 13-3                | 6.20309                    | 12-4                | 8.02734                    |
| 9-4                 | 2.41260                    | 13-4                | 5.99796                    |
| 10-4                | .29071                     | 14-4                |                            |
| 15-4                | .00820                     | 1-5                 | 4.87978                    |
| 16-4                | 3.32522                    | 2-5                 | .91478                     |
| 1-9                 | 2.09526                    | 7-5                 | 4.59511                    |
| 2-9                 | 5.42490                    | 8-5                 | 2.18513                    |
| 3-9                 | 4.21993                    | 9-5                 | 4.94419                    |
| 4-9                 | .57987                     | 10-5                | 2.64613                    |
| 5-9                 | 2.21090                    | 16-5                | 2.34913                    |
| 7-9                 | .00017                     | 3-4                 | 1.70549                    |
| 8-9                 | .47271                     | 4-4                 | 2.85424                    |
| 4-10                | 1.84763                    | 5-4                 | 7.16099                    |
| 5-10                | 3.10550                    | 6-4                 | 5.88864                    |
| 1-8                 | 1.80375                    |                     |                            |
| 10-32               | .20853                     |                     |                            |
| 15-32               | .55718                     |                     |                            |
| 16-32               | .96156                     |                     |                            |
| 13-33               | 1.96054                    |                     |                            |



PART XIV

PARTICIPATING INTERESTS

Provision for           25.01  
Schedule of Working  
Interest Owners and  
Participating Interests

The Unit Operator shall as soon after approval of Title by the Operating Committee under Part XIII is deemed to have been made, prepare and submit to the Working Interest Owners, Schedules setting out the Working Interest Owners of the Tracts and the Participating Interests in the Unit. Upon the approval of the Operating Committee the Unit Operator shall cause such Schedules to be published in one issue of The Manitoba Gazette.

The Unit Operator shall from time to time at the discretion of the Operating Committee prepare and submit to the Working Interest Owners, revised Schedules setting out any change of ownership in the Tracts or Participating Interests in the Unit, and shall cause such Schedules to be published in one issue of The Manitoba Gazette.



PART XXVI

ACCOUNTING PROCEDURE

Definitions

26.01 In this Part:

"Joint Property"

(a) "Joint Property" shall mean the respective Tracts and interests of the Working Interest Owners and where the context so requires shall include all wells, wellbore and operating equipment and salt water disposal facilities taken over by Unit Operator pursuant to Part X hereto, and all material purchased or furnished by the Unit Operator for use in the development, maintenance and operation of the Unit.

"Major Material"

(b) "Major Material" means:

Tubing - 1,000 feet and over in 'A' or 'B' condition  
Sucker Rods - plain or scraped - 1,500 feet and over in 'A' or 'B' condition

Pumping Unit

Pumping Motor

Automatic Controls

Separators

Hoists

Tractors

Tank Complete with Thief Hatches

and any other material the Current New Price of which exceeds One Thousand (\$1,000.00) Dollars.

"Material"

(c) shall mean equipment and supplies.

With respect to classification of material:

"Condition 'A'"

(i) New material (Condition 'A') being new material purchased for the Joint Property but never used thereon, at One Hundred (100%) percent of Current New Price.

"Condition 'B'"

(ii) Good used material (Condition 'B') being good secondhand material which is further usable without reconditioning:

(a) at Seventy-five (75%) percent of Current New Price if material was charged to Common Account as new; or



- (b) at Seventy-five (75%) percent of Current New Price less depreciation consistent with its usage on and service to the Joint Property, if material was originally charged to the Common Account at Seventy-five (75%) percent of Current New Price.

**"Condition 'C'"**

- (iii) Other used material (Condition 'C'), being material which:

- (a) after reconditioning will be further serviceable for original function as good secondhand material (Condition 'B'), or

- (b) is serviceable for original function but substantially not suitable for reconditioning,

shall be at Fifty (50%) percent of Current New Price.

**"Condition 'D'"**

- (iv) Used material (Condition 'D'), being material which cannot be classified as Condition 'B' or Condition 'C' shall be priced at a value commensurate with its use.

**"Condition 'E'"**

- (v) Junk (Condition 'E'), being obsolete and un-serviceable material, at prevailing junk prices in the district.

**"Temporarily Used Equipment"**

- (vi) When the use of material is only temporary, and the time of actual use does not justify the reduction in price as provided above, such material shall be priced on a basis that will leave a net charge to the Common Account consistent with the value of the services rendered and adequate for the time the material was in use.

**"Current New Price"**

- (d) "Current New Price" shall mean where possible the current cost of material as set forth in the most recent issue of the "Controllable Equipment Price Catalogue" published by Petroleum Accountants Society of Western Canada.

**Fixed Asset Records**

- 26.02 Fixed Asset records shall be maintained for all Controllable Material as defined in Section 10.03.



**Statements  
and Billings**

- 26.03** Unit Operator shall bill each of the other Working Interest Owners on or before the last day of each month for their proportionate share of charges and credits in respect of Unit operations during the preceding month. Such bills shall be accompanied by the following statements:
- (a) Detailed statement of Controllable Material.
  - (b) Statement of all ordinary charges and credits to the Common Account summarized by appropriate classification indicative of the nature thereof.
  - (c) Detailed statement of all other charges and credits.

**Payments by  
Working Interest  
Owners**

- 26.04** See Sections 8.03, 8.05 and 8.06.

**Adjustments**

- 26.05** Payments of any such bills shall not prejudice the right of any Working Interest Owner to protest or question the correctness thereof. Subject to the exception noted in 26.06 below, all bills rendered to the Working Interest Owners by Unit Operator during any calendar year shall conclusively be presumed to be true and correct after Twenty-four (24) months following the end of any such calendar year, unless within the said Twenty-four (24) month period any Working Interest Owner takes written exception thereto and makes a written claim on Unit Operator for adjustment. Failure on the part of the Working Interest Owner to make such a claim on Unit Operator within such period shall establish the correctness thereof and preclude the filing of exceptions thereto or making of claims for adjustment thereon.

**Audits**

- 26.06** Any audit committee appointed by the Operating Committee, upon notice in writing to the Unit Operator, shall have the right to audit Unit Operator's accounts and records relating to the accounting hereunder for any calendar year within the Eighteen (18) month period following the end of such calendar year. The Working Interest Owners shall have Six (6) months next following the examination of the Unit Operator's records within which to take written exception to and make any and all claims on the Unit Operator. Such audit committee shall make every reasonable effort to conduct



such auditing in a manner which will result in a minimum of inconvenience to the Unit Operator. The cost of such an audit shall be charged to the Common Account. In addition to the foregoing right, any Working Interest Owner shall have the right to make an individual audit at its own cost and expense.

**Charges to  
Common Account**

**26.07** Subject to the limitations hereinafter prescribed, Unit Operator shall charge the Common Account with the following costs of development and operation of the Joint Property:

- (a) Salaries, wages and related expenses of Unit Operator's personnel directly employed on the Joint Property in the development, maintenance and operation thereof, including salaries and wages paid to landmen acquiring rights-of-way, settling damage claims, etc. and to technical employees, such as geologists, engineers and other employees who are temporarily assigned to and located at and directly engaged on the Joint Property.
- (b) Unit Operator's cost of vacation and expenditures or contributions imposed or assessed by any governmental body having jurisdiction with respect to such salaries and wages referred to in paragraph (a) of Section 26.07.
- (c) Unit Operator's current cost of established plans for employees' group life insurance, sickness and disability benefits, hospitalization, pension, retirement, stock purchases, thrift, bonus and other benefit plans of like nature, applicable to such salaries and wages provided for in paragraph (a) of Section 26.07. Provided that such charges shall not exceed twelve (12%) percent of the total of the salaries and wages charged under paragraph (a) of Section 26.07. It is agreed, however, that if this limitation of twelve (12%) percent shall be found to be insufficient, the same may be increased from time to time when authorized by a vote of the Operating Committee.
- (d) Material purchased or furnished by Unit Operator for use in connection with the operation of the Joint Property. So far as it is reasonably practical and consistent with efficient and economical operation, only such material shall be purchased for or transferred to the Joint Property as is required for immediate use, and the accumulation of surplus stocks shall be avoided whenever possible.



- (e) (i) Moving material to the Joint Property from vendor's or from Unit Operator's warehouse in the district or from the other properties of the Unit Operator, but in either of the last two events no charge shall be made to the Common Account for a distance greater than the distance from the nearest reliable supply store or railway receiving point where such material is available except by specific approval of the Operating Committee.
- (ii) Moving surplus material from the Joint Property to outside vendors, if sold F.O.B. destination, or minor returns to Unit Operator's warehouse or other storage point. No charge shall be made to the Common Account for moving surplus material to Unit Operator's warehouse or other storage point for a distance greater than the distance to the nearest reliable supply store or railway receiving point, except by specific approval of the Operating Committee, and no charge shall be made to the Common Account for moving material to other properties belonging to Unit Operator, except by specific approval of the Operating Committee.
- (iii) Moving expenses of employees incurred by the initial staffing, additions and replacements beyond the control of the Unit Operator.
- (f) (i) Contract services and utilities procured from outside sources. Services of outside professional consultants shall not be charged unless approved by Operating Committee.
- (ii) Use of and service by Unit Operator's exclusively owned equipment and facilities as provided in Section 26.11.
- (g) Costs or expenses necessary to replace or repair Joint Property damaged or lost through fire, flood, storm or any other cause not controllable by Unit Operator through the exercise of reasonable diligence. Unit Operator shall furnish the Working Interest Owners with written notice of damage or losses incurred as soon as practical but not later than Fifteen (15) days after report of same has been received by Unit Operator.
- (h) All costs and expenses of litigation or legal services necessary or expedient for the protection of the Joint Property, including legal fees and



expenses as hereinafter provided, together with all judgments obtained against or chargeable to the Common Account or the Joint Property; actual expenses incurred by any Working Interest Owner in securing evidence for the purposes of defending any action or claim prosecuted or urged against the Common Account or the Joint Property.

- (i) If the Operating Committee agrees, actions or claims affecting the Common Account or the Joint Property hereunder may be handled by the legal staff of one or more of the Working Interest Owners. A charge commensurate with the services rendered and approved by the Operating Committee may be made against the Common Account.
- (ii) Fees and expenses of outside Counsel shall not be charged to the Common Account except where the employment of such outside Counsel is authorized by the Operating Committee.
- (i) All taxes of every kind and nature (other than income taxes) assessed upon or in connection with the Joint Property, the operation thereof or the products derived therefrom, and which taxes have been paid by the Unit Operator for the benefit of the Working Interest Owners.
- (j) Premiums paid for insurance required to be carried under Section 18.02 together with all expenditures incurred and paid in settlement of any and all losses, claims, damages, judgments, and other expenses including legal services, not recovered from the Insurer.
- (k) Area, Division and Administrative Overhead:

The rates set forth below shall be charged to the Common Account in lieu of a proportionate share of the costs incurred by the Unit Operator. These costs include, but are not limited to the following:

- (1) Salaries and expenses of the Unit Operator's area superintendent and other general area or field employees, managing officers and employees of the division and/or principal office other than those who are directly engaged on the Joint Property and whose salaries are chargeable to the Common Account under the provisions of paragraph (a) of Section 26.07.



(ii) Cost of maintaining and operating an area office and all necessary camps, including housing facilities for employees if necessary. The expense of, less any revenue from, these facilities shall include depreciation or a fair monthly rental in lieu of depreciation on investment.

(iii) Any other costs of operating the division and/or principal office of the Unit Operator.

The rates, which are subject to review annually, as set forth in paragraph (j) of Section 3.03 are as follows:

- (a) \$ 2,500.00 per month for all producing operations.
- (b) Forty-five (\$45.00) Dollars per day for each drilling well, wells being plugged back, drilled deeper, reworked, or converted to source or input wells; charges to commence on the date the well is spudded and terminate when the drilling rig or service rig as the case may be is released, except that no charge should be made during the suspension of drilling operations for Fifteen (15) or more consecutive days.
- (c) The charge in respect to construction of Unit Facilities, including, but not limited to, water injection plant, boundary consolidation, injection pipeline systems and water supply systems shall be calculated on direct expenditures on the following basis:
  - 5% of expenditures up to \$50,000.00, plus
  - 3% of expenditures over \$50,000.00 and up to \$100,000.00, plus
  - 1% of all expenditures over \$100,000.00.

(l) A charge to cover the cost of handling material into and in Unit Operator's warehouse shall be assessed on new and used materials furnished from the warehouse on the basis of Two and one-half (2-1/2%) percent of the cost of tubular goods and Major Material and Five (5%) percent of the cost of all other material which shall in each case be deemed to be the actual cost thereof to Unit Operator.

(m) Rentals, payments in lieu of actual production and royalties, when paid by Unit Operator for the Common Account.



- (n) Any other expenditures incurred by Unit Operator except that no charge shall be made for any interest or financing charges incurred by Unit Operator except where incurred with the approval of the Operating Committee.

Basis of  
Charges to  
Common Account

26.08

(i) Outside Purchases

Material purchases shall be charged to the Common Account at their invoice cost to Unit Operator after deduction of all discounts actually received.

(ii) Material Furnished by Unit Operator

Material shall be purchased for direct charge to the Common Account whenever practicable. Material from Unit Operator's stocks shall be priced as follows:

(a) New Material - Condition 'A'

- (1) New material transferred from Unit Operator's warehouse or other properties shall be priced at One Hundred (100%) percent of Current New Price.

(b) Used Materials - Condition 'B' and 'C'

- (1) Material which is in sound and serviceable condition and is suitable for re-use without reconditioning shall be classed as Condition 'B' and priced at Seventy-five (75%) percent of Current New Price.

- (2) Material which cannot be classified as Condition 'B' but which

(i) after reconditioning will be further serviceable for original function as good secondhand material (Condition 'B'), or

(ii) is serviceable for original function but substantially not suitable for reconditioning,

shall be classed as Condition 'C' and priced at Fifty (50%) percent of Current New Prices.

- (3) Material which cannot be classified as Condition 'B' or Condition 'C' shall be priced at a value commensurate with its use



(4) Any equipment involving erection costs will be charged on a basis not to exceed Seventy-Five (75%) percent of Current Market Price for similar materials in a dismantled state.

**Premium Price**                      26.09 Whenever materials are not readily obtainable at the customary supply point and at Current Market Prices because of national emergencies, strikes or other unusual causes over which Unit Operator has no control, Unit Operator may charge the Common Account for the required materials on the basis of Unit Operator's direct cost and expense incurred in procuring such materials, in making it suitable for use, and in moving it to the Joint Property: PROVIDED, HOWEVER, that each Working Interest Owner is notified in writing prior to the acquisition of such material, and upon each Working Interest Owner shall have the right by so electing and notifying Unit Operator within forty-eight (48) hours after receiving notice from the Unit Operator, to furnish in kind or in storage as may be agreed, at the location, nearest railway point, or Unit Operator's storage point, within a reasonable distance, all or part of his share of material suitable for use and acceptable to Unit Operator. Transportation costs on any such material furnished by a Working Interest Owner at any point other than at the location, shall be borne by such Working Interest Owner. If, pursuant to the provisions of this paragraph, a Working Interest Owner furnishes material in kind, Unit Operator shall make appropriate credits therefor to the account of such Working Interest Owner.

**Warranty of Material**                      26.10 Unit Operator does not warrant the material furnished beyond or back of the dealer's or manufacturer's guarantee; and in case of defective material, credit shall not be passed until adjustment has been received by Unit Operator from the manufacturer or their agents.

**Unit Operator's Exclusively Owned Facilities**                      26.11 The Unit Operator shall charge the Common Account for services rendered by facilities and equipment owned exclusively by Unit Operator. The rates charged shall be commensurate with the cost of ownership and operation and shall not be in excess of current prevailing rates of like services and equipment available in the area.

Whenever requested, Unit Operator shall inform the Working Interest Owners in advance of rates it proposes to charge. Rates shall be revised from time to time when found to be either excessive or insufficient.



**Disposal of  
Lease Equipment**

**26.12**

- (a) The term "minor equipment" shall mean any material or items of Unit Facilities not described as Major Material. Unit Operator may dispose of any item of minor equipment, which it deems to be unnecessary for the Unit Operation hereunder, to such person and for such price as it sees fit without reference to the Operating Committee.
- (b) Unit Operator may dispose of any item of Major Material which it deems to be surplus to the unit operations at current market demand prices prevailing in the area without obtaining prior approval of the Working Interest Owners. The Unit Operator will supply to each Working Interest Owner every Six (6) months details of Major Material deemed to be surplus or anticipated to become surplus during the ensuing Six (6) months. Further, any authority granted to the Unit Operator to dispose of a Non-Operator's share of material shall be revocable at the will of the Non-Operator.
- (c) Proceeds from the sale of Surplus Material shall be credited to the Common Account.

**Inventories**

**26.13**

- (a) Regular inventories of Controllable Material shall be taken by an Inventory Committee appointed by the Operating Committee and at intervals specified by the Operating Committee; PROVIDED, HOWEVER, that construction projects as outlined in the budget shall be inventoried by the Inventory Committee within one year of completion and copies of any such inventory shall be furnished to all Working Interest Owners.
- (b) Reconciliation of inventory with the Investment Account shall be made by the Inventory Committee, and a list of overages and shortages shall be submitted to the Working Interest Owners for their approval within Sixty (60) days from the taking of such inventory.
- (c) Inventory adjustments shall be made by Unit Operator with the Investment Account for overages and shortages but Unit Operator shall only be held accountable to the Working Interest Owners hereto for shortages resulting from lack of reasonable diligence.



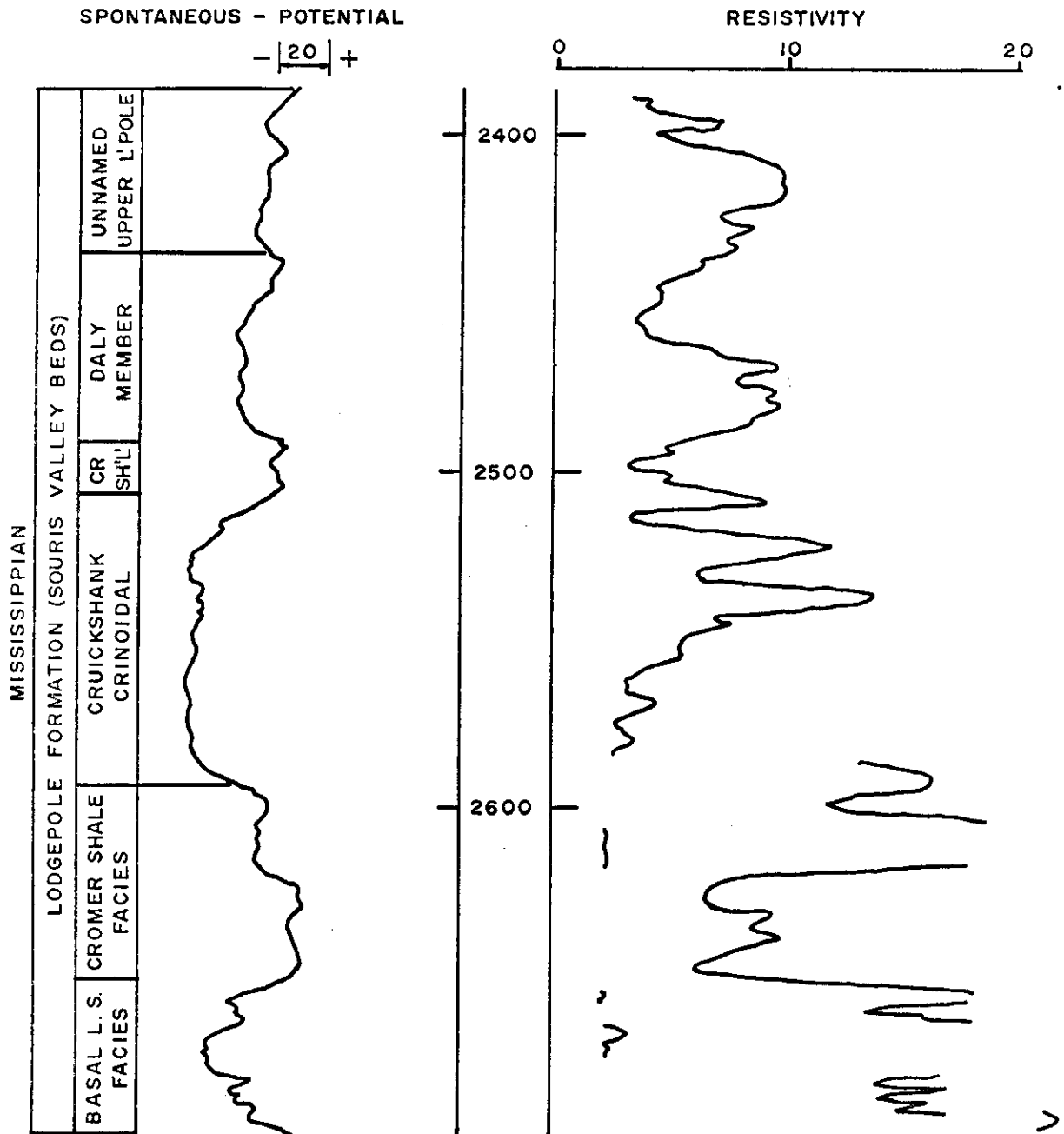
- (d) The expense of the Inventory Committee shall be charged to the Common Account.
- (e) Any Working Interest Owner shall have the right at any time to request in writing the taking of a special inventory. The taking of such special inventory shall be commenced within Fifteen (15) days after the receipt of notice thereof. The expense of Unit Operator's representative in conducting any special inventory so requested shall be charged to the separate account of the requesting Working Interest Owner.



## ELECTRICAL LOG

RUNDLE CRUICKSHANK DALY 14-4-10-28

K. B. ELEVATION 1660'





THE REGULATIONS ACT  
CERTIFICATE

(sec. 13 Reg. 1-45)

I, Derek Bedson, Clerk of the Executive Council,

hereby certify that the attached regulation marked "A" is a true copy of the original regulation:—

(a) entitled (or respecting) Unitization Order No. 24

(Title or Subject Matter)

(b) made pursuant to The Mines Act  
(Act authorizing)

(c) by The Oil and Natural Gas Conservation Board

(d) on the 16th day of August A.D. 1978  
(Date Regulation was made)

(e) approved of by Order-in-Council No. 842 on the 6th day of September  
A.D. 19 78 on the recommendation of the Honourable the Minister of Mines,  
Resources and Environmental Management

(f) which regulation comes into force on the day it is filed with the Registrar of Regulations (or the  
1st day of September A.D. 19 78) and

(g) replaces or amends regulation as follows: amends Manitoba Regulation 94/71 being  
The Oil and Natural Gas Conservation Board Unitization Order No. 11

I certify that the within instrument is duly entered and registered  
in the office of the Petroleum Branch, Department of Mines,

Resources and Environmental Management, this 15th  
day of December A.D. 19 78

Doc. No. 1008-0

H. G. Master  
DIRECTOR, PETROLEUM BRANCH

Derek Bedson  
Clerk of the Executive Council



This is exhibit "A" referred to  
in the certificate of

Derek Beeson

Manitoba Regulation / 72/78

Being

The Oil and Natural Gas Conservation Board

UNITIZATION ORDER NO. 24

Amending Unitization Order No. 11 Pertaining to

DALY UNIT NO. 1

Made and Passed Pursuant to "The Mines Act", Cap. M160, of the  
Continuing Consolidation of the Statutes of Manitoba, and  
Amendments Thereto, by The Oil and Natural Gas  
Conservation Board of Manitoba

(Filed: Sept 14/78)

The Plan for Unit Operation Governing the Unitized Management  
Operation and Further Development of Daly Unit No. 1, set out in  
Unitization Order No. 11 (Manitoba Regulation 94/71), is amended by  
adding to the Unit Area affected by the said Order, the following  
area:

Legal Subdivision 15 of Section 5 in Township 10,  
Range 28, West of the Principal Meridian.

And is further amended as follows:

1. Paragraph (d) of Section 1.02 is rescinded, and the following substituted therefor:

(d) "Effective Date" means the hour of seven o'clock  
in the forenoon, official time, on the first day of  
July, 1971, except that with respect to the tract  
15-5-10-28 WPM "Effective Date" means the hour of  
seven o'clock in the forenoon, official time, on the  
first day of September, A.D., 1978.

2. Part III is rescinded, and the following substituted therefor:

PART III  
TRACT PARTICIPATION

- 3.01 The Tract Participation of each Tract is shown in Part XXIV  
hereof and was determined as follows:

- (a) With respect to all Tracts, except for Tract Number 15-5  
(hereinafter called "the enlargement tract"), the sum of  
each of the following factors reduced by multiplying by  
the difference of one (1) minus the quotient of the tract  
participation for the enlargement tract divided by 100,  
namely:

1.0000000 minus 0.0284181

I hereby certify that the within  
regulation was filed in the office of the  
Registrar of Regulations on the 14<sup>th</sup> day  
of Sept. A.D. 1978 at 5<sup>00</sup> o'clock  
in the afternoon as No. 172/78  
Andrew S. Chalkin  
Registrar of Regulations



- (i) A current production factor — such factor is the percentage calculated by dividing the 1969 oil production of such tract by the oil production of all tracts during the same interval and multiplying by forty one-hundredths (40/100), plus;

- (ii) An average monthly oil production factor penalized for water production, such a factor is arrived at by:

- (1) determining average monthly oil production of the Tract by dividing its cumulative oil production to December 31, 1969 by the number of calendar months since the well on such Tract first went on production, provided that the first calendar month shall not be counted as such unless the oil production from the well on such Tract for that calendar month was greater than one-half (1/2) of the oil production from such well for the next succeeding month;
- (2) calculating a fractional water cut for the Tract by dividing the water production for the interval set out in paragraph (i) hereof by the sum of its water and oil production for the same period; PROVIDED THAT, with respect to these tracts which did not produce during the interval referred to, the fractional water cut shall be calculated by dividing the water production for each such Tract during the consecutive twelve month period that ends with the last recorded production by the sum of such Tracts water and oil production for the same period;
- (3) multiplying the average monthly oil production for the tract obtained in (1) by the fraction one minus the water cut appropriate to the Tract as determined in (2);
- (4) dividing the product obtained in (3) for the Tract by the sum of all products obtained in (3) for all the Tracts and multiplying by sixty one-hundredths (60/100).

- (b) With respect to the enlargement tract, namely Tract No. 15-5, a factor arrived at by:

- (i) Calculating the arithmetic average of the Tract Participations of the four unit tracts directly and diagonally offsetting the enlargement tract, namely tracts numbered 10-5, 16-5, 9-5 and 1-8;



(ii) Dividing the arithmetic average monthly oil production from the enlargement tract during the interval September 1, 1977 to February 28, 1978, both days inclusive, by the sum of the average monthly oil production from all tracts during 1969 plus the arithmetic average monthly oil production from the enlargement tract during the interval September 1, 1977 to February 28, 1978, both days inclusive.

(iii) Adding the arithmetic average tract participation determined in (i) to the quotient determined in (ii) and dividing the sum by two (2).

3.02 The total of the Tract Participations for all Tracts shall at all times equal one hundred (100%) percent.

3.03 This Part III is explanatory and the Tract Participations shown in Part XXIV shall be deemed to be correctly made in accordance with this Part III.

3. Section 5.09 is rescinded, and the following is substituted therefor:

5.09 Unit Operator shall keep minutes of the proceedings of each meeting of the Operating Committee and a copy thereof shall be forwarded to each member thereof. Such minutes need not be a verbatim record of all the proceedings, but shall show the names of the representatives present at the meeting, all motions and resolutions offered or acted upon, together with the result of such action and such other formal action as may be taken by the Operating Committee. Unless within forty-five (45) days of the date of mailing of the minutes a member of the Operating Committee advised Unit Operator of an error or omission or otherwise in such minutes, such minutes shall be deemed conclusively to be correct for all purposes. The unit operator shall mail out the minutes of each meeting to each member of the Operating Committee within 30 days of the date of such a meeting.

4. Paragraph (j) of Section 6.03 is rescinded, and the following is substituted therefor:

6.03(j) To amend Part XXVI thereof from time to time whether in whole or in part, PROVIDED THAT, two copies of any amendment changing the charges to be made by Unit Operator under Section 26.07(k) hereof shall be filed with the Conservation Board.



4—Unitization Order No. 24

5. Section 7.04 is rescinded, and the following is substituted therefor:

7.04 In addition to any expenditures which Unit Operator is specifically authorized to make, Unit Operator is authorized to make an expenditure not in excess of Ten Thousand (\$10,000.00) Dollars, in respect to any single undertaking without the approval of the Operating Committee, or such other amount as may from time to time be approved by a vote of the Operating Committee, PROVIDED THAT, two copies of any such amendment approved by the Operating Committee shall be filed with the Conservation Board. Unit Operator may, without approval of the Operating Committee, take such action and make such expenditures for the Common Account as it may deem necessary in order to protect life or property. Within fifteen (15) days after taking any such action or making such expenditures, Unit Operator shall advise the Operating Committee of such action and expenditures.

6. Paragraph (a) of Section 26.07 is rescinded, and the following is substituted therefor:

(a) Salaries, wages and related expenses of Unit Operator's personnel, up to and including the first level of supervision, directly employed on the Joint Property in the development, maintenance and operation thereof, including salaries and wages paid to landmen acquiring rights-of-way, settling damage claims, etc., and to technical employees, such as geologist, engineers and other employees who are temporarily assigned to and located at and directly engaged on the Joint Property.

7. Subparagraph (iii) of Paragraph (k) of Section 26.07 is rescinded and the following is substituted therefor:

(iii) Any other costs of operating the division and/or principal office of the Unit Operator.

The rates, which are subject to review annually, as set forth in paragraph (j) of Section 6.03 are as follows:

(a) \$3,000.00 per month for all producing operations.

(b) \$65.00 per day for each drilling well, wells being plugged back, drilled deeper, reworked, or converted to source or input wells; charges to commence on the date the well is spudded or operations are commenced and terminate when the drilling rig or service rig as the case may be is released, except that no charge should be made during the suspension of drilling operations for fifteen (15) or more consecutive days.



(c) the charge in respect to construction of Unit Facilities, including but not limited to, water injection plant, battery consolidation, injection pipeline systems and water supply systems shall be calculated on direct expenditures on the following basis:

5% of expenditures up to \$50,000.00, plus  
3% of expenditures over \$50,000.00 and up to  
\$150,000.00, plus  
1% of expenditures over \$150,000.00.

8. Part XXI is rescinded and the new Part hereunder is substituted therefor:

PART XXI

WELLS DELIVERED TO UNIT OPERATOR PURSUANT TO PART X.

Chevron Daly 2-4-10-28  
Chevron Daly 12-3-10-28  
Chevron Daly 13-3-10-28  
Chevron Daly Prov. 9A-4-10-28  
Chevron Daly Prov. 10-4-10-28  
Chevron Daly Prov. 15-4-10-28  
Chevron Daly Prov. 16-4-10-28  
Chevron Daly 1A-9-10-28  
Chevron Daly 2-9-10-28  
Chevron Daly 3-9-10-28  
Chevron Daly 4-9-10-28  
Chevron Daly 5-9-10-28  
Chevron Daly 7-9-10-28  
Chevron Daly 8-9-10-28  
Chevron Daly Prov. 4-10-10-28  
Chevron Daly Prov. 5-10-10-28  
Recovery Daly 1-8-10-28  
Murphy Daly 10-32-9-28  
Murphy Daly 15-32-9-28  
Murphy Daly 16-32-9-28  
Murphy Daly 13-33-9-28  
Murphy Daly 3-5-10-28  
Rundle Cruickshank Daly 11-4-10-28  
Rundle Cruickshank Daly 12-4-10-28  
Rundle Cruickshank Daly 13-4-10-28  
Rundle Cruickshank Daly 14-4-10-28  
Rundle Cruickshank Daly WIW 12-4-10-28  
Rundle M & H Daly 1-5-10-28  
Rundle M & H Daly 2-5-10-28  
Rundle M & H Daly 7-5-10-28  
Rundle M & H Daly 8-5-10-28  
Rundle M & H Daly 9-5-10-28  
Rundle M & H Daly 10-5-10-28  
Rundle M & H Daly 15-5-10-28  
Rundle M & H Daly 16-5-10-28  
Scurry Cruickshank Daly 3-4-10-28  
Scurry Cruickshank Daly 4-4-10-28  
Scurry Cruickshank Daly 5-4-10-28  
Scurry Cruickshank Daly 6-4-10-28



9. Part XXII is rescinded, and the new Part XXII hereunder is substituted therefor:

PART XXII

THE LANDS IN THE PROVINCE OF MANITOBA WHICH COMPRISE  
THE DALY UNIT NO. 1 ARE AS FOLLOWS:

Tract Number

Legal Description

Township 10, Range 28

|      |                    |
|------|--------------------|
| 2-4  | Lsd. 2, Section 4  |
| 12-3 | Lsd. 12, Section 3 |
| 13-3 | Lsd. 13, Section 3 |
| 9-4  | Lsd. 9, Section 4  |
| 10-4 | Lsd. 10, Section 4 |
| 15-4 | Lsd. 15, Section 4 |
| 16-4 | Lsd. 16, Section 4 |
| 1-9  | Lsd. 1, Section 9  |
| 2-9  | Lsd. 2, Section 9  |
| 3-9  | Lsd. 3, Section 9  |
| 4-9  | Lsd. 4, Section 9  |
| 5-9  | Lsd. 5, Section 9  |
| 7-9  | Lsd. 7, Section 9  |
| 8-9  | Lsd. 8, Section 9  |
| 4-10 | Lsd. 4, Section 10 |
| 5-10 | Lsd. 5, Section 10 |
| 1-8  | Lsd. 1, Section 8  |

Township 9, Range 28

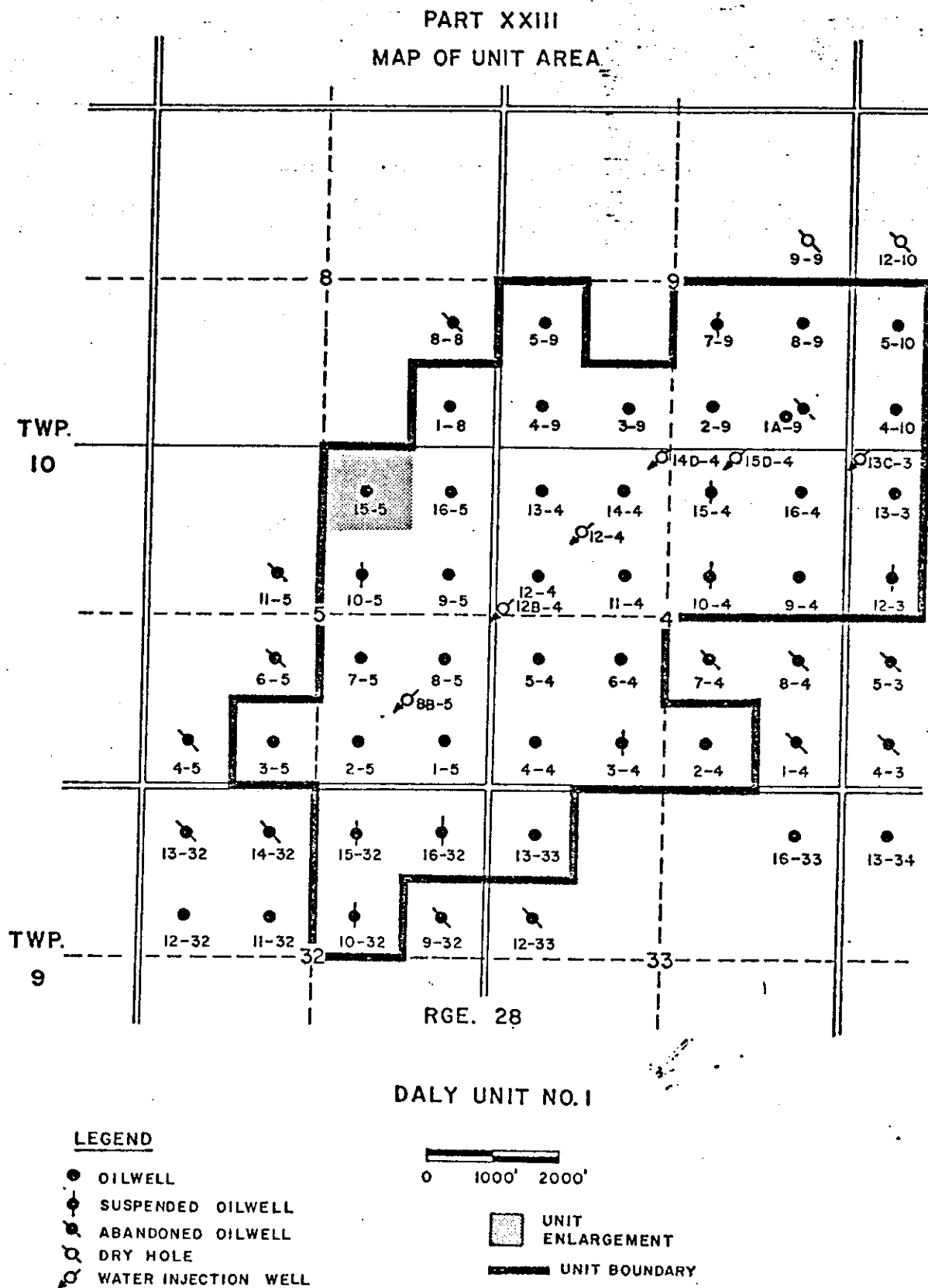
|       |                     |
|-------|---------------------|
| 10-32 | Lsd. 10, Section 32 |
| 15-32 | Lsd. 15, Section 32 |
| 16-32 | Lsd. 16, Section 32 |
| 13-33 | Lsd. 13, Section 33 |

Township 10, Range 28

|      |                    |
|------|--------------------|
| 3-5  | Lsd. 3, Section 5  |
| 11-4 | Lsd. 11, Section 4 |
| 12-4 | Lsd. 12, Section 4 |
| 13-4 | Lsd. 13, Section 4 |
| 14-4 | Lsd. 14, Section 4 |
| 1-5  | Lsd. 1, Section 5  |
| 2-5  | Lsd. 2, Section 5  |
| 7-5  | Lsd. 7, Section 5  |
| 8-5  | Lsd. 8, Section 5  |
| 9-5  | Lsd. 9, Section 5  |
| 10-5 | Lsd. 10, Section 5 |
| 15-5 | Lsd. 15, Section 5 |
| 16-5 | Lsd. 16, Section 5 |
| 3-4  | Lsd. 3, Section 4  |
| 4-4  | Lsd. 4, Section 4  |
| 5-4  | Lsd. 5, Section 4  |
| 6-4  | Lsd. 6, Section 4  |



10. Part XXIII is rescinded, and the new Part XXIII hereunder is substituted therefor:





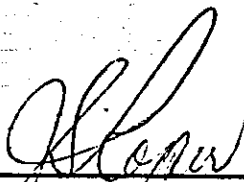
11. Part XXIV is rescinded, and the new Part XXIV hereunder is substituted therefor:

PART XXIV

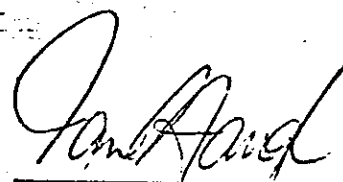
| <u>Tract<br/>Number</u> | <u>Tract<br/>Participation</u> |
|-------------------------|--------------------------------|
| 2-4                     | .97550                         |
| 12-3                    | .13176                         |
| 13-3                    | 6.02681                        |
| 9-4                     | 2.34404                        |
| 10-4                    | .28245                         |
| 15-4                    | .00797                         |
| 16-4                    | 3.23072                        |
| 1-9                     | 2.03572                        |
| 2-9                     | 5.27073                        |
| 3-9                     | 4.10001                        |
| 4-9                     | .56339                         |
| 5-9                     | 2.14807                        |
| 7-9                     | .00016                         |
| 8-9                     | .45928                         |
| 4-10                    | 1.79512                        |
| 5-10                    | 3.01725                        |
| 1-8                     | 1.75249                        |
| 10-32                   | .20260                         |
| 15-32                   | .54135                         |
| 16-32                   | .93423                         |
| 13-33                   | 1.90482                        |
| 3-5                     | 1.39625                        |
| 11-4                    | .50653                         |
| 12-4                    | 7.79922                        |
| 13-4                    | 5.82751                        |
| 14-4                    | 4.92083                        |
| 1-5                     | 4.74111                        |
| 2-5                     | .88878                         |
| 7-5                     | 4.46453                        |
| 8-5                     | 2.12303                        |
| 9-5                     | 4.80369                        |
| 10-5                    | 2.57093                        |
| 15-5                    | 2.84181                        |
| 16-5                    | 2.28237                        |
| 3-4                     | 1.65702                        |
| 4-4                     | 2.77313                        |
| 5-4                     | 6.95749                        |
| 6-4                     | 5.72130                        |



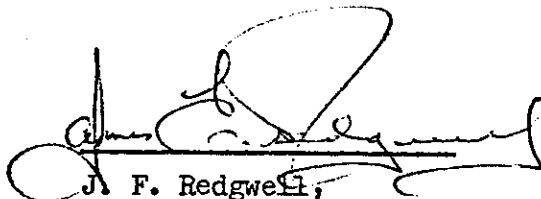
Oil and Natural Gas Unitization Order No. 24  
made and passed this 16<sup>th</sup> day of August  
A.D., 1978 at the City of Winnipeg in the  
Province of Manitoba, by The Oil and  
Natural Gas Conservation Board.



J. S. Roper,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.



Dr. Ian Haugh,  
Deputy Chairman,  
The Oil and Natural Gas  
Conservation Board.



J. F. Redgwell,  
Member,  
The Oil and Natural Gas  
Conservation Board.



Affected by Unitization Order #24  
(December 13/1978) (Doc. No. 1008-0)

Lease #29      Led's 9-10-15-16 of Sec. 4, Twp. 10, Rge 28 WSM  
Lease #54      Led's 4-5 of Sec. 10, Twp. 10, Rge 28 WSM.

The Lessee alleged that the company  
did not seek registration of the Sec. 28  
Branch requested protection against the  
new initiative.



August 24, 1971

Rundle Petroleum Ltd.,  
400 - Royalite Building  
Calgary 2, Alberta

Dear Sirs:

Attention: J. A. Gibson

Re: Unitization Order No. 11  
( Daly Unit No. 1 )

Enclosed herewith certified copy of the  
above mentioned Unitization Order No. 11, duly endorsed  
as to registration in this office under document # 843-0,  
together with Receipt # 20485 in the amount of \$6.00.

This Unitization Order has been registered  
against Crown Oil and Natural Gas Leases 29 and 54.

Yours truly,

T. Morgan  
Chief Mining Recorder

Encl:  
ED/s.



# RUNDLE PETROLEUMS LTD.

400X~~XXX~~ ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171

August 18, 1971

Mr. T. Morgan  
Chief Mining Recorder  
Department of Mines & Natural Resources  
Mines Branch  
Recording Division  
904 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Dear Sir;

We are enclosing for filing with your department a certified copy "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Daly Unit No. 1 (amended)" dated October 20, 1970.

There are two crown leases effected by the plan, which leases are set out in the enclosed letter from Chevron Standard Limited. Our cheque in the amount of \$6.00 is to cover the recording of the plan on the crown leases involved.

We understand that this filing will enable you to issue the license for drilling the water injection well in LSD 15-4-10-28 WPM.

Yours very truly,

RUNDLE PETROLEUMS LTD.

  
J. A. S. Gibson

JASG:ft  
Encls.

4 WELLS ON CROWN LEASE #29  
2 WELLS ON CROWN LEASE #54.

RECEIVED  
SEP 3 1971  
MINE BRANCH  
DEPT. OF MINES  
WINNIPEG





# Chevron Standard Limited

400 Fifth Avenue S.W., Calgary 1, Alberta

August 17, 1971

T. M. Dougall  
Manager  
Land Administration Division

Daly Unit No. 1  
Our File No. 29541

Rundle Petroleum Ltd.  
400 Royalite Building  
Calgary 2, Alberta

Attention: Mr. J. A. S. Gibson

Gentlemen:

Further to your letter of August 6, 1971 and our telephone conversation of August 16, 1971 we are now pleased to supply the information you requested with regard to the following leases:

1. Manitoba Oil and Natural Gas Lease No. <sup>29</sup>~~24~~ covers the NE $\frac{1}{4}$  4-10-28, W1M only.
2. Manitoba Oil and Natural Gas Lease No. 54 covers the SW $\frac{1}{4}$  10-10-28, W1M only.

Both leases are dated May 21, 1968 and expire six years from June 19, 1968.

Chevron has no objection to your company filing the unit order against the subject leases.

Should there be anything further you require with respect to the above, please do not hesitate to contact the writer.

Yours very truly,

  
T. M. DOUGALL

DNG/rt





MANITOBA

DEPARTMENT OF MINES, RESOURCES AND ENVIRONMENTAL MANAGEMENT  
TRANSMITTAL MEMORANDUM

FOR

ORDERS - IN - COUNCIL

SUBJECT The Oil and Natural Gas Conservation Board Unitization Order No. 24

ORDERS-IN-COUNCIL PREPARED FOR A. Brian Ransom, Minister of Mines, Resources and Environmental Mgt

ORDER-IN-COUNCIL PREPARED BY H. C. Moster, Director, Petroleum Branch

JUSTIFICATION PREPARED BY H. C. Moster DATE August 21 19 78

GENERAL PROCEDURES

1. This transmittal memorandum together with twenty-one copies of a justification document must accompany all Orders-in-Council sent to the Minister of Mines, Resources and Environmental Management.
2. This transmittal memorandum must accompany the Order-in-Council until its disposition by the minister, at which time it is requested that this memo be detached from the Order-in-Council and returned to the office mentioned below.
3. The following sequence must be maintained in the routing of the attached Order-in-Council, please sign this memorandum prior to routing to next area.
4. Originator must check appropriate boxes in alternate sections 2-6-7-8 are required.

| Route | POSITION   | APPROVAL SIGNATURES | Route | POSITION  | APPROVAL SIGNATURES             |
|-------|--|---------------------|-------|---|---------------------------------|
| 1     | ORIGINATOR<br>Director<br>Petroleum Br.                |                     | 4     | MINISTER  |                                 |
| 2     | <input type="checkbox"/> PLANNING                      |                     | 5     | ATTORNEY GENERAL                                  |                                 |
|       | <input type="checkbox"/> MANAGEMENT SERVICES           |                     | 6     | <input type="checkbox"/> CIVIL SERVICE COMMISSION |                                 |
|       | <input checked="" type="checkbox"/> Min. Res. Division |                     | 7     | <input type="checkbox"/> PLANNING and PRIORITIES  |                                 |
|       | <input type="checkbox"/> ENVIRONMENTAL MANAGEMENT      |                     |       |   |                                 |
|       | <input type="checkbox"/> RESOURCES MANAGEMENT          |                     |       |   |                                 |
|       | <input type="checkbox"/> WATER RESOURCES               |                     | 8     | <input type="checkbox"/> (ALTERNATIVE)            |                                 |
| 3     | DEPUTY MINISTER  |                     | 9     | DEPUTY MINISTER'S OFFICE                          | FOR PLACEMENT ON CABINET AGENDA |

FOR MINISTER'S USE ONLY

☐ APPROVED

☐ NOT APPROVED

COMMENTS





MANITOBA

DEPARTMENT OF MINES, RESOURCES AND ENVIRONMENTAL MANAGEMENT

## ORDER - IN - COUNCIL JUSTIFICATION DOCUMENT

THE MINISTER OF MINES, RESOURCES AND ENVIRONMENTAL MANAGEMENT PROPOSES TO SUBMIT TO CABINET FOR APPROVAL, AN ORDER-IN-COUNCIL RELATING TO THE FOLLOWING SUBJECT MATTER.

**SUBJECT** The Oil and Natural Gas Conservation Board Unitization Order No. 24 —  
Enlargement of Daly Unit No. 1 and Amendments to the Plan for Unit Operation

### BACKGROUND

Daly Unit No. 1, being part of the producing area in the Daly Field, was unitized by an Order of The Oil and Natural Gas Conservation Board (hereinafter referred to as the Board) in 1971 and approved by Order-in-Council No. 671/71.

On June 2, 1978, Rundle Petroleums Ltd., as Unit Operator of Daly Unit No. 1, made application to the Board for approval of:

1. Enlargement of the present unit area (1,480 acres) by the addition of a tract (40 acres) containing a producing oil well.
2. Certain amendments to the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Daly Unit No. 1."

The application was heard by the Board at a Public Hearing in Winnipeg, Manitoba on July 5, 1978, following which Unitization Order No. 24 was made and passed by the Board on August 16, 1978.

### RECOMMENDATION:

That approval be given to Unitization Order No. 24 in accordance with subsections 78(5) and 79(3) of The Mines Act.

### JUSTIFICATION:

1. The inclusion of the subject tract in the Unit will:
  - (a) reduce the operating costs and extend its production life,
  - (b) enable the Unit Operator to include it in the expanded secondary recovery operations (i.e. injection of water into the subsurface producing formation to displace oil) proposed for the Unit.

Both of these items will result in an increase in the ultimate oil recovery from the tract.

2. The amendments to the Plan for Unit Operation are of a housekeeping nature and mainly pertain to changes in the accounting procedures to:
  - (a) Provide for better overall efficiency for the operation of the Unit.
  - (b) Bring the Plan for Unit Operation into line with other Plans of recently formed Units.
  - (c) Allow the Unit Operator to increase the limit of charges and expenditures to account for inflation.
  - (d) Place greater authority with the Operating Committee of the Unit to amend certain parts in the Plan for Unit Operation.

The evidence submitted at the Hearing satisfied the Board that both the enlargement of the Unit and the amendments to the Plan for Unit Operation were acceptable to the Board.

No objections were received or presented by any affected party and written consents to the application were received from 100% of the Working Interest Owners in the Unit.

THIS DOCUMENT TO BE PREPARED UNDER THE CATEGORICAL HEADINGS:—

**SUBJECT / BACKGROUND / RECOMMENDATIONS / JUSTIFICATION**



SUBMISSION TO CABINET

BY THE

DEPARTMENT OF MINES, RESOURCES AND ENVIRONMENTAL MANAGEMENT

SUBJECT:

The Oil and Natural Gas Conservation Board Unitization Order No. 24

BACKGROUND:

Part of the Daly Field, located approximately 15 miles west of Virden, was unitized by The Oil and Natural Gas Conservation Board (hereinafter referred to as the Board) under Unitization Order No. 11 in 1971 as Daly Unit No. 1. The Order provided for the operation of the Unit in accordance with the provisions of the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Daly Unit No. 1" (hereinafter referred to as the Plan) to accomplish the more efficient and more economical development of that part of the Field through consolidation of production facilities and implementation of a waterflood enhanced recovery project.

At a Public Hearing on July 5th, 1978 the Board heard an application by Rundle Petroleum Ltd., as Operator of the Unit, to:

1. Enlarge the present unit area (1,480 acres) by the addition of a tract (40 acres) containing one producing oil well. This will reduce the operating costs associated with this tract and permit the inclusion of the tract in an enlargement of the waterflood thus resulting in an increase in the ultimate oil recovery from the tract.
2. Make certain amendments of a housekeeping nature to the Plan to give the Operating Committee greater authority to make changes in the accounting procedures and increase charges to account for inflation so as to provide for better efficiency in the operation of the Unit and to bring the Plan into line with other similar plans in the province.

No objections were received or presented by any affected party and the Board, after considering the application, made and passed Unitization Order No. 24 on August 16, 1978.

RECOMMENDATION:

That approval be given to Unitization Order No. 24 in accordance with subsections 78(5) and 79(3) of The Mines Act.

Original Signed By  
A. BRIAN RANSOM

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Minister.



THE REGULATIONS ACT  
CERTIFICATE

(sec. 13 Reg. 1-45)

I, Derek Redson, Clerk of the Executive Council,

hereby certify that the attached regulation marked "A" is a true copy of the original regulation:

(a) entitled ~~as respecting~~ Unitization Order No. 24

(Title or Subject Matter)

(b) made pursuant to The Mines Act  
(Act authorizing)

(c) by The Oil and Natural Gas Conservation Board

(d) on the 16th day of August A.D. 1978.  
(Date Regulation was made)

(e) approved of by Order-in-Council No. 842 on the 6th day of September  
A.D. 19 78 on the recommendation of the Honourable the Minister of Mines,  
Resources and Environmental Management

(f) which regulation comes into force on the day it is filed with the Registrar of Regulations (or the  
1st day of September A.D. 19 78) and

(g) replaces or amends regulation as follows: amends Manitoba Regulation 94/71 being  
The Oil and Natural Gas Conservation Board Unitization Order No. 11

DATED this 14th day of September A.D. 19 78

Derek Redson  
Clerk of the Executive Council





MANITOBA

ON MATTERS OF STATE

To His Honour the Lieutenant-Governor-in-Council

The undersigned, The Minister of Mines, Resources and Environmental Management..... submits for approval of Council a report setting forth that:

WHEREAS, subsection (3) of Section 76 of The Mines Act, being Chapter M160 of The Continuing Consolidation of The Statutes of Manitoba provides as follows:

"76(3) If the board is of the opinion that the operation of the pool, field, or part thereof, as a unit would prevent waste therein having regard

- (a) to the production and recovery of oil and gas;
- (b) to the gathering and processing of gas;
- (c) to the disposal of salt water produced;
- (d) to the rights to each owner to a reasonable opportunity of recovering or receiving the oil and gas in which he has an interest or the equivalent thereof without being required to drill unnecessary wells or to incur other unnecessary expenses therefor; and
- (e) to any other circumstance pertaining to the drilling for or production of oil and gas;

the board may, with the approval of the Lieutenant Governor in Council, order that the pool, field, or part thereof, be operated as a unit.";

AND WHEREAS, subsection (4) of Section 78 of the said Act provides as follows:

"78(4) Upon receiving an application from a working interest owner under subsection (2) or (3), the board shall hold a re-hearing of the matters covered in, or hold a hearing to consider amendments to, the order.";

AND WHEREAS, subsection (5) of Section 78 of the said Act provides as follows:

"78(5) After holding a re-hearing of the matters covered in an order, or a hearing to consider amendments to an order, the board may, subject to the approval of the Lieutenant Governor in Council, make an order amending the order in any way or revoking the order and substituting a further order therefor, or revoking the order without any substitution.";

AND WHEREAS, subsection (1) of Section 79 of the said Act provides as follows:

"79(1) Notwithstanding section 78, the unit operator of a unit area, or the working interest owners of a tract adjoining a unit area, may apply to the board at any time to add to the unit area tracts that adjoin the unit area and that, in the opinion of the board, are in the same pool or field as the unit area.";

AND WHEREAS, subsection (2) of Section 79 of the said Act provides as follows:

"79(2) Upon receiving an application under subsection (1), or upon its own motion, the board may hold a hearing to consider adding further tracts to the unit area.";

AND WHEREAS, subsection (3) of Section 79 of the said Act provides as follows:

"79(3) Upon holding a hearing under subsection (2), the board may, with the approval of the Lieutenant Governor in Council, order that tracts that adjoin a unit area and that, in the opinion of the board, are within the same pool or field, be added to the unit area.";

Copies to: Dr. I. Haugh  
Clare Moster  
Mr. J. Redgwell  
Wm. Podolsky

/ie 78 Sept. 08



AND WHEREAS, The Oil and Natural Gas Conservation Board, by its Unitization Order No. 11 dated June 17, 1971, pursuant to Subsection 76(3) of The Mines Act, ordered that part of the Daly Field be operated as a Unit, to be known as Daly Unit No. 1;

AND WHEREAS, the said Order was approved by the Lieutenant-Governor-in-Council by Order-in-Council No. 671/71, and filed under the Regulations Act as Manitoba Regulation 94/71;

AND WHEREAS, Rundle Petroleums Ltd., as the Unit Operator of Daly Unit No. 1, has applied to The Oil and Natural Gas Conservation Board pursuant to Subsection 79(1) of The Mines Act to have a certain tract adjoining the unit area added to the unit area, and pursuant to Section 78 of The Mines Act to make certain amendments to the above Order;

AND WHEREAS, The Oil and Natural Gas Conservation Board held a hearing on July 5, 1978 to consider the application by Rundle Petroleums Ltd.;

AND WHEREAS, The Oil and Natural Gas Conservation Board upon due consideration of the said application and testimony at the hearing and pursuant to Subsections 78(5) and 79(3) of The Mines Act has made Unitization Order No. 24, dated August 16, 1978, set out in the Schedule hereto, amending Unitization Order No. 11;

AND WHEREAS, it is deemed advisable to approve Unitization Order No. 24 of The Oil and Natural Gas Conservation Board set out in the Schedule hereto.

THEREFOR he, the Minister, recommends:

THAT, Unitization Order No. 24 of The Oil and Natural Gas Conservation Board, set out in the Schedule hereto be approved.

Signature

IN THE EXECUTIVE COUNCIL CHAMBER, WINNIPEG

Upon consideration of the foregoing report and recommendation Council advises that it be done as recommended.

6th September 1978

Date

President of Executive Council

AT GOVERNMENT HOUSE IN THE CITY OF WINNIPEG

Approved and Ordered this 6th day of September A.D. 1978

Lieutenant-Governor



Manitoba Regulation <sup>172</sup> This is the Schedule " " referred to in  
Being Order-in-Council No. 842/78

The Oil and Natural Gas Conservation Board *Derek Badian*  
Clerk of the Executive Council

UNITIZATION ORDER NO. 24

Amending Unitization Order No. 11 Pertaining to

DALY UNIT NO. 1

Made and Passed Pursuant to "The Mines Act", Cap. M160, of the  
Continuing Consolidation of the Statutes of Manitoba, and  
Amendments Thereto, by The Oil and Natural Gas  
Conservation Board of Manitoba

(Filed: )

The Plan for Unit Operation Governing the Unitized Management  
Operation and Further Development of Daly Unit No. 1, set out in  
Unitization Order No. 11 (Manitoba Regulation 94/71), is amended by  
adding to the Unit Area affected by the said Order, the following  
area:

Legal Subdivision 15 of Section 5 in Township 10,  
Range 28, West of the Principal Meridian.

And is further amended as follows:

1. Paragraph (d) of Section 1.02 is rescinded, and the following substituted therefor:

(d) "Effective Date" means the hour of seven o'clock  
in the forenoon, official time, on the first day of  
July, 1971, except that with respect to the tract  
15-5-10-28 WPM "Effective Date" means the hour of  
seven o'clock in the forenoon, official time, on the  
first day of September, A.D., 1978.

2. Part III is rescinded, and the following substituted therefor:

PART III  
TRACT PARTICIPATION

- 3.01 The Tract Participation of each Tract is shown in Part XXIV  
hereof and was determined as follows:

- (a) With respect to all Tracts, except for Tract Number 15-5  
(hereinafter called "the enlargement tract"), the sum of  
each of the following factors reduced by multiplying by  
the difference of one (1) minus the quotient of the tract  
participation for the enlargement tract divided by 100,  
namely:

1.0000000 minus 0.0284181



- (i) A current production factor — such factor is the percentage calculated by dividing the 1969 oil production of such tract by the oil production of all tracts during the same interval and multiplying by forty one-hundredths (40/100), plus;
- (ii) An average monthly oil production factor penalized for water production, such a factor is arrived at by:
  - (1) determining average monthly oil production of the Tract by dividing its cumulative oil production to December 31, 1969 by the number of calendar months since the well on such Tract first went on production, provided that the first calendar month shall not be counted as such unless the oil production from the well on such Tract for that calendar month was greater than one-half (1/2) of the oil production from such well for the next succeeding month;
  - (2) calculating a fractional water cut for the Tract by dividing the water production for the interval set out in paragraph (i) hereof by the sum of its water and oil production for the same period; PROVIDED THAT, with respect to these tracts which did not produce during the interval referred to, the fractional water cut shall be calculated by dividing the water production for each such Tract during the consecutive twelve month period that ends with the last recorded production by the sum of such Tracts water and oil production for the same period;
  - (3) multiplying the average monthly oil production for the tract obtained in (1) by the fraction one minus the water cut appropriate to the Tract as determined in (2);
  - (4) dividing the product obtained in (3) for the Tract by the sum of all products obtained in (3) for all the Tracts and multiplying by sixty one-hundredths (60/100).
- (b) With respect to the enlargement tract, namely Tract No. 15-5, a factor arrived at by:
  - (i) Calculating the arithmetic average of the Tract Participations of the four unit tracts directly and diagonally offsetting the enlargement tract, namely tracts numbered 10-5, 16-5, 9-5 and 1-8;



(ii) Dividing the arithmetic average monthly oil production from the enlargement tract during the interval September 1, 1977 to February 28, 1978, both days inclusive, by the sum of the average monthly oil production from all tracts during 1969 plus the arithmetic average monthly oil production from the enlargement tract during the interval September 1, 1977 to February 28, 1978, both days inclusive.

(iii) Adding the arithmetic average tract participation determined in (i) to the quotient determined in (ii) and dividing the sum by two (2).

3.02 The total of the Tract Participations for all Tracts shall at all times equal one hundred (100%) percent.

3.03 This Part III is explanatory and the Tract Participations shown in Part XXIV shall be deemed to be correctly made in accordance with this Part III.

3. Section 5.09 is rescinded, and the following is substituted therefor:

5.09 Unit Operator shall keep minutes of the proceedings of each meeting of the Operating Committee and a copy thereof shall be forwarded to each member thereof. Such minutes need not be a verbatim record of all the proceedings, but shall show the names of the representatives present at the meeting, all motions and resolutions offered or acted upon, together with the result of such action and such other formal action as may be taken by the Operating Committee. Unless within forty-five (45) days of the date of mailing of the minutes a member of the Operating Committee advised Unit Operator of an error or omission or otherwise in such minutes, such minutes shall be deemed conclusively to be correct for all purposes. The unit operator shall mail out the minutes of each meeting to each member of the Operating Committee within 30 days of the date of such a meeting.

4. Paragraph (j) of Section 6.03 is rescinded, and the following is substituted therefor:

6.03(j) To amend Part XXVI thereof from time to time whether in whole or in part, PROVIDED THAT, two copies of any amendment changing the charges to be made by Unit Operator under Section 26.07(k) hereof shall be filed with the Conservation Board.



5. Section 7.04 is rescinded, and the following is substituted therefor:

7.04 In addition to any expenditures which Unit Operator is specifically authorized to make, Unit Operator is authorized to make an expenditure not in excess of Ten Thousand (\$10,000.00) Dollars, in respect to any single undertaking without the approval of the Operating Committee, or such other amount as may from time to time be approved by a vote of the Operating Committee, PROVIDED THAT, two copies of any such amendment approved by the Operating Committee shall be filed with the Conservation Board. Unit Operator may, without approval of the Operating Committee, take such action and make such expenditures for the Common Account as it may deem necessary in order to protect life or property. Within fifteen (15) days after taking any such action or making such expenditures, Unit Operator shall advise the Operating Committee of such action and expenditures.

6. Paragraph (a) of Section 26.07 is rescinded, and the following is substituted therefor:

(a) Salaries, wages and related expenses of Unit Operator's personnel, up to and including the first level of supervision, directly employed on the Joint Property in the development, maintenance and operation thereof, including salaries and wages paid to landmen acquiring rights-of-way, settling damage claims, etc., and to technical employees, such as geologist, engineers and other employees who are temporarily assigned to and located at and directly engaged on the Joint Property.

7. Subparagraph (iii) of Paragraph (k) of Section 26.07 is rescinded and the following is substituted therefor:

(iii) Any other costs of operating the division and/or principal office of the Unit Operator.

The rates, which are subject to review annually, as set forth in paragraph (j) of Section 6.03 are as follows:

(a) \$3,000.00 per month for all producing operations.

(b) \$65.00 per day for each drilling well, wells being plugged back, drilled deeper, reworked, or converted to source or input wells; charges to commence on the date the well is spudded or operations are commenced and terminate when the drilling rig or service rig as the case may be is released, except that no charge should be made during the suspension of drilling operations for fifteen (15) or more consecutive days.



(c) the charge in respect to construction of Unit Facilities, including but not limited to, water injection plant, battery consolidation, injection pipeline systems and water supply systems shall be calculated on direct expenditures on the following basis:

5% of expenditures up to \$50,000.00, plus  
3% of expenditures over \$50,000.00 and up to  
\$150,000.00, plus  
1% of expenditures over \$150,000.00.

8. Part XXI is rescinded and the new Part hereunder is substituted therefor:

PART XXI

WELLS DELIVERED TO UNIT OPERATOR PURSUANT TO PART X.

Chevron Daly 2-4-10-28  
Chevron Daly 12-3-10-28  
Chevron Daly 13-3-10-28  
Chevron Daly Prov. 9A-4-10-28  
Chevron Daly Prov. 10-4-10-28  
Chevron Daly Prov. 15-4-10-28  
Chevron Daly Prov. 16-4-10-28  
Chevron Daly 1A-9-10-28  
Chevron Daly 2-9-10-28  
Chevron Daly 3-9-10-28  
Chevron Daly 4-9-10-28  
Chevron Daly 5-9-10-28  
Chevron Daly 7-9-10-28  
Chevron Daly 8-9-10-28  
Chevron Daly Prov. 4-10-10-28  
Chevron Daly Prov. 5-10-10-28  
Recovery Daly 1-8-10-28  
Murphy Daly 10-32-9-28  
Murphy Daly 15-32-9-28  
Murphy Daly 16-32-9-28  
Murphy Daly 13-33-9-28  
Murphy Daly 3-5-10-28  
Rundle Cruickshank Daly 11-4-10-28  
Rundle Cruickshank Daly 12-4-10-28  
Rundle Cruickshank Daly 13-4-10-28  
Rundle Cruickshank Daly 14-4-10-28  
Rundle Cruickshank Daly WIW 12-4-10-28  
Rundle M & H Daly 1-5-10-28  
Rundle M & H Daly 2-5-10-28  
Rundle M & H Daly 7-5-10-28  
Rundle M & H Daly 8-5-10-28  
Rundle M & H Daly 9-5-10-28  
Rundle M & H Daly 10-5-10-28  
Rundle M & H Daly 15-5-10-28  
Rundle M & H Daly 16-5-10-28  
Scurry Cruickshank Daly 3-4-10-28  
Scurry Cruickshank Daly 4-4-10-28  
Scurry Cruickshank Daly 5-4-10-28  
Scurry Cruickshank Daly 6-4-10-28



9. Part ~~XXII~~ is rescinded, and the new Part ~~XXII~~ hereunder is substituted therefor:

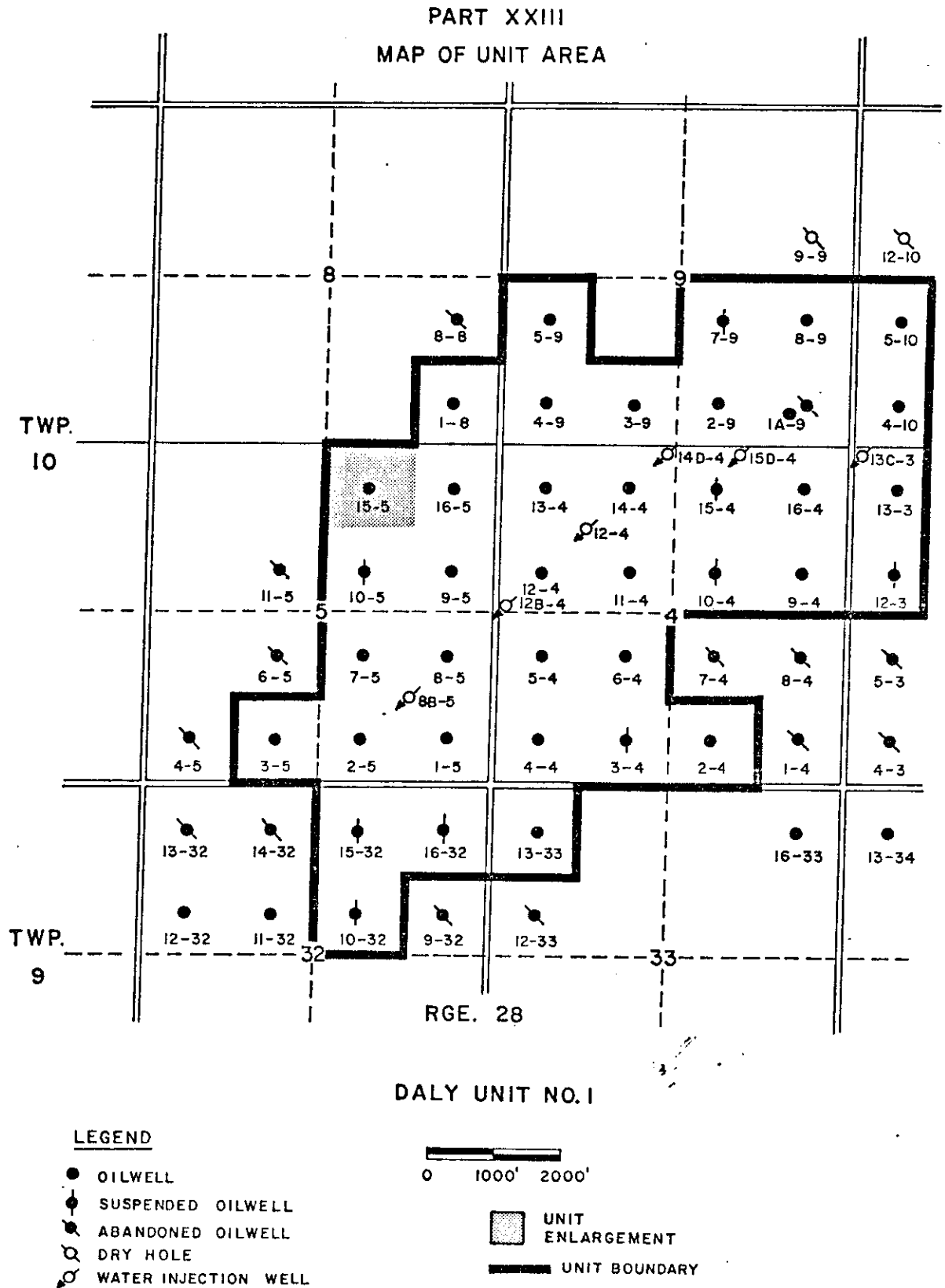
PART ~~XXII~~

THE LANDS IN THE PROVINCE OF MANITOBA WHICH COMPRISE  
THE DALY UNIT NO. 1 ARE AS FOLLOWS:

| <u>Tract Number</u> | <u>Legal Description</u>     |
|---------------------|------------------------------|
|                     | <u>Township 10, Range 28</u> |
| 2-4                 | Lsd. 2, Section 4            |
| 12-3                | Lsd. 12, Section 3           |
| 13-3                | Lsd. 13, Section 3           |
| 9-4                 | Lsd. 9, Section 4            |
| 10-4                | Lsd. 10, Section 4           |
| 15-4                | Lsd. 15, Section 4           |
| 16-4                | Lsd. 16, Section 4           |
| 1-9                 | Lsd. 1, Section 9            |
| 2-9                 | Lsd. 2, Section 9            |
| 3-9                 | Lsd. 3, Section 9            |
| 4-9                 | Lsd. 4, Section 9            |
| 5-9                 | Lsd. 5, Section 9            |
| 7-9                 | Lsd. 7, Section 9            |
| 8-9                 | Lsd. 8, Section 9            |
| 4-10                | Lsd. 4, Section 10           |
| 5-10                | Lsd. 5, Section 10           |
| 1-8                 | Lsd. 1, Section 8            |
|                     | <u>Township 9, Range 28</u>  |
| 10-32               | Lsd. 10, Section 32          |
| 15-32               | Lsd. 15, Section 32          |
| 16-32               | Lsd. 16, Section 32          |
| 13-33               | Lsd. 13, Section 33          |
|                     | <u>Township 10, Range 28</u> |
| 3-5                 | Lsd. 3, Section 5            |
| 11-4                | Lsd. 11, Section 4           |
| 12-4                | Lsd. 12, Section 4           |
| 13-4                | Lsd. 13, Section 4           |
| 14-4                | Lsd. 14, Section 4           |
| 1-5                 | Lsd. 1, Section 5            |
| 2-5                 | Lsd. 2, Section 5            |
| 7-5                 | Lsd. 7, Section 5            |
| 8-5                 | Lsd. 8, Section 5            |
| 9-5                 | Lsd. 9, Section 5            |
| 10-5                | Lsd. 10, Section 5           |
| 15-5                | Lsd. 15, Section 5           |
| 16-5                | Lsd. 16, Section 5           |
| 3-4                 | Lsd. 3, Section 4            |
| 4-4                 | Lsd. 4, Section 4            |
| 5-4                 | Lsd. 5, Section 4            |
| 6-4                 | Lsd. 6, Section 4            |



10. Part ~~XXIII~~ is rescinded, and the new Part ~~XXIII~~ hereunder is substituted therefor:





11. Part ~~XXIV~~ is rescinded, and the new Part XXIV hereunder is substituted therefor:

PART XXIV

| <u>Tract<br/>Number</u> | <u>Tract<br/>Participation</u> |
|-------------------------|--------------------------------|
| 2-4                     | .97550                         |
| 12-3                    | .13176                         |
| 13-3                    | 6.02681                        |
| 9-4                     | 2.34404                        |
| 10-4                    | .28245                         |
| 15-4                    | .00797                         |
| 16-4                    | 3.23072                        |
| 1-9                     | 2.03572                        |
| 2-9                     | 5.27073                        |
| 3-9                     | 4.10001                        |
| 4-9                     | .56339                         |
| 5-9                     | 2.14807                        |
| 7-9                     | .00016                         |
| 8-9                     | .45928                         |
| 4-10                    | 1.79512                        |
| 5-10                    | 3.01725                        |
| 1-8                     | 1.75249                        |
| 10-32                   | .20260                         |
| 15-32                   | .54135                         |
| 16-32                   | .93423                         |
| 13-33                   | 1.90482                        |
| 3-5                     | 1.39625                        |
| 11-4                    | .50653                         |
| 12-4                    | 7.79922                        |
| 13-4                    | 5.82751                        |
| 14-4                    | 4.92083                        |
| 1-5                     | 4.74111                        |
| 2-5                     | .88878                         |
| 7-5                     | 4.46453                        |
| 8-5                     | 2.12303                        |
| 9-5                     | 4.80369                        |
| 10-5                    | 2.57093                        |
| 15-5                    | 2.84181                        |
| 16-5                    | 2.28237                        |
| 3-4                     | 1.65702                        |
| 4-4                     | 2.77313                        |
| 5-4                     | 6.95749                        |
| 6-4                     | 5.72130                        |



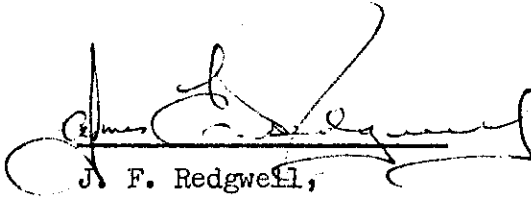
Oil and Natural Gas Unitization Order No. 24  
made and passed this 16<sup>th</sup> day of August  
A.D., 1978 at the City of Winnipeg in the  
Province of Manitoba, by The Oil and  
Natural Gas Conservation Board.



J. S. Roper,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.



Dr. Ian Haugh,  
Deputy Chairman,  
The Oil and Natural Gas  
Conservation Board.

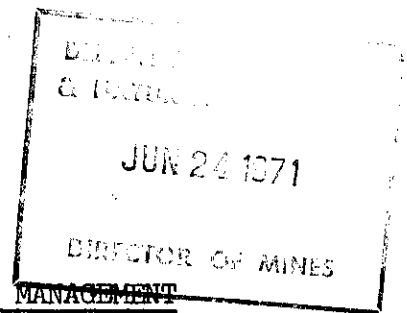


J. F. Redgwell,  
Member,  
The Oil and Natural Gas  
Conservation Board.



*14/6/71*  
*W. G. Gormley*

CABINET MEMO



DEPARTMENT OF MINES, RESOURCES AND ENVIRONMENTAL MANAGEMENT

SUBJECT:

The Oil and Natural Gas Conservation Board Unitization Order No. 11.

EXPLANATION:

The Oil and Natural Gas Conservation Board held a public hearing in Virden, Manitoba, December 15, 1970, in respect of an application by Rundle Petroleum Ltd., for approval of a "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of the Daly Unit No. 1", being a part of the Daly Field.

The evidence submitted at this hearing satisfied the Board that the proposed Plan would prevent waste and increase the ultimate recovery of oil.

There were no objections to the proposal, and the Plan has been approved, in writing, by more than seventy-five percent (75%) of the working interest owners and the royalty owners in the proposed Unit Area.

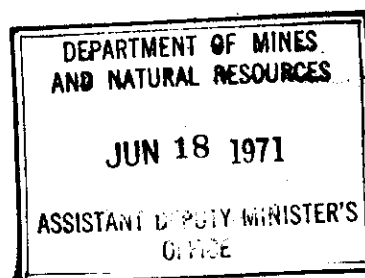
PROPOSAL:

The Board is prepared to order, subject to the approval of the Lieutenant-Governor-in-Council, that part of the Daly Field, to be known as the "Daly Unit No. 1", be operated as a Unit.

RECOMMENDATION:

That approval be given to the Order of The Oil and Natural Gas Conservation Board, providing that, on and after July 1, 1971, a certain part of the Daly Field be operated as a Unit in accordance with the Plan for Unit Operation Governing the Unitized Management Operation and Further Development of the Daly Unit No. 1.

Date Typed: June 18, 1971.



MINISTER OF MINES, RESOURCES  
AND ENVIRONMENTAL MANAGEMENT.



At Government House in the City of Winnipeg  
APPROVED AND ORDERED this

June 23rd day of June A.D. 1971

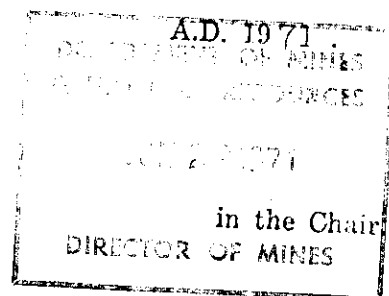
Lieutenant-Governor

# In The Executive Council Chamber, Winnipeg

The 23rd day of June

## PRESENT

The Honourable Mr. SCHREYER  
Mr. CHERNIACK  
Mr. PAULEY  
Mr. MACKLING  
Mr. CROSBY  
Mr. USKIN  
Mr. MITCHELL  
Mr. TOLPIN  
Mr. EVANS  
Mr. BURTNIAK  
Mr. PAWLEY  
Mr. DOERN



JUN 23 1971

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# 23

## ON MATTERS OF STATE

To His Honour the Lieutenant-Governor-in-Council

The undersigned, the Minister of Mines, Resources and Environmental Management, submits for approval of Council a report setting forth that:

WHEREAS, subsections (1), (2), and (3) of Section 76 of "The Mines Act", being Chapter M160 of the Revised Statutes of Manitoba, 1970, provide as follows:

"76(1) The board, upon its own motion, may, or, upon the application of a working interest owner of a tract that exceeds a spacing unit in area, and that is within the pool, field, or part thereof, shall hold a hearing to consider the advisability or necessity for the operation of a pool, field, or part thereof, as a unit.

76(2) A working interest owner applying to the board under subsection (1) shall apply in writing and shall submit to the board a proposed plan of unit operation of the proposed unit area containing the terms and conditions that the applicant desires to be included in the order, together with such number of copies of the plan and such other information as the board may require.

76(3) If the board is of the opinion that the operation of the pool, field, or part thereof, as a unit would prevent waste therein having regard

(a) to the production and recovery of oil and gas;

(b) to the gathering and processing of gas;

(c) to the disposal of salt water produced;

(d) to the rights of each owner to a reasonable opportunity of recovering or receiving the oil and gas in which he has an interest or the equivalent thereof without being required to drill unnecessary wells or to incur other unnecessary expenses therefor; and

(e) to any other circumstance pertaining to the drilling for or production of oil and gas;

the board may, with the approval of the Lieutenant Governor in Council, order that the pool, field, or part thereof, be operated as a unit.";



AND WHEREAS, Section 77 of "The Mines Act", as enacted by Chapter M160 of the Revised Statutes of Manitoba, 1970, provides as follows:

"77. The board shall not make an order under subsection (3) of section 76 unless

(a) the working interest owners of over seventy-five per centum of the area of the proposed unit area have agreed in writing to the proposed plan of unit operation, or, if one working interest owner is the working interest owner of seventy-five per centum or more, but less than one hundred per centum, of the area of the proposed unit area, that working interest owner and at least one other working interest owner of a tract in the proposed unit area, have agreed in writing to the proposed plan of unit operation; and

(b) the royalty owners having seventy-five per centum of the royalty interests of the head lessors in the oil and gas produced from the unit area have agreed in writing to the proposed plan of unit operation, or, if one royalty owner has seventy-five per centum or more of the royalty interests of the head lessors in the oil and gas produced from the unit area but does not have all such royalty interests, that royalty owner and at least one other royalty owner having such royalty interests, have agreed in writing to the proposed plan of unit operation.";

AND WHEREAS, The Oil and Natural Gas Conservation Board received an application from Rundle Petroleum Ltd., on behalf of itself and other working interest owners in the Daly Field in Manitoba, requesting the Board to hold a Hearing to consider the advisability or necessity for the operation of a certain part of the Daly Field in Manitoba as a unit, and to consider a proposed plan of unit operation of the proposed unit area;

AND WHEREAS, the Board, pursuant to Section 76 of "The Mines Act", held public Hearings on December 15, 1970, and May 14, 1971, for the purpose of considering a Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Daly Unit No. 1;

AND WHEREAS, upon due consideration of the submissions and testimony at the Hearings, the Board has found:

(a) That the operation of a certain part of the Daly Field in Manitoba, as more particularly delineated in the Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Daly Unit No. 1, dated October 20, 1970, and as amended January 6, 1971, is reasonably necessary to prevent waste, and to increase substantially the recovery of oil;



- (b) That the value of the estimated additional recovery of oil and gas resulting from such operation will exceed the estimated additional cost incidental to the conduct of such operation;
- (c) That such operation will result in general advantage to the owners of oil and gas rights within the proposed unit area;
- (d) That the provisions of Section 77 of "The Mines Act" have been complied with;

AND WHEREAS, subsections (1) and (3) of Section 4 of The Regulations Act, being Chapter R60 of the Revised Statutes of Manitoba, 1970, provide as follows:

"4(1) Subject to subsections (2) and (3), the registrar shall, within one month of the filing thereof, publish every regulation in The Manitoba Gazette,

4(3) Where a regulation, in the opinion of the Lieutenant Governor in Council,

(a) is of such length as to render publication thereof in The Manitoba Gazette unnecessary or undesirable; and

(b) is or will be available to all persons who are likely to be interested therein;

the Lieutenant Governor in Council, by order in council, may dispense with the publication thereof; and the regulation, upon registration thereof, is as valid against all persons as if it had been published.";

AND WHEREAS, on the 17th day of June, 1971, The Oil and Natural Gas Conservation Board made Unitization Order No. 11, as set out in the Schedule hereto;

AND WHEREAS, it is deemed necessary and expedient that the said Order be approved, and that the publication of the Plan, referred to in the said Unitization Order, in The Manitoba Gazette be dispensed with.



THEREFORE he, the Minister, recommends:

1. THAT Unitization Order No. 11, and Plan attached thereto, made by The Oil and Natural Gas Conservation Board on the 17th day of June, 1971, be approved.
2. THAT publication of the Plan, attached to the said Unitization Order No. 11, in The Manitoba Gazette be dispensed with.

Submitted and Recommended

Minister of Mines, Resources and Environmental Management.

Upon consideration of the foregoing report and recommendation Council advises that it be done as recommended by the Honourable the Minister of Mines, Resources and Environmental Management; and His Honour the Lieutenant-Governor-in-Council is pleased to approve the said report and recommendation and doth order accordingly.

*[Signature]*  
President of the Council  
or

Presiding Member of the Executive Council.



THE REGULATIONS ACT  
CERTIFICATE  
(sec. 13 Reg. 1-45)

I, Derek Bedson, Clerk of the Executive Council,  
hereby certify that the attached regulation marked "A" is a true copy of the original regulation:—

(a) entitled (or respecting) The Oil and Natural Gas Conservation Board  
Unitization Order No. 11;

(Title or Subject Matter)

(b) made pursuant to The Mines Act;  
(Act authorizing)

(c) by His Honour the Lieutenant Governor in Council;

(d) on the 24 day of June, A.D. 19 71;  
(Date Regulation was made)

(e) approved of by Order-in-Council No. 671/71, on the 23 day of June,  
A.D. 19 71, on the recommendation of the Honourable the Minister of Mines, Resources  
and Environmental Management;

(f) which regulation comes into force on the day it is filed with the Registrar of Regulations (or the  
day of A.D. 19 ) and

(g) ~~represents or amends regulation as follows~~ Pertaining to Daly Unit No. 1.

DATED this day of June, A.D. 19 71.

Clerk of the Executive Council



THE OIL AND NATURAL GAS CONSERVATION BOARD

UNITIZATION ORDER NO. 11

Pertaining to the Unitized Management Operation and Further Development of Daly Unit No. 1.

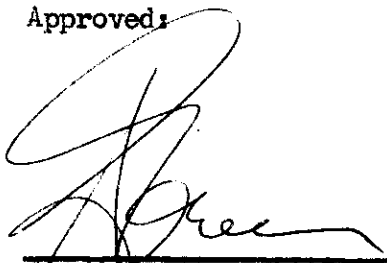
Made and passed pursuant to "The Mines Act", Cap. M160, R. S. M., 1970, and amendments thereto, by The Oil and Natural Gas Conservation Board, of Manitoba.

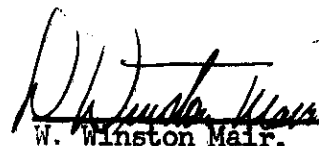
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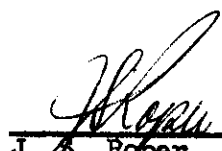
1. Effective at the hour of seven o'clock in the forenoon, Central Daylight Time, on the first day of July, 1971, that a certain part of the Daly Field, to be known as the Unit Area, shall be operated as a unit in accordance with the Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Daly Unit No. 1, dated October 20, 1970, and amended January 6, 1971, and shall be known as the Daly Unit No. 1.
2. Excerpts from the Plan, namely: Parts XXII, XXIII, and XXIV here attached, are for publication in The Manitoba Gazette for the information of the public.

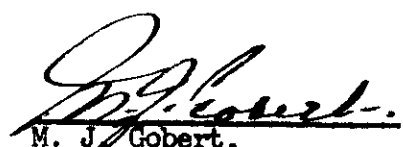
Oil and Natural Gas Unitization Order No. 11,  
made and passed this ~~17th~~ day of June,  
A. D., 1971, at the City of Winnipeg, in  
the Province of Manitoba, by The Oil and  
Natural Gas Conservation Board.

Approved:

  
Sidney Green,  
Minister of Mines, Resources  
and Environmental Management.

  
W. Winston Mair,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.

  
J. S. Roper,  
Deputy Chairman,  
The Oil and Natural Gas  
Conservation Board.

  
M. J. Gobert,  
Member,  
The Oil and Natural Gas  
Conservation Board.



Being

THE OIL AND NATURAL GAS CONSERVATION BOARD

UNITIZATION ORDER NO. 11

Pertaining to the Unitized Management Operation and Further Development of Daly Unit No. 1.


Made and passed pursuant to "The Mines Act", Cap. M160, R. S. M., 1970, and amendments thereto, by The Oil and Natural Gas Conservation Board, of Manitoba.

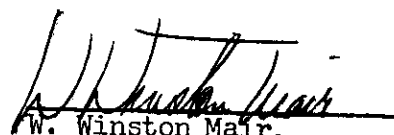
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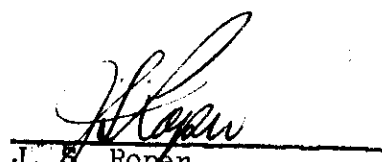
1. Effective at the hour of seven o'clock in the forenoon, Central Daylight Time, on the first day of July, 1971, that a certain part of the Daly Field, to be known as the Unit Area, shall be operated as a unit in accordance with the Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Daly Unit No. 1, dated October 20, 1970, and amended January 6, 1971, and shall be known as the Daly Unit No. 1.
2. Excerpts from the Plan, namely: Parts XXII, XXIII, and XXIV here attached, are for publication in The Manitoba Gazette for the information of the public.

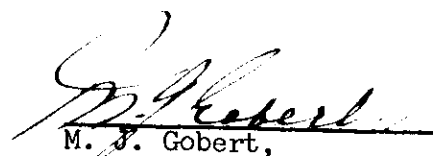
Oil and Natural Gas Unitization Order No. 11,  
made and passed this 17<sup>th</sup> day of June,  
A. D., 1971, at the City of Winnipeg, in  
the Province of Manitoba, by The Oil and  
Natural Gas Conservation Board.

Approved:

  
Sidney Green,  
Minister of Mines, Resources  
and Environmental Management.

  
W. Winston Mair,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.

  
J. E. Roper,  
Deputy Chairman,  
The Oil and Natural Gas  
Conservation Board.

  
M. J. Gobert,  
Member,  
The Oil and Natural Gas  
Conservation Board.



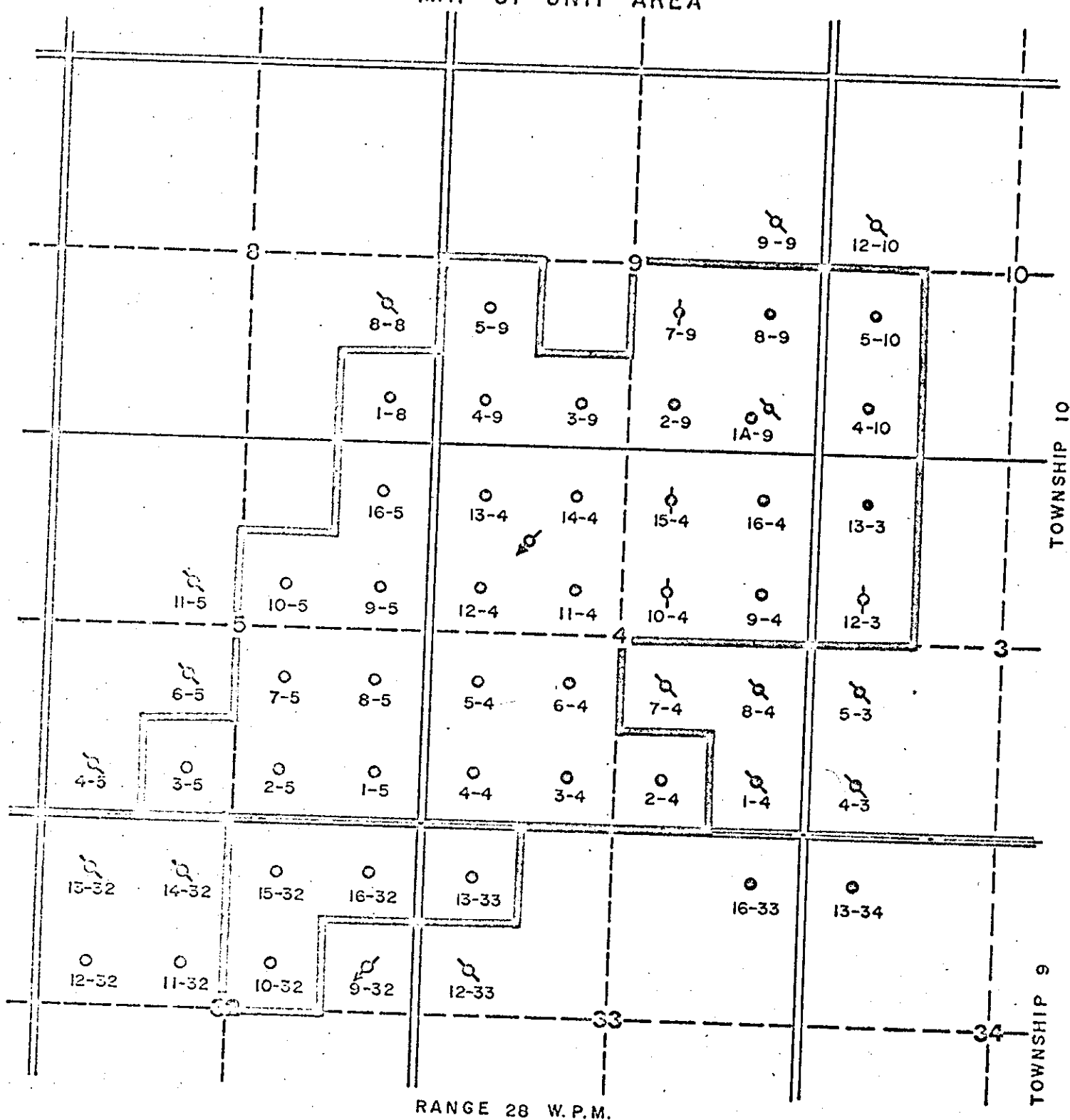
PART XXII

THE LANDS IN THE PROVINCE OF MANITOBA WHICH COMPRISE  
THE DALY UNIT NO. 1 ARE AS FOLLOWS:

| <u>TRACT NUMBER</u> | <u>LEGAL DESCRIPTION</u>    | <u>TRACT NUMBER</u> | <u>LEGAL DESCRIPTION</u>    |
|---------------------|-----------------------------|---------------------|-----------------------------|
|                     | <u>TOWNSHIP 10 RANGE 28</u> |                     | <u>TOWNSHIP 10 RANGE 28</u> |
| 2-4                 | LSD. 2, SECTION 4           | 3-5                 | LSD. 3, SECTION 5           |
| 12-3                | LSD. 12, SECTION 3          | 11-4                | LSD. 11, SECTION 4          |
| 13-3                | LSD. 13, SECTION 3          | 12-4                | LSD. 12, SECTION 4          |
| 9-4                 | LSD. 9, SECTION 4           | 13-4                | LSD. 13, SECTION 4          |
| 10-4                | LSD. 10, SECTION 4          | 14-4                | LSD. 14, SECTION 4          |
| 15-4                | LSD. 15, SECTION 4          | 1-5                 | LSD. 1, SECTION 5           |
| 16-4                | LSD. 16, SECTION 4          | 2-5                 | LSD. 2, SECTION 5           |
| 1-9                 | LSD. 1, SECTION 9           | 7-5                 | LSD. 7, SECTION 5           |
| 2-9                 | LSD. 2, SECTION 9           | 8-5                 | LSD. 8, SECTION 5           |
| 3-9                 | LSD. 3, SECTION 9           | 9-5                 | LSD. 9, SECTION 5           |
| 4-9                 | LSD. 4, SECTION 9           | 10-5                | LSD. 10, SECTION 5          |
| 5-9                 | LSD. 5, SECTION 9           | 16-5                | LSD. 16, SECTION 5          |
| 7-9                 | LSD. 7, SECTION 9           | 3-4                 | LSD. 3, SECTION 4           |
| 8-9                 | LSD. 8, SECTION 9           | 4-4                 | LSD. 4, SECTION 4           |
| 4-10                | LSD. 4, SECTION 10          | 5-4                 | LSD. 5, SECTION 4           |
| 5-10                | LSD. 5, SECTION 10          | 6-4                 | LSD. 6, SECTION 4           |
| 1-8                 | LSD. 1, SECTION 8           |                     |                             |
|                     | <u>TOWNSHIP 9 RANGE 28</u>  |                     |                             |
| 10-32               | LSD. 10, SECTION 32         |                     |                             |
| 15-32               | LSD. 15, SECTION 32         |                     |                             |
| 16-32               | LSD. 16, SECTION 32         |                     |                             |
| 13-33               | LSD. 13, SECTION 33         |                     |                             |



PART XXIII  
MAP OF UNIT AREA





PART XXIV

| <u>TRACT NUMBER</u> | <u>TRACT PARTICIPATION</u> | <u>TRACT NUMBER</u> | <u>TRACT PARITICPATION</u> |
|---------------------|----------------------------|---------------------|----------------------------|
| 2-4                 | 1.00403                    | 3-5                 | 1.43709                    |
| 12-3                | .13561                     | 11-4                | .52135                     |
| 13-3                | 6.20309                    | 12-4                | 8.02734                    |
| 9-4                 | 2.41260                    | 13-4                | 5.99796                    |
| 10-4                | .29071                     | 14-4                | 5.06476                    |
| 15-4                | .00820                     | 1-5                 | 4.87978                    |
| 16-4                | 3.32522                    | 2-5                 | .91478                     |
| 1-9                 | 2.09526                    | 7-5                 | 4.59511                    |
| 2-9                 | 5.42490                    | 8-5                 | 2.18513                    |
| 3-9                 | 4.21993                    | 9-5                 | 4.94419                    |
| 4-9                 | .57987                     | 10-5                | 2.64613                    |
| 5-9                 | 2.21090                    | 16-5                | 2.34913                    |
| 7-9                 | .00017                     | 3-4                 | 1.70549                    |
| 8-9                 | .47271                     | 4-4                 | 2.85424                    |
| 4-10                | 1.84763                    | 5-4                 | 7.16099                    |
| 5-10                | 3.10550                    | 6-4                 | 5.88864                    |
| 1-8                 | 1.80375                    |                     |                            |
| 10-32               | .20853                     |                     |                            |
| 15-32               | .55718                     |                     |                            |
| 16-32               | .96156                     |                     |                            |
| 13-33               | 1.96054                    |                     |                            |



R3C OPE

November 26, 1971.

Rundle Petroleum Limited,  
Operator - Daly Unit No. 1,  
400 Royalite Building,  
Calgary 2, Alberta.

ATTENTION: R.F. Atkinson

Dear Sir:


Re: Daly Unit No. 1

This will acknowledge your letter of November 24, 1971, reporting the suspected breakthrough of injected water to the producing well on 12-4-10-28, in accordance with Board Order No. PM 17.

We note the action taken to reduce the rate of water injection.

Should the Board prescribe a maximum pressure or maximum rate of injection into WTW 12-4, you will be advised immediately.

Yours sincerely,



J.S. Hoper

FSG/gh

cc: M.J. Gobert



**RUNDLE PETROLEUMS LTD.**

400 ~~X00X~~ ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171

November 24th, 1971

The Oil & Gas Conservation Board  
901 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Dear Sirs;

Re: Daly Unit No. 1

Further to order No. PM 17 section 3 Rundle Petroleum Ltd. as operator of Daly Unit No. 1 reports that an indication of water breakthrough has been indicated on the original Pilot Flood area on the well Rundle Cruickshank Daly #12-4-10-28. On November 22, 1971 this well tested 146 barrels of oil + 95 barrels of water for 24 hours. This compares to the last test of October 5, 1971 when the well made 183 barrels of oil + 48 barrels of water in 24 hours.

In view of this test, water injection into the WIW #12-4 will be reduced to approximately 360 barrels per day immediately and will be reduced a further amount to approximately 100 barrels per day in the near future when the WIW #12B-4 will be placed on stream. The full scale water injection is expected to begin in the next month or so.

The four wells in the original Pilot Area have produced 94,586 barrels of oil from January 1, 1970 to October 31, 1971. It is estimated that this area would have produced 34,451 barrels of oil if primary recovery methods had been used. Therefore, the Pilot Waterflood had increased the recovery by 60,135 barrels in 22 months.

It is interesting to note that the other three wells in the Pilot Area namely #11-4; #13-4 and #14-4 are now producing 73 barrels of oil + 90 barrels of water per day. This compares with 36 barrels of oil + 84 barrels of water per day prior to waterflooding.

cont...2

*F.S.G. -  
- I think we should make a xerox copy  
of this & forward to N.W.G. for info  
- Please prepare an acknowledgement to R.F.H.  
J. Nov 25*

*1 cc to N.W.G. Nov 26  
+ 1 cc to R.F.H.*



- 2 -

The fluid level in #12-4 is some 600' up from bottom, hence larger pumping equipment is required to lift all the fluid from this well.

Yours very truly,

RUNDLE PETROLEUMS LTD.  
Operator - Daly Unit No. 1

  
R. F. Atkinson



INTER-DEPARTMENTAL MEMORANDUM

FROM F. S. GAMEY  
Reservoir Engineer



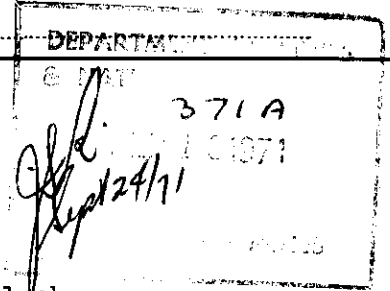
PROVINCE  
OF  
MANITOBA

DATE SEPTEMBER 10, 1971

TO J. S. ROPER  
Director of Mines

SUBJECT SALT WATER LEAK 16-3-10-28 September 10, 1971

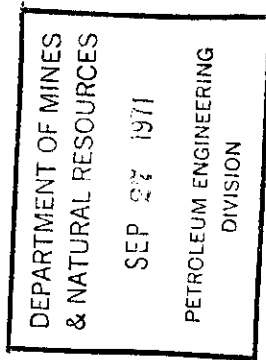
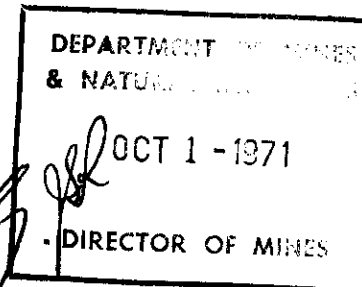
- phone call from Grady Johnson - 2 P.M., Sept. 10/71



Recovery Oil's battery on Daly 16-3-10-28 sprung a leak in the salt water tank. Some salt water ran down to a nearby creek.

John Clarke is now installing a new tank and cleaning up the location.

The farmer on this section is Mr. J. R. Mathieson.



*New tank installed. Same day.  
New pit dug. Site cleaned up.*

*JMG*

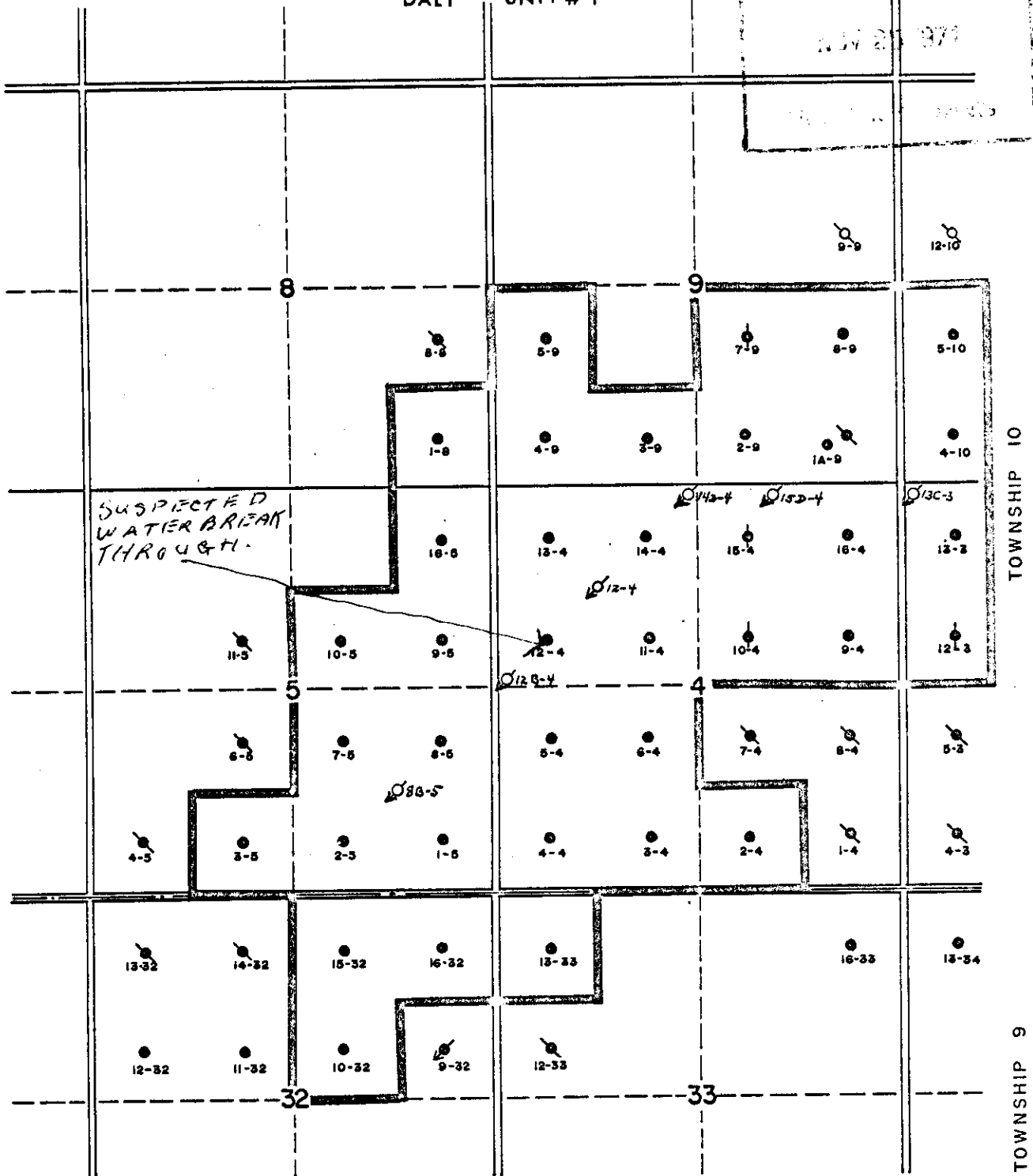
*F.S.G. - JMG  
has this been cleaned  
up? taken care of now. JMG 29/71*



# RUNDLE PETROLEUMS LTD.

DALY UNIT # 1

DATE: MAY 25 1971  
 100-100



RANGE 28 - W. P. M.

## WEST DALY AREA

0 1000' 2000'

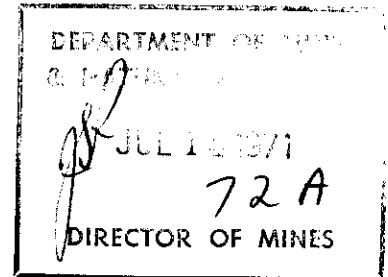
### LEGEND

- OILWELL
- ⦿ SUSPENDED OILWELL
- ⦿ ABANDONED OILWELL
- ⦿ DRY HOLE
- ⦿ WATER INJECTION WELL
- ⦿ SALT WATER DISPOSAL WELL



**RUNDLE PETROLEUMS LTD.**

400 ~~XXX~~ ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171



July 13, 1971

Department of Mines & Natural Resources  
Mines Branch  
Oil & Gas Conservation Board  
911 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Attention: Chairman, Oil & Gas Conservation Board

Dear Sir;

Re: Daly Unit #1

In accordance with Section 5.03, Part "C", an organization meeting of the Operating Committee for Daly Unit #1 was held on June 29, 1971 and Rundle Petroleum Ltd. was appointed Unit Operator. The representative of Rundle Petroleum Ltd. of the Operating Committee is R. F. Atkinson, and he will act as chairman at future operating committee meetings as directed.

Yours very truly,

RUNDLE PETROLEUMS LTD.

  
R. F. Atkinson

RFA:ft



SCURRY - RAINBOW OIL LIMITED

539 - 8TH AVENUE SOUTH WEST  
CALGARY 2, ALBERTA

June 24th, 1971

The Oil and Natural Gas Conservation Board  
WINNIPEG, Manitoba

Attention: The Chairman

Dear Sir:

Re: Proposed Daly Unit No. 1

Please be advised that Scurry-Rainbow Oil Limited nominates  
the following representatives for the above Unit:

Representative: B. R. Leeds  
Alternate: D. H. Logan

Yours, very truly,

SCURRY-RAINBOW OIL LIMITED

*D. H. Logan*  
D. H. Logan  
Production Manager

BRL/lgs

c.c. Rundle Petroleum Ltd.

DEPARTMENT OF MINES  
& NATURAL RESOURCES

JUN 28 1971

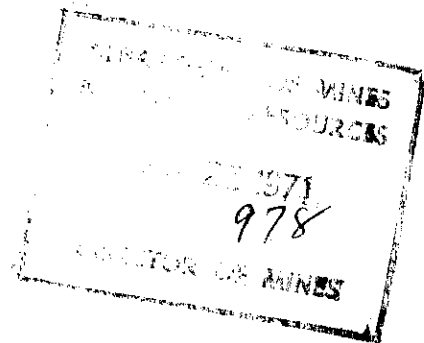
PETROLEUM ENGINEERING  
DIVISION



RECOVERY OILS LTD.

P.O. BOX #779

VIRIDEN, MANITOBA



June 24, 1971

Oil and Natural Gas Conservation Board,  
Norquay Building  
Winnipeg, Manitoba

Attention: Mr. W. Winston Mair, Chairman

Dear Sir:

Re: Daly Unit #1

Please be advised that the representative to the  
Daly Unit #1 Operator's Committee for Recovery Oils Ltd. will  
be H. B. Elder, Jr. with J. W. Clarke as an alternate.

Yours very truly,

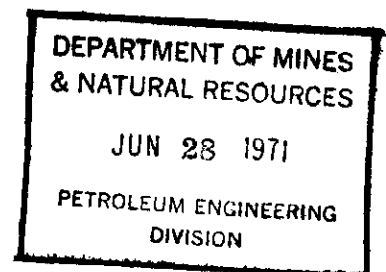
RECOVERY OILS LTD.

Per:

A handwritten signature in dark ink, appearing to be "H. B. Elder, Jr.", written over a horizontal line.

H. B. Elder, Jr.

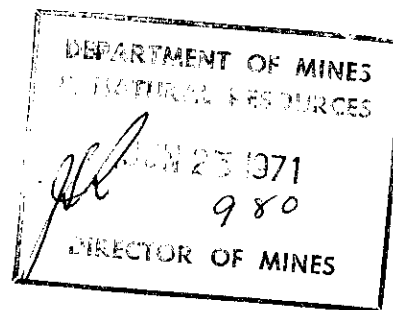
HBE/dml





*FSG*

3 SONS INVESTMENTS LTD.  
P. O. BOX 6207, STATION "D"  
CALGARY 2, ALBERTA



Telephone 266-3025

June 24, 1971

The Chairman  
Oil and Gas Conservation Board  
911 Norquay Building  
401 York Avenue  
Winnipeg, Manitoba

Dear Sir:

Re: Proposed Daly Unit No. 1

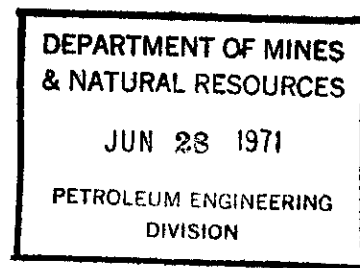
3 Sons Investments Ltd. hereby appoints the following  
as its representative to the Operating Committee for the above  
named Unit.

Representative:      Ralph F. Atkinson  
                             Rundle Petroleums Ltd.

Yours very truly,

*Kendall Jennings*  
Kendall Jennings  
President

cc: Mr. Ralph F. Atkinson  
Rundle Petroleums Ltd.  
4th Floor, Royalite Building  
Calgary, Alberta

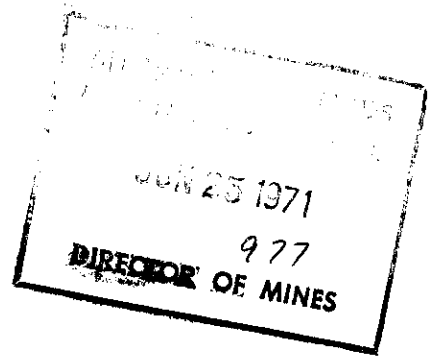




# RUNDLE PETROLEUMS LTD.

400 ~~XXX~~ ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171

June 24, 1971



Dept. of Mines & Natural Resources  
Petroleum Engineering Division  
911 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Attention: Chairman

Dear Sir;

Re: Proposed Daly Unit #1

Rundle Petroleums Ltd., hereby appoints  
the following as representatives to the operating committee  
for the above named unit:

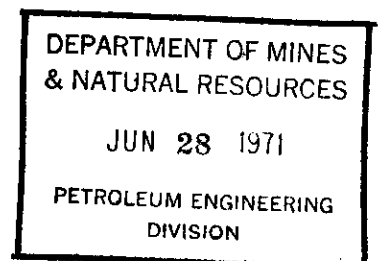
Representative - R. F. Atkinson  
Alternate - J. A. S. Gibson

Yours very truly,

RUNDLE PETROLEUMS LTD.

  
R. F. Atkinson

RFA:ft







# Chevron Standard Limited

400 Fifth Avenue S.W., Calgary 1, Alberta

June 24, 1971

Representative and Alternate  
Designation - Operating Committee  
Daly Unit No. 1

The Oil and Natural Gas Conservation Board  
Department of Mines and Natural Resources  
Province of Manitoba  
Norquay Building  
Winnipeg 1, Manitoba

Attention: Mr. W. Winston Mair, Chairman

Gentlemen:

Please be advised that Chevron Standard Limited's representative and alternate on the Daly Unit No. 1 Operating Committee will be:

Representative: Mr. A. Hamberg  
Chevron Standard Limited  
400 Fifth Avenue S.W.  
Calgary 1, Alberta

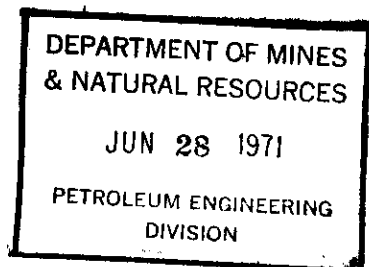
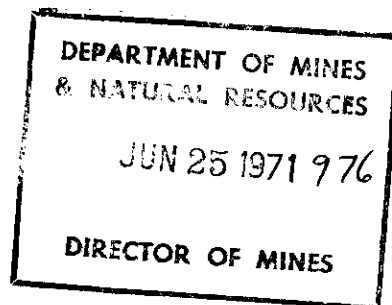
Alternate: Mr. K. G. Pritchard  
Chevron Standard Limited  
400 Fifth Avenue S.W.  
Calgary 1, Alberta

Yours very truly,

*for K.G. Pritchard*  
J. G. TROWELL  
Division Superintendent  
Producing Department  
Calgary Division

SNB/dmc

cc: Rundle Petroleum Ltd.





MANITOBA REGULATION 53/71

Being

THE OIL AND NATURAL GAS CONSERVATION BOARD

ORDER NO. PM 17

An Order pertaining to Pressure Maintenance by Water Flooding

DAILY UNIT NO. 1

Made and passed pursuant to "The Mines Act", Cap. M160, R.S.M., 1970, and amendments thereto, by The Oil and Natural Gas Conservation Board, of Manitoba.  
(Filed June 23/71)

WHEREAS, subsection (9)(d) of Section 62 of "The Mines Act", being Chapter M160 of the Revised Statutes of Manitoba, 1970, provides as follows:

"62 (9) Without restricting the generality of subsection (8) the board, with the approval of the minister, may make orders

- (d) requiring the repressuring, recycling, or pressure maintenance, of any pool or portion thereof where it is economical so to do, and for that purpose where necessary requiring the introduction or injection into any pool or portion thereof of gas, air, water, or other substance;"

AND WHEREAS, the Board, pursuant to Section 62 of "The Mines Act" held a public hearing on December 15, 1970, and on May 14, 1971, for the purpose of considering a Proposal for Pressure Maintenance by Water Flooding within the Unit Area of the Daily Unit No. 1, by Rundle Petroleum Ltd., on its own behalf and other working interest owners, in the Daily Field in Manitoba.

AND WHEREAS, upon due consideration of the submissions and testimony at the hearings, the Board has found:

- (a) That the pressure maintenance by water flooding of a certain part of the Daily Field in Manitoba, comprising the Unit Area of the Daily Unit No. 1, is reasonably necessary to prevent waste, and to increase substantially the recovery of oil;
- (b) That the value of the estimated additional recovery of oil and gas resulting from such operation will exceed the estimated additional cost incidental to the conduct of such operation; and
- (c) That such operation will result in general advantage to the owners of oil and gas rights within the Unit Area.

AND WHEREAS, Unitization Order No. 11 provides for the appointment of a Unit Operator.



ORE, the Board orders:

the Unit Operator shall conduct pressure maintenance operations by the injection of water to the Members of the Lodgepole Formation of the Mississippi Age underlying the Unit Area;

the pressure maintenance operations shall be in accordance with, and subject to, the following rules:

#### PRESSURE MAINTENANCE RULES

(1) Water shall be injected to the Lodgepole Formation of the Mississippi Age in the well

Rundle Cruickshank Daly WIW 12-4-10-28

and, from time to time, in such other wells as the Board may direct, or, upon application of the Unit Operator, may approve;

(2) After the commencement, the Unit Operator shall, subject to any remedial work required to be performed on the well or wells referred to in this clause, endeavour to maintain continuous injection;

(3) Notwithstanding the provisions of subclause (2), the Board may, upon application by the Unit Operator, approve the suspension of water injection, provided the Board is satisfied that the pressure maintenance operation in the Unit Area will not be adversely affected.

(4) Before the injection of water is commenced, and from time to time after the commencement of injection, and upon the request of the Board, the Unit Operator shall satisfy the Board as to the source, suitability, and method of treatment of the water to be injected;

(5) Before any change is made in the source of water being injected, the Unit Operator shall satisfy the Board as to the suitability of the water to be injected.

The Unit Operator shall immediately report to the Board any indication of channelling or break-through of injected water to producing wells, or any indication of other detrimental effects that may be attributable to the pressure maintenance operations.

In the interest of equity and good engineering practice the Board may prescribe from time to time a maximum pressure, or a minimum or a maximum rate, at which water shall be injected in any well in the Unit, at least annually, unless otherwise directed by the Board, the Unit Operator shall determine the reservoir pressure in the producing wells in the Unit to the satisfaction of the Board.

The Unit Operator shall inject water to each well referred to in clause 1 hereof in a manner such that, within five years of the effective date of the Order, a suitable balance is achieved and maintained between water injected to, and fluids withdrawn from, the Unitized Strata.

7. The Unit Operator shall, not later than the twenty-fifth day of each month, file with the Mines Branch a report of the quantity and source of water injected during the preceding month to each well referred to in clause 1 hereof.

8. (1) Unless otherwise authorized in writing by the Board, the Unit Operator shall, within six weeks of the expiration of each yearly period commencing on the first day of January, 1972, file with the Board a report of the progress, performance, and efficacy of the pressure maintenance program during the period;

(2) Subject to any direction in writing of the Board to the contrary, a report required by this clause may, at the discretion of the Unit Operator, be in two parts, the first of which parts shall set out graphically and from the commencement of the operation of the pressure maintenance program

- (a) the daily average rate during each month of oil production of each producing well;
- (b) the average water-oil ratio during each month of each producing well;
- (c) the monthly cumulative oil and water production from each producing well;
- (d) the daily average rate during each month of water injection to each injection well;
- (e) the daily average water injection pressure during each month at each injection well;
- (f) the monthly cumulative volume of water injected to each injection well;
- (g) the average injectivity index during each month, for each water injection well, which index, at the discretion of the Unit Operator, may be determined as
  - (i) the daily injection rate divided by the average injection well-head pressure, or
  - (ii) any similar index that the Board, on the application of the Unit Operator, may approve; and
- (h) the date and type of any well treatment or workover which shall be indicated on the graph, and the second of which parts shall contain
  - (a) calculations of the balance during each month between water injected to, and fluids withdrawn from, the Unitized Strata,
  - (b) such other interpretative information as the Unit Operator considers necessary to evaluate adequately the progress, performance, and efficacy of the pressure maintenance program, and



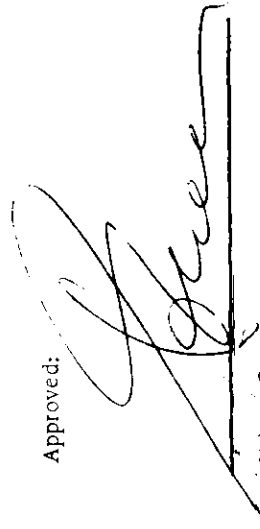
(c) an outline of the method actually in use for the quality, control, and treatment of the water, or where there has been no change in the control or treatment from that outlined in a previous report, a statement to that effect.

(3) If a report required by this clause is in the form provided for in subclause (2), the Board, at any time, may make the first part of the report available to the public, and, after one year from the end of the period for which the report is made, may make the second part of the report available to the public, and, if the report is not in the form provided for in subclause (2), the Board may make the whole of the report available to the public at any time.

2. This Order shall be effective at the hour of seven o'clock in the forenoon, Central Daylight Time, on the first day of July, A.D., 1971.

Oil and Natural Gas Order No. PM 17, made and passed this 17th day of June, A.D., 1971, at the City of Winnipeg, in the Province of Manitoba, by The Oil and Natural Gas Conservation Board.

Approved:



Sidney Green,  
Minister of Mines, Resources  
and Environmental Management.



W. Winston Mair,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.



J. S. Roper,  
Deputy Chairman,  
The Oil and Natural Gas  
Conservation Board.



M. J. Gbert,  
Member,  
The Oil and Natural Gas  
Conservation Board.



## MANITOBA REGULATION 19/71

Being

## THE OIL AND NATURAL GAS CONSERVATION BOARD

## ORDER NO. PM 17

## An Order pertaining to Pressure Maintenance by Water Flooding

## DALY UNIT NO. 1

Made and passed pursuant to "The Mines Act", Cap. M160, R.S.M., 1970, and amendments thereto, by The Oil and Natural Gas Conservation Board, of Manitoba.

(Filed June 23/71)

WHEREAS, subsection (9)(d) of Section 62 of "The Mines Act", being Chapter M160 of the Revised Statutes of Manitoba, 1970, provides as follows:

"62 (9) Without restricting the generality of subsection (8) the board, with the approval of the minister, may make orders

- (d) requiring the repressuring, recycling, or pressure maintenance, of any pool or portion thereof where it is economical so to do, and for that purpose where necessary requiring the introduction or injection into any pool or portion thereof of gas, air, water, or other substance;".

AND WHEREAS, the Board, pursuant to Section 62 of "The Mines Act" held a public hearing on December 15, 1970, and on May 14, 1971, for the purpose of considering a Proposal for Pressure Maintenance by Water Flooding within the Unit Area of the Daly Unit No. 1, by Rundle Petroleum Ltd., on its own behalf and other working interest owners, in the Daly Field in Manitoba.

AND WHEREAS, upon due consideration of the submissions and testimony at the hearings, the Board has found:

- (a) That the pressure maintenance by water flooding of a certain part of the Daly Field in Manitoba, comprising the Unit Area of the Daly Unit No. 1, is reasonably necessary to prevent waste, and to increase substantially the recovery of oil;
- (b) That the value of the estimated additional recovery of oil and gas resulting from such operation will exceed the estimated additional cost incidental to the conduct of such operation; and
- (c) That such operation will result in general advantage to the owners of oil and gas rights within the Unit Area.

AND WHEREAS, Unitization Order No. 11 provides for the appointment of a Unit Operator.



## NOW, THEREFORE, the Board orders:

1. (a) The Unit Operator shall conduct pressure maintenance operations by the injection of water to the Members of the Lodgepole Formation of the Mississippian Age underlying the Unit Area;
- (b) The pressure maintenance operations shall be in accordance with, and subject to, the following rules:

## PRESSURE MAINTENANCE RULES

1. (1) Water shall be injected to the Lodgepole Formation of the Mississippian Age in the well  
Rundle Cruickshank Daly WIW 12-4-10-28  
and, from time to time, in such other wells, as the Board may direct, or, upon application of the Unit Operator, may approve;
- (2) After the commencement, the Unit Operator shall, subject to any remedial work required to be performed on the well or wells referred to in this clause, endeavour to maintain continuous injection;
- (3) Notwithstanding the provisions of subclause (2), the Board may, upon application by the Unit Operator, approve the suspension of water injection, provided the Board is satisfied that the pressure maintenance operation in the Unit Area will not be adversely affected.
2. (1) Before the injection of water is commenced, and from time to time after the commencement of injection, and upon the request of the Board, the Unit Operator shall satisfy the Board as to the source, suitability, and method of treatment of the water to be injected;
- (2) Before any change is made in the source of water being injected, the Unit Operator shall satisfy the Board as to the suitability of the water to be injected.
3. The Unit Operator shall immediately report to the Board any indication of channelling or break-through of injected water to producing wells, or any indication of other detrimental effects that may be attributable to the pressure maintenance operations.
4. In the interest of equity and good engineering practice the Board may prescribe from time to time a maximum pressure, or a minimum or a maximum rate, at which water shall be injected in any well in the Unit.
5. At least annually, unless otherwise directed by the Board, the Unit Operator shall determine the reservoir pressure in the producing wells in the Unit to the satisfaction of the Board.
6. The Unit Operator shall inject water to each well referred to in clause 1 hereof in a manner such that, within five years of the effective date of the Order, a suitable balance is achieved and maintained between water injected to, and fluids withdrawn from, the Unitized Strata.

7. The Unit Operator shall, not later than the twenty-fifth day of each month, file with the Mines Branch a report of the quantity and source of water injected during the preceding month to each well referred to in clause 1 hereof.
8. (1) Unless otherwise authorized in writing by the Board, the Unit Operator shall, within six weeks of the expiration of each yearly period commencing on the first day of January, 1972, file with the Board a report of the progress, performance, and efficacy of the pressure maintenance program during the period;
- (2) Subject to any direction in writing of the Board to the contrary, a report required by this clause may, at the discretion of the Unit Operator, be in two parts, the first of which parts shall set out graphically and from the commencement of the operation of the pressure maintenance program
  - (a) the daily average rate during each month of oil production of each producing well;
  - (b) the average water-oil ratio during each month of each producing well;
  - (c) the monthly cumulative oil and water production from each producing well;
  - (d) the daily average rate during each month of water injection to each injection well;
  - (e) the daily average water injection pressure during each month at each injection well;
  - (f) the monthly cumulative volume of water injected to each injection well;
  - (g) the average injectivity index during each month, for each water injection well, which index, at the discretion of the Unit Operator, may be determined as
    - (i) the daily injection rate divided by the average injection well-head pressure, or
    - (ii) any similar index that the Board, on the application of the Unit Operator, may approve; and
  - (h) the date and type of any well treatment or workover which shall be indicated on the graph, and the second of which parts shall contain
    - (a) calculations of the balance during each month between water injected to, and fluids withdrawn from, the Unitized Strata,
    - (b) such other interpretative information as the Unit Operator considers necessary to evaluate adequately the progress, performance, and efficacy of the pressure maintenance program, and



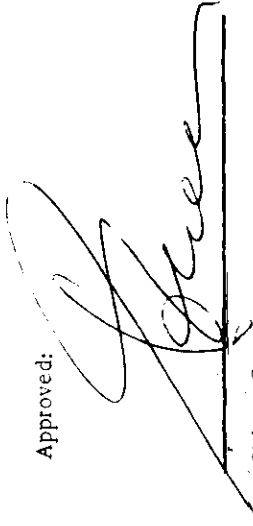
(c) an outline of the method actually in use for the quality, control, and treatment of the water, or where there has been no change in the control or treatment from that outlined in a previous report, a statement to that effect.

(3) If a report required by this clause is in the form provided for in subclause (2), the Board, at any time, may make the first part of the report available to the public, and, after one year from the end of the period for which the report is made, may make the second part of the report available to the public, and, if the report is not in the form provided for in subclause (2), the Board may make the whole of the report available to the public at any time.

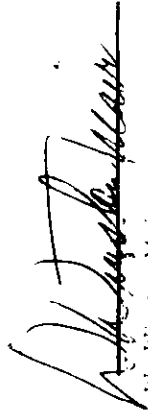
2. This Order shall be effective at the hour of seven o'clock in the forenoon, Central Daylight Time, on the first day of July, A. D., 1971.

Oil and Natural Gas Order No. PM 17, made and passed this 17th day of June, A. D., 1971, at the City of Winnipeg, in the Province of Manitoba, by The Oil and Natural Gas Conservation Board.

Approved:



Sidney Green,  
Minister of Mines, Resources  
and Environmental Management.



W. Winston Mair,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.



J. S. Roper,  
Deputy Chairman,  
The Oil and Natural Gas  
Conservation Board.



M. J. Gohert,  
Member,  
The Oil and Natural Gas  
Conservation Board.



DEPARTMENT OF MINES  
APR 1 - 1971  
JSL

INTER - DEPARTMENTAL MEMORANDUM

FROM F. S. GAMEY  
Reservoir Engineer



PROVINCE  
OF  
MANITOBA

DATE April 1, 1971 DIRECTOR OF MINES

TO OIL & NATURAL GAS CONSERVATION BOARD  
W. WINSTON MAIR - Chairman  
✓ J. S. ROPER - Deputy Chairman  
M. J. GOBERT - Member

SUBJECT HEARINGS TO BE RECONVENED

1. DALY UNIT #1

APPLICANT: Rundle Petroleums Ltd.

PREVIOUS HEARING: Dec. 15/70 - Unitization approved in principle by Board

ITEMS PENDING: (1) Plan for waterflooding (see letter to applicant - attached)  
(2) Filing of Royalty Owners' consents

2. NORTH VIRDEN SCALLION UNIT #1 - Enlargement & amendments to Plan

APPLICANT: Chevron Standard Limited

PREVIOUS HEARING: Dec. 15/70 - approved in principle by Board

ITEMS PENDING: (1) Filing of Royalty Owners' consents in the enlargement tracts

3. WHITEWATER UNIT #1

APPLICANT: Chevron Standard Limited

PREVIOUS HEARING: Dec. 15/70 - approved in principle by Board

ITEMS PENDING: (1) Filing of Royalty Owners' consents

*F. S. Gamey*



# RUNDLE PETROLEUMS LTD.

400 ~~X306~~ ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171

DEPARTMENT OF MINES  
& NATURAL RESOURCES

MAR 30 1971

PETROLEUM ENGINEERING  
DIVISION

March 29, 1971

Department of Mines & Natural Resources  
The Oil and Natural Gas Conservation Board  
901 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Attention: Mr. W. Winston Mair, Chairman

Dear Sir;

Re: Proposed Daly Unit #1

Further to your letter of December 24, 1970 regarding the continuation of the December 15, 1970 hearing, we are enclosing ten copies of our water injection plan for the above unit.

We now have in our possession royalty owners consents in excess of 75% of the tract participations and we respectfully request that continuation of the December 15, 1970 hearing be set at a convenient date.

We are hopeful that the effective date for the unit could be June 1st, 1971.

Yours very truly,

RUNDLE PETROLEUMS LTD.



R. F. Atkinson

RFA:ft  
Encls.



COPY

W. Winston Mair  
XXXXXXXXXXXX

DEPARTMENT OF MINES  
& NATURAL RESOURCES

Jan 1 - 1971

DIRECTOR OF MINES

December 24, 1970.

Mr. R.F. Atkinson, President,  
Hundle Petroleum Ltd.,  
400 Royalite Building,  
Calgary 2, Alberta.

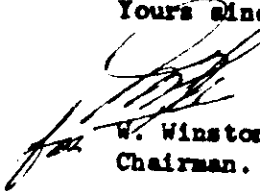
Dear Mr. Atkinson:

Re: Proposed Daly Unit No.1

As a result of the public hearing held in Virden, Manitoba, December 15, 1970 concerning the above proposed Unit, the Board wishes to outline the following points as a guide to the applicant in meeting the future requirements for final approval of this Unit.

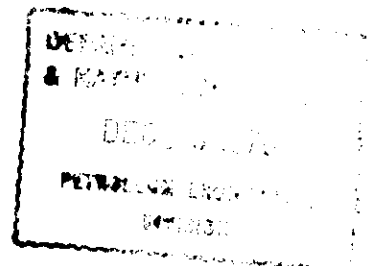
1. The Board approves in principle the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of the Daly Unit No.1", as amended at the said hearing.
2. At the continuation of the December 15, 1970 hearing the applicant will be required to:
  - (a) file with the Board, the Royalty Owners' consents to the above "Plan", as amended;
  - (b) submit, for the approval of the Board, a definite plan of the water injection system and flood pattern proposed for "Pressure Maintenance by Waterflooding" in the Daly Unit No.1.
3. The Board will set a date for the continuation of the December 15th, 1970 hearing at the request of the applicant.

Yours sincerely,

  
W. Winston Mair,  
Chairman.

FSG/MJG/1a

c.c. F.S. Ganev





*Q Transcript of last  
Hearing*



PROVINCE OF MANITOBA

THE OIL AND NATURAL GAS CONSERVATION BOARD

10th FL. LEGISLATIVE BUILDING  
WINNIPEG

Continuation of Dec. 15/70 Hearing - May 14, 1971 (10 A.M., C.D.T.)

Room 903 Norquay Building

AGENDA

1. Daly Unit No. 1 - applicant: Rundle Petroleums Ltd.  
approved in principle (Dec.15/70)  
by Board

Pending:

- f56* 1. Filing of Plan of water injection system and flood pattern proposed "for pressure maintenance by waterflooding in the Daly Unit No. 1", for approval of the Board
2. Filing of Royalty Owners consents to the Plan, as amended

Board Orders relative to above approval -

1. Unitization Order (38 copies of amended Plan required for O-in-C)
2. Pressure Maintenance Order  
Five additional water injection wells are to be drilled. How will they be described in the order
3. Allowable Order (maximum rate of production)

2. Whitewater Unit #1 - applicant: Chevron Standard Limited  
approved in principle Dec. 15/70

Pending:

1. Filing of Royalty Owners consents

Board Orders relative to above, if approved -

1. Unitization Order (38 copies of Plan for O-in-C)
2. Pressure Maintenance Order
3. Allowable Order



THE OIL AND NATURAL GAS CONSERVATION BOARD

HEARING - May 14/71

(Suggested Procedure)

Gentlemen, it is now 10 a.m., so I will call this Oil and Natural Gas Conservation Board hearing to order.

This is a continuation of the December 15th, 1970 Board hearing held in Virden, Manitoba.

I will read the "Notice of Hearing".

See (A) attached

Will Mr. Gamey inform the Board on the notification of the applicants.

Mr. Gamey -

I propose that we proceed with the items on the agenda in the order listed.

Would the representative for Rundle Petroleums (Daly Unit No. 1) identify himself by name and office, and be sworn in before giving evidence.

We will proceed with Item 1.

Regarding this application, I will read a letter of the Board, dated December 24th, 1970, to Mr. R. F. Atkinson, outlining the requirements for final approval of this Unit.

Read letter - see (B) attached

Are you prepared to file the Royalty Owners consents and Plan of water injection as exhibits, and to discuss them at this time?

(Consents and Plan filed as exhibits and applicant may speak to them)

(Chairman asks Mr. Kuziak (Att.-Gen. Dept.) to check the affidavits)

Discussion



Following discussion, the Chairman asks if there are further questions.

The final matter regarding these matters is the setting of an effective date for commencement of Unit operation.

\*\*\*\*\*

Item No. 2 on the agenda is Whitewater Unit No. 1.

Will the representative of the applicant identify himself and be sworn in.

Please proceed with the filing of the royalty owners consents.

Mr. Kuziak, will you check the affidavits, please.

Is there any further question of discussion?

Finally, when do you suggest as the effective commencement day for the operation] of Whitewater Unit No. 1? (not before July 1, 1971)

\*\*\*\*\*

Item No. 3 on the agenda is the North Virden Scallion Unit No. 1 enlargement.

Will the representative of the applicant identify himself and be sworn in.

Please proceed with the filing of the royalty owners consents.

Mr. Kuziak, will you check the affidavits, please.

Is there any further question or discussion?

When do you suggest as an effective commencement date for the operation of the North Virden Scallion Unit enlargement?

\*\*\*\*\*

If there are no further questions, I declare this Board hearing adjourned (closed).



3 741

# RUNDLE PETROLEUMS LTD.

400~~XXX~~ ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171

W. W. HARR

February 12, 1971

The Oil & Natural Gas Conservation Board  
901 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Gentlemen;

Re: Proposed Daly Unit No. 1

Further to the hearing held December 15, 1970 regarding the unitization and waterflooding of the proposed Daly Unit No. 1, we hereby submit a plan for a water injection system and waterflood pattern on behalf of the Working Interest Owners.

1. It is proposed that the waterflood pattern be an inverted 5 spot using the 20 acre spacing now in effect on Daly Pilot Waterflood. It is proposed to drill an additional 5 water injection wells at the following locations.

- #1 - centre SE $\frac{1}{4}$  5-10-28 WPM
- #2 - NE corner SE $\frac{1}{4}$  5-10-28 WPM
- #3 - NE corner NW 4-10-28 WPM
- #4 - centre of North Boundary NE 4-10-28 WPM
- #5 - NE corner NE 4-10-28 WPM

It is proposed to drill these wells into the Cruickshank Crinoidal zone and inject water into all porous Mississippian zones down to and including this marker.



Some wells will be cored in the producing horizon and adequate logs will be run in order to obtain additional reservoir data, within the unit area. Four and one-half inch casing will be run and the wells will be equipped with packers and cement lined or corrosion-resistant tubing.

2. The present water injection plant will be expanded to increase the injection capacity to 4500 or 5000 barrels of water per day. Initially, the two - 250 barrel fibreglass tanks, now in use, will act as settling and suction tanks. An oil blanket will be carried on each tank. Injection lines will be cement-lined steel with yellow-jacket external coating. Meters will be installed to measure the volume of water injected into each well.
3. The water source will be produced water from the unit and nearby areas.

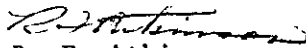
At present there is in excess of 1000 barrels of water per day produced in the unit area. It is estimated that an additional 2000 barrels of water per day can be produced from wells at LSD 15-32 and LSD 10-32 by high volume pumping. The water supply available from within the proposed unit area will be supplemented with water collected by Chevron's salt water gathering system. This gathering system, which crosses the southern portion of the proposed Daly Unit No. 1, could provide an estimated 4000 BWPD.

4. Battery consolidation will bring all produced fluids to a central battery at LSD 12-4-10-28. Some testing facilities will remain at some existing battery sites.
5. Estimated cost for installation of the outlined system is as follows:



|   |                         |
|---|-------------------------|
| 1. Water Injection Lines                          | \$ 25,000               |
| 2. Drill, Complete & Equip. 5 new injection wells | 150,000                 |
| 3. Plant Expansion                                | 18,000                  |
| 4. Engineering and Overhead                       | 6,000                   |
| Miscellaneous                                     | <u>2,000</u>            |
| Subtotal  | <u>\$201,000</u>        |
| 5. Battery Consolidation - Labor                  | 5,000                   |
| 6. Flowlines                                      | 35,000                  |
| 7. Treater & Free Water Knockout                  | 15,000                  |
| 8. Buildings                                      | 3,000                   |
| Miscellaneous                                     | <u>2,000</u>            |
| Subtotal  | <u>\$ 60,000</u>        |
| ESTIMATED TOTAL COST                              | <u><u>\$261,000</u></u> |

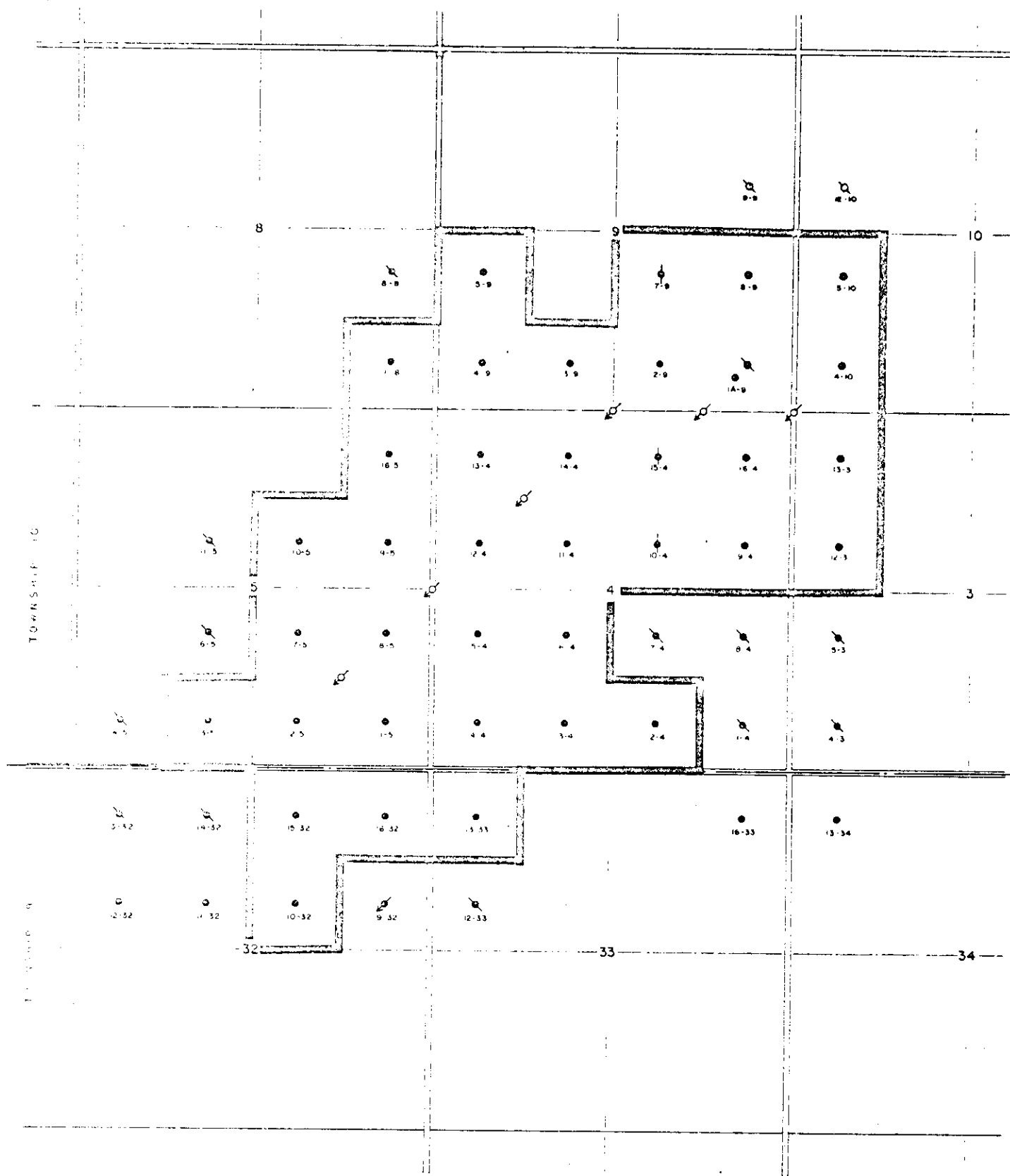
Yours very truly,

  
R. F. Atkinson  
Chairman Pro-tem.  
Proposed Daly Unit No. 1



# DALY UNIT No. 1

## WATER INJECTION PATTERN



RANGE 28 W.P.M.

WEST DALY AREA

Scale: 1 inch = 1 mile

### LEGEND

- OILWELL
- ◊ ABANDONED OILWELL
- ◊ DRY HOLE
- ◊ WATER INJECTION
- ◊ SALT WATER DISPOSAL WELL
- ◊ SUSPENDED OILWELL
- UNIT BOUNDARY



COPY

W. Winston Mair  
XXXXXXXXXX

December 24, 1970.

Mr. R.F. Atkinson, President,  
Humble Petroleums Ltd.,  
400 Royalite Building,  
Calgary 2, Alberta.

Dear Mr. Atkinson:

Re: Proposed Daly Unit No.1

As a result of the public hearing held in Virden, Manitoba, December 15, 1970 concerning the above proposed Unit, the Board wishes to outline the following points as a guide to the applicant in meeting the future requirements for final approval of this Unit.

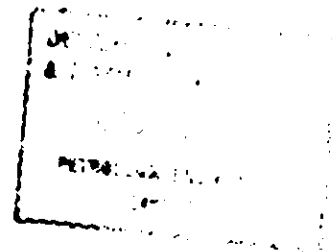
1. The Board approves in principle the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of the Daly Unit No.1", as amended at the said hearing.
2. At the continuation of the December 15, 1970 hearing the applicant will be required to:
  - (a) file with the Board, the Royalty Owners' consents to the above "Plan", as amended;
  - (b) submit, for the approval of the Board, a definite plan of the water injection system and flood pattern proposed for "Pressure Maintenance by Waterflooding" in the Daly Unit No.1.
3. The Board will set a date for the continuation of the December 15th, 1970 hearing at the request of the applicant.

Yours sincerely,

  
W. Winston Mair,  
Chairman.

FSG/MJG/ia

C.C. F.C. Geaney





APR 20 1971

INTER - DEPARTMENTAL MEMORANDUM



PROVINCE  
OF  
MANITOBA

DATE APRIL 20, 1971

DIRECTOR OF MINES

FROM F. S. GAMEY  
Reservoir Engineer

TO THE OIL AND NATURAL GAS CONSERVATION BOARD

W. WINSTON MAIR - Chairman  
J. S. ROPER - Deputy Chairman  
M. J. GOBERT - Member

SUBJECT BOARD HEARING - May 14, 1971

Regarding the above hearing, Mr. Dennis Moylan, Q.C.,  
Departmental Solicitor, had advised me that he or an  
assistant will attend same, for the purpose of check-  
ing the consents of various royalty owners, as filed  
with the Board at that time.

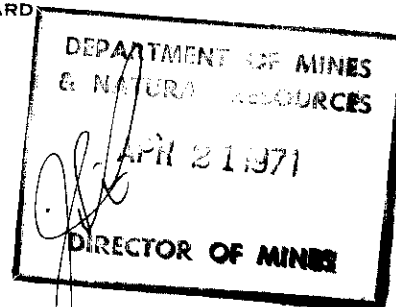
*F. S. Gamey*





PROVINCE OF MANITOBA  
DEPARTMENT OF MINES, RESOURCES AND ENVIRONMENTAL MANAGEMENT  
THE OIL AND NATURAL GAS CONSERVATION BOARD  
XXX

NOTICE OF HEARING



Notice is hereby given that The Oil and Natural Gas Conservation Board will continue the December 15, 1970 hearing, with respect to:

1. The Daly Unit No. 1
2. The Whitewater Unit No. 1
3. The North Virden Scallion Unit No. 1  
(enlargement)

on the 14th day of May, 1971, commencing at 10 A.M., Central Day-light Time, in Room 903, Norquay Building, Winnipeg, Manitoba.

W. Winston Mair,  
Chairman.

DATED at Winnipeg, Manitoba,  
this *21st* day of April 1971



## UNDER THE MINES ACT

DEPARTMENT OF MINES AND  
NATURAL RESOURCES  
The Oil and Natural Gas Conservation  
Board.

## NOTICE

A Public Hearing will be held in the Government Resources Building, 247 Wellington W., Town of Virden, Province of Manitoba, on Tuesday, December 15, 1970, commencing at 9 a.m., Central Standard Time, for the purpose of hearing representations with respect to:

1. Application by Rundle Petroleum Ltd., for "A Plan for Unit Operation Governing the Unitized Management Operation and Further Development of the Daly Unit No. 1" comprising a part of the Daly Field and containing the following well locations:

In Township 9, Range 28 WPM:

Legal Subdivisions 10, 15 and 16, Section 32; Legal Subdivision 13, Section 33.

In Township 10, Range 28 WPM:

Legal Subdivisions 12 and 13, Section 3; Legal Subdivisions 2 to 6 incl., and 9 to 16 incl., Section 4; Legal Subdivisions 1 to 3 incl., and 7 to 10 incl., and 16, Section 5; Legal Subdivision 1, Section 8; Legal Subdivisions 1 to 5 incl., 7 and 8, Section 9; Legal Subdivisions 4 and 5, Section 10.

2. A Proposal for Pressure Maintenance by Waterflooding Daly Unit No. 1.

3. An application for a Maximum Permissible Rate of Production — Daly Unit No. 1.

4. Application by Chevron Standard Limited for Unit Enlargement and extension of water injection system — North Virden Scallion Unit No. 1, containing the following well locations:

In Township 11, Range 26 WPM:

Legal Subdivisions 10, 11, 13 and 14, Section 11; Legal Subdivision 3, Section 14; Legal Subdivision 2, Section 22; Legal Subdivisions 2, 14 and 15, Section 24; Legal Subdivision 3, Section 25; Legal Subdivision 8, Section 33.

5. Application for Maximum Permissible Rate of Production for the Enlarge-

ment Tracts — North Virden Scallion Unit No. 1.

6. Amendments to Part X, Clause 10.03 and Part VII, Clause 7.04 of the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of North Virden Scallion Unit No. 1."

7. Application by Chevron Standard Limited for "A Plan for Unit Operation Governing the Unitized Management Operation and Further Development of the Whitewater Unit No. 1" containing the following well locations:

In Township 3, Range 21 WPM:

Legal Subdivisions 12 and 13, Section 16; Legal Subdivisions 8, 9 and 16, Section 17; Legal Subdivision 4, Section 21.

8. Proposal for Pressure Maintenance by Waterflooding — Whitewater Unit No. 1.

9. Proposal for Maximum Permissible Rate of Production — Whitewater Unit No. 1.

10. Continuation of the March 19, 1970 Public Hearing re: An application by Chevron Standard Limited to carry out a pilot high pressure waterflood in the Daly Waterflood area.

Copies of material, filed in support of Items 1, 2 and 3, are available at the offices of Rundle Petroleum Ltd., 400 Royalite Building, Calgary 2, Alberta.

Copies of material, filed in support of Items 4, 5, 6, 7, 8 and 9, are available at the offices of Chevron Standard Limited, 400 Fifth Avenue S.W., Calgary 1, Alberta.

Written submissions in respect to the subjects of the hearing must be submitted to the Board, at Room 1010, Norquay Building, Winnipeg 1, Manitoba, on or before December 11, 1970.

Dated at Winnipeg, Manitoba, this 20th day of November, 1970.

M. J. GOBERT,  
for W. Winston Mair,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.

-----49

## UNDER THE HIGHWAY TRAFFIC ACT

Notice is hereby given that the following applications have been received by the Motor Transport Board:

**Atomic Transfer (Sask.) Ltd.,  
Yorkton, Saskatchewan.**

Application for approval of the purchase of certain assets and the granting of a portion of the Manitoba rights; namely, "general freight and live stock to and from Churchbridge, Langenburg, Marchwell, Saltcoats, Tonkin, Bredenbury, Yorkton Airport Radar Site, Sas-

katchewan, to and from Brandon and Winnipeg, Manitoba", held by Atomic Transfer Ltd., Winnipeg, Manitoba.

**Atomic Transfer (Sask.) Ltd.,  
Yorkton, Saskatchewan.**

Application for approval of the purchase of certain assets and the granting of a portion of the Manitoba rights; namely, "serving Yorkton and districts, to and from Winnipeg, for the transportation of general freight", held by Nu-Way Express Ltd., Yorkton, Saskatchewan.



November 13, 1970

NKJ  
JSC 11/17/70

P. S. Ganey

The Oil and Natural Gas Conservation  
Board

W. Winston Mair - Chairman

J. S. Richards - Deputy Chairman

M. J. Gobert - Member

REQUEST FOR HEARING

RE: DALY UNIT #1

BF  
Dec 11/70

Attached herewith, please find:

1. Copy of application by Rundle Petroleum Ltd., requesting a hearing to consider a "Plan for Unit Operation - Daly Unit #1 and the proposal for Pressure Maintenance by Water-Flooding".
2. Copy of the "Plan for Unit Operation - Daly Unit No. 1".

ERRATUM

The application mentions (page 2) that a list of Royalty Owners and Working Interest Owners was enclosed. I could not locate this list.

I have contacted Mr. Atkinson, who has informed he is sending this list by separate mail and that we should have it next week (Nov. 16th).

NOTE

The "Plan for Unit Operation" is a duplicate of the Plan submitted for the Virman-Roselea Unit #2 except that the definition of "Unintended Strata" has been changed to correspond with the "Daly" producing formation; and the Tract Participation has been altered to give a 40 percent weighting of the current production factor and a 60 percent weighting for the average monthly production factor.

Under "Division and Administrative Overhead" - page 63

(k) (iii) (a) "cost" per month has not been inserted.

*P. S. Ganey*

cc: J. S. Roper ✓  
D. J. Moylan  
R. R. McDaniel



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CALGARY 2, ALBERTA  
Telephone 263-7171

October 22, 1970

The Oil & Gas Conservation Board  
Dept. of Mines & Natural Resources  
Legislative Building  
Province of Manitoba  
Winnipeg 1, Manitoba

Dear Sirs;

Rundle Petroleum Ltd., under and pursuant to The Mines Act, Revised Statutes of Manitoba 1970, and amendments thereto, hereby, on behalf of itself and other Working Interest Owners in the Daly Field, requests the Board to hold a hearing to consider and approve the following:

1. "PLAN FOR UNIT OPERATION GOVERNING THE UNITIZED MANAGEMENT OPERATION AND FURTHER DEVELOPMENT OF THE DALY UNIT NO. 1" pursuant to Section 62 of the Mines Act.
2. "PROPOSAL FOR PRESSURE MAINTENANCE BY WATERFLOODING" pursuant to Section 62 of the Mines Act.
3. "APPLICATION FOR A UNIT MAXIMUM PERMISSIBLE RATE OF PRODUCTION" pursuant to Section 62 of the Mines Act.

Enclosed please find ten copies of each of the following:

1. "PLAN FOR UNIT OPERATION GOVERNING THE UNITIZED MANAGEMENT OPERATION AND FURTHER DEVELOPMENT OF THE DALY UNIT NO. 1."
2. "PROPOSAL FOR PRESSURE MAINTENANCE BY WATERFLOODING."
3. "APPLICATION FOR A UNIT MAXIMUM PERMISSIBLE RATE OF PRODUCTION."

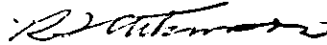
We have included several maps and curves used by the Engineering Committee in its' study of the area.

cont...



In addition we are enclosing a list of the Royalty Owners and Working Interest Owners for the proposed area of Daly Unit #1.

Yours very truly,



R. F. Atkinson  
Chairman  
Proposed Daly Unit No. 1  
Operating Committee

RFA:ft  
Encls.



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## PROPOSAL FOR PRESSURE MAINTENANCE BY WATERFLOODING

The applicants propose to unitize a portion of the west side of the Daly Field. The proposed area consists of 37 oil-wells. The primary purpose for unitizing the area is to facilitate waterflooding in that area.

No detailed waterflood study has been done on the area, mainly because of the following:

1. Reservoir core data is scant and not complete.
2. The results of the Rundle Cruickshank pilot flood is available.

### PILOT FLOOD

Rundle Petroleums Ltd. started water injection into the Mississippian on December 13, 1969 on a 20 acre spacing located in the center of NW $\frac{1}{4}$  4-10-28 WPM. The well had previously been used as a Devonian salt water disposal well and was recompleted as a Mississippian water injection well. The estimated bottom hole pressure in the area was approximately 450 psi compared to an original bottom hole pressure of 1000 psi.

Injectivity proved to be excellent upon recompletion and the well had a capacity in excess of 1000 BWPD at surface pressures up to 1300 psi.

The water injection rates reached a high of 24,000 bbls. per month in September 1970 with a total water injection to that time of some 166,000 barrels. This was all the produced water available to the pilot during this time.

Oil production showed a marked increase after 3 $\frac{1}{2}$  months. During 1969 the four producers averaged 56.7 BOPD for 11 months. In September, 1970 these same four wells averaged just under 100 BOPD and a steady climb has been noted since.

In view of the excellent injection rates and the accompanied oil response, it was felt that the flood should be expanded.

### OPERATOR RECOMMENDATIONS

The operators of the adjoining tracts met and agreed to expand the flood as soon as possible. The Engineering Committee

cont...



studied the area and proposed various combinations of tract factors.

The Engineering Committee estimates that the ultimate primary recoverable reserves for the area would be 5,000,000 barrels. This was based on rate-time decline curves analysis. The estimated cumulative oil production to 1-1-71 is 3,500,000 barrels. This leaves another 1.5 million to be recovered. It is estimated that water-flooding will double the estimated primary figure, hence another 5 million barrels is expected on this basis. This leaves an estimated remaining primary and secondary reserves as of 1-1-71 at 6.5 million barrels.

Several approaches to tract factors were studied but only two parameters appeared feasible to use as a measure of the waterflood potential of a tract. In view of the scarce reservoir data and inconsistency of logs, a test period, (in this case 1969) was used to give a measure of the wells current producing capabilities. Flood response achieved in 1970, as a result of the Pilot Flood initiated December 13, 1969 in the NW $\frac{1}{4}$  4-10-28 WPM, makes a more recent period unacceptable as current production criteria. The other factor considered was the cumulative oil production over its' present life. In order to bring the wells to a common denominator this was converted to a cumulative average monthly production which compensates for wells having a shorter history. In order to bring this into a more equitable realm this average monthly production was penalized for water production based on the 1969 water cut. In other words if a well had produced a large amount of oil but in 1969 had produced with a high water cut, it would be penalized accordingly. This method would relate to the residual oil remaining in the well and would enable one to place a numerical weighting factor to it. Several combinations of the two parameters were studied but the most equitable appeared to be 60% based on penalized average monthly production and 40% on the current (or 1969 oil production). This was adopted by the operators.

#### FLOOD PATTERN

Two basic patterns have been studied for waterflooding. No decision has been made at this time but it is currently under further study. These are:

1. 20 acre inverted 5 spot which could be converted to a line drive or standard 5 spot.
2. 40 acre 5 spot which could be changed to a line drive if need be.

The differential of costs is not great but it is felt that further study should be done on this phase before adoption of any specific pattern. It is not anticipated that any construction could be done until May or June, 1970.

For the same reason the battery consolidation has not been finalized.



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## APPLICATION FOR A UNIT MAXIMUM RATE OF PRODUCTION

The applicants propose that the operation of the Daly Unit #1 should not be restricted by the allowables presently in effect in the Daly Field. It is the applicants contention that no reservoir damage will be done by producing the wells at capacity.

It is important that the oil bank built up in front of a flood front be produced in the first line of offsetting wells if at all possible. This is good engineering and economic practice.

The applicants contend that no nearby non-unit wells will be harmed by this practice since the increased oil production will be a result of water injection within the unit boundaries.

The applicants respectfully request that, on and after the first day that the Daly Unit #1 becomes effective, the Unit be excluded from any provisions governing the limitations of production of oil.



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## PROPOSED DALY UNIT NO. 1

Engineering Committee - October 8, 1970

### 1. Unit Boundaries

It was decided that the proposed unit boundaries be extended to the north east to include a further 12 wells from the original proposal submitted by Rundle at the September 11/70 meeting. This would extend the boundaries to the edge of a line of suspended or abandoned wells in Section 3-10-28 WPM. The only producer left to the east would be 6-10-10-28.

The extension of the boundaries would aid in the selection of a water-flood pattern since it would add to the flexibility of locating injection wells and not having them located at the edge of the unit boundaries which could cause oil to be swept off the unit.

It will be noted that some of these wells have shown good to medium producing characteristics in the past.

2. The estimated recoverable oil reserves are based on rate-cumulative decline curves. Since the history is long on these wells, this method is felt to be most reliable as only limited core information is available. By using what core information was available and applying recovery factors used in the Chevron Daly waterflood, the figures compare most favourably.

In extrapolation of the decline curves it has been assumed that the economic limit would be 4BOPD/well for primary and 7 BOPD/well for waterflood.

It was assumed that the waterflood recovery would double the primary reserves and that the peak production would be 1000 BOPD for the proposed unit.

3. In the area of tract factor participation several approaches were studied. It is recommended that a similar method to that used in other Manitoba units be adopted. It is the belief of this committee that the only equitable method of equating the value of a well to a waterflood project is to arrive at some numerical value based on the past performance of the well. It is also important to devise a method whereby all information is available to everyone concerned in order to check the calculations. Since Manitoba has published oil production figures from inception, this is the most desirable data to use.

As in other Manitoba units the two factors which have been used to determine tract factors are -

1. A current test period to measure the wells' recent value or capacity.
2. Cumulative production based on an average monthly production and penalized by a water penalty factor from the test period.  
As an example the penalized cumulative production value of a well which has produced 120,000 barrels of oil over a period of 15 years (or 180 months) and having a 60% water production during the test period would be -  $120,000 \div 180 \times (1 - .60) = 266.7$  barrels/month.



Page 2

In the case where a well did not produce in the test period, the last 12 months of production (or portion thereof) was used to determine the water penalty.

Four combinations are shown of these two factors on the attached data sheets.

As a guide to choosing a combination the committee discounted the primary production at 10% and the secondary at 20%. It was found that comparing these two that the primary discounted barrels was 42% while the secondary was 58% of a total of the two figures. This can be used as a guide to arriving at the weighting to be used in the final analysis.

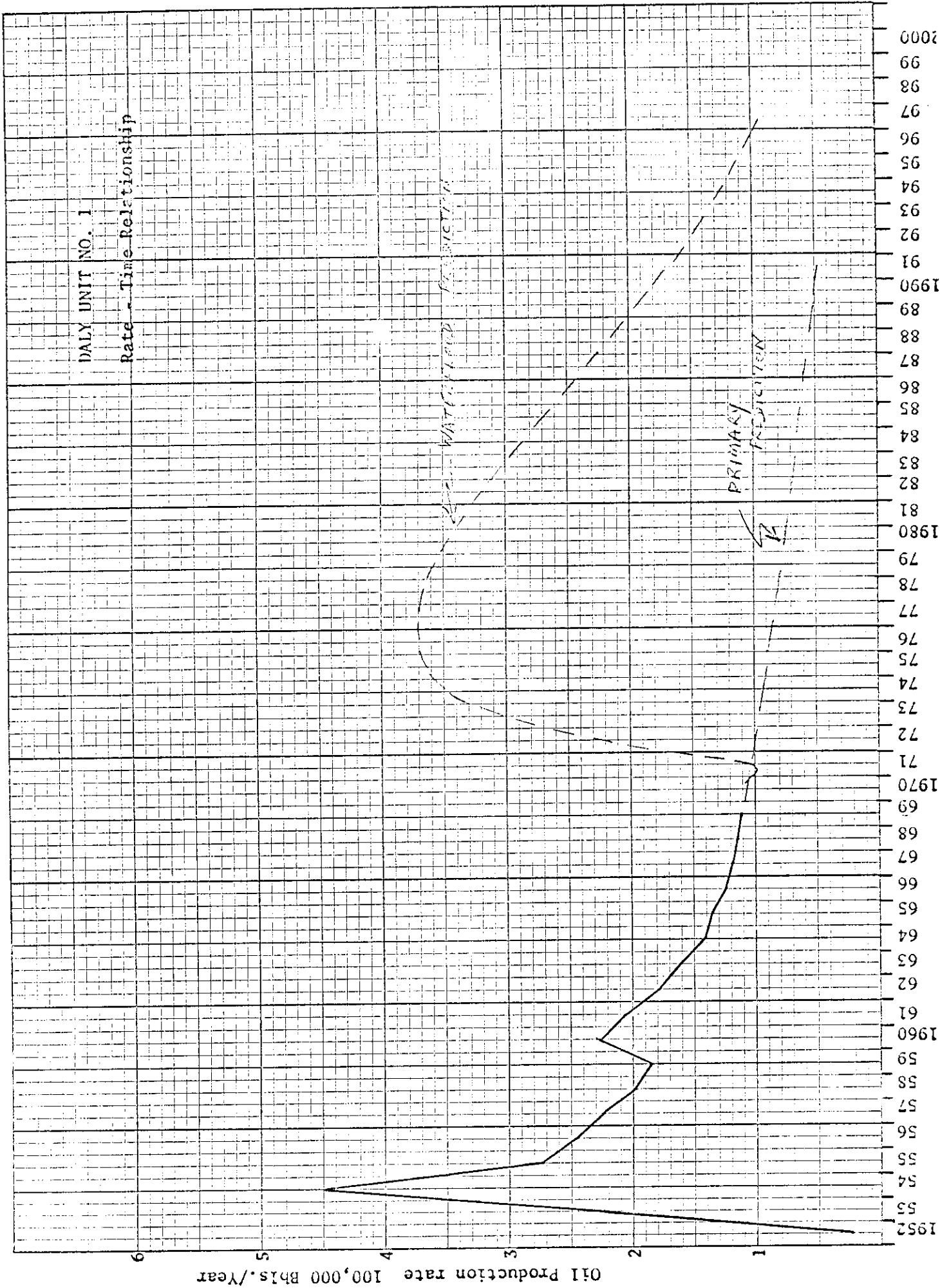
The committee used the 1969 figures for the test period since these figures were not influenced by the effects of the pilot waterflood.

4. The enclosed plats show the two patterns studied together with anticipated costs. No figures for battery consolidation have been included but will not vary from one pattern to another. Further study should be done on this aspect.
5. R.F. Atkinson recently met with some members of the Oil & Gas Conservation Board in Winnipeg. A tentative date of December 15, 1970 has been set for a hearing. If we can get our application in by the end of October, it is hoped that this hearing can include the proposed Daly Unit #1 at that time.

  
R. F. Atkinson.



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7 X 10 INCHES MADE IN U.S.A.  
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DALY FIELDPERCENTAGES

|                   | <u>Cumulative<br/>Oil Production<br/>to 31/12/69</u> | <u>Monthly Avge.<br/>Oil Production<br/>to 31/12/69</u> | <u>Monthly Avge.<br/>Penalized By<br/>1969 Water Prod.</u> | <u>Oil<br/>Production<br/>1969</u> |
|-------------------|--|---|--|------------------------------------|
| Basco             | 1.02239  | 1.17188   | 1.09467  | .86807                             |
| Chevron           | 25.56927   | 26.02932  | 32.64495   | 31.86345                           |
| Rundle            | 46.40651   | 45.62076  | 40.87035   | 44.00838                           |
| Recovery          | 1.51238  | 1.55106   | 2.57741  | .64328                             |
| R. B. Exploration | 11.33249   | 11.47174  | 3.65770  | 7.32570                            |
| Scurry            | <u>14.15696</u>                                      | <u>14.15524</u>   | <u>19.15492</u>  | <u>15.29112</u>                    |
|                   | <u>100.00000%</u>                                    | <u>100.00000%</u>                                       | <u>100.00000%</u>  | <u>100.00000%</u>                  |



DALY FIELDTRACT FACTOR COMBINATIONS

|   | <u>Basco</u>   | <u>Chevron</u>  | <u>Rundle</u>   | <u>Recovery</u> | <u>R.B.</u>    | <u>Scurry</u>   |
|---|----------------|-----------------|-----------------|-----------------|----------------|-----------------|
| 1. (a) 1969 - 50%   | .43404         | 15.93172        | 22.00419        | .32164          | 3.66285        | 7.64556         |
| (b) Cumulative averaged<br>on monthly basis<br>penalized by 1969<br>water penalty - 50% | <u>.54775</u>  | <u>16.30145</u> | <u>20.44785</u> | <u>1.28950</u>  | <u>1.83000</u> | <u>9.58345</u>  |
|   | <u>.98179</u>  | <u>32.23317</u> | <u>42.45204</u> | <u>1.61114</u>  | <u>5.49285</u> | <u>17.22901</u> |
| 2. (a) 1969 - 60%   | .52084         | 19.11807        | 26.40503        | .38597          | 4.39542        | 9.17467         |
| (b) Cumulative averaged<br>on monthly basis<br>penalized by 1969<br>water penalty - 40% | <u>.43820</u>  | <u>13.04116</u> | <u>16.35828</u> | <u>1.03160</u>  | <u>1.46400</u> | <u>7.66676</u>  |
|   | <u>.95904</u>  | <u>32.15923</u> | <u>42.76331</u> | <u>1.41757</u>  | <u>5.85942</u> | <u>16.84143</u> |
| 3. (a) 1969 - 40%   | .34723         | 12.74538        | 17.60335        | .25731          | 2.93028        | 6.11645         |
| (b) Cumulative averaged<br>on monthly basis<br>penalized by 1969<br>water penalty - 60% | <u>.65730</u>  | <u>19.56174</u> | <u>24.53742</u> | <u>1.54740</u>  | <u>2.19600</u> | <u>11.50014</u> |
|   | <u>1.00453</u> | <u>32.30712</u> | <u>42.14077</u> | <u>1.80471</u>  | <u>5.12628</u> | <u>17.61659</u> |
| 4. (a) 1969 - 30%   | .26042         | 9.55904         | 13.20251        | .19298          | 2.19771        | 4.58734         |
| (b) Cumulative averaged<br>on monthly basis<br>penalized by 1969<br>water penalty - 70% | <u>.76685</u>  | <u>22.82203</u> | <u>28.62699</u> | <u>1.80530</u>  | <u>2.56200</u> | <u>13.41683</u> |
|   | <u>1.02727</u> | <u>32.38107</u> | <u>41.82950</u> | <u>1.99828</u>  | <u>4.75971</u> | <u>18.00417</u> |



DALY FIELD

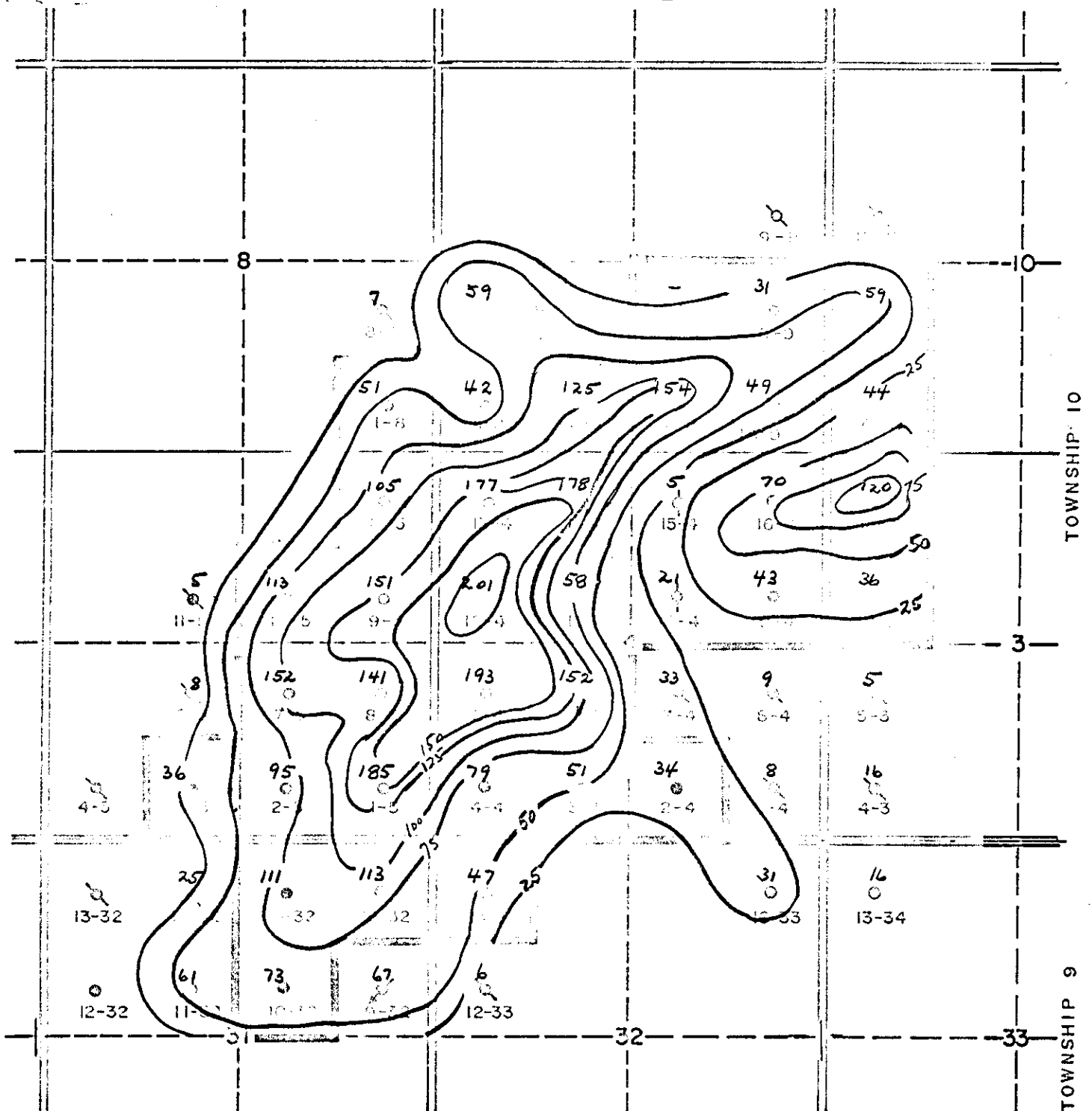
|                           | Cumulative<br>Oil Production<br>to 31/12/69 | Monthly Ave.<br>Oil Production<br>to 31/12/69 | Water penalty<br>Factor on<br>1969 Prod. | Monthly Ave.<br>Penalized on<br>1969 Water<br>Prod. Basis | Oil<br>Prod.<br>1969 |
|---------------------------|---|---|--|---|----------------------|
| Basco Daly 2-4            | 34,302                                      | 201.77647                                     | .56214                                   | 113.42663   | 977                  |
| Company Total             | 34,302                                      | 201.77647                                     |  | 113.42663   | 977                  |
| Chev. Daly 12-3           | 35,542                                      | 224.94937*                                    | .10411                                   | 23.41948  | -                    |
| Chev. Daly 13-3           | 119,977                                     | 605.94444                                     | .99829                                   | 604.90828   | 7,598                |
| Chev. Daly Prov. 9A-4     | 42,870                                      | 266.27329                                     | 1.00000                                  | 266.27329   | 2,450                |
| Chev. Daly 10-4           | 21,369                                      | 133.55625*                                    | .37591                                   | 50.20513  | -                    |
| Chev. Daly Prov. 15-4     | 4,756                                       | 26,71910*                                     | .05301                                   | 1.41638   | -                    |
| Chev. Daly Prov. 16-4     | 69,785                                      | 396.50568                                     | 1.00000                                  | 396.50568   | 2,896                |
| Chev. Daly 1A-9           | 48,913                                      | 238.60000                                     | .58688                                   | 140.02957   | 3,614                |
| Chev. Daly 2-9            | 153,894                                     | 750.70244                                     | .85676                                   | 643.17182   | 4,785                |
| Chev. Daly 3-9            | 125,484                                     | 603.28846                                     | .73461                                   | 443.18174   | 4,653                |
| Chev. Daly 4-9            | 42,279                                      | 215.70918                                     | .18995                                   | 40.97396  | 964                  |
| Chev. Daly 5-9            | 59,186                                      | 287.31068                                     | .55389                                   | 159.13851   | 3,628                |
| Chev. Daly 7-9            | 46  | .30873*                                       | .09446                                   | .02916  | -                    |
| Chev. Daly 8-9            | 30,732                                      | 156.79592*                                    | .52064                                   | 81.63423  | -                    |
| Chev. Daly 4-10           | 43,669                                      | 221.67005                                     | .85272                                   | 189.02249   | 2,119                |
| Chev. Daly 5-10           | 59,374                                      | 353.41667                                     | .96958                                   | 342.66574   | 3,155                |
| Company Total             | 857,876                                     | 4,481.75026                                   |  | 3,382.57546   | 35,862               |
| Rundle Cr. Daly 11-4      | 58,251                                      | 282.77185                                     | .05620                                   | 15.89178  | 1,208                |
| Rundle Cr. 12-4           | 201,359                                     | 1,027.34184                                   | .83650                                   | 859.37145   | 8,585                |
| Rundle Cr. Daly 13-4      | 177,172                                     | 868.49020                                     | .79628                                   | 691.56138   | 5,609                |
| Rundle Cr. Daly 14-4      | 178,156                                     | 840.35849                                     | .64818                                   | 544.70357   | 5,376                |
| Rundle M&H Daly 1-5       | 185,012                                     | 953.67010                                     | .33706                                   | 321.44404   | 8,493                |
| Rundle M&H Daly 2-5       | 94,547                                      | 489.88083                                     | .02317                                   | 11.35054  | 2,389                |
| Rundle M&H Daly 7-5       | 151,869                                     | 782.82990                                     | .64230                                   | 502.81165   | 4,737                |
| Rundle M&H Daly 8-5       | 141,212                                     | 720.46939                                     | .32203                                   | 232.01276   | 2,368                |
| Rundle M&H Daly 9-5       | 150,720                                     | 772.92308                                     | .73695                                   | 569.60566   | 4,631                |
| Rundle M&H Daly 10-5      | 113,286                                     | 583.94845                                     | .43340                                   | 253.08326   | 3,322                |
| Rundle M&H Daly 16-5      | 105,403                                     | 532.33838                                     | .43775                                   | 233.03113   | 2,813                |
| Company Total             | 1,556,987                                   | 7,855.02251                                   |  | 4,234.86722   | 49,531               |
| Recovery Daly 1-8         | 50,742                                      | 267.06316                                     | 1.00000                                  | 267.06316   | 724                  |
| Company Total             | 50,742                                      | 267.06316                                     |  | 267.06316   | 724                  |
| R.B. Exp. Th. Daly 10-32  | 73,224                                      | 381.37500                                     | .01814                                   | 6.91814   | 474                  |
| R.B. Exp. Th. Daly 15-32  | 111,460                                     | 577.51295                                     | .01857                                   | 10.72442  | 1,393                |
| R.B. Exp. Th. Daly 16-32  | 113,117                                     | 586.09845                                     | .05504                                   | 32.25886  | 2,180                |
| R.B. Exp. Th. Daly 13-33  | 46,567                                      | 242.53646                                     | .77700                                   | 188.45083   | 2,446                |
| R.B. Exp. Grieve Daly 3-5 | 35,849                                      | 187.69110                                     | .74936                                   | 140.64820   | 1,752                |
| Company Total             | 380,217                                     | 1,975.21396                                   |  | 379.00045   | 8,245                |
| Scurry Cr. Daly 3-4       | 50,564                                      | 274.80435                                     | .73744                                   | 202.65172   | 1,497                |
| Scurry Cr. Daly 4-4       | 79,020                                      | 405.23077                                     | .67582                                   | 273.86306   | 3,569                |
| Scurry Cr. Daly 5-4       | 193,206                                     | 980.74112                                     | .84266                                   | 826.43131   | 6,684                |
| Scurry Cr. Daly 6-5       | 152,191                                     | 776.48469                                     | .87810                                   | 681.83121   | 5,460                |
| Company Total             | 474,981                                     | 2,437.26093                                   |  | 1,984.77730   | 17,210               |
| GRAND TOTAL               | 3,355,105                                   | 17,218.08729                                  |  | 10,361.71022  | 112,549              |

\* No 1969 production - penalty based on last 12 months of production

Amended October 13, 1970



PART XXIII  
MAP OF UNIT AREA



RANGE 28 W.P.M.

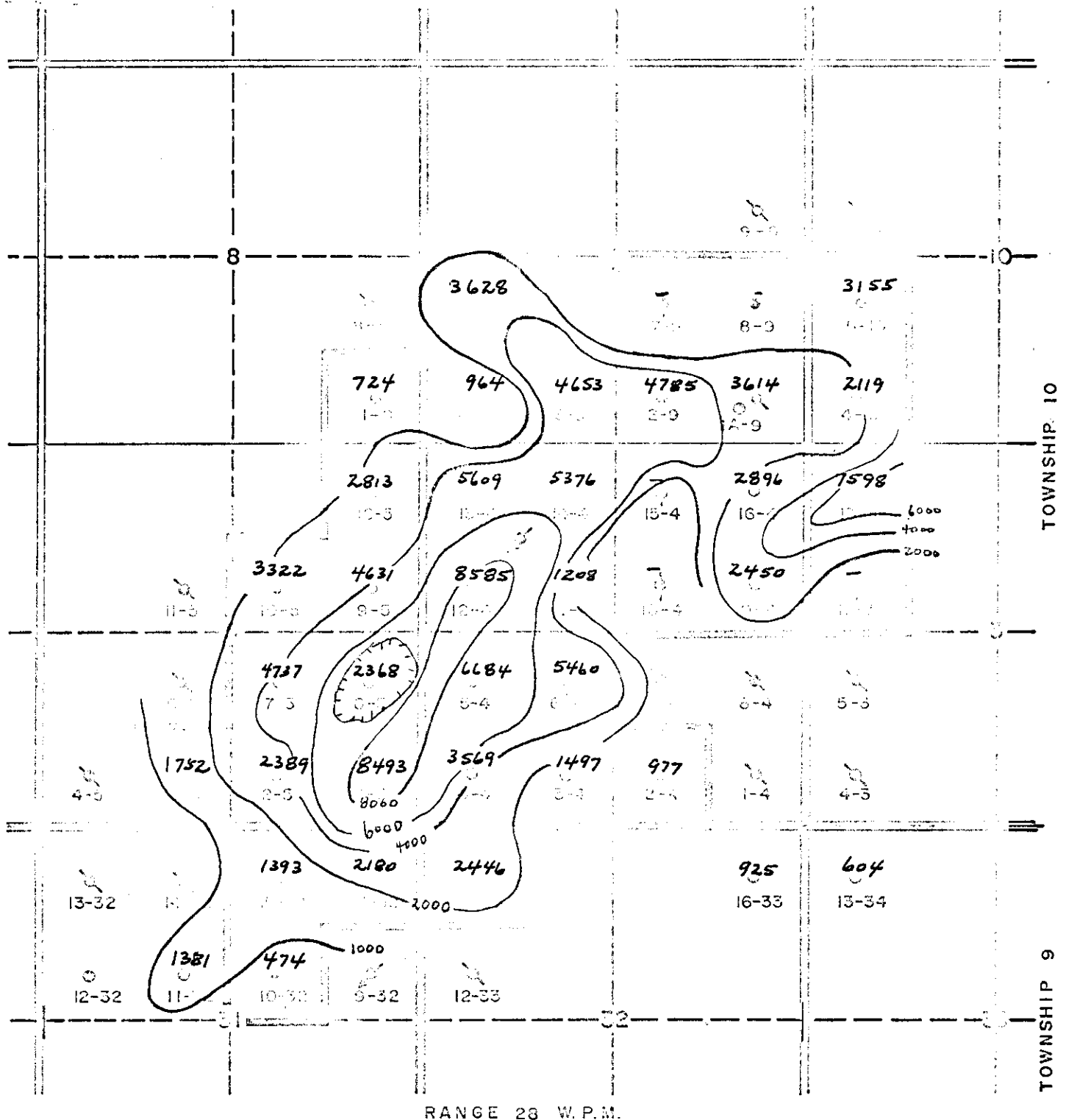
WEST DALY AREA

Cumulative Oil to Dec. 31,  
1969 in Thousands of Bbls.

- OILWELL
- ⊗ ABANDONED OILWELL
- ⊙ DRY HOLE
- ⊕ WATER INJECTION WELL
- ⊗ SALT WATER DISPOSAL WELL
- ⊙ SUSPENDED OILWELL
- UNIT BOUNDARY



# MAP OF UNIT AREA



## WEST DALY AREA

0 1000' 2000'

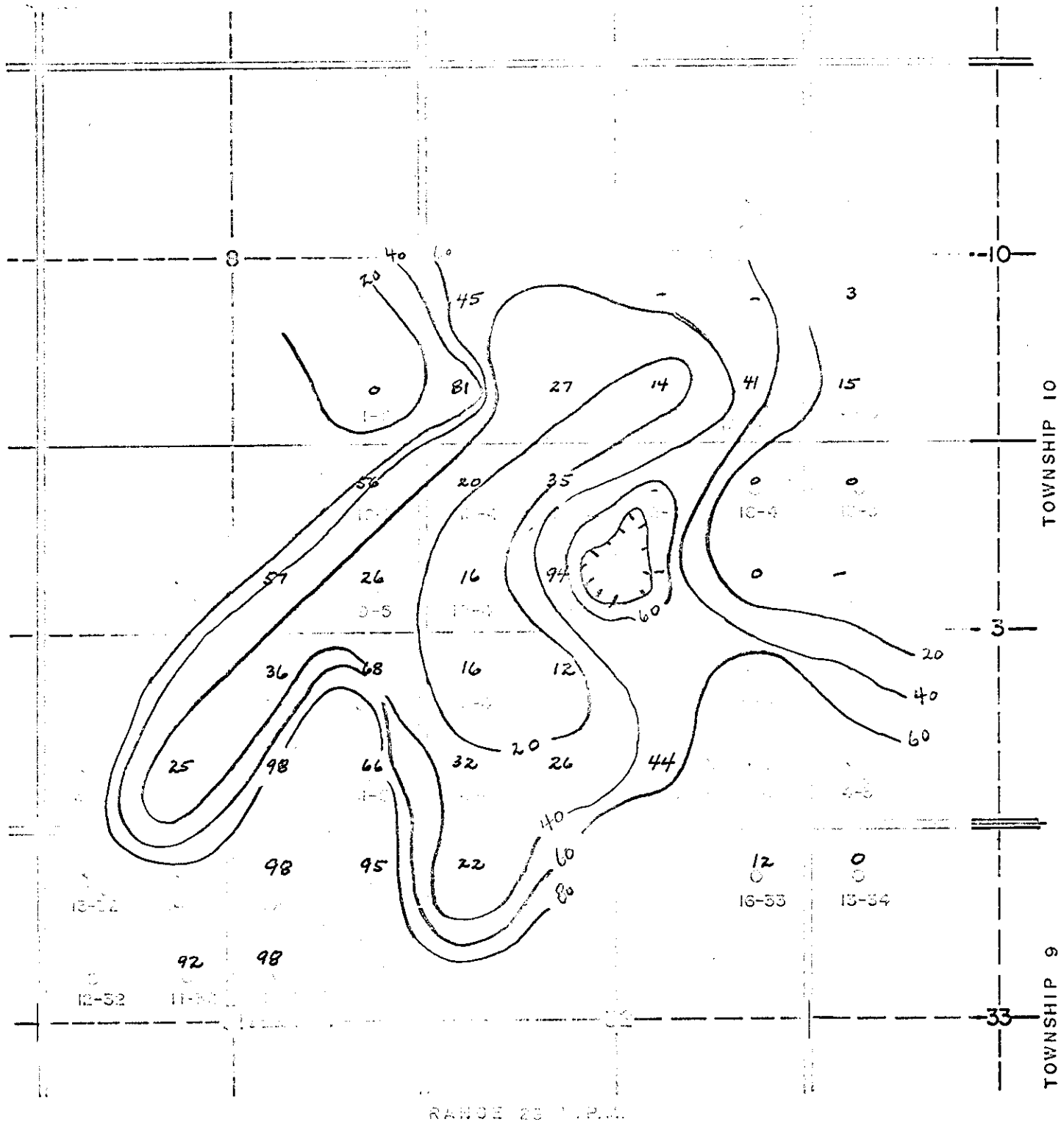
1969 Oil Production in bbls.

### LEGEND

- OILWELL
- ⊗ ABANDONED OILWELL
- ⊗ DRY HOLE
- ⊗ WATER INJECTION WELL
- ⊗ SALT WATER DISPOSAL WELL
- ⊗ SUSPENDED OILWELL
- UNIT BOUNDARY



# PARTIAL MAP OF UNIT AREA



WEST 1/4 1/4 Percent Water Cut For  
1969

- OILWELL
- ⊗ ABANDONED OILWELL
- ⊗ DRY HOLE
- ⊗ WATER INJECTION WELL
- UNIT BOUNDARY
- ⊗ AT WATER DISPOSAL WELL
- ⊗ ABANDONED OILWELL



WATERFLOOD PATTERN STUDYCASE NO 1

40 acre 5 spot pattern - 7 additional injection wells

3" line required - 4000'

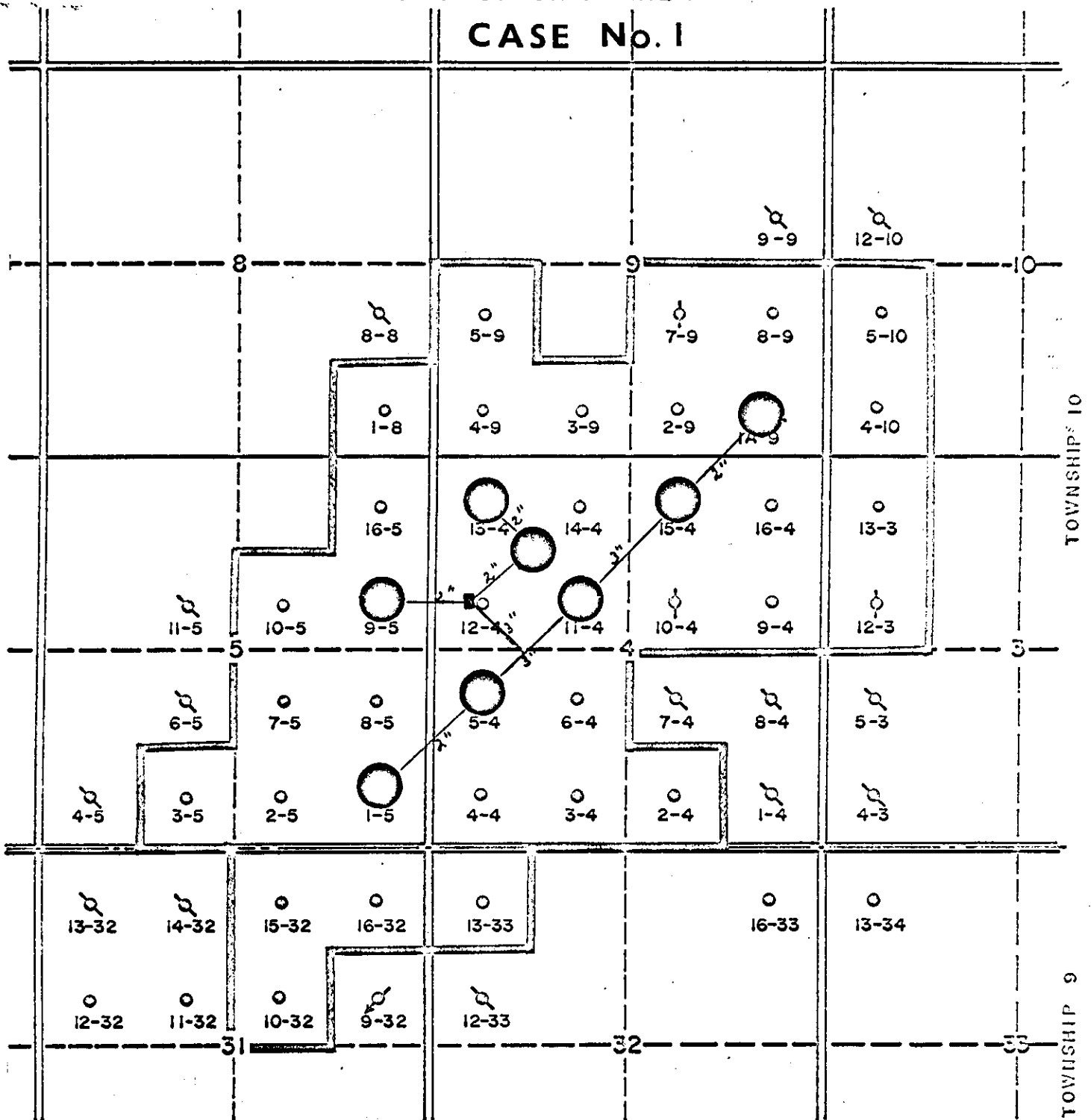
2" line required - 8400'

COST ESTIMATES

|                           |             |   |                         |
|---------------------------|-------------|---|-------------------------|
| 1. Inection lines (3")    | 4000 x 2.70 | = | 10,800                  |
| (2")                      | 8400 x 2.10 | = | 17,650                  |
|                           |             |   | <u>\$28,450</u>         |
| 2. Well Conversions       | 8000 x 7    | = | 56,000                  |
| 3. Plant Expansion        | 4000 x 3    | = | 12,000                  |
| 4. Engineering & Overhead |             |   | <u>3,550</u>            |
| TOTAL                     |             |   | <u><u>\$110,000</u></u> |



PART XXIII  
MAP OF UNIT AREA  
**CASE No. 1**



RANGE 28 W.P.M.

WEST DALY AREA

0 1000' 2000'

LEGEND

- OILWELL
- ⊗ ABANDONED OILWELL
- ⊗ DRY HOLE
- ⊗ WATER INJECTION WELL
- ⊗ SALT WATER DISPOSAL WELL
- ⊗ SUSPENDED OILWELL
- UNIT BOUNDARY



WATERFLOOD PATTERN STUDYCASE NO 2

20 acre inverted 5 spot - 4 additional new injection wells

3" line required - 3800' x 2.70 = \$ 10,280

2" line required - 4740' x 2.10 = 10,500

20,780

COST ESTIMATES

1. Injection lines 20,780

2. New Wells 4 x 25,000 100,000

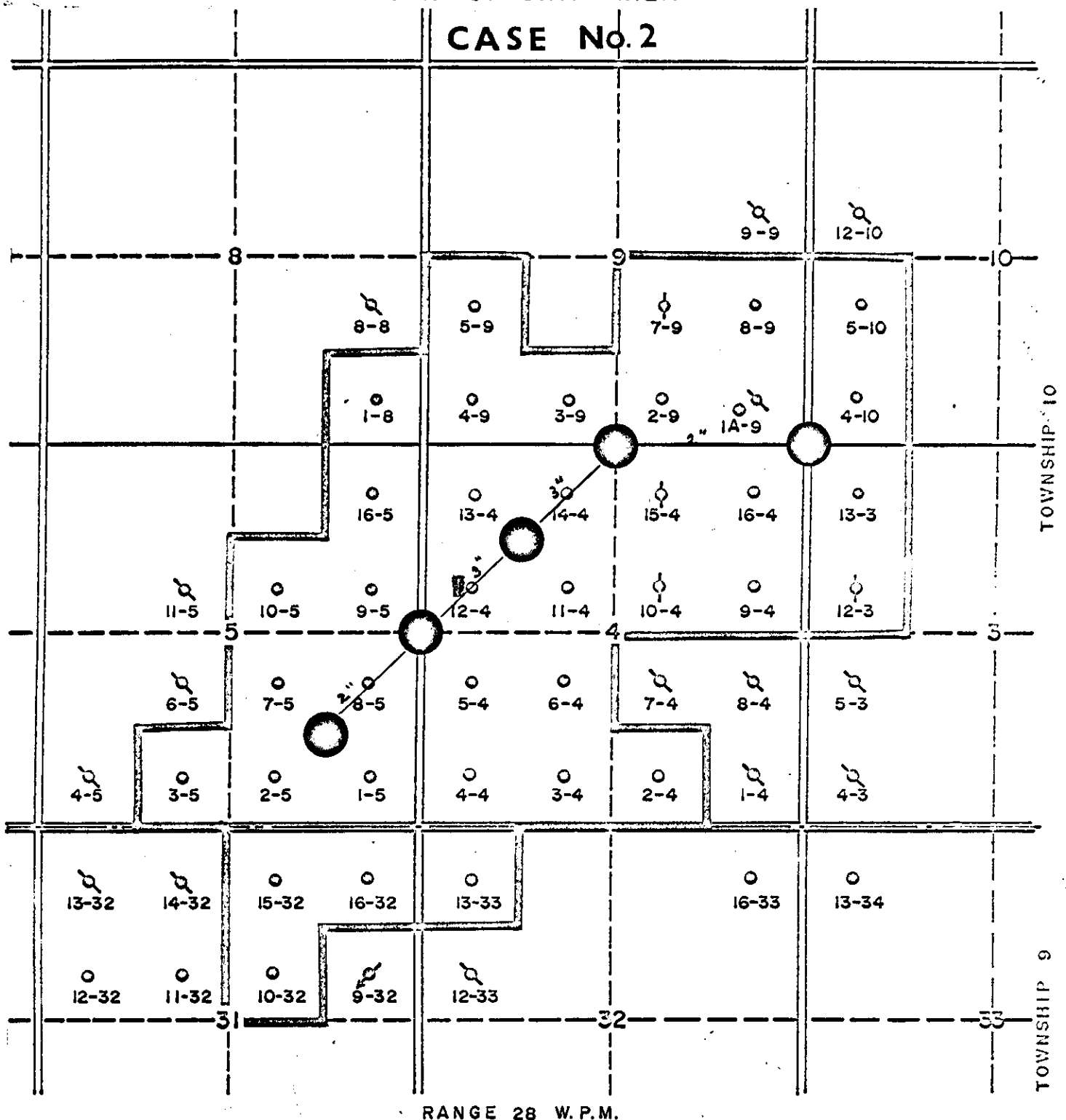
3. Plant Expansion 3000 x 3 9,000

4. Engineering & Overhead 4,000

TOTAL \$133,780



PART XXIII  
MAP OF UNIT AREA  
**CASE No. 2**



**WEST DALY AREA**

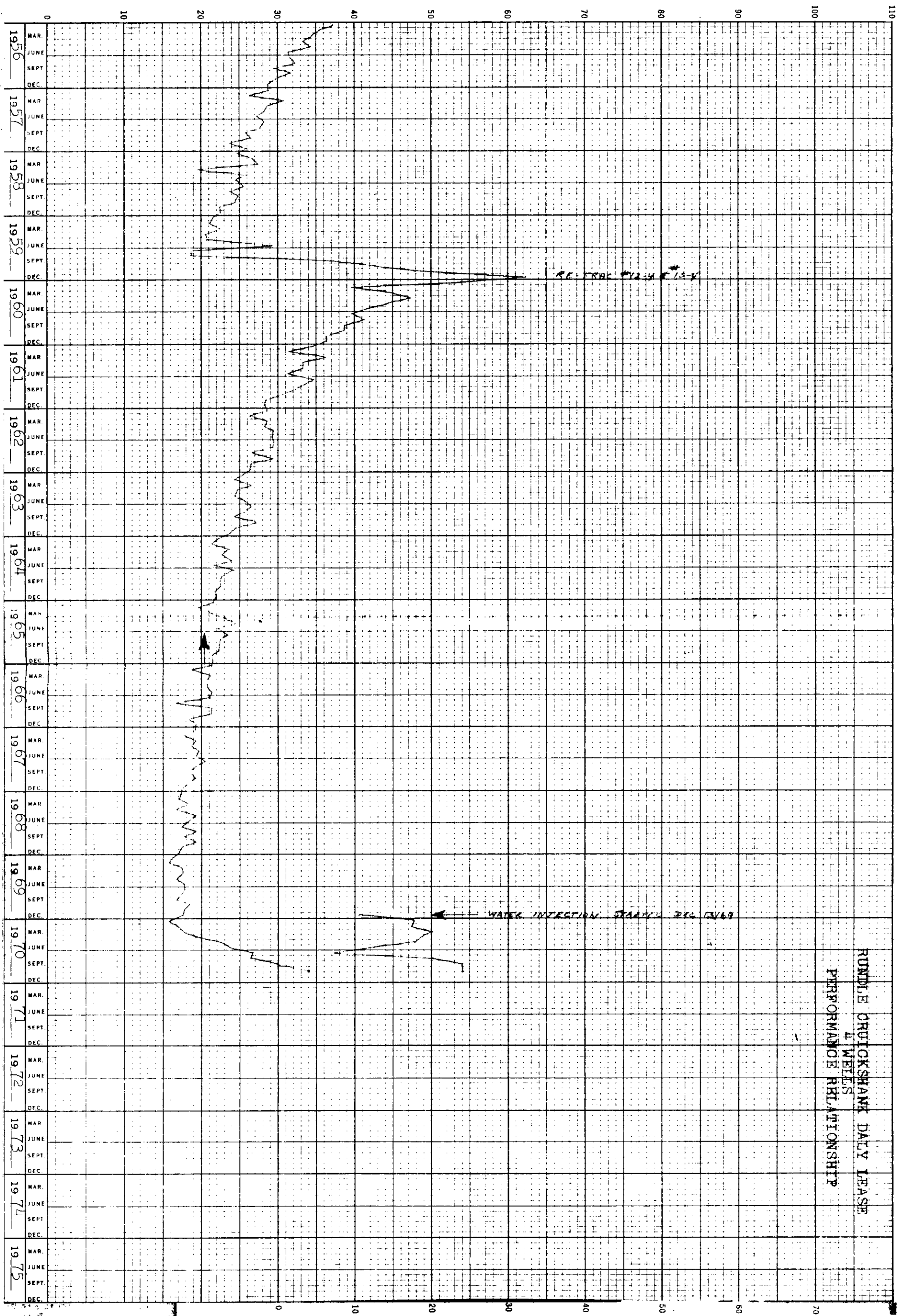
0 1000' 2000'

**LEGEND**

- OILWELL
- ABANDONED OILWELL
- DRY HOLE
- WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- SUSPENDED OILWELL
- UNIT BOUNDARY



OIL PROD. RATE - 100 BBLs./MONTH



RUNDLE CRUICKSHANK DAILY LEASE  
4 WELLS  
PERFORMANCE RELATIONSHIP

WATER INJECTION RATE - 1000 BBLs./MONTH



DEPARTMENT OF MINES  
& NATURAL RESOURCES

MAR 30 1971

DIRECTOR OF MINES

## RUNDLE PETROLEUMS LTD.

400 ~~X306~~ ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171

DEPARTMENT OF MINES  
& NATURAL RESOURCES

MAR 30 1971

PETROLEUM ENGINEERING  
DIVISION

March 29, 1971

Department of Mines & Natural Resources  
The Oil and Natural Gas Conservation Board  
901 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Attention: Mr. W. Winston Mair, Chairman

Dear Sir;

Re: Proposed Daly Unit #1

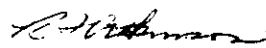
Further to your letter of December 24, 1970 regarding the continuation of the December 15, 1970 hearing, we are enclosing ten copies of our water injection plan for the above unit.

We now have in our possession royalty owners consents in excess of 75% of the tract participations and we respectfully request that continuation of the December 15, 1970 hearing be set at a convenient date.

We are hopeful that the effective date for the unit could be June 1st, 1971.

Yours very truly,

RUNDLE PETROLEUMS LTD.

  
R. F. Atkinson

RFA:ft  
Encls.

D. c. to: Mr. W. Winston Mair;  
Mr. M. J. Gobert;  
Mr. J. S. Roper.

DEPARTMENT OF MINES  
& NATURAL RESOURCES

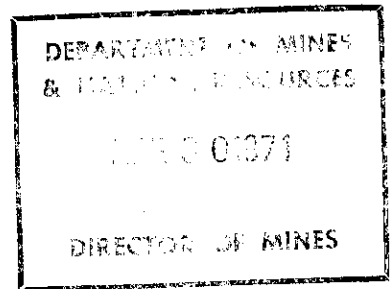
JUN 28 1971

PETROLEUM ENGINEERING  
DIVISION



# RUNDLE PETROLEUMS LTD.

400X00X ROYALITE BUILDING  
CALGARY 2, ALBERTA  
Telephone 263-7171



February 12, 1971

The Oil & Natural Gas Conservation Board  
901 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Gentlemen;

Re: Proposed Daly Unit No. 1

Further to the hearing held December 15, 1970 regarding the unitization and waterflooding of the proposed Daly Unit No. 1, we hereby submit a plan for a water injection system and waterflood pattern on behalf of the Working Interest Owners.

1. It is proposed that the waterflood pattern be an inverted 5 spot using the 20 acre spacing now in effect on Daly Pilot Waterflood. It is proposed to drill an additional 5 water injection wells at the following locations.

- #1 - centre SE $\frac{1}{4}$  5-10-28 WPM
- #2 - NE corner SE $\frac{1}{4}$  5-10-28 WPM
- #3 - NE corner NW 4-10-28 WPM
- #4 - centre of North Boundary NE 4-10-28 WPM
- #5 - NE corner NE 4-10-28 WPM

It is proposed to drill these wells into the Cruickshank Crinoidal zone and inject water into all porous Mississippian zones down to and including this marker.



Some wells will be cored in the producing horizon and adequate logs will be run in order to obtain additional reservoir data, within the unit area. Four and one-half inch casing will be run and the wells will be equipped with packers and cement lined or corrosion-resistant tubing.

2. The present water injection plant will be expanded to increase the injection capacity to 4500 or 5000 barrels of water per day. Initially, the two - 250 barrel fibreglass tanks, now in use, will act as settling and suction tanks. An oil blanket will be carried on each tank. Injection lines will be cement-lined steel with yellow-jacket external coating. Meters will be installed to measure the volume of water injected into each well.
3. The water source will be produced water from the unit and nearby areas.

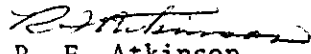
At present there is in excess of 1000 barrels of water per day produced in the unit area. It is estimated that an additional 2000 barrels of water per day can be produced from wells at LSD 15-32 and LSD 10-32 by high volume pumping. The water supply available from within the proposed unit area will be supplemented with water collected by Chevron's salt water gathering system. This gathering system, which crosses the southern portion of the proposed Daly Unit No. 1, could provide an estimated 4000 BWPD.

4. Battery consolidation will bring all produced fluids to a central battery at LSD 12-4-10-28. Some testing facilities will remain at some existing battery sites.
5. Estimated cost for installation of the outlined system is as follows:



|   |                         |
|---|-------------------------|
| 1. Water Injection Lines                          | \$ 25,000               |
| 2. Drill, Complete & Equip. 5 new injection wells | 150,000                 |
| 3. Plant Expansion                                | 18,000                  |
| 4. Engineering and Overhead                       | 6,000                   |
| Miscellaneous                                     | <u>2,000</u>            |
| Subtotal  | <u>\$201,000</u>        |
| 5. Battery Consolidation - Labor                  | 5,000                   |
| 6. Flowlines                                      | 35,000                  |
| 7. Treater & Free Water Knockout                  | 15,000                  |
| 8. Buildings                                      | 3,000                   |
| Miscellaneous                                     | <u>2,000</u>            |
| Subtotal  | <u>\$ 60,000</u>        |
| ESTIMATED TOTAL COST                              | <u><u>\$261,000</u></u> |

Yours very truly,

  
R. F. Atkinson  
Chairman Pro-tem.  
Proposed Daly Unit No. 1

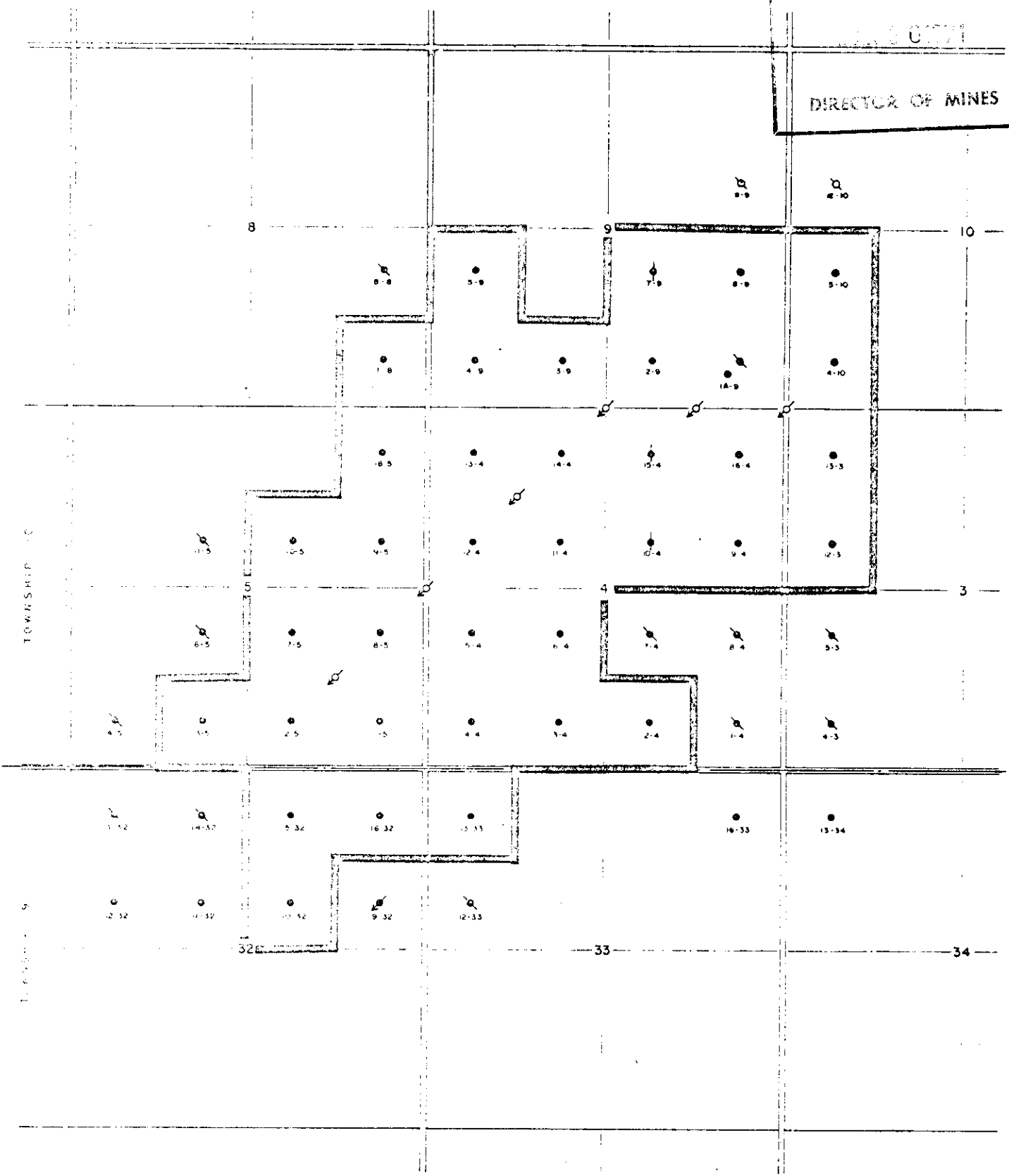


DALY UNIT No. 1  
WATER INJECTION PATTERN

RECEIVED BY THE DIRECTOR OF MINES  
2-1-1971

DAKOTA 0071

DIRECTOR OF MINES



RANGE 28 W P M

WEST DALY AREA

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LEGEND

- OILWELL
- ABANDONED OILWELL
- DRY HOLE
- WATER INJECTION
- SALT WATER DISPOSAL WELL
- SUSPENDED OILWELL
- UNIT BOUNDARY



INTER-DEPARTMENTAL MEMORANDUM



PROVINCE  
OF  
MANITOBA

DATE FEBRUARY 16, 1971

FROM F. S. GAGEY  
Reservoir Engineer

TO THE OIL & NATURAL GAS CONSERVATION BOARD  
J. S. ROPER - Deputy Chairman  
M. J. GORERT - Member

SUBJECT CROWN CONSENT - PROPOSED "DALY UNIT NO. 1"

*Plans & Consents  
returned to MSG  
16/2*

The Crown Tracts, as listed in the "consent form", have been checked and are correct as regards the Crown's interest in the above proposed Unit.

The outline by individual Tracts is as follows:

| <u>Crown Tract</u> | <u>Crown Lease</u> | <u>Acreage</u> | <u>Crown Interest</u> | <u>Unit<br/>Participation Factor</u> |
|--------------------|--------------------|----------------|-----------------------|--------------------------------------|
| 9 - 4              | 29                 | 40             | 100%                  | 2.41260 %                            |
| 10 - 4             | 29                 | 40             | 100%                  | .29071                               |
| 15 - 4             | 29                 | 40             | 100%                  | .00820                               |
| 16 - 4             | 29                 | 40             | 100%                  | 3.32522                              |
| 4 - 10             | 54                 | 40             | 100%                  | 1.84763                              |
| 5 - 10             | 54                 | 40             | 100%                  | 3.10550                              |
|                    |                    | 240            |                       | 10.98986 %                           |

Total acreage in Unit (37 wells) = 1,480 acres  
Crown acreage in Unit (6 wells) = 240 acres  
Percentage Crown acreage in Unit = 16.2 %  
Total Crown Participation in Unit Production = 10.98986 %

Primary Recoverable Oil in 37-well Unit (1-1-71) = 1.5 million bbls. (est.)  
Secondary Oil Recoverable by Waterflood (1-1-71) = 5.0 million bbls. (est.)  
Total Primary & Secondary Recoverable Oil (1-1-71) = 6.5 million bbls.

Primary Recoverable Oil from 6 Crown wells (1-1-71) = 100,000 bbls. (est.)  
Primary & Secondary Recoverable Oil from 6 Crown wells by Unit Participation = 10.9 of 6,500,000 = 708,500 bbls.  
Gain due to participation in Waterflood Area = 608,000 bbls.  
Crown Royalty from Primary Production estimated 12 1/2% of 100,000 bbls. = 12,500 bbls.  
Crown Royalty from Unit Participation, estimated 12 1/2% of 708,500 bbls. = 88,562 bbls.  
Estimated Crown Royalty gain from Unit Participation = 76,000 bbls.  
Value @ \$2.50 per bbl. = \$190,000.00



The Unit Plan was approved in principle by The Oil and Natural Gas Conservation Board, at the hearing held December 5th, 1970, in Virden.

The final approval of the Board is contingent upon the filing of 75% of the Royalty Interest consents to the Plan, and the filing (and approval by the Board) of a definite plan of the water injection system to be used in flooding.

In view of the estimated Royalty gain for the Crown, by participating in the proposed Daly Unit No. 1, it is recommended that the consent of the Crown, as head lessor of the six listed Tracts, be obtained.

A handwritten signature in dark ink, appearing to be 'H. J. G. Smith', is located in the lower right quadrant of the page. The signature is fluid and cursive, with a long horizontal stroke extending to the right.