

## PROPOSAL FOR UNITIZED OPERATIONS

### INTRODUCTION

The applicants propose to unitize a portion of the Routledge Field to form a single unit. The proposed area consists of 108 wells on 40 acre spacing. The primary purpose for unitizing this area is to permit the consolidation of producing facilities. Consolidation will result in a lower economic producing limit than is attainable for the area under the currently existing competitive producing operations. The lower economic producing limit will result in an increased ultimate recovery.

From volumetric calculations that considered the penetrated pay sections at individual wells, it is estimated that the original oil-in-place was 60,000,000 barrels. The indicated ultimate primary recovery from the area under competitive operations is 12,000,000 barrels for a recovery factor of 20.0%. It is estimated that under unitized operations the ultimate recovery will be increased by 4,000,000 barrels to 16,000,000 barrels to realize a recovery factor of 26.7%. The incremental recoverable oil is due primarily to the lowering of the operating economic limit by the consolidation of producing facilities, and partially due to the greater operational flexibility permitted under unitized operation.

Appendix I contains summaries of considerations that entered into the decision to request permission to unitize for operational purposes.

Appendix II presents the details on the operations to be conducted in the proposed Unit area.

### UNITIZATION

Unitization of the area under application would enable all interests in the area to be merged so that this portion of the reservoir may be operated as a single property. Improved recovery efficiency through reduced operating expenditures can be realized under Unit operation.

Unitization will permit the commingling of production without regard to lines of property demarcation. This is a flexibility in operation that is both desirable for efficient operation and necessary for the consolidation of producing facilities.

Additional production will be obtained from the area as a result of unitization. A fair and equitable basis for the sharing of this additional production must be provided. It is the applicants' contention that the basis proposed for participation is both fair and equitable.

The proposed Unit boundary encompasses most of the producing wells and wells capable of production that are in the Routledge Field (See Figure 1). The Unit boundary in the southeastern corner is created by the presence of abandoned wells which form a natural separation from nearby production. The rest of the boundary is such that it includes all wells that have produced oil in economic quantities and are desirable for unitized operations. Abandoned wells within the outer boundary of the Unit have been excluded as window acreage.

If future development indicates that any lands currently excluded from the proposed Unit area should be included, this inclusion can be accommodated by Unit enlargement. Under Section 76 of the Mines Act, the Board may, at any time, hold a further hearing to consider the admission of these or any lands to the Unit area.

APPENDIX I

A. INVESTIGATION OF THE FEASIBILITY OF UNITIZATION

1. INTRODUCTION

The majority of the wells in the proposed Routledge Unit No. 1 area were drilled during the period 1955 to 1959, inclusive. The most recent producer was placed on production during 1967. Most of the wells in the proposed area did not fully penetrate the entire oil pay section. (See Figure 1 for a map of the proposed Unit area.)

2. GEOLOGY

The Routledge Field lies on the northeast flank of the Williston Basin southeast of the Town of Virden. The field is basically a stratigraphic trap in the Mississippian but the eastern margin is controlled by a sharp structural drop thought to be due to solution of the Prairie Evaporite salt to the east and collapse of the overlying beds.

The reservoir rocks are part of the Lodgepole Formation of Lower Mississippian age and are underlain by Ordovician, Silurian and Devonian sediments. The overlying deposits are Jurassic and Cretaceous sediments and glacial drift. The reservoir rocks are mainly clastic limestones subdivided by thin interbeds of argillaceous limestone. The Lodgepole Formation has been subdivided into three members: the Scallion Member; the Virden Member and the Whitewater Lake Member in ascending order.

The Scallion Member is predominantly a finely crystalline cherty limestone conformable with the underlying Bakken Formation and is approximately 200 feet thick within the field area.

The Lower Virden Member consists mainly of oolitic limestones interbedded with argillaceous limestone or calcareous shale, hence its common name, the Oolitic Zone. These oolite bands are cyclic in nature and total four in the area, the Fourth, Third, Second and First Oolites in ascending order. Overlying the Oolitic Zone are argillaceous limestones and shales.

The Upper Virden Member is a bioclastic limestone of mainly crinoidal debris. It is sometimes crystalline and is generally known as the "Crinoids" or "Crinoidal."

The overlying Whitewater Lake Member is generally dolomitized within the field and the rocks up to the top of the Lodgepole Formation are variably argillaceous, dolomitic and anhydritic. It is porous over only a small part of the area.

### 3. WATERFLOOD CONSIDERATIONS

The feasibility of a waterflood scheme in the area was considered. The wells in most of the proposed Unit area produce with a water cut in excess of 80% (see Figure 3). Only very small scattered portions of the proposed Unit area produce with water cuts lower than 60%. A subsurface pressure survey conducted during 1969 indicates the presence of a reasonably high reservoir pressure, in most instances within 100 psi of the initial pressure (see Figure 4). The pressure decline to date is much slower than in other fields in the area.

Based on the presence of high water cut production and high reservoir pressures, it was concluded that the reservoir within the bounds of the

proposed Unit is operating under an active natural waterdrive mechanism. Some indication of the rate of natural water encroachment can be obtained from a comparison of the location of similar water cut contours on Figures 3, 5, and 6.

Based on the high current water production and on the presence of a reasonably high reservoir pressure in the area, the necessity for, and the economic feasibility of a waterflood scheme, as such, in this area, now or in the future, is at best doubtful. Consideration will, however, be given to the disposal of produced water into judiciously chosen disposal wells.

#### 4. ORIGINAL OIL-IN-PLACE

An attempt was made to establish the amount of oil that was in place in the proposed Unit area originally. Very few wells penetrated the entire pay section. Logs and core analyses were, in many instances, of poor quality or incomplete for satisfactory interpretation. Because of these factors, a pay isopach showing only the estimated penetrated pay was prepared. The total pay isopach is presented as Figure 2.

Table 1 presents a summary of average reservoir parameters for the producing horizon in the proposed Unit area. These parameters were obtained from interpretation of logs, PVT analyses, core analyses and other miscellaneous sources. Employing this data, the calculated original oil-in-place was established to be 60,000,000 barrels.

TABLE I

SUMMARY OF RESERVOIR PARAMETERS  
PROPOSED ROUTLEDGE UNIT NO. 1

Est. Surface Area (Acres)	4,320
Est. Average Pay Thickness (Ft.)	28
Est. Reservoir Rock Volume (Ac.-Ft.)	121,000
Est. Average Porosity (%)	12.3
Est. Average Water Saturation (%)	45
Est. Average Initial Oil Saturation (%)	55
Formation Volume Factor (Res. Bbls./S.T.B.)	1.06
Est. Original Oil-in-place (Bbls./Ac.-Ft.)	495
Est. Original Oil-in-place (Barrels)	60,000,000
 Total Est. Recovery Under Competitive Operations	 12,000,000
RECOVERY FACTOR	20%
 Total Est. Recovery With Unit Operation	 16,000,000
RECOVERY FACTOR	26.7

5. ULTIMATE RECOVERY

(a) Competitive Operations

The production history in the proposed Unit area is such that an extrapolation of water cut versus cumulative oil production plot to a limiting water cut yields a reasonable estimate of the ultimate recoverable oil for a particular tract or group of tracts. Figures 7, 8, 9, 10, and 11 present such plots by Working Interest Owner within the proposed Unit area.

For consistency it was assumed that, under competitive operations, each Working Interest Owner would produce his group of tracts to a production rate that cut 95% water.

The sum of the ultimate oil producible under competitive operations, as shown by Figures 7 to 11, inclusive, is 12,000,000 barrels.

(b) Unitized Operations

As discussed above, it is possible to estimate the ultimate recoverable oil from a plot of water cut versus cumulative oil produced. Figure 12 presents such a plot for all wells in the proposed Unit area.

It was assumed that, due to consolidated production facilities, it was feasible to produce economically to a production rate that cuts 98% water. The extrapolation of this plot to 98% yields an ultimate recoverable oil production of 16,000,000 barrels.

It is thus anticipated that an incremental 4,000,000 barrels of oil

will be made recoverable by unitizing the proposed area.

A production forecast for the area under unitized operations, as well as on a competitive operation basis, is shown on Figure 13.



APPENDIX II

A. DETAILS OF OPERATIONS TO BE CONDUCTED IN THE PROPOSED UNIT AREA

1. CONSOLIDATION OF PRODUCING FACILITIES AND SALT WATER DISPOSAL SYSTEM

The basic objective in the proposed scheme is to recover the greatest amount of oil economically. The economics in this case are generated by reduced operating costs through the consolidation of producing facilities. The producing facilities can be consolidated conveniently only after the area has been unitized.

An extensive consolidation program is planned for the area, such that all the production will be handled at four batteries. There are currently 22 batteries in the area.

The four battery locations, their anticipated fluid volumes upon unitization, and the location of each battery's salt water disposal facility are as follows:

<u>Battery Location</u>	<u>Fluid Volumes (Bbls./Day)</u>		<u>Disposal Well Location</u>
	<u>Oil</u>	<u>Water</u>	
1-16-9-25	540	3,360	8-16-9-25
4-20-9-25	260	2,680	16-17-9-25
8-21-9-25	310	1,060	16-17-9-25
10-28-9-25	380	2,000	16-17-9-25 and/or 5-33-9-25
	<hr/>	<hr/>	
	1,490	9,100	

Each battery will be tied into one or more salt water disposal facilities.

It is anticipated that, eventually, water production will exceed 11,500 bbls. per day by 1975.

Figure 14 shows the batteries and salt water disposal facilities and the producing wells that will be served by each.

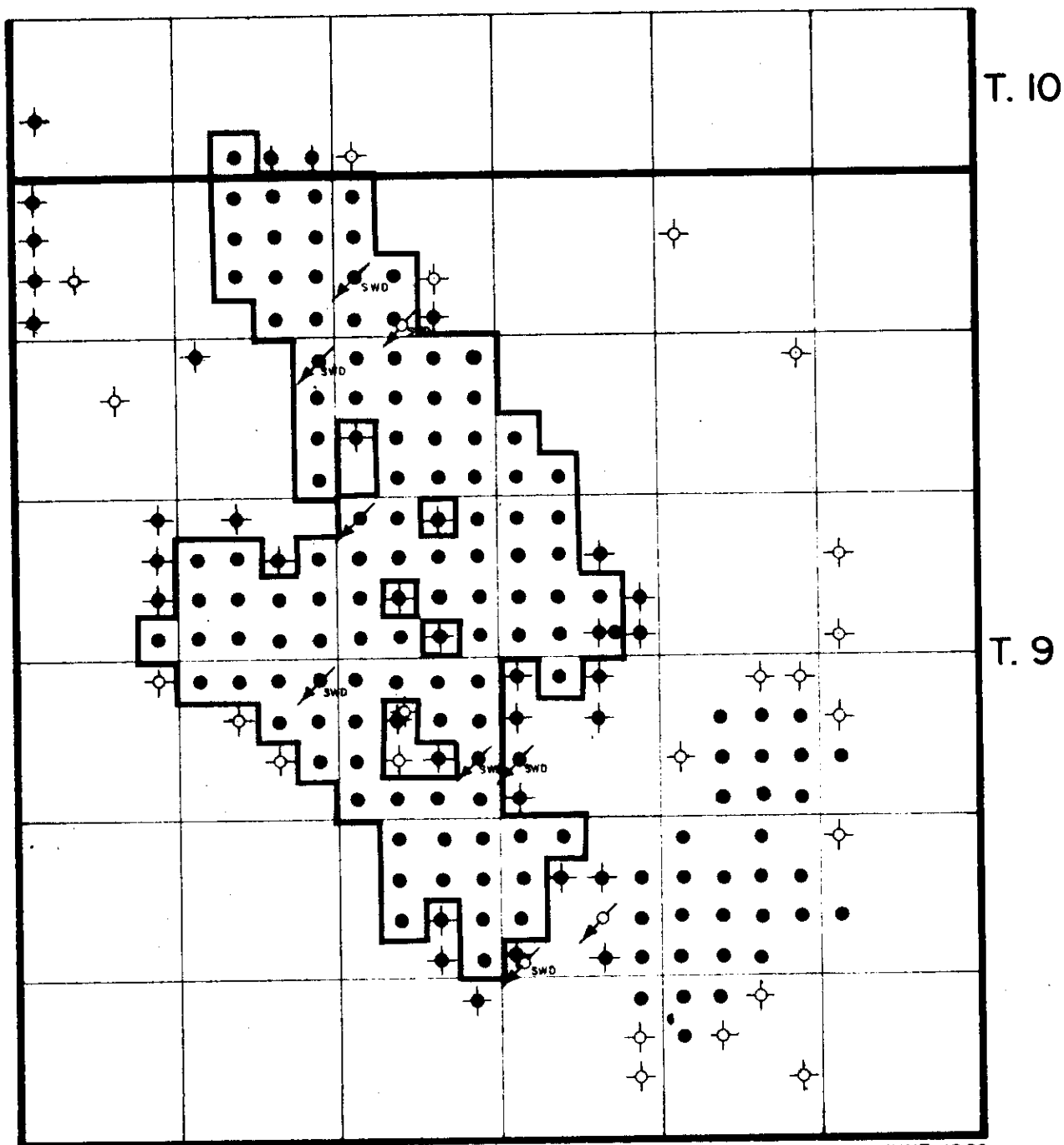
## 2. CAPITAL COST ESTIMATES

The following is an estimate of the capital expenditures involved on consolidating the producing facilities into the four batteries as shown:

Battery 1-16-9-25	\$ 48,000
Battery 4-20-9-25	9,000
Battery 8-21-9-25	19,000
Battery 10-28-9-25	34,000
	<hr/>
Total	\$110,000

## 3. HIGH VOLUME FLUID WITHDRAWALS

It is anticipated that, with consolidation of producing facilities and the provision of adequate produced water disposal facilities, it will become feasible to institute several high volume withdrawal projects in the proposed Unit area. In some of these projects it may be desirable to reach production rates that exceed the current maximum permissible rate of production. In other instances the projects may be feasible without exceeding existing production restrictions. The details on these projects will not be available until closer scrutiny of well production characteristics can be obtained under Unit operations. The cost estimates above do not include provisions for the high volume projects.



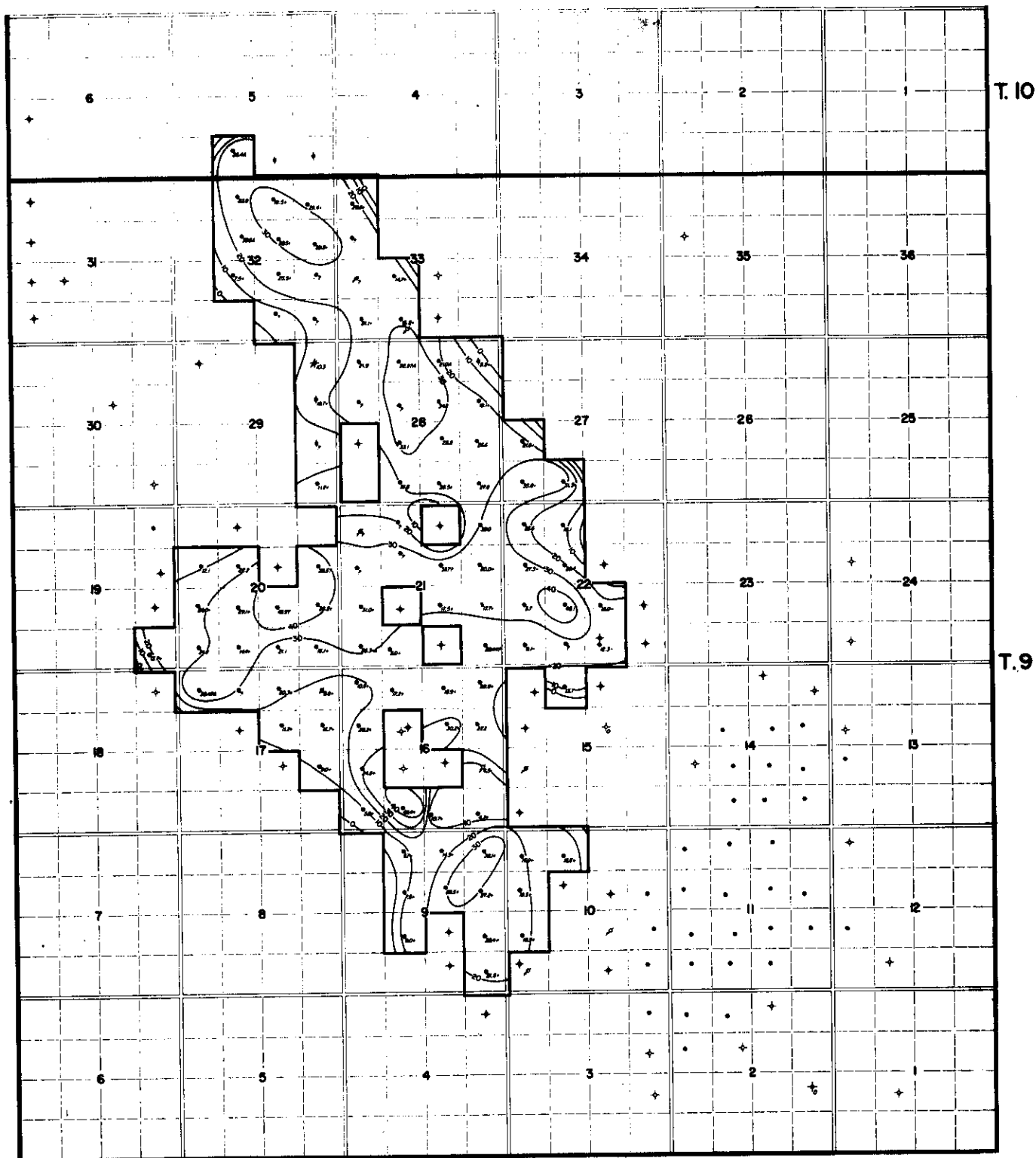
R. 25 W.P.M.

JUNE, 1969

FIGURE 1

PROPOSED ROUTLEDGE UNIT No. 1





R. 25 W.P.M.

FIGURE 2

# PROPOSED ROUTLEDGE UNIT No. 1

ISOPACH OF TOTAL PENETRATED PAY

JUNE 1969



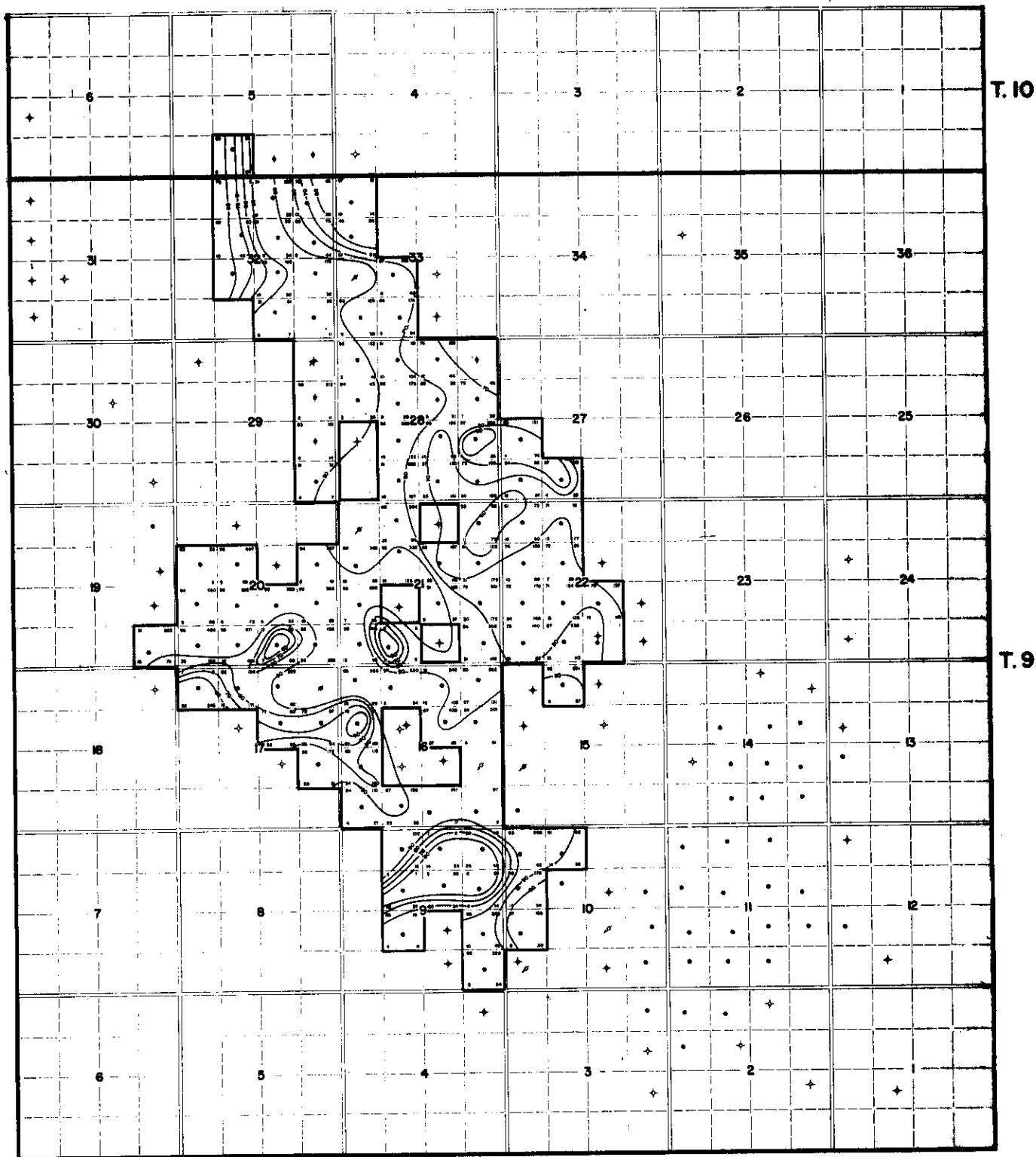


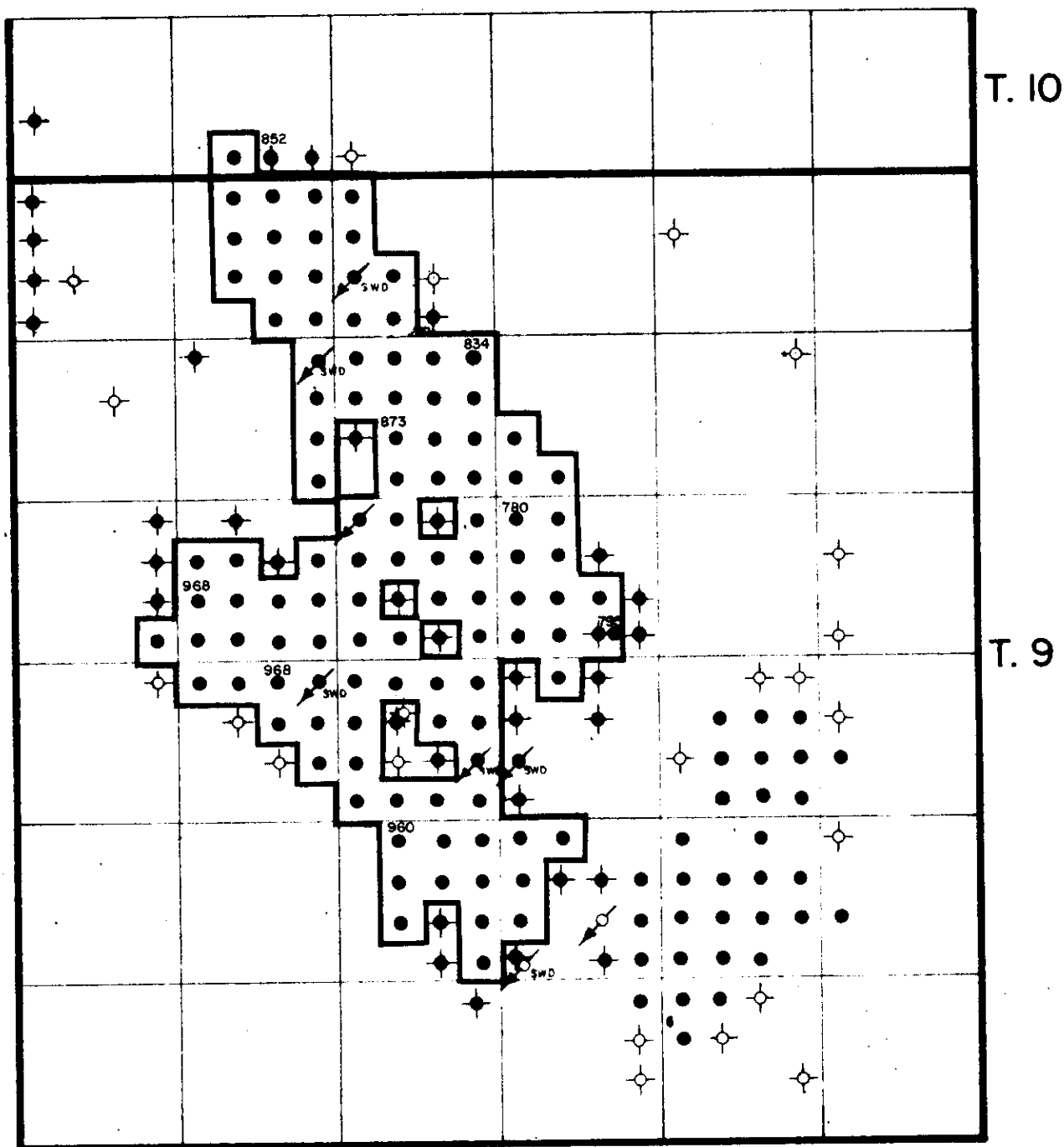
FIGURE 3

# PROPOSED ROUTLEDGE UNIT No.1 ISO WATER-CUT

MARCH 1969

MARCH/69 WATER-CUT (cc) CUMULATIVE WATER (Bbls)  
 OIL PER DAY (Bbls) CUMULATIVE OIL (Bbls)



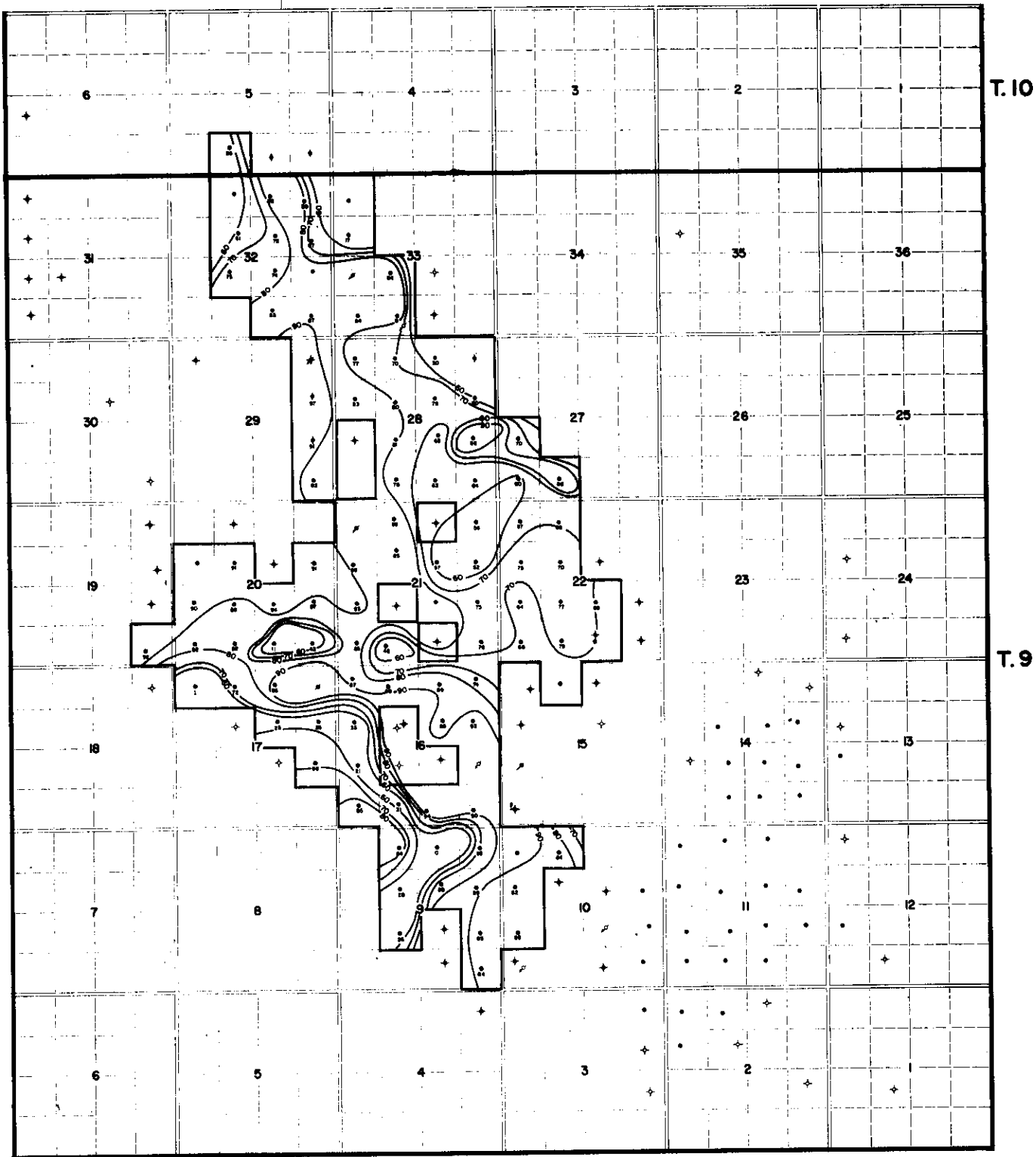


R. 25 W.P.M.

FIGURE 4

PROPOSED ROUTLEDGE UNIT No.1  
SUBSURFACE PRESSURES FROM 1969 SURVEY





R.25 W.P.M.

FIGURE 5

# PROPOSED ROUTLEDGE UNIT No.1 ISO WATER-CUT

JULY 1966



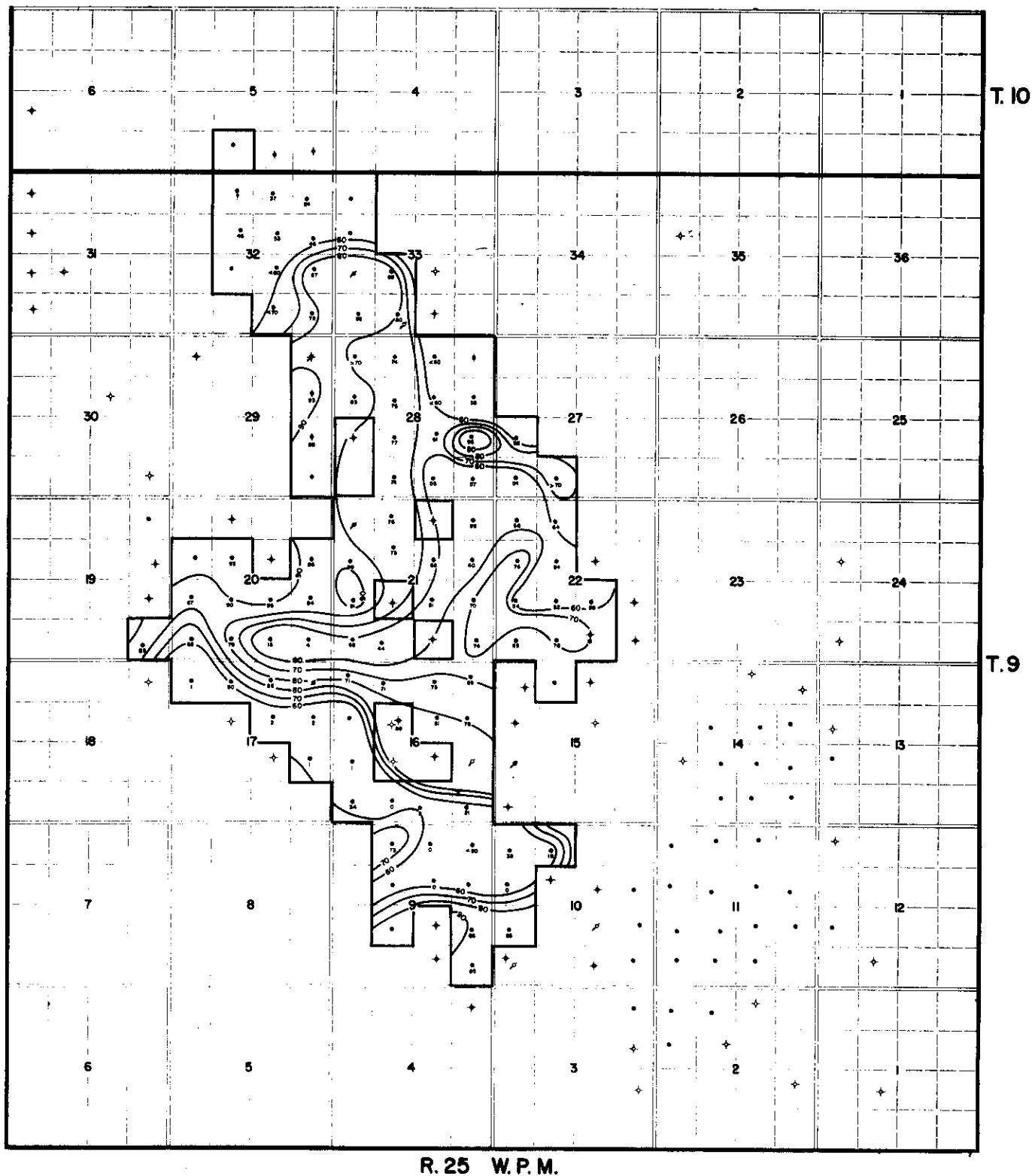


FIGURE 6

# PROPOSED ROUTLEDGE UNIT No.1

ISO WATER - CUT

JULY 1964





FIGURE 7

PROPOSED ROUTLEDGE UNIT No. 1  
 WATER CUT vs CUMULATIVE OIL FOR  
 COMPETITIVE OPERATION No. 1

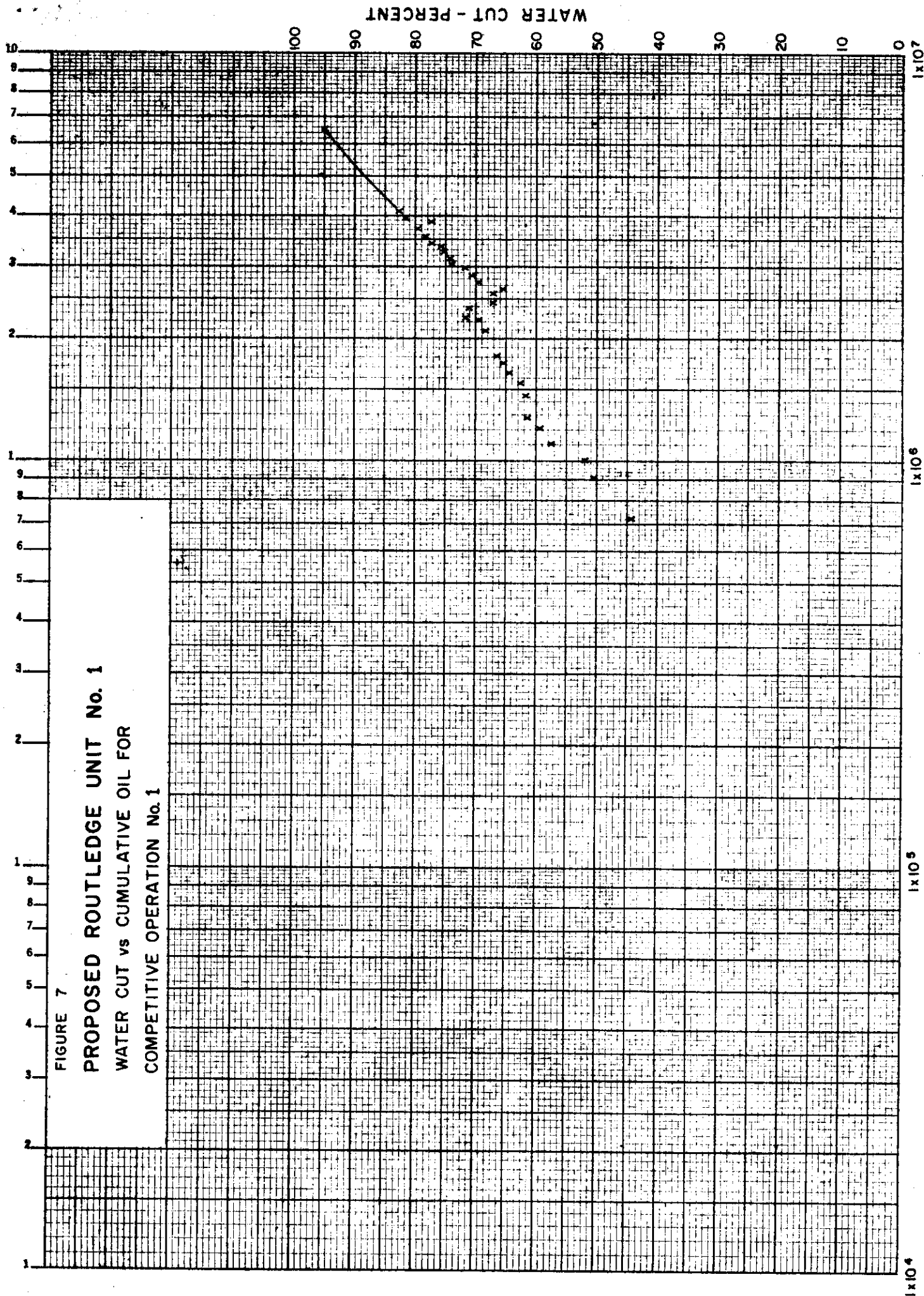


FIGURE 8

PROPOSED ROUTLEDGE UNIT No. 1  
WATER CUT vs CUMULATIVE OIL FOR  
COMPETITIVE OPERATION No. 2

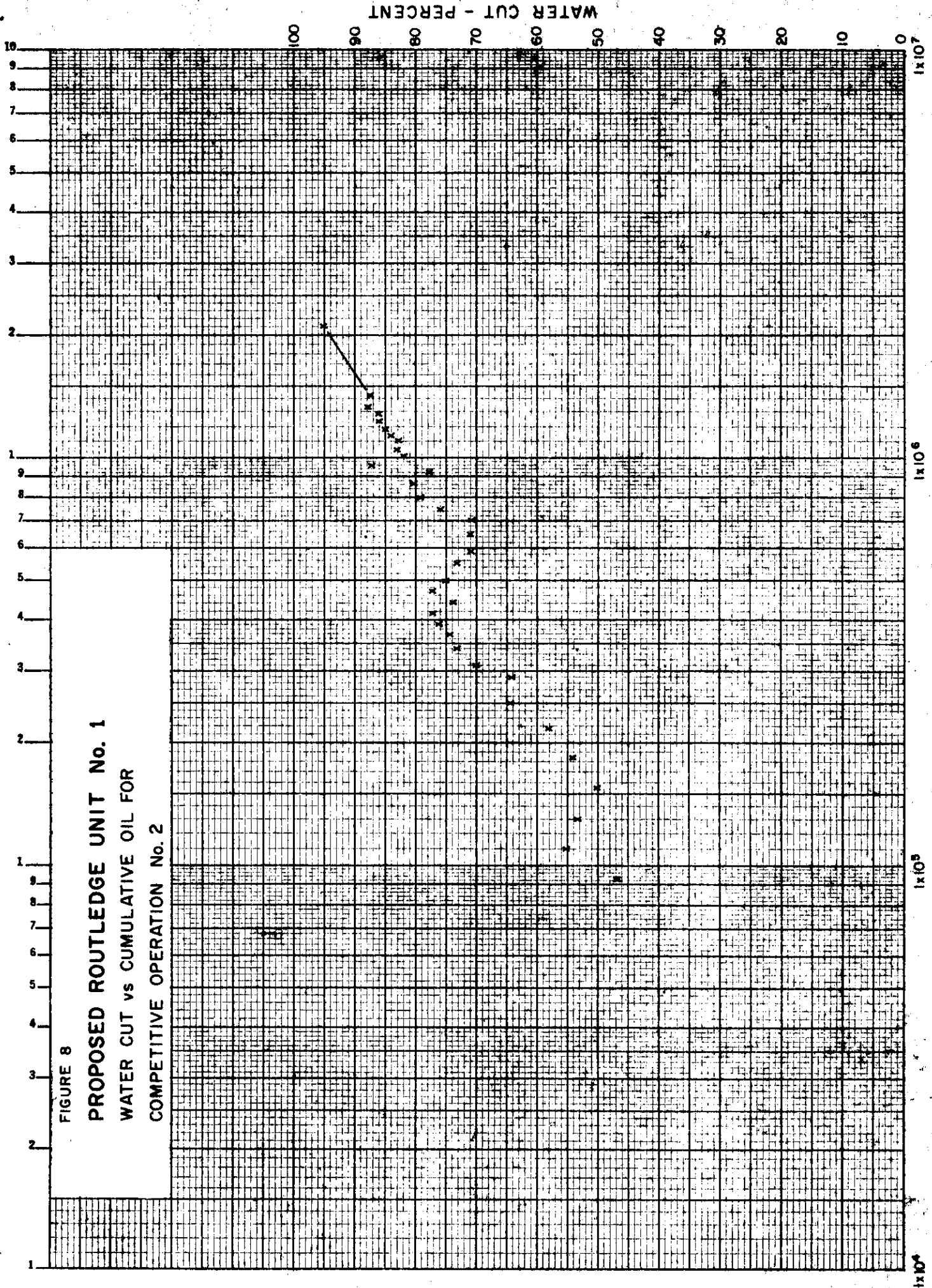


FIGURE 9

PROPOSED ROUTLEDGE UNIT No. 1  
 WATER CUT vs CUMULATIVE OIL FOR  
 COMPETITIVE OPERATION No. 3

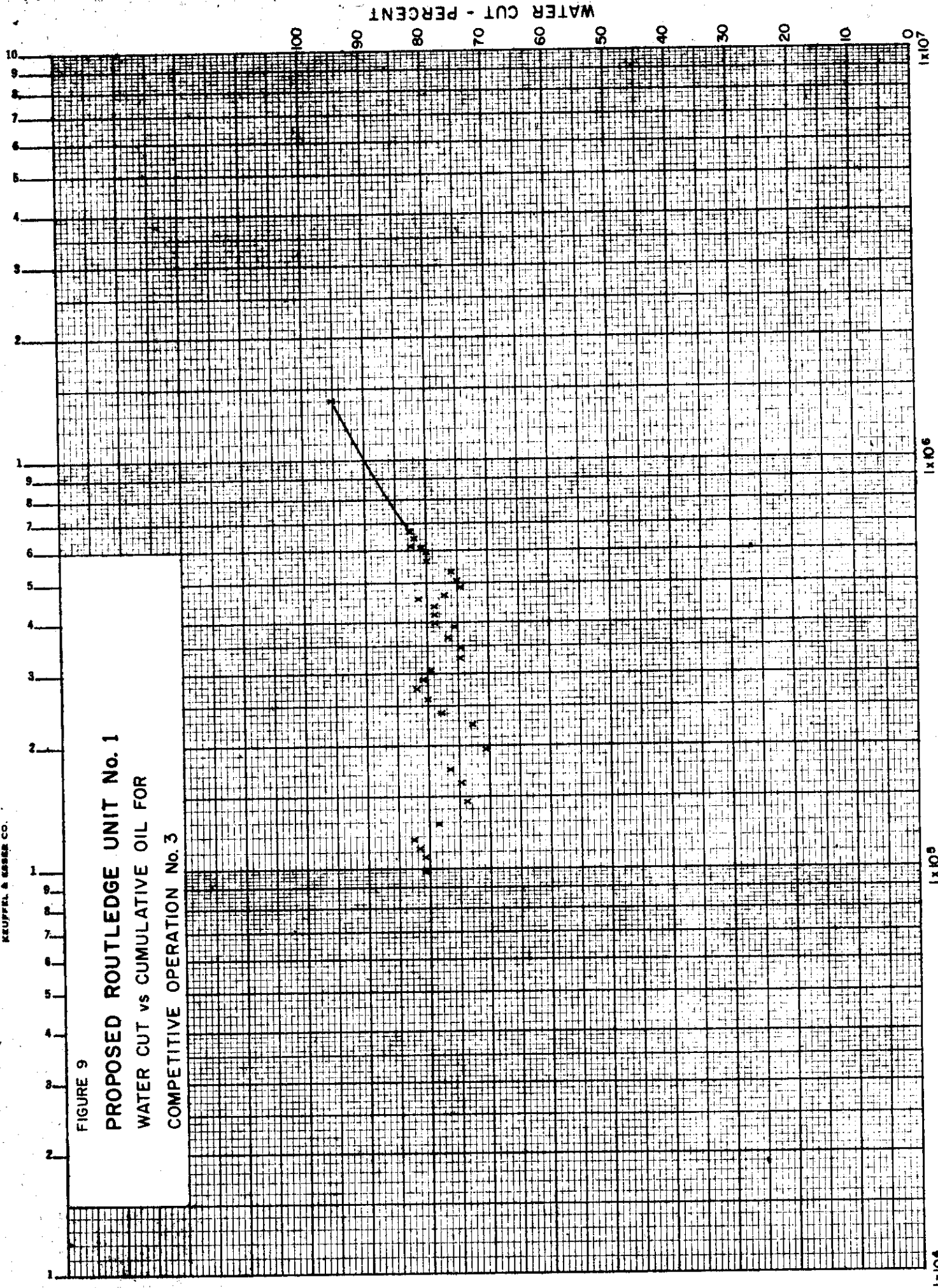


FIGURE 10

PROPOSED ROUTLEDGE UNIT No. 1  
WATER CUT vs CUMULATIVE OIL FOR  
COMPETITIVE OPERATION No. 4

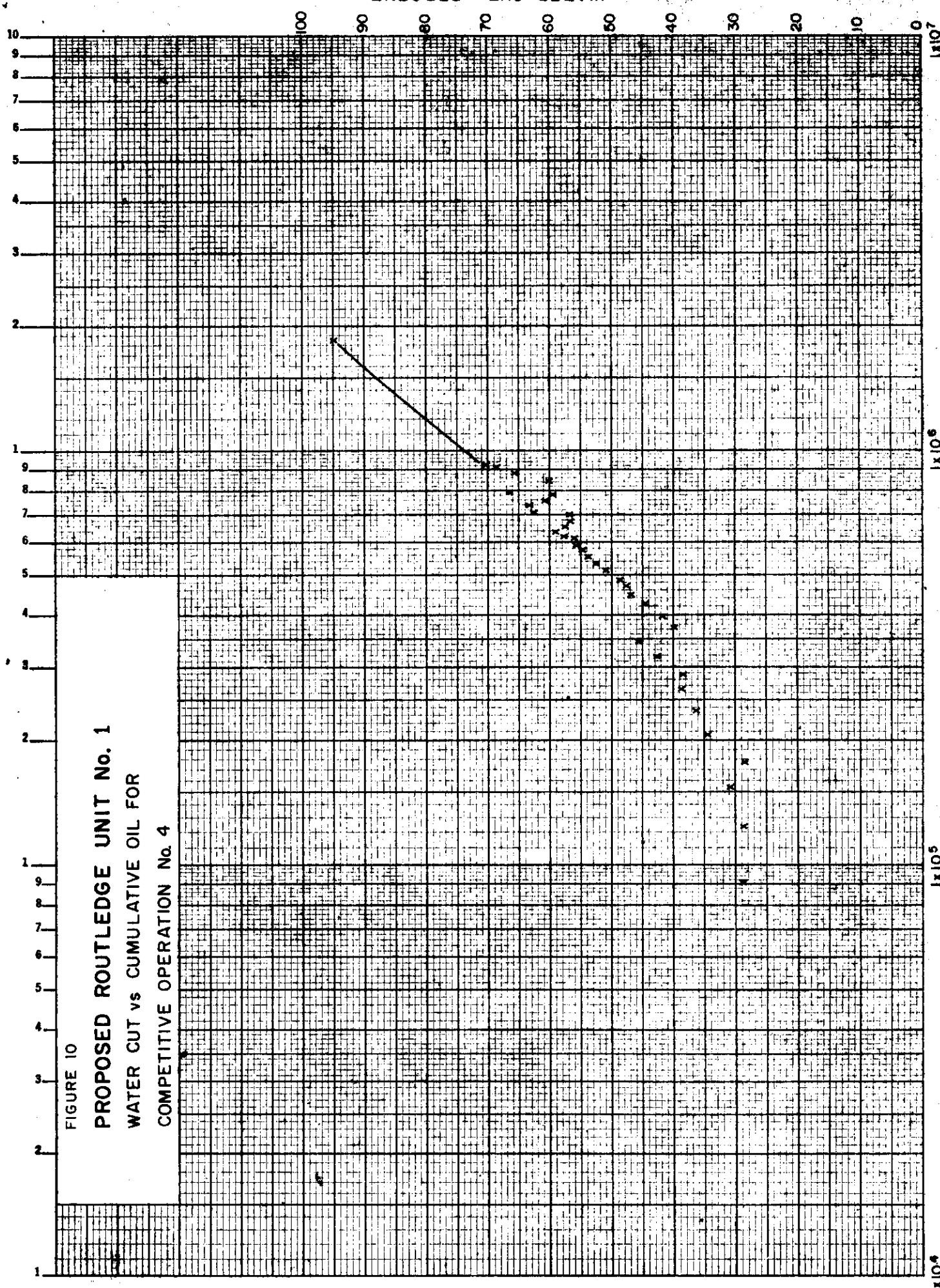




FIGURE 11

PROPOSED ROUTLEDGE UNIT No. 1  
 WATER CUT vs CUMULATIVE OIL FOR  
 COMPETITIVE OPERATION No. 5

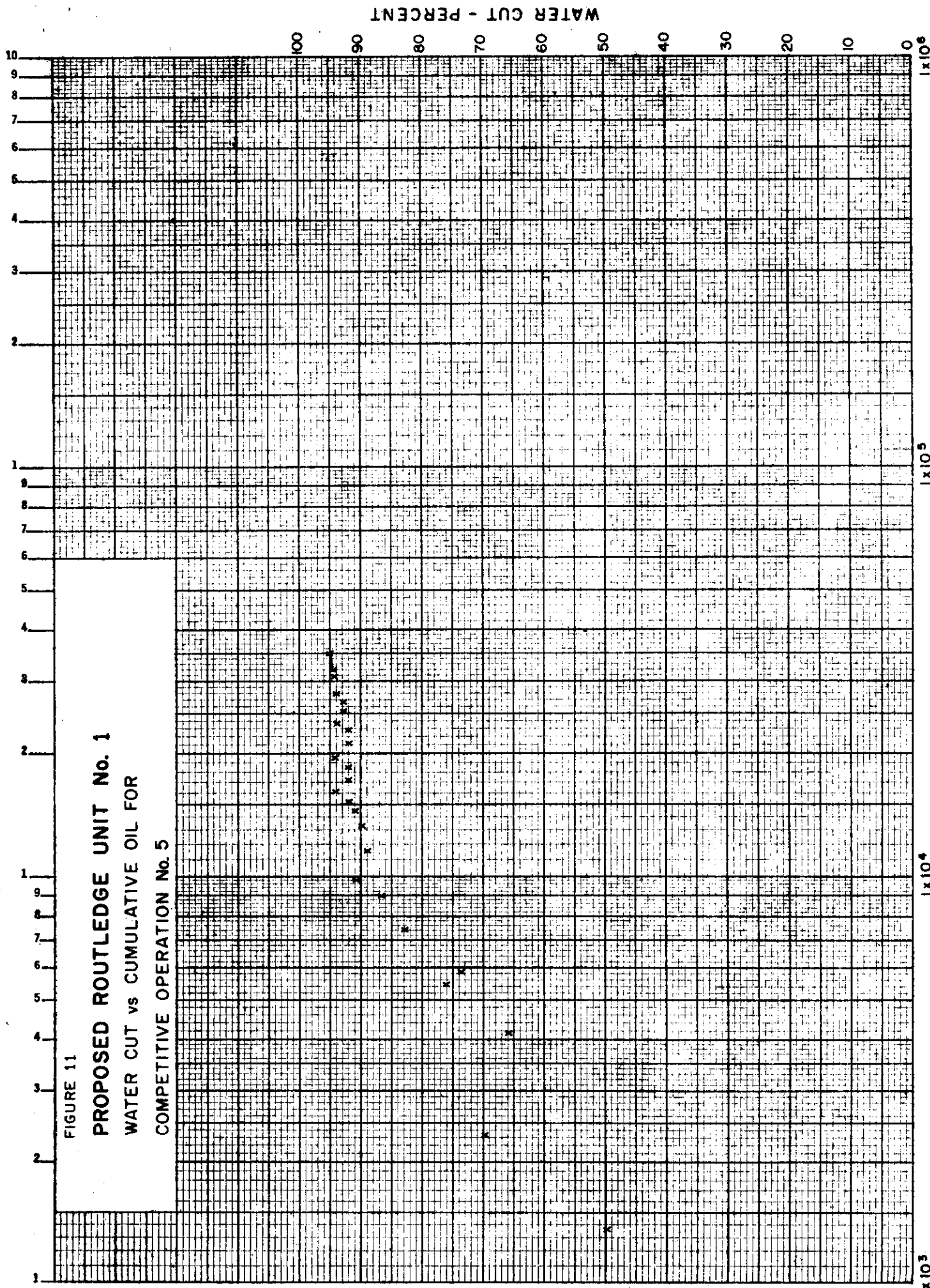


FIGURE 12

PROPOSED ROUTLEDGE UNIT No. 1  
 WATER CUT vs CUMULATIVE OIL FOR  
 UNITIZED OPERATION

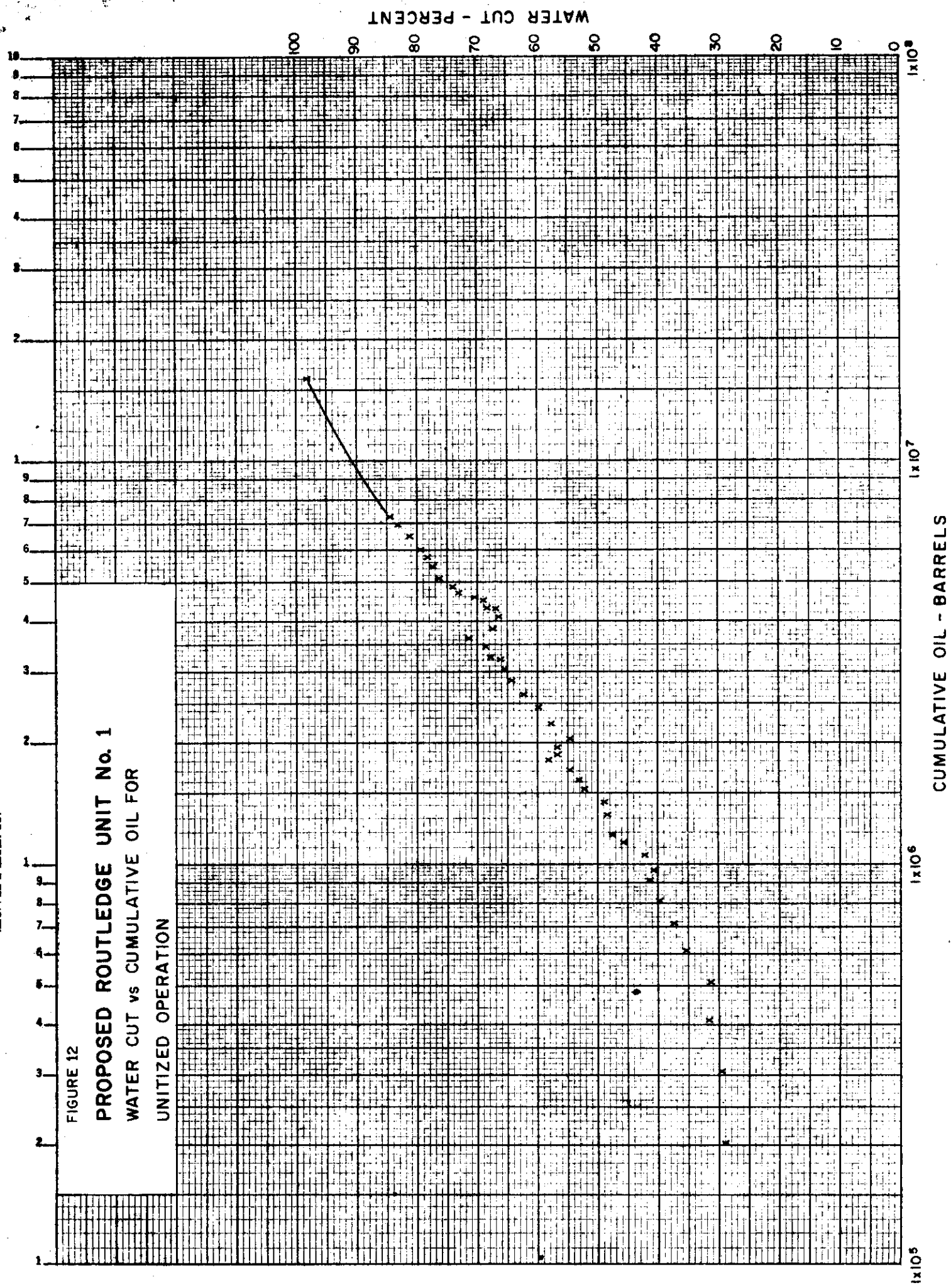
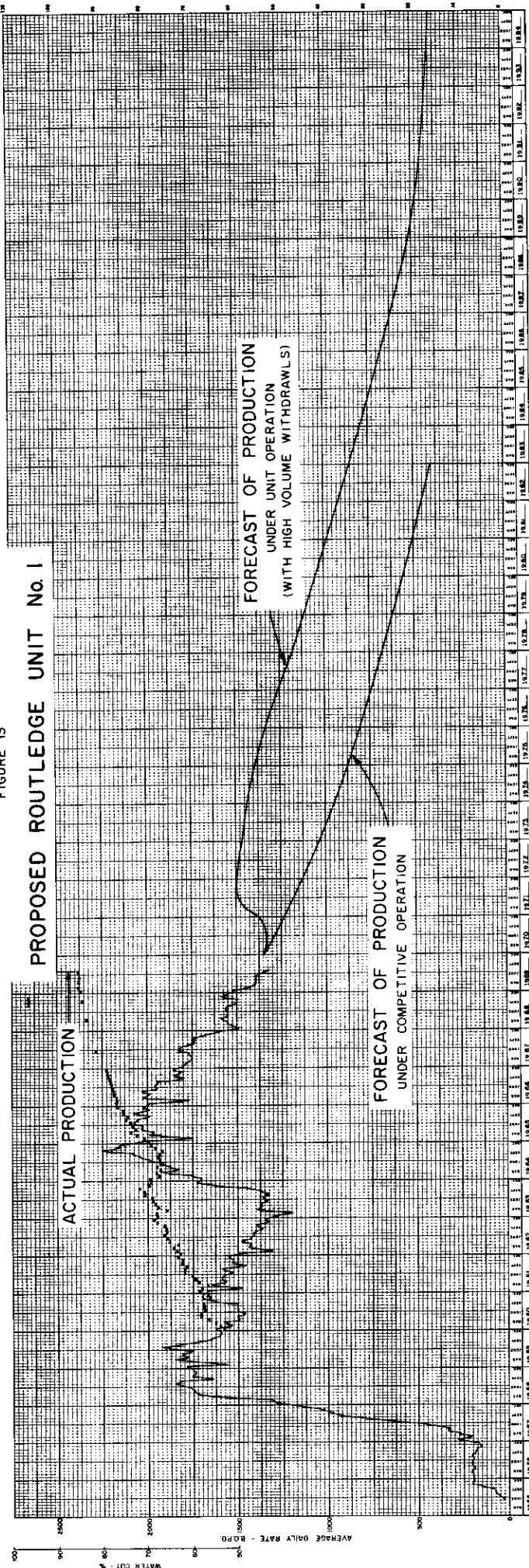
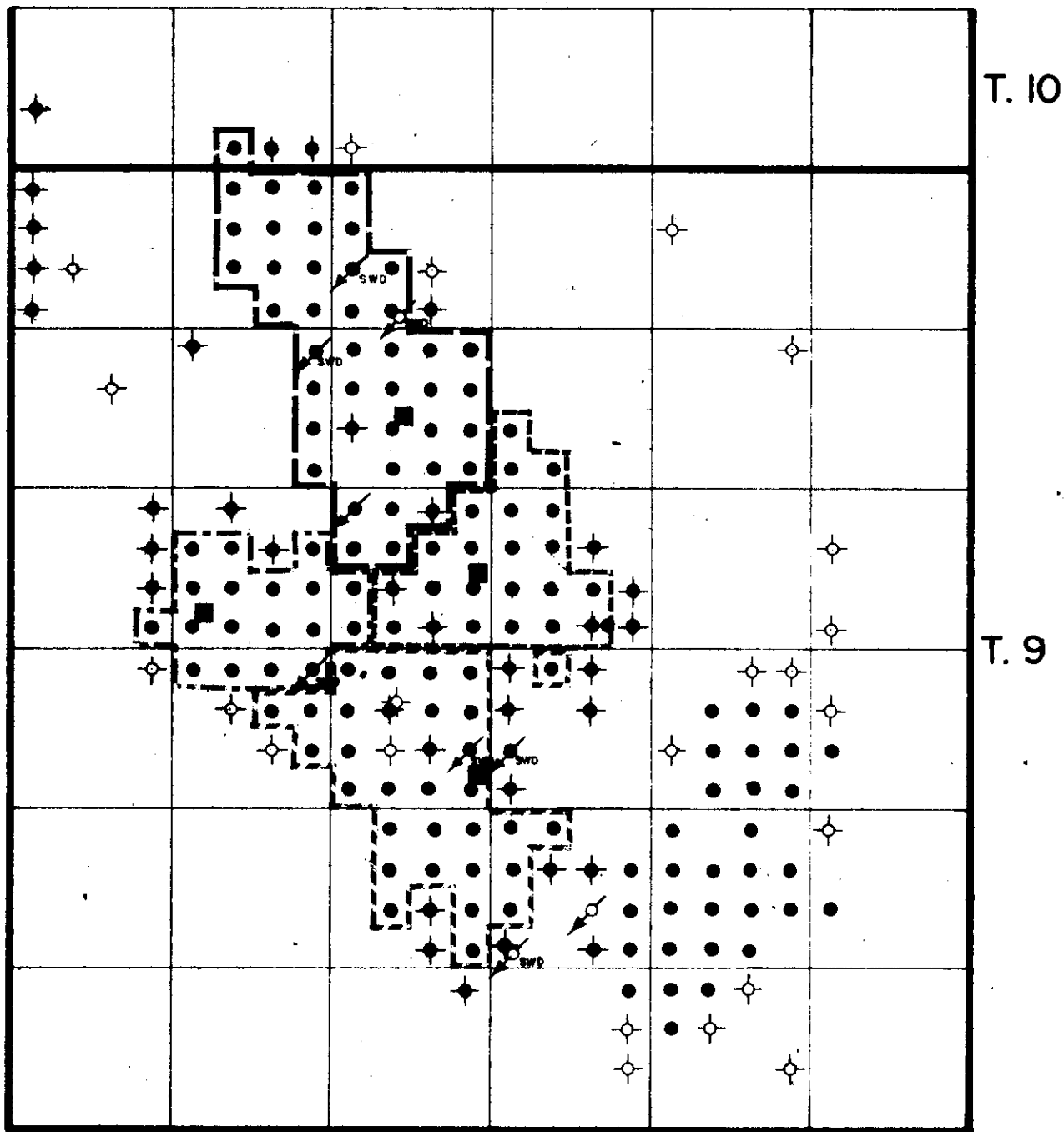


Figure 13 is a line graph titled "PROPOSED ROUTLEDGE UNIT No. 1". The Y-axis is labeled "AVERAGE DAILY RATE - B.O.P.D." and ranges from 0 to 100. The X-axis is labeled "YEAR" and ranges from 1971 to 1983. The graph displays three data series:

- ACTUAL PRODUCTION:** This series shows a sharp decline from approximately 85 B.O.P.D. in 1971 to about 10 B.O.P.D. in 1973, followed by a recovery to about 40 B.O.P.D. in 1974, and then a decline to about 10 B.O.P.D. in 1975. It remains relatively stable around 10 B.O.P.D. until 1978, after which it begins to rise, reaching about 40 B.O.P.D. by 1983.
- FORECAST OF PRODUCTION UNDER UNIT OPERATION (WITH HIGH VOLUME WITHDRAWALS):** This series starts at approximately 10 B.O.P.D. in 1973 and shows a steady, nearly linear increase, reaching about 85 B.O.P.D. by 1983.
- FORECAST OF PRODUCTION UNDER COMPETITIVE OPERATION:** This series starts at approximately 10 B.O.P.D. in 1973 and shows a steady, nearly linear increase, reaching about 40 B.O.P.D. by 1983.

The graph also includes a secondary Y-axis on the right labeled "WATER CUT - %" ranging from 0 to 100. The water cut for the actual production is shown as a line that starts at approximately 10% in 1971, rises to about 20% in 1973, and then fluctuates between 20% and 30% until 1983.





R. 25 W.P.M.

FIGURE 14

# PROPOSED ROUTLEDGE UNIT No. 1

LOCATION OF CONSOLIDATED BATTERIES AND SALT WATER DISPOSAL WELLS





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

MICROFILMED

TO .....

HERE .....

..... July 1979

## I N D E X

<u>PART NO.</u>		<u>PAGE NO.</u>
I	INTERPRETATION	1
II	UNIT OPERATION	6
III	TRACT PARTICIPATION	9
IV	ALLOCATION OF PRODUCTION	11
V	ORGANIZATION OF THE OPERATING COMMITTEE	16
VI	POWERS AND DUTIES OF THE OPERATING COMMITTEE	20
VII	POWERS AND DUTIES OF UNIT OPERATOR AND CHANGE OF UNIT OPERATOR	23
VIII	EXPENDITURES AND LIABILITIES	28
IX	RESPONSIBILITY FOR PAYMENTS	36
X	DELIVERY OF WELLS AND EQUIPMENT INVESTMENT ACCOUNT	37
XI	SURFACE RIGHTS	43
XII	INDEMNITY	46
XIII	APPROVAL OF TITLES	48
XIV	DISPUTES	49
XV	FILING	50
XVI	TRANSFER OF INTEREST	51
XVII	INDIVIDUAL RIGHTS AND PRIVILEGES OF THE WORKING INTEREST OWNERS	54
XVIII	INSURANCE	58
XIX	GENERAL	60
XX	TERM OF PLAN	62
XXI	WELLS DELIVERED TO UNIT OPERATOR PURSUANT TO PART X	65

<u>PART NO.</u>		<u>PAGE NO.</u>
XXII	THE LANDS IN THE PROVINCE OF MANITOBA WHICH COMPRISE THE ROUTLEDGE UNIT NO. 1	68
XXIII	MAP OF THE UNIT AREA	71
XXIV	TRACT PARTICIPATIONS	72
XXV	PARTICIPATING INTERESTS	75
XXVI	ACCOUNTING PROCEDURE	76
XXVII	ELECTRICAL LOG	87

PLAN FOR UNIT OPERATION  
GOVERNING THE UNITIZED MANAGEMENT  
OPERATION AND FURTHER DEVELOPMENT OF  
ROUTLEDGE 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 in the forenoon, Central Standard Time, on the first day of   |
| "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 inter-

est 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;
- "Stock Tank Barrel" (o) "a Stock Tank Barrel" means  $34.972\frac{2}{3}$  Canadian gallons at sixty (60°) degrees Fahrenheit;
- "Tract" (p) "Tract" means each parcel of land described as such and given a Tract number in Part XXII hereof;
- "Tract Participation" (q) "Tract Participation" means the percentage set forth for each Tract in Part XXIV hereof.
- "Unit Area" (r) "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" (s) "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 purchased, constructed or acquired by Unit Operator pursuant hereto;
- "Unit Operated Wells" (t) "Unit Operated Wells" means all wells (including wells drilled for the production of Unitized Substances, wells drilled for the purpose of producing water only, 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" (u) "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" (v) "Unitized Strata" means the Whitewater Lake, the



Virden, and the Scallion members of the Lodgepole Formation of Mississippian age underlying the lands described in Part XXII hereof, as these are shown on that portion of the electrical log of Samedan West Routledge/13-11-9-25 well in Legal Subdivision Thirteen (13) of Section Eleven (11), Township Nine (9), Range Twenty-five (25), West of the First (W-1st) Meridian, in the Province of Manitoba in the interval 1,955 feet and 2,308 feet as measured from the Kelly Bushing. The Whitewater member consists of submembers sometimes known as the Maples and the Upper Virden Shale. The Virden member consists of submembers sometimes known as the Crinoidal, Lower Virden Shale, Sandhill and four Oolites. The Scallion member is sometimes known as the Cherty Zone and sometimes includes a basal shale unit known as the Routledge Shale.

"Unitized Substances"

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

"Well"

(x) "Well" means any well within the Unit Area which has been drilled to the Whitewater Lake, the Virden or the Scallion members of the Lodgepole Formation of Mississippian age for the production of Oil and Gas which at some time since such drilling has produced a minimum of three (3) barrels of Oil per day for at

least one month's duration;

"Working Interest Owner" (y) "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 ownership in fee simple or from a Lease.

PART II

UNIT OPERATION

Unit Name 2.01 The name of the Unit shall be "Routledge Unit No. 1" (hereinafter sometimes called 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 purposes 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 Sub-

stances 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 <sup>subject</sup> 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 same by the terms of any Lease.

PART III

TRACT PARTICIPATION

Tract  
Participation

3.01 The Tract Participation of each Tract is shown in Part XXIV hereof.

Determination of  
Tract Participa-  
tion

3.02 The Tract Participation for each Tract is the sum of the following factors:

- (a) A current production factor. Such factor is that number expressed as a percentage arrived at by dividing the oil production of each Tract during the interval June 1, 1968 to November 30, 1968, both days inclusive, by the Oil production for all Tracts during the same interval, and multiplying by seventy-five one hundredths (75/100) and;
- (b) An average monthly Oil production factor penalized for water production. Such factor is arrived at by:
  - i) determining average monthly Oil production of the Tract by dividing its cumulative Oil production <sup>to the end of</sup> through November 30, 1968 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 the first 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 those 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 six (6) month period that ends with the last recorded production by the sum of such Tract's water and Oil production for the said period;
- iii) multiplying the average monthly Oil production for the Tract obtained in sub-paragraph (i) hereof by the fraction one minus the water cut appropriate to the Tract as determined in sub-paragraph (ii) hereof;
- iv) dividing the product obtained in sub-paragraph (iii) hereof by the sum of all the products obtained in sub-paragraph (iii) hereof for all the Tracts and multiplying by twenty-five one hundredths (25/100).

Tract Participations Equal 100%

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

Part III  
Explanatory

3.04 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 it, 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 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.

Failure to  
Take in Kind

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 Whitewater Lake, the Virden or the Scallion members of the Lodgepole Formation of 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 pro-

perty 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 sub-paragraph, 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 re-allocated to all of the Tracts in proportion to their respective Tract Participations. Such withholding and re-allocation shall be continued until the full amount of any such excess production in respect to any Tract or Tracts has been withheld

and re-allocated.

- (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 (1) 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. Any vote so made 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 represen-

tatives 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 percent (75%) 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 percent



Rights Granted  
the Operating  
Committee

(75%) or more of the total Participating Interest.

- 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, re-working, 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 Dollars (\$5,000.00) in respect of 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 Owners

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 working interest in the Unit Area.

Change of  
Operator

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 percent (85%) 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 <sup>Conservation</sup> 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 deliver 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 of resignation of Unit Operator, or at any time when there is no Unit Oper-<sup>or</sup>

ator, 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.

For the purposes of this Plan capital expenditures shall be as determined by the Operating Committee.

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 unpaid amount shall, at Unit Operator's discretion, bear interest at a rate equivalent to the prime lending rate of interest then quoted by the chartered bank used by Unit Operator in Manitoba plus one percent (1%) per annum, such interest to be calculated from the end of the said period until paid, and 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 herein-  
after provided for upon the respective interests of  
such Working Interest Owner.

Annual Budget,  
etc.

8.04 As soon as practicable after the Effective Date here-  
of, 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. 1970 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 pro-  
per, PROVIDED, HOWEVER, that if Unit Operator's to-  
tal expenditures for the year are within ten percent  
(10%) of those costs and expenses approved in any  
budget, such expenditures shall be considered as hav-  
ing been approved. A copy of each such budget and  
adjusted budget shall be promptly furnished each  
Working Intrest Owner.

Approval of the budget by the Working Interest  
Owners shall constitute authorization to the Unit Op-  
erator to make the expenditures therein detailed.

Advances to  
Unit Operator  
- Capital Fund

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 a rate equivalent to the prime lending rate of interest then quoted by the chartered bank used by Unit Operator in Manitoba plus one percent (1%) per annum, such interest to be calculated 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 monthly statement following the month covered by the estimate.

Advances to Unit  
Operator - Oper-  
ating 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 a rate equivalent to the prime lending rate of interest then quoted by the chartered bank used by Unit Operator in Manitoba plus one percent (1%) per annum, such interest to be calculated 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 73 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

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 - Salt  
Water Disposal  
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 equip-

ment, 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 well-site 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 well-site 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 hereinafter 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<sup>on</sup> and production operations<sup>for</sup> 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) days' 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 the 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, with the approval of the Operating Committee, 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 XLII

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 title data and information (including title opinions) 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 accept-

ance 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

#### 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 both the person claiming the benefit thereof and the Working Interest Owner making the disposition 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 such notice is given to the Unit Operator. 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 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

- |                           |  |
|---------------------------|--|
| Workmen's<br>Compensation | 18.01 Unit Operator shall comply with all laws relating to Workmen'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<br>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 considered necessary from time to time by the Unit Operator.   |
| Settlement<br>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 Dollars (\$2,000.00) 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 percent (95%) of the Participating Interests and such vote shall be binding upon all the Working Interest Owners and 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 ar respect, shall be heard by the Conservation Board withi in three (3) years of the Effective Date unless:

- (a) a majority of the Working Interest Owners, owning at least seventy-five percent (75%) 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

Bralorne Pascas West Routledge 1-9-9-25	Chevron Routledge Prov. 5-16-9-25
Chevron West Routledge CPR 6-9-9-25	Bralorne Routledge Prov. SWD 8-16-9-25
Bralorne Pascas West Routledge 8-9-9-25	Bralorne Routledge Prov. 9-16-9-25
Chevron West Routledge CPR 9-9-9-25	Bralorne Routledge Prov. 10-16-9-25
Chevron West Routledge CPR 10-9-9-25	Bralorne Routledge Prov. 12-16-9-25
Chevron West Routledge CPR 11-9-9-25	Bralorne Routledge Prov. 13-16-9-25
Chevron West Routledge CPR 14-9-9-25	Bralorne Routledge Prov. 14-16-9-25
Chevron West Routledge CPR 15-9-9-25	Bralorne Routledge Prov. 15-16-9-25
Chevron West Routledge CPR 16-9-9-25	Bralorne Routledge Prov. 16-16-9-25
Bralorne Pascas South Routledge Prov. SWD 4-10-9-25	Chevron West Routledge 8-17-9-25
	Bralorne West Routledge 9-17-9-25
Bralorne Pascas West Routledge Prov. 5-10-9-25	Bralorne West Routledge 10-17-9-25
Bralorne Pascas West Routledge Prov. 12-10-9-25	Drevzoil Vanderschaeghe 13-17-9-25
	Drevzoil Vanderschaeghe 14-17-9-25
Bralorne Pascas West Routledge Prov. 13-10-9-25	Chevron West Routledge CPR 15-17-9-25
Bralorne Pascas West Routledge Prov. 14-10-9-25	Chevron West Routledge CPR SWD 16-17-9-25
Drevzoil Routledge SWD 5-15-9-25	Chevron West Routledge CPR 1-19-9-25
Bralorne Routledge 14-15-9-25	Chevron West Routledge Prov. 1-20-9-25
Bralorne Routledge Prov. 1-16-9-25	Chevron West Routledge Prov. 2-20-9-25
Bralorne Routledge Prov. 2-16-9-25	Chevron West Routledge Prov. 3-20-9-25
Chevron Routledge Prov. 3-16-9-25	Chevron West Routledge Prov. 4-20-9-25
Chevron Routledge Prov. 4-16-9-25	Chevron West Routledge Prov. 5-20-9-25

Chevron West Routledge Prov. 6-20-9-25  
 Chevron West Routledge Prov. 7-20-9-25  
 Chevron West Routledge Prov. 8-20-9-25  
 Chevron West Routledge Prov. 9-20-9-25  
 Chevron West Routledge Prov. 11-20-9-25  
 Chevron West Routledge Prov. 12-20-9-25  
 Chevron Routledge CPR 1-21-9-25  
 Chevron Routledge CPR 3-21-9-25  
 Chevron Routledge CPR 4-21-9-25  
 Chevron Routledge CPR 5-21-9-25  
 Chevron Routledge CPR 7-21-9-25  
 Chevron Routledge CPR 8-21-9-25  
 Chevron Routledge CPR 9-21-9-25  
 Chevron Routledge CPR 10-21-9-25  
 Bralorne Routledge 11-21-9-25  
 Bralorne Routledge 12-21-9-25  
 Bralorne Routledge CPR SWD 13-21-9-25  
 Bralorne Routledge 14-21-9-25  
 Chevron Routledge SWD 16-21-9-25  
 Chevron Routledge 2A-22-9-25  
 Drevzoil Fillion 3-22-9-25  
 Drevzoil Fillion 4-22-9-25  
 Drevzoil Fillion 5-22-9-25  
 Drevzoil Fillion 6-22-9-25  
 Chevron Routledge 7-22-9-25

Chevron Routledge Prov. 11-22-9-25  
 Chevron Routledge Prov. 12-22-9-25  
 Chevron Routledge Prov. 13-22-9-25  
 Chevron Routledge Prov. 14-22-9-25  
 Chevron Routledge CPR 3-27-9-25  
 Chevron Routledge CPR 4-27-9-25  
 Chevron Routledge CPR 5-27-9-25  
 Chevron Routledge 1-28-9-25  
 Chevron Routledge 2-28-9-25  
 Chevron Routledge Prov. 3-28-9-25  
 Chevron Routledge Prov. 6-28-9-25  
 Chevron Routledge 7-28-9-25  
 Chevron Routledge 8-28-9-25  
 Chevron Routledge 9-28-9-25  
 Chevron Routledge 10-28-9-25  
 Mineraloid Routledge 11-28-9-25  
 Mineraloid Routledge 12-28-9-25  
 Mineraloid Routledge 13-28-9-25  
 Mineraloid Routledge 14-28-9-25  
 Chevron Routledge 15-28-9-25  
 Chevron Routledge 16-28-9-25  
 Rundle Routledge Prov. 1-29-9-25  
 Rundle Routledge Prov. 8-29-9-25  
 Rundle Routledge Prov. 9-29-9-25  
 Rundle Routledge Prov. SWD 16-29-9-25

R-E

Mineraloid Routledge 1-32-9-25

Mineraloid Routledge 2-32-9-25

Chevron Routledge Prov. 6-32-9-25

Mineraloid Routledge 7-32-9-25

Mineraloid Routledge 8-32-9-25

Mineraloid Routledge 9-32-9-25

Mineraloid Routledge 10-32-9-25

Chevron Routledge Prov. 11-32-9-25

Chevron Routledge Prov. 14-32-9-25

Mineraloid Routledge 15-32-9-25

Mineraloid Routledge 16-32-9-25

Mineraloid Routledge 3-33-9-25

Mineraloid Routledge 4-33-9-25

Mineraloid Routledge SWD 5-33-9-25

Mineraloid Routledge 6-33-9-25

Mineraloid Routledge 12-33-9-25

Mineraloid Routledge 13-33-9-25

Chevron Routledge CPR 3-5-10-25

## PART XXII

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

<u>TRACT NUMBER</u>	<u>LEGAL DESCRIPTION</u>	<u>TRACT NUMBER</u>	<u>LEGAL DESCRIPTION</u>
	<u>TOWNSHIP 9, RANGE 25 WPM</u>		<u>TOWNSHIP 9, RANGE 25 WPM</u>
1-9	LSD. 1, SECTION 9	8-16	LSD. 8, SECTION 16
6-9	LSD. 6, SECTION 9	9-16	LSD. 9, SECTION 16
8-9	LSD. 8, SECTION 9	10-16	LSD. 10, SECTION 16
9-9	LSD. 9, SECTION 9	12-16	LSD. 12, SECTION 16
10-9	LSD. 10, SECTION 9	13-16	LSD. 13, SECTION 16
11-9	LSD. 11, SECTION 9	14-16	LSD. 14, SECTION 16
14-9	LSD. 14, SECTION 9	15-16	LSD. 15, SECTION 16
15-9	LSD. 15, SECTION 9	16-16	LSD. 16, SECTION 16
16-9	LSD. 16, SECTION 9	8-17	LSD. 8, SECTION 17
5-10	LSD. 5, SECTION 10	9-17	LSD. 9, SECTION 17
12-10	LSD. 12, SECTION 10	10-17	LSD. 10, SECTION 17
13-10	LSD. 13, SECTION 10	13-17	LSD. 13, SECTION 17
14-10	LSD. 14, SECTION 10	14-17	LSD. 14, SECTION 17
14-15	LSD. 14, SECTION 15	15-17	LSD. 15, SECTION 17
1-16	LSD. 1, SECTION 16	16-17	LSD. 16, SECTION 17
2-16	LSD. 2, SECTION 16	1-19	LSD. 1, SECTION 19
3-16	LSD. 3, SECTION 16	1-20	LSD. 1, SECTION 20
4-16	LSD. 4, SECTION 16	2-20	LSD. 2, SECTION 20
5-16	LSD. 5, SECTION 16	3-20	LSD. 3, SECTION 20



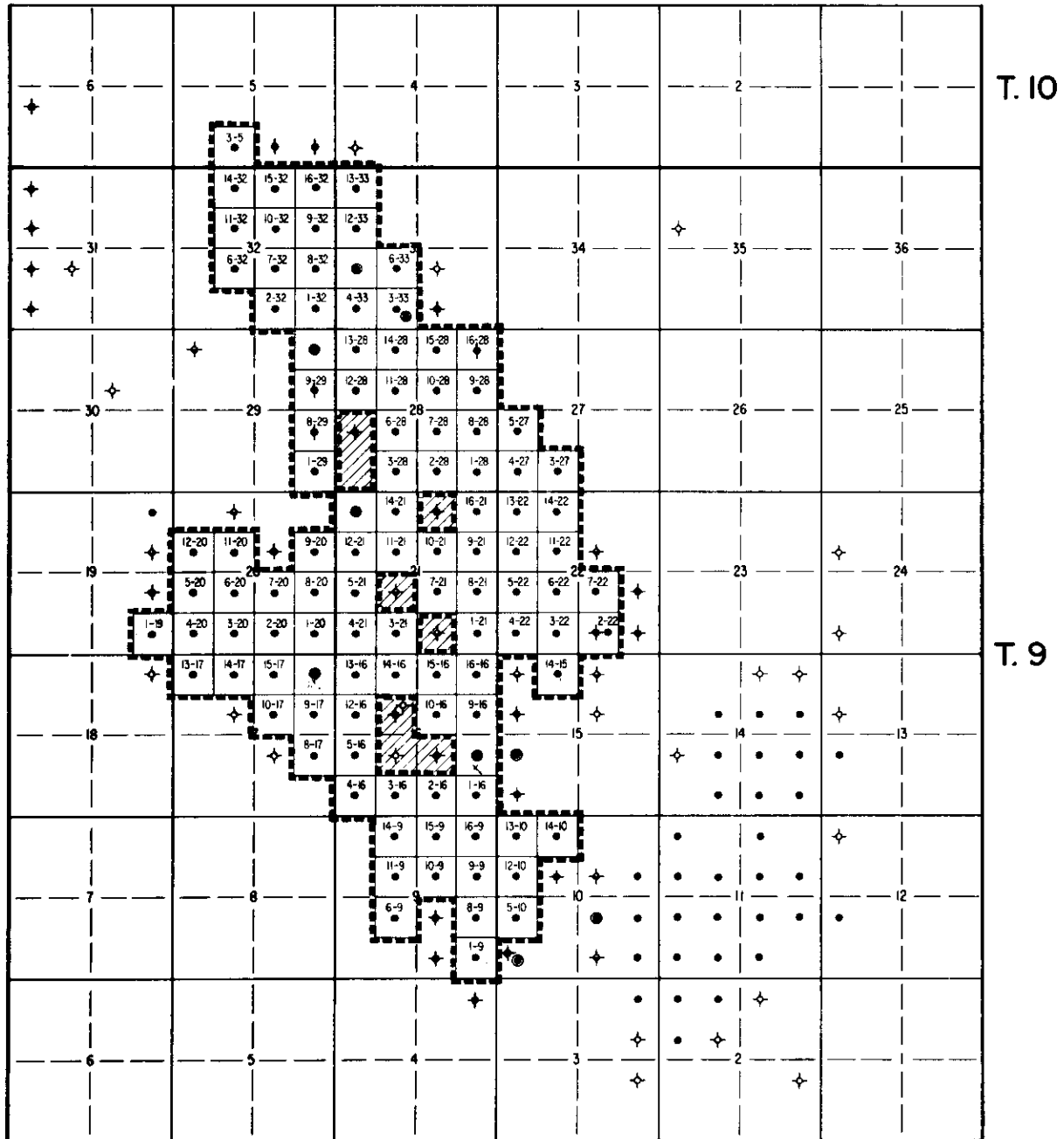
R-E

<u>TRACT NUMBER</u>	<u>LEGAL DESCRIPTION</u>	<u>TRACT NUMBER</u>	<u>LEGAL DESCRIPTION</u>
	<u>TOWNSHIP 9, RANGE 25 WPM</u>		<u>TOWNSHIP 9, RANGE 25 WPM</u>
4-20	LSD. 4, SECTION 20	4-22	LSD. 4, SECTION 22
5-20	LSD. 5, SECTION 20	5-22	LSD. 5, SECTION 22
6-20	LSD. 6, SECTION 20	6-22	LSD. 6, SECTION 22
7-20	LSD. 7, SECTION 20	7-22	LSD. 7, SECTION 22
8-20	LSD. 8, SECTION 20	11-22	LSD. 11, SECTION 22
9-20	LSD. 9, SECTION 20	12-22	LSD. 12, SECTION 22
11-20	LSD. 11, SECTION 20	13-22	LSD. 13, SECTION 22
12-20	LSD. 12, SECTION 20	14-22	LSD. 14, SECTION 22
1-21	LSD. 1, SECTION 21	3-27	LSD. 3, SECTION 27
3-21	LSD. 3, SECTION 21	4-27	LSD. 4, SECTION 27
4-21	LSD. 4, SECTION 21	5-27	LSD. 5, SECTION 27
5-21	LSD. 5, SECTION 21	1-28	LSD. 1, SECTION 28
7-21	LSD. 7, SECTION 21	2-28	LSD. 2, SECTION 28
8-21	LSD. 8, SECTION 21	3-28	LSD. 3, SECTION 28
9-21	LSD. 9, SECTION 21	6-28	LSD. 6, SECTION 28
10-21	LSD. 10, SECTION 21	7-28	LSD. 7, SECTION 28
11-21	LSD. 11, SECTION 21	8-28	LSD. 8, SECTION 28
12-21	LSD. 12, SECTION 21	9-28	LSD. 9, SECTION 28
13-21	LSD. 13, SECTION 21	10-28	LSD. 10, SECTION 28
14-21	LSD. 14, SECTION 21	11-28	LSD. 11, SECTION 28
16-21	LSD. 16, SECTION 21	12-28	LSD. 12, SECTION 28
2-22	LSD. 2, SECTION 22	13-28	LSD. 13, SECTION 28
3-22	LSD. 3, SECTION 22	14-28	LSD. 14, SECTION 28

R-E

<u>TRACT NUMBER</u>	<u>LEGAL DESCRIPTION</u>	<u>TRACT NUMBER</u>	<u>LEGAL DESCRIPTION</u>
	<u>TOWNSHIP 9, RANGE 25 WPM</u>		<u>TOWNSHIP 9, RANGE 25 WPM</u>
15-28	LSD. 15, SECTION 28	13-33	LSD. 13, SECTION 33
16-28	LSD. 16, SECTION 28		<u>TOWNSHIP 10, RANGE 25 WPM</u>
1-29	LSD. 1, SECTION 29	3-5	LSD. 3, SECTION 5
8-29	LSD. 8, SECTION 29		
9-29	LSD. 9, SECTION 29		
16-29	LSD. 16, SECTION 29		
1-32	LSD. 1, SECTION 32		
2-32	LSD. 2, SECTION 32		
6-32	LSD. 6, SECTION 32		
7-32	LSD. 7, SECTION 32		
8-32	LSD. 8, SECTION 32		
9-32	LSD. 9, SECTION 32		
10-32	LSD. 10, SECTION 32		
11-32	LSD. 11, SECTION 32		
14-32	LSD. 14, SECTION 32		
15-32	LSD. 15, SECTION 32		
16-32	LSD. 16, SECTION 32		
3-33	LSD. 3, SECTION 33		
4-33	LSD. 4, SECTION 33		
5-33	LSD. 5, SECTION 33		
6-33	LSD. 6, SECTION 33		
12-33	LSD. 12, SECTION 33		

## MAP OF UNIT AREA




R. 25 W.P.M.

## LEGEND

• OIL WELL

● SALTWATER DISPOSAL WELL


 NUMBERED TRACT

----- UNIT BOUNDARY

R-E

PART XXIV

<u>TRACT NUMBER</u>	<u>TRACT PARTICIPATION</u>	<u>TRACT NUMBER</u>	<u>TRACT PARTICIPATION</u>
1-9	.41869	12-16	4.25427
6-9	.23504	13-16	.94995
8-9	.53380	14-16	.62044
9-9	.72234	15-16	1.14267
10-9	1.92921	16-16	1.30055
11-9	2.03555	8-17	2.05700
14-9	.01125	9-17	2.24772
15-9	1.36322	10-17	1.87768
16-9	1.83389	13-17	5.36067
5-10	.72945	14-17	1.38304
12-10	.74938	15-17	.02472
13-10	.88321	16-17	.03331
14-10	1.08718	1-19	.70313
14-15	.59251	1-20	2.60293
1-16	.11181	2-20	.85947
2-16	.16702	3-20	.66197
3-16	2.37865	4-20	1.84974
4-16	.31484	5-20	.73953
5-16	2.95260	6-20	.32064
8-16	.00351	7-20	.35574
9-16	.40933	8-20	.93514
10-16	1.55143	9-20	.34075

R-E

<u>TRACT NUMBER</u>	<u>TRACT PARTICIPATION</u>	<u>TRACT NUMBER</u>	<u>TRACT PARTICIPATION</u>
11-20	.48598	14-22	1.01574
12-20	.16151	3-27	.28773
1-21	1.74462	4-27	1.01024
3-21	.37557	5-27	.70423
4-21	.62838	1-28	2.25353
5-21	.36715	2-28	1.71341
7-21	.50607	3-28	1.22130
8-21	1.96129	6-28	.94260
9-21	2.55137	7-28	1.09468
10-21	2.07910	8-28	.12320
11-21	.70377	9-28	.59609
12-21	.94956	10-28	.30227
13-21	.00515	11-28	.52681
14-21	.80946	12-28	.25151
16-21	1.05723	13-28	.32382
2A-22	.02676	14-28	.71202
3-22	.97749	15-28	.40632
4-22	1.16316	16-28	.01610
5-22	1.64762	1-29	.34385
6-22	1.18268	8-29	.28141
7-22	1.17116	9-29	.09494
11-22	.69780	16-29	.00823
12-22	.89578	1-32	.00321
13-22	1.24947	2-32	.23922

R-E

<u>TRACT NUMBER</u>	<u>TRACT PARTICIPATION</u>
6-32	.00685
7-32	.82382
8-32	.01389
9-32	.64345
10-32	.43569
11-32	1.19414
14-32	.00701
15-32	.35294
16-32	.96280
3-33	.46540
4-33	.37753
5-33	.00825
6-33	.35109
12-33	2.54613
13-33	1.64235
3-5	.66310

PART XXV

PARTICIPATING INTERESTS

Provision for            25.01        The Unit Operator shall as soon after  
Schedule of Working       approval of title by the Operating Committee  
Interest Owners and       under Part XIII is deemed to have been made,  
Participating Interests    prepare and submit to the Working Interest  
                                 Owners, Schedules setting out the Working  
                                 Interest Owners of the Tracts and the Part-  
                                 icipating 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 Partici-  
                                 pating 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, wellsite and operating equipment and salt water disposal facilities taken over by Unit Operator pursuant to Part X hereof, 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  
Heaters  
Treaters  
Tank complete with thief hatches
- and any other material the Current New Price of which exceeds One Thousand Dollars (\$1,000.00).
- "Material" (c) "Material" 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 percent (100%) 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 percent (75%) of Current New Price if material was charged to Common Account as new; or



- (b) at Seventy-five percent (75%) 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 percent (75%) 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 percent (50%) 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 unserviceable material, at prevailing junk prices in the district.
- "Temporarily Used Equipment" (vi) When the use of material is only temporary, and when 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 then most recent issue of the "Controllable Equipment Price Catalogue" published by the 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 percent (12%) 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 percent (12%) 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 vendees, 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 of the Joint Property; actual expenses incurred by any Working Interest Owners 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:

- (i) 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 6.03 are as follows:

- (a) \$6,100 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,

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 \$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 percent (2-1/2%) of the cost of tubular goods and Major Material and Five percent (5%) 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

26.03 (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 percent (100%) 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 percent (75%) 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 percent (50%) of Current New Price.

(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 percent (75%) of Current New 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 New Prices because of national emergencies, strikes or other unusual causes over which Unit Operator has not 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, whereupon 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 tonnage as may be agreed, at the location, nearest railway point, or Unit Operator's storage point, within a comparable 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.

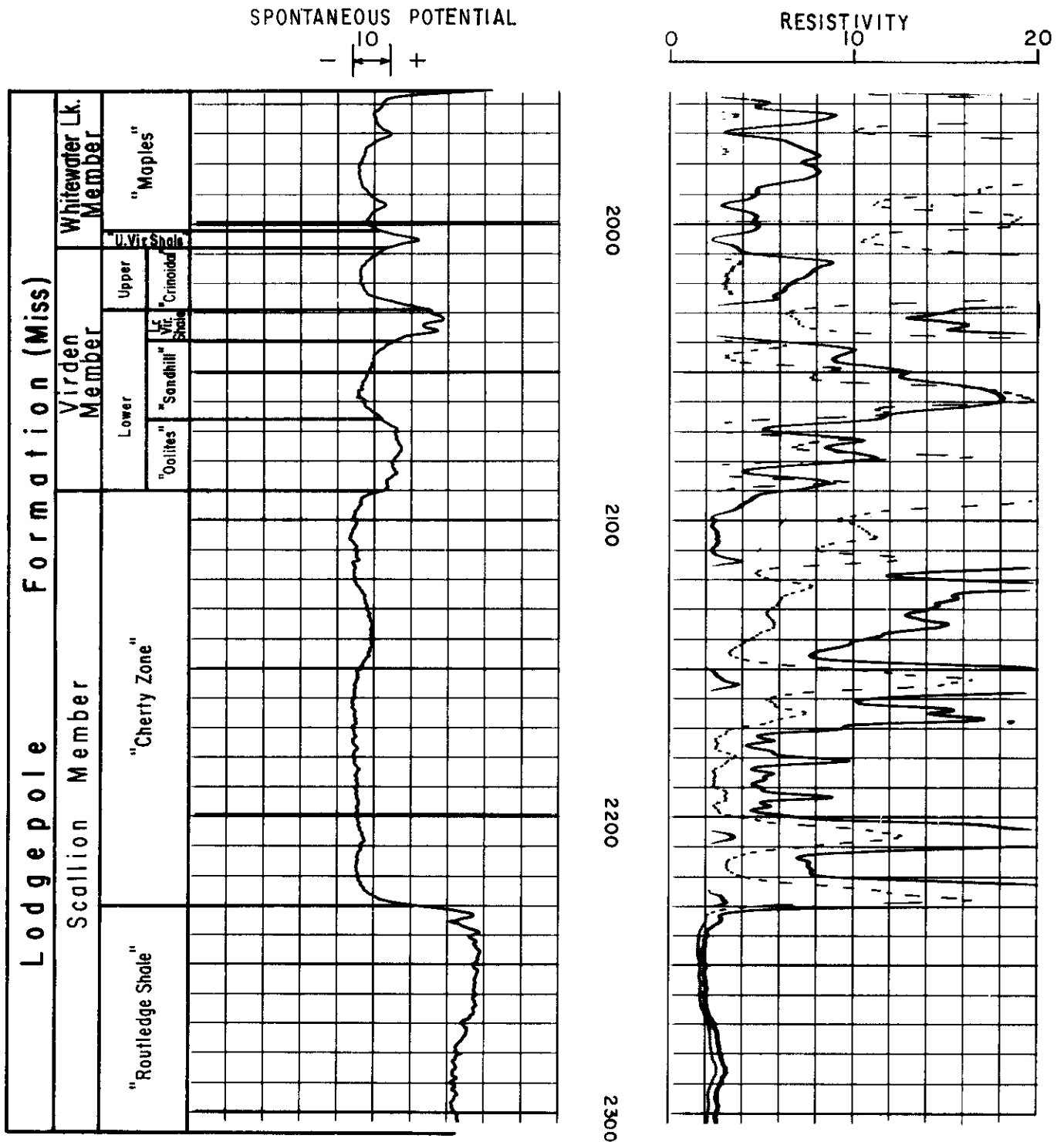
- (c) Proceeds from the sale of Surplus Material shall be credited to the Common Account.

#### 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.

PART XXVII  
ELECTRICAL LOG  
Samedan W. Rutledge Prov. 13-11-9-25  
K. B. Elevation 1429'





## Chevron Canada Resources

500 - Fifth Avenue S.W., Calgary, Alberta T2P 0L7  
Phone (403) 234-5000 Fax (403) 234-6214

R.A. Pashelka  
Vice President and  
General Counsel

February 13, 1991

*Routledge  
UNIT No. 1  
Unit Agreement*

Plan for Unit Operation  
Routledge Unit No. 1  
Our File No. 55,479-4

The Oil and Natural Gas Conservation Board,  
Room 309 Legislative Building,  
Winnipeg, Manitoba.  
R3C 0V8

Attention: Mr. Ian Haugh

Dear Sirs:

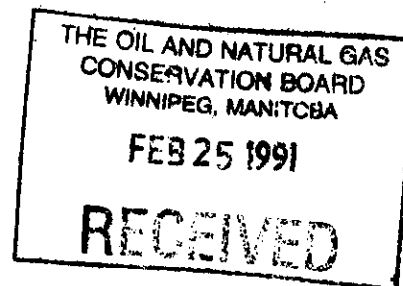
We wish to advise that the Operating Committee, by Mail Ballot No. 90-8, has approved amendments to subparagraph (a) of Section 16.07 (k)(iii), effective January 1, 1991, in accordance with Section 6.03 (j) of the Plan for Unit Operation, as amended by Unitization Order No. 25.

Two (2) copies of revised page 82 to the Plan which reflect the changes are enclosed herewith for your records.

Yours very truly,

D. P. LOUGHEED

/ps  
Encls.



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:

- (i) 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 6.03 are as follows:

- (a) 5% of the operating cost for all producing operations plus \$150.00 per month per producing well.
- (b) For each drilling well, wells being plugged back, completed, production tested, capped, abandoned, deepened, redrilled or reconditioned (except routine cleanout and pump or rod pulling operation) or wells being converted to source, injection, observation or production wells:
  - 3% of the first \$50,000.00 of the expenditure; plus
  - 2% of the next \$100,000.00 of the expenditure; plus
  - 1% of the expenditure exceeding \$150,000.00.
- (c) The charge in respect to construction of Unit Facilities, including, but not limited to, water injection plant,

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:

- (i) 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 6.03 are as follows:

- (a) 5% of the operating cost for all producing operations plus \$150.00 per month per producing well.
- (b) For each drilling well, wells being plugged back, completed, production tested, capped, abandoned, deepened, redrilled or reconditioned (except routine cleanout and pump or rod pulling operation) or wells being converted to source, injection, observation or production wells:
  - 3% of the first \$50,000.00 of the expenditure; plus
  - 2% of the next \$100,000.00 of the expenditure; plus
  - 1% of the expenditure exceeding \$150,000.00.
- (c) The charge in respect to construction of Unit Facilities, including, but not limited to, water injection plant,



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. 29

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 September 14, 1978

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.

POSITION	APPROVAL SIGNATURES	Route	POSITION	APPROVAL SIGNATURES
ORIGINATOR Director Petroleum Br.	<i>H. C. Moster</i>	4	MINISTER	
<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	<i>Paul Hargreaves</i>	7	<input type="checkbox"/> PLANNING and PRIORITIES	
<input type="checkbox"/> ENVIRONMENTAL MANAGEMENT			<input type="checkbox"/> MANAGEMENT	
<input type="checkbox"/> RESOURCES MANAGEMENT		8	<input type="checkbox"/> (ALTERNATIVE)	
<input type="checkbox"/> WATER RESOURCES		9	DEPUTY MINISTER'S OFFICE	FOR PLACEMENT ON CABINET AGENDA
<input checked="" type="checkbox"/> DEPUTY MINISTER	<i>J. Hopewell</i>			

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. 29

Routledge Unit No. 1 — Amendments to the Plan for Unit Operation.

### BACKGROUND

Routledge Unit No. 1, being part of the producing area in the Routledge Field, was unitized by an Order of The Oil and Natural Gas Conservation Board (hereinafter referred to as the Board) in 1970 and approved by Order-in-Council No. 406/70.

On March 7, 1978, Chevron Standard Limited, as Unit Operator of Routledge Unit No. 1, made application to the Board for approval of certain amendments to the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge 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. 29 was made and passed by the Board on September 7, 1978.

### RECOMMENDATION:

That approval be given to Unitization Order No. 29 in accordance with subsection 78(5) of The Mines Act.

### JUSTIFICATION:

The amendments to the Plan for Unit Operation are of a housekeeping nature and mainly pertain to changes in the accounting procedures to:

1. Provide for better overall efficiency for the operation of the Unit.
2. Bring the Plan for Unit Operation into line with other Plans of recently formed Units.
3. Allow the Unit Operator to increase the limit of charges and expenditures to account for inflation.
4. 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 the amendments to the Plan for Unit Operation were acceptable to the Board.

The amendments only affect the Working Interest Owners in the Unit and written consents were received from the majority of Working Interest Owners to each of the amendments.

The consents ranged from 89.32007% to 100% of the Working Interest in the Unit.

THIS DOCUMENT TO BE PREPARED UNDER THE CATEGORICAL HEADINGS:—

**SUBJECT / BACKGROUND / RECOMMENDATIONS / JUSTIFICATION**



SUBMISSION TO CABINET

DEPARTMENT OF MINES, RESOURCES AND ENVIRONMENTAL MANAGEMENT

SUBJECT:

The Oil and Natural Gas Conservation Board Unitization Order  
Nos. 25, 26, 27, 28, 29 and 30.

BACKGROUND:

At a Public Hearing on July 5, 1978 The Oil and Natural Gas Conservation Board (hereinafter referred to as the Board) heard applications by Chevron Standard Limited as Operator of the following six (6) Units:

North Virden Scallion Unit No. 1  
Virden-Roselea Units Nos. 1, 2 and 3  
Routledge Unit No. 1  
Daly Unit No. 3

The applications pertained to proposed changes to the Plans for Unit Operation Governing the Unitized Management Operation and Further Development of each of the subject Units. The amendments are of a housekeeping nature and will give the Operating Committees of each of the Units 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 Units. The proposed amendments will also bring these Plans into line with one another and with similar plans in effect in other units in the province.

Signed consents from a large majority of the parties in each of the Units to be affected by the proposed amendments were filed with the Board and no interested party appeared at the Hearing to present its objection.

On September 7, 1978 the Board made and passed Unitization Order Nos. 25, 26, 27, 28, 29 and 30.

RECOMMENDATION:

That approval be given to the subject six (6) Unitization Orders in accordance with subsection 78(5) of The Mines Act.

Original Signed By  
A. BRIAN RANSOM

Minister.

78 09 14

SEP 21 1978

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. 29

(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 7th day of September A.D. 19 78  
(Date Regulation was made)

(e) approved of by Order-in-Council No. 914/78 on the 27th 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 October A.D. 19 78) and

(g) replaces or amends regulation as follows: amends Manitoba Regulation 71/70 being

The Oil and Natural Gas Conservation Board Unitization Order No. 8.

DATED this 28th day of September A.D. 19 78

Derek Bedson

Clerk of the Executive Council

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

Manitoba Regulation 185/78

Being

The Oil and Natural Gas Conservation Board

UNITIZATION ORDER NO. 29

Amending Unitization Order No. 8 Pertaining to

ROUTLEDGE 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 September 29/78)

Effective at the hour of seven o'clock in the forenoon, official  
time, on the first day of October, A.D., 1978, the Plan for Unit  
Operation Governing the Unitized Management Operation and Further  
Development of Routledge Unit No. 1 set out in Unitization Order  
No. 8 (Manitoba Regulation 71/70) is amended as follows:

1. 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 advises 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.

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

6.03(j) To amend Part XXVI hereof from time to time whether  
in whole or in part, PROVIDED THAT, two copies of any  
amendments to Part XXVI shall be filed with the Conservation  
Board.

I hereby certify that the within  
regulation was filed in the office of the  
Registrar of Regulations on the 29<sup>th</sup> day  
of September, A.D. 1978 at 10<sup>15</sup> o'clock  
in the forenoon as No. 185/78  
Registrar of Regulations

3. 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 Twenty Thousand (\$20,000.00) 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 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.

4. Section 18.04 is rescinded, and the following is substituted therefor:

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 Five Thousand (\$5,000.00) Dollars unless Unit Operator first obtains the approval of the Operating Committee to such settlement.

5. Paragraph (a) of Section 26.07 is rescinded, and the following 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 geologists, engineers and other employees who are temporarily assigned to and located at and directly engaged on the Joint Property.

6. Clause (b) of Subparagraph (iii) of Paragraph (k) of Section 26.07 is rescinded, and the following is substituted therefor:

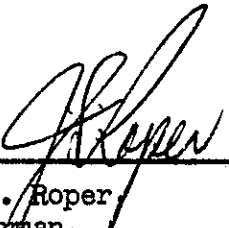
(b) \$65.00 per day for each drilling well, wells being plugged back, drilled deeper, reworked, or converted to source or input wells; charges to commence on the date the well is spudded or operations are commenced and terminate when the drilling rig or service rig as the case may be is released, except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

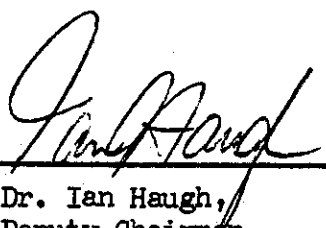
7. Clause (c) of Subparagraph (iii) of Paragraph (k) of Section 26.07 is rescinded, and the following is substituted therefor:

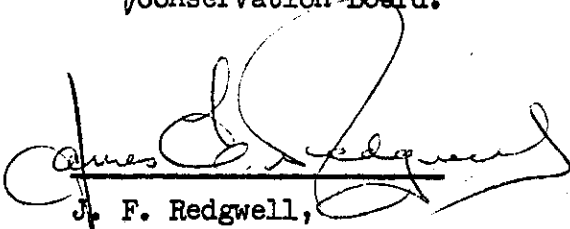
(c) The charge in respect to construction of Unit Facilities including, but not limited to, water injection plant, battery consolidation, injection pipeline systems and water supply systems shall be calculated on direct expenditures on the following basis:

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 all expenditures over \$150,000.00.

Oil and Natural Gas Unitization Order No. 29  
made and passed this 7<sup>th</sup> day of September  
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.



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, The Oil and Natural Gas Conservation Board, by its Unitization Order No. 8, dated March 23, 1970, pursuant to Subsection 76(3) of The Mines Act, ordered that part of the Routledge Field be operated as a Unit, to be known as Routledge Unit No. 1;

AND WHEREAS, the said Order was approved by the Lieutenant-Governor-in-Council by Order-in-Council No. 406/70, and filed under The Regulations Act as Manitoba Regulation 71/70;

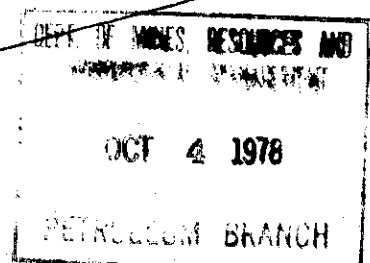
AND WHEREAS, Chevron Standard Limited, as the Unit Operator of Routledge Unit No. 1, has applied to The Oil and Natural Gas Conservation Board pursuant to Section 78 of The Mines Act to make certain amendments to the above Order;

AND WHEREAS, The Oil and Natural Gas Conservation Board held a hearing on July 5, 1978 to consider the application by Chevron Standard Limited;

AND WHEREAS, The Oil and Natural Gas Conservation Board upon due consideration of the said application and testimony at the hearing and pursuant to Subsection 78(5) of The Mines Act has made Unitization Order No. 29, dated September 7, 1978, set out in the Schedule hereto, amending Unitization Order No. 8;

AND WHEREAS, it is deemed advisable to approve Unitization Order No. 29 of The Oil and Natural Gas Conservation Board set out in the Schedule hereto;

Copies to: Dr. I. Haugh  
Mr. J. Redgwell  
/ie October 4, 1978



THEREFORE he, the Minister, recommends:

THAT, Unitization Order No. 29 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.

27th September 1978

Date .....

President of the Council

AT GOVERNMENT HOUSE IN THE CITY OF WINNIPEG

Approved and Ordered this 27th day of September A.D. 1978

Lieutenant-Governor



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. 21

ORDERS-IN-COUNCIL PREPARED FOR Sidney Green, Minister of M., R. & E. M.

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

JUSTIFICATION PREPARED BY H. C. Moster DATE MAY 6<sup>th</sup> 1976

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.

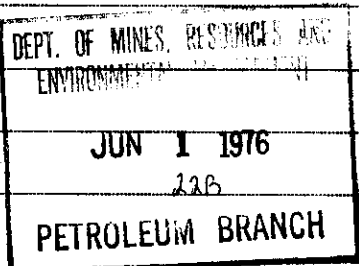
Route	POSITION	APPROVAL SIGNATURES	Route	POSITION	APPROVAL SIGNATURES
1	ORIGINATOR Director Pet. Br.	<i>H. C. Moster</i>	4	MINISTER	<i>Sidney Green</i>
2	<input type="checkbox"/> PLANNING		5	ATTORNEY GENERAL	
	<input type="checkbox"/> MANAGEMENT SERVICES		6	<input type="checkbox"/> CIVIL SERVICE COMMISSION	
	<input checked="" type="checkbox"/> Min. Res. Division	<i>Jan. Brough</i>	7	<input type="checkbox"/> PLANNING and PRIORITIES	
	<input type="checkbox"/> ENVIRONMENTAL MANAGEMENT			<input type="checkbox"/> MANAGEMENT	
	<input type="checkbox"/> RESOURCES MANAGEMENT		8	<input type="checkbox"/> (ALTERNATIVE)	
	<input type="checkbox"/> WATER RESOURCES		9	DEPUTY MINISTER'S OFFICE	FOR PLACEMENT ON CABINET AGENDA
3	DEPUTY MINISTER	<i>Joe. J. Lowrey</i>			

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. 21.

### BACKGROUND

Chevron Standard Limited, as Unit Operator of Routledge Unit No. 1, made application to The Oil and Natural Gas Conservation Board for approval of an amendment to the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No. 1". The amendment would permit the Unit Operator to charge a higher overhead rate for all producing operations in the Unit.

The application was heard by the Board at a Public Hearing in Winnipeg, Manitoba on March 12th, 1976. Unitization Order No. 21 was made and passed by the Board on May 4th, 1976 approving the application.

### RECOMMENDATION

That approval be given to Unitization Order No. 21 in accordance with Section 78(5) of "The Mines Act".

### JUSTIFICATION

The evidence submitted at the Hearing satisfied the Board that the requested amendment was justified.

The proposed amendment only affects the Working Interest Owners. Written consents to the amendment were received from Working Interest Owners holding more than 88% of the participating interests in the Unit.

No objections were presented.

THIS DOCUMENT TO BE PREPARED UNDER THE CATEGORICAL HEADINGS:—

**SUBJECT / BACKGROUND / RECOMMENDATIONS / JUSTIFICATION**

SCHEDULE

THE OIL AND NATURAL GAS CONSERVATION BOARD

UNITIZATION ORDER NO. 21

AMENDING UNITIZATION ORDER NO. 8 OF THE BOARD  
MADE UNDER THE MINES ACT

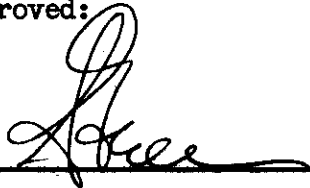
Effective at the hour of seven o'clock in the forenoon, Central Standard Time, on the first day of June, A.D., 1976, the Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No. 1, set out in Unitization Order No. 8 (Manitoba Regulation 71/70) is amended as follows:

1. Clause (a) of subparagraph (iii) of paragraph (k) of Section 26.07 is rescinded, and the following substituted therefor:

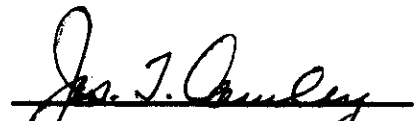
"(a) \$7,000.00 per month for all producing operations."

Oil and Natural Gas Unitization Order No. 21,  
made and passed this 4<sup>th</sup> day of May  
A.D., 1976, 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.



Jas. T. Cawley, P. Eng.,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.



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




Dr. I. Haugh,  
Member,  
The Oil and Natural Gas  
Conservation Board.

**THE REGULATIONS ACT  
CERTIFICATE**

I, Jas. T. Ouelley, P. Eng., Chairman of The Oil and Natural Gas Conservation Board, of Manitoba, hereby certify that the attached Regulation is a true copy of the original Order:—

- (a) entitled The Oil and Natural Gas Conservation Board Unitization Order No. 21;
- (b) made pursuant to "The Mines Act";
- (c) made by The Oil and Natural Gas Conservation Board, of Manitoba;
- (d) under date of the 4<sup>th</sup> day of May A.D., 1976;
- (e) which Regulation comes into force on the date of filing with the Registrar of Regulations.

  
Jas. T. Ouelley, P. Eng.,  
Chairman,  
The Oil and Natural Gas  
Conservation Board.



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 (2) of Section 78 of "The Mines Act", being Chapter M160 of the Continuing Consolidation of the Statutes of Manitoba, provides as follows:

"78(2) Where an order contains no provision as to limitation on a further application with respect to the order, any working interest owner may apply for, or the board may of its own motion hold, a re-hearing of the matters covered by the order, or a working interest owner may apply for, or the board of its own motion may hold a hearing to consider, amendments to the order.";

AND WHEREAS, subsection (4) of Section 78 of "The Mines 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 Mines 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, The Oil and Natural Gas Conservation Board, by its order dated March 23rd, 1970 (Unitization Order No. 8), ordered that part of the Routledge Field be operated as a Unit, to be known as Routledge Unit No. 1;

AND WHEREAS, the said Order was approved by the Lieutenant-Governor-in-Council by Order-in-Council No. 406/70, and filed under The Regulations Act as Manitoba Regulation 71/70;

AND WHEREAS, the Unit Operator of Routledge Unit No. 1 has applied to The Oil and Natural Gas Conservation Board to have certain amendment made to the above Order;

AND WHEREAS, The Oil and Natural Gas Conservation Board held a Hearing on the application on March 12th, 1976;

AND WHEREAS, The Oil and Natural Gas Conservation Board has made the Order, dated May 4th, 1976 set out in the Schedule hereto, amending the above mentioned Order;

AND WHEREAS, it is deemed advisable to approve the Order of The Oil and Natural Gas Conservation Board set out in the Schedule hereto.

Copies to: Mr. Roper  
 Dr. Haugh

/ie 76 05 28

Department of Mines, Resources  
 & Environmental Management  
 Mineral Resources Division

JUN 1 1976

ASSISTANT DEPUTY MINISTER

THEREFORE he, the Minister, recommends:

THAT the Order 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.

26th May, 1976

Date

President of Presiding Member

AT GOVERNMENT HOUSE IN THE CITY OF WINNIPEG

Approved and Ordered this 26th day of May A.D. 1976

ADMINISTRATOR

~~#7~~

CABINET MEMO

DEPARTMENT OF MINES AND NATURAL RESOURCES

SUBJECT:

Authorization of the Minister of Mines and Natural Resources to consent to a "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No.1" .

EXPLANATION:

Chevron Standard Limited applied to the Oil and Natural Gas Conservation Board for approval of a "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No.1". The Board held a Public Hearing in respect to this application, and issued Unitization Order No. 8, approved by Order-in-Council No. 406/70, for operation of the above Unit.

The operation of all such Units affects the manner of payment of the Crown royalty, and Section 72 of The Mines Act provides that the Lieutenant-Governor-in-Council may authorize the Minister of Mines and Natural Resources to enter into unitization agreements and agreements in respect to the payment of Crown royalty.

Under the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No.1", the payment of royalty due the Crown will be provided for on the basis of Tract participation.

The Crown Tracts in the Unit will receive a participating interest of 36.88 per cent in the total oil produced from the Unit Area. The royalty received by the Crown will be 12½ per cent of this allotment.

Under Unit operations it is estimated that ultimate recoverable oil for the Crown Tracts will amount to 5,960,000 barrels by the year 1994, compared with an estimated 3,800,000 barrels that would be recovered under competitive operation and probable abandonment of all Crown wells by 1979.

The increase in recoverable oil allotted to the Crown Tracts by participation in the Unit will result in a royalty increase of some \$677,700 by 1994, based on present-day prices for crude oil.

The operation of other Units in the Province shows the following increase in Crown royalty to December 31, 1969:

North Virden Seallion Unit No. 1	-	\$145,660
Virden-Roselea Unit No. 1	-	81,442
Virden-Roselea Unit No. 2	-	95,856
Virden-Roselea Unit No. 3	-	<u>55,945</u>
Total	-	\$378,903

RECOMMENDATION:

That the Minister of Mines and Natural Resources be authorized to consent to the "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No. 1", dated December 4, 1969.

---

MINISTER OF MINES AND NATURAL RESOURCES

*B.S. Savelle*  
Lieutenant-Governor,

# In The Executive Council Chamber, Winnipeg

The 22nd day of April A.D. 1970

## PRESENT

The Honourable Mr. SCHREYER in the Chair.  
Mr. CHERNIACK  
Mr. PAULLEY  
Mr. MACKLING  
Mr. GREEN  
Mr. USKIW  
Mr. PETURSSON  
Mr. MILLER  
Mr. TOUPIN  
Mr. BURTNIAK  
Mr. BOROWSKI  
Mr. PAWLEY

APR 22 1970

406

## ON MATTERS OF STATE

To His Honour the Lieutenant-Governor-in-Council

The undersigned, the Minister of Mines and Natural Resources,

submits for approval of Council a report setting forth that:

WHEREAS, Section 73 of "The Mines Act", Statutes of Manitoba, 1959, Chapter 38, provides as follows:

"73. (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.

(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.

(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 74 of "The Mines Act", Statutes of Manitoba, 1959, Chapter 38, provides as follows:

"74. The board shall not make an order under subsection (3) of section 73 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 Chevron Standard Limited, on behalf of itself and other working interest owners in the Routledge 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 Routledge 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 73 of "The Mines Act", held public hearings on December 4, 1969, and March 19, 1970, for the purpose of considering a Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge 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 Routledge Field in Manitoba as more particularly delineated in the Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No. 1, dated December 4, 1969, 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 74 of "The Mines Act" have been complied with.

AND WHEREAS, subsections (1) and (3) of Section 4 of The Regulations Act, being Chapter 224 of the Revised Statutes, 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.

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

(a) has been available in printed form to all persons who are likely to be interested therein; and

(b) is of such length as to render publication thereof in The Manitoba Gazette unnecessary or undesirable,

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

AND WHEREAS, on the 23rd day of March, 1970, The Oil and Natural Gas Conservation Board made Unitization Order No. 8, 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. 8, and Plan attached thereto, made by The Oil and Natural Gas Conservation Board on the 23rd day of March, 1970, be approved.
2. THAT publication of the Plan attached to the said Unitization Order No. 8 in The Manitoba Gazette be dispensed with.

Submitted and Recommended

Minister of Mines and Natural Resources.

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

President of the Council

or

Presiding Member of the Executive Council.

THE OIL AND NATURAL GAS CONSERVATION BOARD

UNITIZATION ORDER NO. 8

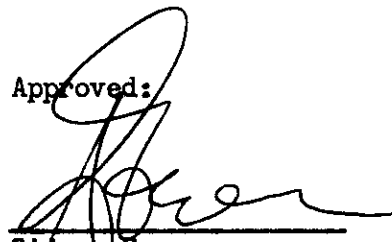
Pertaining to the Unitized Management Operation and Further Development of Routledge Unit No. 1.

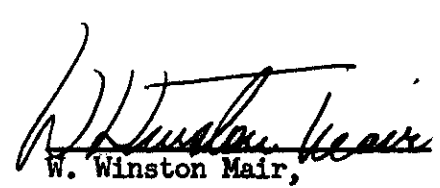
Made and passed pursuant to The Mines Act, R. S. M., 1954, and amendments thereto, and approved by Order-in-Council No. 406/70, by The Oil and Natural Gas Conservation Board.

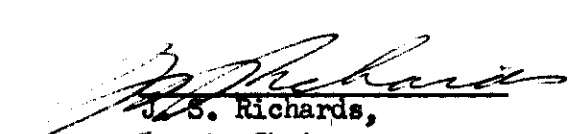
1. Effective at the hour of seven o'clock in the forenoon, Central Standard Time, on the first day of May, 1970, that a certain part of the Routledge Field to be known as the Unit Area shall be operated as a Unit in accordance with the attached Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No. 1, dated December 4, 1969, and shall be known as Routledge Unit No. 1.
2. Unless otherwise authorized in writing by the Board, the Unit Operator shall, within six weeks of the expiration of each calendar year, file with the Mines Branch a report of the progress and performance of the Unit Operation, showing graphically
  - (a) The daily average rate of oil production during each month 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 for each producing well;
  - (d) The notation of any well treatment or workover, which shall be indicated on the graph.

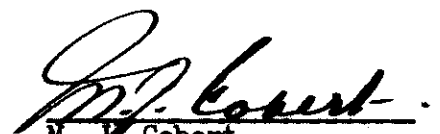
Oil and Natural Gas Unitization Order No. 8, made and passed this 23 day of March, A. D., 1970, at the City of Winnipeg, in the Province of Manitoba, by The Oil and Natural Gas Conservation Board.

Approved:

  
Sidney Green,  
Minister of Mines and  
Natural Resources.

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

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

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



## Chevron Canada Resources

500 - Fifth Avenue S.W., Calgary, Alberta T2P 0L7  
Phone (403) 234-5000 Fax (403) 234-6214

R.A. Pashelka  
Vice President and  
General Counsel

November 1, 1991

Plan for Unit Operation  
Routledge Unit No. 1  
Our File No. 55,479-4

File  
← Unit Agreement  
or  
Unit Plan

The Oil and Natural Gas Conservation Board,  
Attention: Mr. Ian Haugh  
Room 309 Legislative Building,  
Winnipeg, Manitoba.  
R3C 0V8

Attention: Mr. Ian Haugh

Dear Sirs:

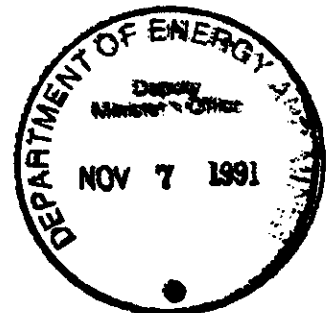
We wish to advise that the Operating Committee, by Mail Ballot No. 91-3, has approved amendments to subparagraph (a) of Section 16.07 (k)(iii), effective October 1, 1991, in accordance with Section 6.03 (j) of the Plan for Unit Operation, as amended by Unitization Order No. 25.

Two (2) copies of revised pages 82 and 82A to the Plan which reflect the changes are enclosed herewith for your records.

Yours very truly,

M. A. (Peggy) SIMI,  
Legal Assistant

Encls.



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:

- (i) 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 6.03 are as follows:

- (a) 5% of the operating cost for all producing operations plus \$150.00 per month per producing well.

For this purpose, a producing well means a well for the Common Account that in a calendar month:

- is equipped for and is capable of producing crude oil; or
- is connected to a permanent gas sales outlet, source or injection system; or
- is used as a disposal well;

provided that; a well that is drilling during the entire month or is permanently shut-in and awaiting abandonment shall not be considered a producing well; a well completed in more than one zone for segregated production shall be considered a separate

producing well for each such zone; an injection, source or disposal well shall be active during at least one day of the month to be considered a producing well and a temporarily shut-in oil or gas well shall not be charged for overhead longer than three consecutive months after being shut in.

- (b) For each drilling well, wells being plugged back, completed, production tested, capped, abandoned, deepened, redrilled or reconditioned (except routine cleanout and pump or rod pulling operation) or wells being converted to source, injection, observation or production wells:

3% of the first \$50,000.00 of the expenditure; plus  
2% of the next \$100,000.00 of the expenditure; plus  
1% of the expenditure exceeding \$150,000.00.

- (c) The charge in respect to construction of Unit Facilities, including, but not limited to, water injection plant,

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:

- (i) 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 6.03 are as follows:

- (a) 5% of the operating cost for all producing operations plus \$150.00 per month per producing well.

For this purpose, a producing well means a well for the Common Account that in a calendar month:

- is equipped for and is capable of producing crude oil; or
- is connected to a permanent gas sales outlet, source or injection system; or
- is used as a disposal well;

provided that; a well that is drilling during the entire month or is permanently shut-in and awaiting abandonment shall not be considered a producing well; a well completed in more than one zone for segregated production shall be considered a separate



producing well for each such zone; an injection, source or disposal well shall be active during at least one day of the month to be considered a producing well and a temporarily shut-in oil or gas well shall not be charged for overhead longer than three consecutive months after being shut in.

- (b) For each drilling well, wells being plugged back, completed, production tested, capped, abandoned, deepened, redrilled or reconditioned (except routine cleanout and pump or rod pulling operation) or wells being converted to source, injection, observation or production wells:

3% of the first \$50,000.00 of the expenditure; plus  
2% of the next \$100,000.00 of the expenditure; plus  
1% of the expenditure exceeding \$150,000.00.

- (c) The charge in respect to construction of Unit Facilities, including, but not limited to, water injection plant,



*→ John pls return to Brad*

# CANADA NORTHWEST ENERGY LIMITED

2700 THE ALBERTA STOCK EXCHANGE TOWER  
300 FIFTH AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 3C4  
TELEX 03-825692 • FAX (403) 260-2995 • TELEPHONE (403) 260-2900

October 1, 1991

Manitoba Energy and Mines  
Petroleum Branch  
555 - 330 Graham Avenue  
Winnipeg, Manitoba  
R3C 4E3

Dear Sirs:

Re: Sale of Canada Northwest Energy Limited's  
Interest to Chevron Canada Resources:  
Daly Unit No. 1  
Daly Unit No. 3  
Routledge Unit No. 1  
Virden-Roselea Unit No. 1  
Virden-Roselea Unit No. 3

We wish to advise that effective September 1, 1991 Canada Northwest Energy Limited assigned its entire interest in the above referenced Units to Chevron Canada Resources.

Furthermore, Canada Northwest Energy Limited resigned as Unit Operator of the Daly Unit No. 1 effective as of September 1, 1991. By virtue of a mail ballot amongst the working interest owners in the Daly Unit No. 1 Chevron Canada Resources was appointed as the succeeding Unit Operator effective as of September 1, 1991.

We request that any well licenses or pipeline permits pertaining to the captioned Units that are currently registered in the name of Canada Northwest Energy Limited be transferred to Chevron Canada Resources Limited, in its capacity as Managing Partner on behalf of the Chevron Canada Resources partnership. The address for service shall be:

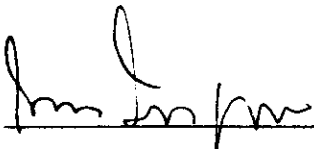
Chevron Canada Resources Limited  
500 - 5th Avenue, S. W.  
Calgary, Alberta  
T2P 0L7

Attention: Manager, Units and Joint Ventures

Thank you for your co-operation in this matter.

CANADA NORTHWEST ENERGY LIMITED

CHEVRON CANADA RESOURCES,  
by its Managing Partner,  
CHEVRON CANADA RESOURCES  
LIMITED

Per:   
\_\_\_\_\_  
SENIOR VICE PRESIDENT

Per:   
\_\_\_\_\_

June 22, 1987

Chevron Canada Resources Limited  
500 - 5th Avenue S.W.  
Calgary, Alberta  
T2P 0L7

Dear Sirs:

Re: North Virden Scallion Unit No. 1  
Virden Roselea Unit No. 1  
Virden Roselea Unit No. 2  
Virden Roselea Unit No. 3  
Routledge Unit No. 1  
Daly Unit No. 3

Your letters of May 27, 1987 and June 1, 1987 relating to modifications in the Unit Plans for the subject Units are acknowledged with thanks.

Sincerely yours

ORIGINAL SIGNED BY  
WM. M. McDONALD P. ENG

Wm. McDonald  
Deputy Chairman

LRD/lk

b.c. Charles S. Kang  
B. Ball  
Petroleum



**Chevron Canada Resources Limited**  
500 - Fifth Avenue S.W., Calgary, Alberta T2P 0L7

1987-05-27

R. A. Pashelka  
General Counsel

Plan for Unit Operation  
Routledge Unit No. 1

The Oil and Natural Gas Conservation Board,  
Room 309 Legislative Building,  
Winnipeg, Manitoba.  
R3C 0V8

Attention: Mr. Charles S. Kang, Chairman

Dear Mr. Kang:

We wish to advise that the Operating Committee, by Mail Ballot No. 87-2, has approved amendments to subparagraph (b) of Section 26.07 (k) (iii), effective May 1, 1987, in accordance with Section 6.03 (j) of the Plan for Unit Operation, as amended by Unitization Order No. 29.

Two (2) copies of revised page 82 of the Plan, reflecting these amendments, are enclosed herewith for your records.

Yours very truly,

  
D. P. LOUGHEED

/ps  
Encls.



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:

- (i) 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 6.03 are as follows:

- (a) \$7,000 per month for all producing operations.
- (b) For each drilling well, wells being plugged back, completed, production tested, capped, abandoned, deepened, redrilled or reconditioned (except routine cleanout and pump or rod pulling operation) or wells being converted to source, injection, observation or producing wells:

3% of the first \$50,000.00 of the expenditure; plus  
2% of the next \$100,000.00 of the expenditure; plus  
1% of the expenditure exceeding \$150,000.00.

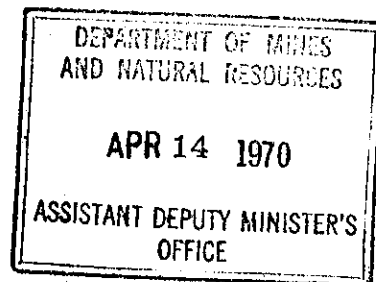
- (c) The charge in respect to construction of Unit Facilities, including, but not limited to, water injection plant,



# CHEVRON STANDARD LIMITED

400 FIFTH AVENUE S.W., CALGARY 1, ALBERTA

April 13, 1970



## Proposed Routledge Unit No. 1

Department of Mines and Natural Resources  
1010 Norquay Building  
401 York Avenue  
Winnipeg 1, Manitoba

Attention: Mr. M. J. Gobert

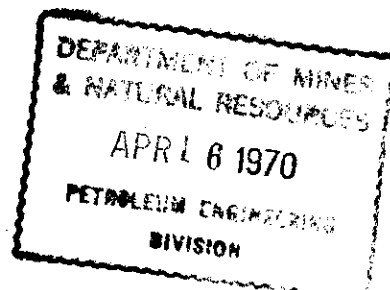
Gentlemen:

To further elaborate on the incentives for the Crown to participate in the proposed Routledge Unit No. 1, we submit the following comments, some of which were presented by letter dated November 7, 1969 and attachment thereto (copy attached):

1. It is anticipated that the production for the entire project area will increase over the 1969 average rate because of:
  - (a) high fluid withdrawals
  - (b) more efficient operation through unitization.
2. It will become practical to produce certain wells at high fluid rates since unitization will protect correlative rights and will make possible the economic provision of adequate facilities where they may not exist under a competitive operation.
3. Operations will become more efficient with the consolidation of unitized producing facilities. This will result in an improvement in the economic limit which will make it feasible to produce those wells that might otherwise be suspended or abandoned.
4. The wells on the following tracts are deemed to have high fluid withdrawal potential that would represent a 350 to 500 BOPD increase in production very early in the life of the project:

3-16-9-25 WPM  
5-16-9-25 WPM  
12-16-9-25 WPM  
13-16-9-25 WPM  
8-17-9-25 WPM  
9-17-9-25 WPM

10-17-9-25 WPM  
14-17-9-25 WPM  
1-19-9-25 WPM  
4-20-9-25 WPM  
4-21-9-25 WPM



5. It is anticipated that, with natural water encroachment, other wells will also become candidates for high fluid withdrawal installations during the life of the project.
6. The production for the wells on the Crown tracts, within the proposed Unit area, has decreased by an average 85 BOPD during the last three years. With the abandonment of wells on a competitive operation basis, this decline rate will become more severe.
7. It is anticipated that the Crown tract wells listed below would, with competitive operations, become uneconomic to produce in the very near future. These wells had a combined production rate of approximately 60 BOPD during 1969. Unitization would permit further economic production of these and other similar wells.

1-16-9-25 WPM	7-20-9-25 WPM
2-16-9-25 WPM	9-20-9-25 WPM
4-16-9-25 WPM	11-20-9-25 WPM
8-16-9-25 WPM	12-20-9-25 WPM
9-16-9-25 WPM	1-29-9-25 WPM
5-20-9-25 WPM	8-29-9-25 WPM
6-20-9-25 WPM	9-29-9-25 WPM

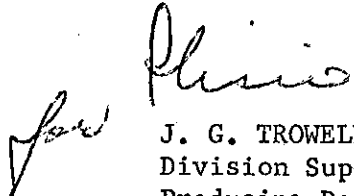
8. The production for the entire Unit has been conservatively shown as being 400 to 500 BOPD higher than it would be for the area under competitive operations. Of this increase, 300 to 400 BOPD is attributable to high fluid withdrawals while the remaining 100 BOPD is attributable to more efficient operations.
9. Figure 3 and Table I attached to the letter dated November 7, 1969 are reasonable estimates of the type of production that can be anticipated by the Crown tracts in the Routledge Unit. Of the gain shown numerically on Table I, in the early life of the project, 20 - 25% is attributable to more efficient operation while the remainder is due to high fluid withdrawals. In later years, as the project approaches the stage at which many wells would be abandoned on a competitive operation basis, more than 50% of the gain in income will be attributable to more efficient operations.
10. It is anticipated that, by the end of the first full year of unitized operation, the Crown tracts will be allocated approximately 100 BOPD more than they would have realized had the area remained on a competitive operation basis. This gain will increase to as much as 360 BOPD in later years. Further, it is estimated that the Crown tracts will ultimately realize an additional 2.16 MMSTB of oil as a direct result of participating in the Routledge Unit. The increase in current income and in ultimate reserves represents a very definite incentive for the Crown tracts to participate in the Unit at this time.



April 13, 1970

Should you have any questions with respect to the foregoing, or if we can be of further assistance, please contact the undersigned.

Yours very truly,

  
J. G. TROWELL  
Division Superintendent  
Producing Department  
Calgary Division

PP/cs  
Attach.

April 13, 1970.

M.J. Schert,  
Assistant Deputy Minister.

Hon. Sidney Green, Q.C.,  
Minister.

RE: PROPOSED ROUTLEDGE UNIT NO. 1

Further to our recent discussion, I have attached a revised Cabinet Memo.

A Working Interest Owner is almost invariably an oil company having a leasehold interest of  $87\frac{1}{2}$  per cent in each Tract. A Royalty Interest Owner usually holds the remaining  $12\frac{1}{2}$  per cent interest but it may have been divided among other interest owners.

In the case of the Proposed Routledge Unit No. 1 all of the Working Interest Owners having an  $87\frac{1}{2}$  per cent interest in the Unit area have agreed in writing to the Plan. If there is a benefit to  $87\frac{1}{2}$  per cent of the Unit there is a corresponding benefit to the  $12\frac{1}{2}$  per cent interest held by the Royalty Interest Owners.

The Crown Tracts comprise 37.16481 per cent of the area of the proposed Unit and could block the Plan since written consent of 75 per cent of Royalty Interest Owners is required.

For your information, Section 72 (2) of The Mines Act provides:

"Notwithstanding any other provision of this Act or of an agreement or other disposition made under this Act, the Lieutenant-Governor-in-Council may authorize the minister, on behalf of the Crown, to enter into an agreement for the calculation of the royalty payable to the Crown on the oil and was produced from a unit area that includes a tract that is subject to the payment of a royalty to the Crown. En.S.M. (2nd), c.38 s.22."

If Unitization Order No. 8 is approved a further Recommendation-to-Council will be forwarded to you.

In summary Unit operations in the past have resulted in increased returns to the Crown and it is estimated the

- 2 -

operation of a part of the Routledge Field as a Unit will similarly benefit the Crown in the amount of \$677,700 by 1994 at present day prices.

Approval of Unitization Order No. 8 is recommended.

I will be happy to discuss this with you at your convenience.



M.J. Gobert

MJG:ia  
enc.

c.c. W. Winston Mair

**CABINET MEMO**

**DEPARTMENT OF MINES AND NATURAL RESOURCES**

**SUBJECT:**

Proposed Plan of Unit Operation governing a certain part of the Routledge Field, to be known as Routledge Unit No. 1.

**EXPLANATION:**

Five oil companies, being 100 per cent of the Working Interest Owners and thereby lease holders of a 7/8th interest in each Tract, have agreed to unitize a part of the Routledge Field in order to lower producing cost of wells and thereby increase the ultimate recovery of oil. Chevron Standard Limited, on behalf of itself and the other operators, applied to The Oil and Natural Gas Conservation Board to consider a "Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No. 1". The Board held a Public hearing in respect of this Plan on December 4, 1969, and on March 19, 1970, and is prepared to order, subject to the approval of the Lieutenant-Governor-in-Council, that that part of the Routledge Field to be known as Routledge Unit No. 1 be operated as a Unit.

The Crown Tracts comprise a 36.88 per cent participating interest in the proposed Unit and it is estimated that the ultimate recoverable oil from the Crown Tracts will amount to 5,960,000 barrels under Unit operation, compared with 3,800,000 barrels estimated under the present competitive operations.

This would result in an increased return to the Crown of \$677,700 by 1994, present day prices, as compared with competitive operations and probable abandonment of all Crown wells by 1979.

The increase will be achieved under Unit operations by consolidation of surface equipment thereby increasing well efficiency under a single operator and by high volume pumping.

It is estimated that increased production for the total Unit will be 4,000,000 barrels valued at \$10,040,000.

Under Section 74 of The Mines Act, the Board cannot make an order unless 75 per cent of the Working Interest Owners and the Royalty Interest Owners have agreed in writing to the Plan for Unit Operation.

Cumulated increased returns to the Crown from estimated production increases due to unitization in existing Units to December 31, 1969 are:

North Virden Scallion Unit No. 1	\$ 145,660
Virden-Roselea Unit No. 1	81,442
Virden-Roselea Unit No. 2	95,856
Virden-Roselea Unit No. 3	<u>55,945</u>
	\$ 378,903

**RECOMMENDATION:**

That approval be given to an Order of the Board, providing that on and after May 1, 1970, a certain part of the Routledge Field shall be operated as a Unit, in accordance with the Plan for Unit Operation Governing the Unitized Management Operation and Further Development of Routledge Unit No. 1, and that publication of the Plan attached to the said order of the Board in The Manitoba Gazette be dispensed with.

---

MINISTER OF MINES AND NATURAL RESOURCES

April 10, 1970

F. S. Ganey  
Reservoir Engineer

M.J. Gobert  
Assistant Deputy Minister

Routledge Proposed Unit - Crown Royalty

A comparison of the actual royalty received from the Crown tracts in the above Unit with the estimated royalty which would have been received under Unit operation, producing the same amount of oil, has been made for the year 1969.

This shows a loss, to the Crown, of approximately \$4,000. (\$3,947.81)

The average daily production from Crown wells in the Unit area, during 1969, amounted to 534 barrels of oil per day.

Chevron Standard Limited, in their evaluation of 1970 production, estimated that the average daily production from Crown wells would decline to 420 barrels of oil per day, under competitive operation.

Under Unit operation, they estimated that the average daily production would increase to 520 barrels of oil per day during 1970, and continue to show an increase over competitive operation until 1980.

Under competitive operations they estimate a yearly decline to the end of 1978, when operations would likely be abandoned.

The main reason for increased production under Unit operation, as emphasized by Chevron Standard, is:

1. High volume pumping
2. Efficient well performance

Under high volume pumping the total fluid produced would, in some cases, be doubled; resulting in more oil being recovered.

Under efficient well operation the Unit could produce wells which are intermittently shut down during the year because of lack of gas to operate the treaters.

Attached is the comparison of Crown royalty received from the tracts with that calculated from tract participation in the proposed Unit, and the outline by Chevron regarding "Royalty Interest Incentive for Unitization in the Routledge Field".

1969 PRODUCTION - ROUTLEDGE UNIT CROWN WELLS

<u>COMPANY</u>	<u>CROWN PRODUCTION 1969 BBLs.</u>	<u>PRE-UNIT ROYALTY 1969 @ 12½%</u>
Bralorne	70,375	\$ 22,108.71
Chevron	121,056	38,824.00
Mineraloid (fractional)	508	147.97
Rundle	3,067	931.53
	<u>195,006 bbls.</u>	<u>\$ 62,012.21</u>

1969 Production - All Wells included in Routledge Unit

Routledge	327,830	
West Routledge	<u>172,854</u>	
	500,684 bbls.	@ \$2.51/bbl. = \$1,256,716.84

ROYALTY (calculated on participation factor x 12½%)

<u>COMPANY</u>	<u>ROYALTY</u>
Bralorne	\$ 21,924.56
Chevron	34,858.43
Mineraloid	150.00
Rundle	<u>1,131.42</u>
	\$ 58,064.41
LOSS	4,000.00

April 10, 1970

F. S. Gamsey  
Reservoir Engineer

M. J. Gobert  
Assistant Deputy Minister

Tract Participation - Routledge Unit No. 1

Attached are:

1. Print-out sheets used in checking Routledge Unit proposed participation factors
2. Discussion of the Unitization and Participation Formula for the proposed Routledge Unit No. 1

The participation formula in the Routledge Unit was weighted to give a participation based on 75 percent of the current production factor and 25 percent of the penalized average monthly oil production factor.

1. Current production factor

This is arrived at by dividing the oil production of each tract, during the interval June 1, 1968 to November 30, 1968, by the oil production for all the tracts during that same interval and multiplying by  $\frac{75}{100}$ .

The formula could be expressed mathematically by

$$\frac{P \text{ interval}}{\sum P \text{ interval}}$$

P = production

$\sum$  = sum of

2. The penalized average monthly factor is arrived at by

- (a) determining average monthly oil production for each tract by dividing the cumulative oil for the tract to November 30/68 by the number of calendar months since the well first went on production. (The first month's production must be greater than 1/2 of succeeding months production to be counted)
- (b) calculating a fractional water-cut for each tract by dividing the water production during the interval (June 1 - Nov. 30) by the sum of its water and oil production (total fluid) during the same interval.



- (c) multiplying the average monthly oil production for the tract obtained in (a) by the fraction - 1 minus the water-cut obtained in (b)
- (d) dividing the product obtained in (c) above by the sum of all the tracts obtained in (c) and multiplying by  $\frac{25}{100}$ .

This could be expressed mathematically by

$$\left( \frac{\frac{\text{Tract cum. oil}}{\text{Months on production}} \left( 1 - \frac{P_w (\text{interval})}{P_o + P_w (\text{interval})} \right)}{\sum \frac{\text{Tract Cum. oil}}{\text{Months on Prod.}} \left( 1 - \frac{P_w \text{ interval}}{P_o + P_w \text{ interval}} \right)} \right) \times .25$$

The sum of the two factors obtained in 1 and 2 gives you the participating factor for the tract. The total of all tract participations equals 100 percent.

April 10, 1970

F. S. Gamey  
Reservoir Engineer

M. J. Gobert  
Assistant Deputy Minister

Royalty Owners' Consent

Attached is a copy of the Crown Consent signed by Sidney Green, Minister,  
and a copy of the letter of recommendation.

April 10, 1970

F. S. Gamey  
Reservoir Engineer

M. J. Gobert  
Assistant Deputy Minister

Royalty gain due to unitization from estimated production increases

1. North Virden Unit #1 (commenced Aug. 1/62)

Estimated cumulative increase in production to Dec. 31/69 = 8,124,000 bbls.  
Participation factor for Crown wells = 5.714578%  
Share of production - Crown wells = 464,252 bbls.  
Crown Royalty @ 12½% = 58,032 bbls.  
Value @ \$2.51/bbl. = \$145,660.

2. VIRDEN-ROSELEA UNIT NO. 1 (commenced July 1/65)

Estimated cumulative increase in production to Dec. 31/69 = 1,162,400 bbls.  
Participation factor for Crown wells = 22.33079%  
Share in production - Crown wells = 259,573 bbls.  
Crown Royalty @ 12½% = 32,447 bbls.  
Value @ \$2.51/bbls = \$81,442.00

3. Virden-Roselea Unit No. 2 (commenced July 1/66)

Estimated cumulative increase in production to Dec. 31/69 = 457,900 bbls.  
Participation factor for Crown wells = 66.72264%  
Share of production - Crown wells = 305,523 bbls.  
Crown Royalty @ 12½% = 38,190 bbls.  
Value @ \$2.51/bbl. = \$95,856.00

4. Virden-Roselea Unit No. 3 (commenced Dec. 1/66)

Estimated cumulative increase in Production to Dec. 31/69 = 608,900 bbls.  
Participation factor for Crown wells = 29.28370%  
Share of production - Crown wells = 178,308 bbls.  
Value @ \$2.51/bbl. = \$55,945.00  
Crown royalty @ 12½% = 22,289 bbls.

SUMMARY

Cumulated increase in Crown Royalty to December 31, 1969

North Virden Scallion Unit No. 1	=	\$145,660.
Virden-Roselea Unit No. 1	=	81,442.
Virden-Roselea Unit No. 2	=	95,856.
Virden-Roselea Unit No. 3	=	55,945.
		<hr/>
TOTAL		\$ 378,903.