

3 MCHIEF BUILDING
3RD STREET WEST AT 3RD AVENUE
CALGARY, ALTA

December 21, 1960.

Mr. J.S. Richards, Deputy Chairman,
Oil & Natural Gas Conservation Board,
Department of Mines & Natural Resources,
Province of Manitoba,
Box 42, Legislative Building,
WINNIPEG 1.

re: North Virden-Scallion
Proposed Unit.

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1960

Dear Mr. Richards:

As one of the small operators in the North Virden-Scallion field, we must comment on your letter of December 6th to Mr. L.A. Swanson, in respect to the proposed unitization of a major portion of that oilfield. You may recall that we had written to you about this same proposal March 16, 1960.

We greatly appreciate your perceptiveness in recognizing the implied weakness of estimating the reservoir content on a customary basis of pore volume reservoir characteristics and then proposing that the credit for recovery, to be taken by the unit when formed, should be on a well performance basis. In my experience I am not aware of any other multiple ownership unit where no allowance is given to reservoir volume under each property, so the approach is at least unusual if not unique. This departure becomes more significant when it is realized that 14% of the wells have to date produced more than 34% of the oil, and under the proposed equity distribution, would in general, obtain a like proportion of the oil to be recovered in a secondary recovery programme under unitization. It should be emphasized that the wells with the highest recoveries are not all located within the areas in the field which have the greatest pore-volume reservoir content.

In my opinion these possible anomalies set up some warning signals regarding mechanical problems that are almost certain to arise in attempting to operate a secondary recovery project in this multiple-zoned, "herniated" reservoir. They further emphasize the wisdom of re-considering a pilot water flood before involving the whole field.

EHV:ths.

Yours very truly,

E. H. Vallat

cc: Mr. Swanson
Esso Oils Ltd.,
Lunda Oil Co.

*cc: Mr. Swanson
Esso Oils Ltd.
Lunda Oil Co.*

E. H. VALLAT LTD.

8 MICHAEL BUILDING
3RD STREET WEST AT 9TH AVENUE
CALGARY, ALTA.

December 21, 1960.

Mr. J.S. Richards, Deputy Chairman,
Oil & Natural Gas Conservation Board,
Department of Mines & Natural Resources,
Province of Manitoba,
Box 42, Legislative Building,
WINNIPEG 1.

DEC. 22 1960

re: North Virden-Scallion
Proposed Unit.

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EHV:ins.

Yours very truly,



cc: Mr. Swanson
Fargo Oils Ltd.,
Landa Oil Co.

COPY

December 6, 1960.

Mr. L. A. Swanson,
Vice-President, Producing,
The California Standard Company,
Medical Arts Building,
Calgary,
Alberta.

Dear Mr. Swanson:

As you are aware, the application made to the Board, by your company, in respect to a Pilot Water Flood in the North Virden Sealion Field, and heard on July 3, 1958, was supported by a very detailed reservoir study, and the basis of participation was "recoverable oil in place". However, in the informal discussions which we have had with you in recent months, we were informed that, in your opinion, the only practical basis of participation was a formula calculated entirely on production.

Doubtless, when a hearing is held in respect to this matter, the reasons for the proposed approach will be made clear. However, we wish to advise that, regardless of the basis of participation which is finally decided upon, the Board will require the submission of basic reservoir data. The data to be submitted, supported by all working interest owners in the field, must include the following:

- (a) A detailed effective pore volume study;
- (b) A study of recoverable reserves;
- (c) Well performance characteristics, with rate cumulative and rate vs. time decline curves, on each well;
- (d) Well test data.

2--Mr. L. A. Swanson,
Vice-President, Producing,
The California Standard Company — December 6, 1960.

All such data should be received by the Board
before a date for a hearing is considered, or set.

Yours very truly,

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

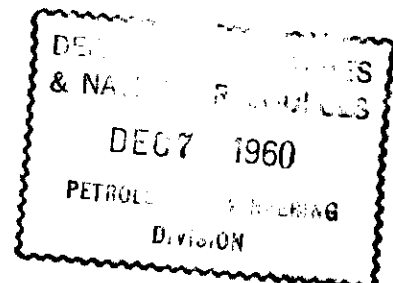
JSK:db

c. c. for: Mr. R. R. McDaniel,
President,
McDaniel Consultants Ltd.,
231 - 8 Av., West,
Calgary,
Alberta.

Hon. C. H. Witney,
Minister of Mines and
Natural Resources

Mr. J. G. Cowan, Q.C.,
Chairman,
The Oil and Natural Gas
Conservation Board.

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



Notes re North Virden Scallion Agreement No. 1
para. 3 fair and equitable.

- 1.7 Royalty Owner
- 1.8 Spacing Unit
- 1.9 Exclude Tract
- 1.17 Working Interest Owner
- 2.1 (a) Exhibit "A" tracts, participation of Working Interest Owners.
(b) Exhibit "B" Map of Unit "rea
- Royalty Interest owners not shown.
- 2.6 Board not receive copies
- 2.7 What does this mean other that tracts excluded are at option
of W.I. Owners.
Effective Date
- 3.2 Not hyphenated
Authority for Operations (by Royalty Owners)
- 5.1 (a) Why working interest owners not Unit Operator
- 5.1 (b) Unit Operator. Operating Agreement
- 6.1 (b) No Royalty Interest Agreement
- 6.1 (c) Royalty interest owner consent not necessary.
Tracts within 90 days
- 7.1 Participation formula
- 8.2 Why delivery in kind
- 8.3 Allocated production
Why owners
- 8.4 "any party"
minimum needs of industry.
- 9.1 Why working interest owner and not unit operator

- 10.1 Should be application to the Board
- 10.2 " " "
- 10.4 " " "
- 11.1 (b) Owners
- 11.2 Board?
- 12.1 Sec. 87.
- 13.1 Sec. 85.
- 13.2 See Sec. 85 (c)
- 13.3 See Sec. 85
- 16.2 partition?
- 16.4 not sold by Unit Operator?
- 17.1 % ?
 Conservation Board

1. Drafting and phrasing of

Unit Agreement No. 1

Operating Agreement

Application and Plan of Unit Operation

should correspond with pertinent sections in The Mines Act and embody the requirements of the Act.

2. Hearing - should deal with engineering principles and equity interests. ✓

Could be that 60 days would be required by Board before approval of these principles could be given prior to the approach to the mineral owners.

Reconvene the hearing when 75% of owners have been signed up.

Remaining 25% - unreasonable, ✓ untraceable, trust companies or estates involved in litigation.

3. Consents.

Application 73 (4)

- (c) Legal description of unit area
- (d) " " of each tract
- (e) description of the operations
- (f) provisions for allowing credit (operating agreement)
- (g) allocation of capital investment " "
- (h) " " costs " "
- (i) committee of operators " "
- (j) appointment of a unit operator " "
- (k) defaulting of cost " "

Insurance

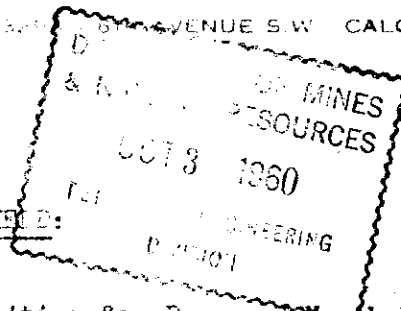
Liability

Claims suits and judgment

THE CALIFORNIA STANDARD COMPANY

MEDICAL ARTS BUILDING 200 AVENUE S.W. CALGARY, ALBERTA

TO ALL OPERATORS
NORTH VIRDEN SCALLION FIELD:



May 22, 1960

Calculation of Equities for Proposed North Virden Scallion Unit

As agreed at the Engineering Committee meeting of April 6, 1960, participating equities have been calculated by well, by lease and by Company on the following basis:

- (1) 100% well count (248 wells at December 31, 1958).
- (2) 100% current production (last 6 months 1958).
- (3) 100% cumulative production to December 31, 1958.
- (4) 100% monthly average production for entire well life.
In addition combinations of the above four basis have been calculated as follows:
- (5) 50% current production, 50% cumulative production.
- (6) 1/3 wells, 1/3 current production, 1/3 cumulative production.
- (7) 50% current production, 50% average monthly production.
- (8) 1/4 wells, 1/4 current production, 1/4 cumulative and 1/4 average monthly production.
- (9) 1/3 wells, 1/3 current production and 1/3 average monthly production.

In addition a water cut penalty scale was devised and applied to each of (5), (6), (7), (8) and (9).

The equity factors are attached and include:

(a) A summary sheet showing equities for each Company for all the above mentioned basis and combinations. Please note that the scale line for each Company reflects the application of the water cut penalty scale to that particular combination.

(b) Pages 1 to 10 inclusive show equities by well, by lease and by Company for each of basis (1) to (9) inclusive. Approximately one fourth well was rounded off 0.0001 to balance totals.

(c) The proposed North Virden Scallion Penalty Scale follows on page 10. The field average water cut for the last 6 months of 1958 was

41%. No penalty is proposed for wells cutting 0 to 40%.

(d) The last ten pages also numbered 1 to 10 show the application of the water cut penalty scale to equity calculations numbered (5), (6), (7), (8) and (9).

The Working Committee started on April 24th and the work was completed May 21st. Time spent was as follows:

	<u>Representing</u>	<u>Days Worked</u>
J. Stewart	Dome and Canadian Superior	13
R. Doris & L. Hughes	Shell Oil	4 $\frac{1}{2}$
J. Crute	Sun Oil	4
R. A. Park	California Standard	<u>15</u>
TOTAL		36 $\frac{1}{2}$ man days

Five additional days were required for typing, ~~printing~~, printing and assembling the data.

A. R. Dutka
for The North Virden Scallion Engineering
Committee.

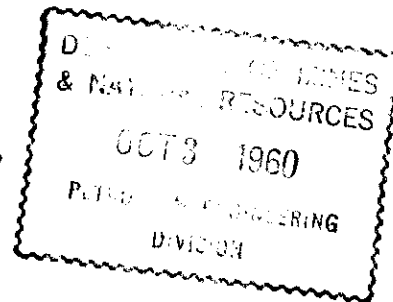


THE CALIFORNIA STANDARD COMPANY

September 30th, 1960.

CALGARY, ALBERTA

Department of Mines and Natural Resources,
P. O. Box 42,
Legislative Buildings,
WINNIPEG 1, Manitoba.



Attention: Mr. M. J. Gobert
Senior Petroleum Engineer

Dear Sir:

In reply to your letter of September 26th, I am enclosing equity calculations which were prepared May 22nd, 1959, which include other factors that have been considered for the North Virden Scallion Field. These calculations were made including all the wells in the field and a comparable set of calculations have not been made for the presently proposed unit area.

I would like to point out that the well count factor was included in this set of calculations at the request of a few operators. Our Company has never subscribed to a well count factor in the North Virden Scallion Field. Our reason is that a well count simply represents a hole in the ground whereas the current production factor represents the quality of the well.

In addition you may note that the set of equity calculations which I have labelled "A" were calculated without water penalty. The equity calculations labelled "B" include a water penalty factor. The reason for including a penalty factor in all recent calculations is to downgrade high water cut wells which, it is generally agreed, will have smaller secondary reserves. Please note that the water penalty factor starts at a 40% water cut. Recent calculations have used a straight line water penalty scale increasing from 0 to 100%.

Yours truly,

Rudy
R. R. Dutka.

RHD:jka



THE CALIFORNIA STANDARD COMPANY

CALGARY, ALBERTA

September 7, 1960.

Mr. M. J. Gobert,
Senior Petroleum Engineer,
Dept. of Mines & Natural Resources,
Mines Branch,
Petroleum Engineering Division
Room 2, 232 Memorial Blvd.,
Box 42 Legislative Building,
Winnipeg 1, Manitoba.

Dear Sir:

In reply to your letter of August 17, 1960, I am enclosing two copies of the recent North Virden Scallion Field Equity Calculation - First Half 1960.

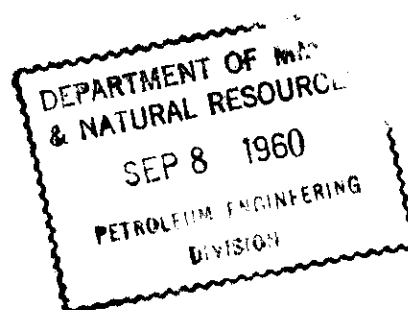
In addition, I am enclosing pages 8 and 8A of the first draft of the North Virden ~~Operating~~ *Unit* Agreement which defines the "Current Production Factor" and the "Average Monthly Oil Production Factor Penalized for Water Production".

Please let me know if you have any questions concerning these calculations.

Yours very truly,

RRD/mig
Encls.

Rudy
R. R. BUTKA,
Senior Engineer,
Reservoir & Reserves.



wells now drilled or hereafter drilled into the Unitized Formation.

- (b) The Royalty Owners do hereby agree that the Unit Operator shall have and may exercise, subject to the terms of the Operating Agreement and during the time the Operating Agreement is in effect, the rights and powers herein given to the Working Interest Owners, or any of them.

ARTICLE VI

QUALIFICATION OF TRACTS

6.1 From and after the Effective Date the Unit Area shall be composed of the Tracts that are from time to time and at any time qualified as follows:

- (a) Each and all of those Tracts whose titles have been approved or accepted pursuant to Article XI hereof; and
- (b) As to which Working Interest Owners owning one hundred (100%) per cent of the Working Interest therein have executed this Agreement and the Operating Agreement and Royalty Owners owning one hundred (100%) per cent of the Royalty Interest therein have executed this Agreement; or
- (c) Any Tract qualified pursuant to paragraph (a) hereof, but which has not been qualified pursuant to paragraph (b) hereof, which has become qualified as a Tract on any basis which may be negotiated between the owners of a Working Interest in such Tract and the Working Interest Owners then parties to this Agreement and the Operating Agreement.

Any Tract qualified after the Effective Date, but within ninety (90) days thereof, shall be deemed to have been qualified as and from the Effective Date.

ARTICLE VII

TRACT PARTICIPATION

7.1 The Tract Participation of each Tract as of the Effective Date is shown in Exhibit "A" hereto and was determined by adding one-half (1/2) of

wells now drilled or hereafter drilled into the Unitized Formation.

- (b) The Royalty Owners do hereby agree that the Unit Operator shall have and may exercise, subject to the terms of the Operating Agreement and during the time the Operating Agreement is in effect, the rights and powers herein given to the Working Interest Owners, or any of them.

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Any Tract qualified after the Effective Date, but within ninety (90) days thereof, shall be deemed to have been qualified as and from the Effective Date.

ARTICLE VII

TRACT PARTICIPATION

7.1 The Tract Participation of each Tract as of the Effective Date is shown in Exhibit "A" hereto, such Participation being computed by applying the following formula:

each of the following:

(a) a current production factor:

such factor is the percentage calculated by dividing the oil production of the Tract for the six-month interval January 1 to June 30, 1960, inclusive, by the total oil production of all Tracts for the same period, multiplied by 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 to June 30, 1960, inclusive, by the number of full months since the well in such Tract first went on production.
- ii) dividing the average monthly production of the Tract by the total of average monthly oil productions for all the Tracts.
- iii) calculating a fractional water cut for the Tract by dividing the water production for the six-month interval January 1, 1960 to June 30, 1960, inclusive, by the sum of the water and oil production for the same period.
- iv) multiplying the fraction obtained in (ii) for the Tract by the fraction one minus the water cut appropriate to the Tract determined in (iii).
- v) dividing the product obtained in (iv) for the Tract by the sum of all the products obtained in (iv) for all the Tracts multiplied by 100%. Such percentage calculated for the Tract is the average monthly oil production factor penalized for water production.

NORTH VARDEN SCALION EQUITIES
SUMMARY SHEET

<u>Company</u>	<u>Well Count</u>	<u>Current Production (2nd $\frac{1}{2}$ 1958)</u>	<u>Cumulative Production (end of 1958)</u>	<u>Average Monthly (end of 1958)</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3, 1/3 Well, Curr., Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>$\frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}$ Wells, Curr. Cum. Ave. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
British American	4.0322	1.7533	2.4979	2.2701	2.12560	2.76113	2.01170	2.63837	2.68520
California Standard	44.7580	55.7156	59.8329	53.2478	2.33109	3.03894	2.21956	2.89606	2.96486*
Canadian Export	1.6129	0.7045	0.6789	0.7766	57.77425	53.43551	54.48170	53.38857	51.24047
Canadian Superior	5.2419	5.9005	7.5843	5.9442	57.90881	53.58941	54.65644	53.68364	51.40766*
Dome Exploration	6.0484	4.9475	2.8577	4.6366	0.69170	0.99877	0.74055	0.94323	1.03133
Fargo Oils	7.6613	6.5915	2.7671	6.5184	0.67662	0.94069	0.72640	0.89029	0.97496*
Imperial Oil	2.4194	1.8923	1.7971	2.1343	6.74240	6.24224	5.92235	6.16773	5.69553
Shell Oil	6.0484	6.2504	6.3748	6.3202	7.05078	6.67050	6.27089	6.56590	6.13723*
Shannon Oils	1.2097	0.1326	0.0244	0.1207	3.90260	4.61787	4.79205	4.62255	5.21084
Souris Valley	1.2097	0.4638	1.1112	0.6179	4.14406	4.83899	5.10506	4.85649	5.48894*
Sun Oil	14.9194	9.8066	10.8022	11.5043	4.67930	5.67331	6.55495	5.88457	6.92374
Vallet et al	0.4032	0.2507	0.0347	0.3799	4.82921	5.82346	6.79104	6.03965	7.15094*
West Canadian	4.4355	5.5907	3.6368	5.5290	1.84470	2.03626	2.01330	2.06078	2.14866
					1.81686	2.01822	1.99884	2.04568	2.14092*
					6.31260	6.22450	6.28530	6.24845	6.20633
					6.73209	6.59387	6.75347	6.61416	6.60361*
					0.07850	0.45557	0.12665	0.37185	0.48767
					0.08513	0.48255	0.13758	0.39259	0.51950*
					0.78750	0.92824	0.54085	0.85065	0.76380
					0.87651	1.05088	0.60602	0.95793	0.86810*
					10.30440	11.84274	10.65545	11.75812	12.07677
					9.72670	11.09267	9.94908	10.95115	11.23419*
					0.14270	0.22953	0.31530	0.26713	0.34460
					0.15883	0.25986	0.35330	0.30082	0.39166*
					4.61375	4.55433	5.55985	4.79800	5.18506
					3.66331	3.59996	4.43232	3.80564	4.11743*
TOTAL	100.0000	100.0000	100.0000	100.0000	100.00000	100.00000	100.00000	100.00000	100.00000
					100.00000	100.00000	100.00000	100.00000	100.00000

* Equities with water penalty applied.

NORTH VIRIDEN SCALLION EQUITIES
by Wells, Leases and Company Totals.

Company	Well Number	Well Count	Current Production	Cumulative Production	F Q U I T				I E S		50% Current 50% Avg. Mon.	1 1 1 1				1/3, 1/3, 1/3
					Monthly Average	50% Current Cum.	50% Current Cum.	50% Current Cum.	1/5, 1/5 & 1/3 Wells, Curr. & Cum.	50% Current 50% Avg. Mon.		1/5, 1/5, 1/5 Wells, Curr. Cum.	1/5, 1/5, 1/5 Wells, Curr.	1/5, 1/5, 1/5 Wells, Curr.	1/5, 1/5, 1/5 Wells, Curr.	
B.A.	3-28	.4032	.3337	.5342	.4495	.43395			.42370	.39160		.43015				.39547
	5-28	.4032	.0426	.0709	.0683	.05675			.17223	.05545		.14625				.17137
	6-28	.4032	.1444	.3927	.3305	.26855			.31343	.23745		.31770				.29270
	11-28	.4033*	.3162	.5784	.4993	.44730			.43264*	.40775		.44930				.40627
	12-28	.4032	.3241	.2271	.2015	.27560			.31813	.26280		.28897				.30960
	13-28	.4032	.0627	.1725	.1718	.11760			.21280	.11725		.20255				.21257
	14-28	.4032	.2325	.2486	.2203	.24055			.29477	.22640		.27615				.28533
	Lease Total	2.8225	1.4562	2.2244	1.9412	1.84030			2.16770	1.69870		2.11107				2.07331
	2-34	.4032		.0024	.0034	.00120			.13520	.00170		.10225				.13552
	3-34	.4033*	.2971	.2440	.2966	.27055			.31480	.29685		.31025				.33233
	4-34	.4032		.0271	.0289	.01355			.14343	.01445		.11480				.14403
	Lease Total	1.2097	.2971	.2735	.3289	.28530			.59343	.31300		.52730				.61189
	B.A. TOTAL	4.0322	1.7533	2.4979	2.2701	2.12560			2.76113	2.01170		2.63837				2.68520
Calistan	6-2	.4032	.0051	.0520	.0297	.02855			.15343	.01740		.12250				.14600
	11-2	.4032	.0456	.1825	.1051	.11405			.21043	.07535		.18410				.18463
	13-2	.4032	.6828	.3765	.2245	.52965			.48750	.45365		.42175				.43683
	14-2	.4033*	.1966	.3569	.2019	.27675			.31894*	.19925		.28967				.26727
	Lease Total	1.6129	.9301	.9679	.5612	.94900			1.17030	.74565		1.01802				1.03473
	9-9	.4032	.1536	.2677	.1793	.21065			.27483	.16645		.25095				.24537
	15-9	.4032	.0045	.0845	.0578	.04450			.16407	.03115		.13750				.15517
	16-9	.4032	1.1447	.6841	.4491	.91440			.74400	.79690		.67028				.66567
	Lease Total	1.2096	1.3028	1.0363	.6862	1.16955			1.18289	.99450		1.05873				1.06621
	1-10	.4033*	.3542	.3785	.2178	.36635			.37867	.28600		.33845				.32510
	2-10	.4032	.4511	.6788	.4545	.56495			.51103	.45280		.49690				.43627
	7-10	.4032	.3249	.7017	.4344	.51330			.47660	.37965		.46605				.38750
	8-10	.4032	.4076	.8482	.5060	.62790			.55300	.45680		.54125				.43893
	9-10	.4033*	.4116	.7251	.4407	.56835			.51333	.42615		.49517				.41853
	10-10	.4032	.7112	1.0394	.6824	.87530			.91794*	.69680		.70905				.59893
Lease Total	15-10	.4032	.5502	.7552	.4767	.65270			.56953	.51345		.54633				.47670
	16-10	.4032	.2850	.2940	.1931	.28950			.32740	.23905		.29382				.29377
	Lease Total	3.2233	3.4938	5.4209	3.4056	4.45835			4.04750	3.45070		3.88702				3.37573

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<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Ave. Mon.</u>	<u>$\frac{1}{4}, \frac{1}{4}, \frac{1}{4}, \frac{1}{4}$ Wells, Curr. Cum. Ave. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Ave. Mon.</u>
Calstan	3-10	.4032	.0339	.1092	.1194	.07155	.18210	.07665	.16642	.18550
	5-10	.4033*	.5823	.2913	.5035	.43680	.42563	.54290	.44510	.49637
	6-10	.4032	.5241	.6699	.5115	.59700	.53240	.51780	.52718	.47960
	11-10	.4032	.8144	1.1191	.7817	.96675	.77890	.79805	.77960	.66643
	12-10	.4032	.1575	.4524	.3452	.30495	.33770	.25135	.33957	.30197
	13-10	.4933*	.6739	.9274	.6920	.80065	.66820	.68295	.67415	.58973
	14-10	.4032	.6839	1.0993	.7519	.89160	.72880	.71790	.73458	.61300
	Lease Total	<u>2.8226</u>	<u>3.4700</u>	<u>4.6686</u>	<u>3.7052</u>	<u>4.06930</u>	<u>3.65373</u>	<u>3.58760</u>	<u>3.66660</u>	<u>3.33260</u>
	3-11	.4032	.1452	.3850	.2073	.26510	.31113	.17625	.28517	.25190
	4-11	.4032	.2130	.4501	.2547	.33155	.35543	.23385	.33025	.29030
	5-11	.4033*	.0696	.3831	.2132	.22635	.28534*	.14140	.26730	.22870
	6-11	.4032	.1674	.3210	.1847	.24420	.29720	.17605	.26908	.25177
	Lease Total	<u>1.6129</u>	<u>.5952</u>	<u>1.5392</u>	<u>.8599</u>	<u>1.06720</u>	<u>1.24910</u>	<u>.72755</u>	<u>1.15180</u>	<u>1.02267</u>
	1-11	.4032	.1253	.4246	.2400	.27495	.31770	.18265	.29828	.25617
	2-11	.4032	.2140	.2440	.1378	.22900	.28707	.17590	.24975	.25167
	7-11	.4033*	.1246	.3722	.2141	.24840	.30003	.16935	.27855	.24733
	8-11	.4032	.0426	.1112	.0674	.07690	.18567	.05500	.15610	.17107
	Lease Total	<u>1.6129</u>	<u>.5065</u>	<u>1.1520</u>	<u>.6593</u>	<u>.82925</u>	<u>1.09047</u>	<u>.98290</u>	<u>.98268</u>	<u>.92624</u>
	12-11	.4032	.1319	.2982	.1843	.21505	.27777	.15810	.25440	.23980
	Lease Total	<u>.4032</u>	<u>.1319</u>	<u>.2982</u>	<u>.1843</u>	<u>.21505</u>	<u>.27777</u>	<u>.15810</u>	<u>.25440</u>	<u>.23980</u>
	5-13	.4033*	1.0120	.2999	.7574	.65595	.57173	.88470	.61815	.72423
	6-13	.4032	.6604	.2363	.5338	.44835	.43330	.60710	.46342	.53913
	Lease Total	<u>.8065</u>	<u>1.6724</u>	<u>.5362</u>	<u>1.3112</u>	<u>1.10430</u>	<u>1.00503</u>	<u>1.49180</u>	<u>1.08157</u>	<u>1.26336</u>
	7-13	.4032	.4478	.0620	.6786	.25490	.30433	.56320	.39790	.50987
	10-13	.4032	.7434	.1048	.4914	.42410	.41714*	.61740	.43570	.54600
	15-13	.4033*	.3453	.0478	.2614	.19655	.26547	.30335	.26445	.33667
	Lease Total	<u>1.2097</u>	<u>1.5365</u>	<u>.2146</u>	<u>1.4314</u>	<u>.87555</u>	<u>.98694</u>	<u>1.48395</u>	<u>1.09805</u>	<u>1.39254</u>
	11-13	.4032	1.1897	.3682	.8629	.77895	.65370	1.02630	.70600	.81860
	12-13	.4032	1.2473	.3486	.8801	.79795	.66637	1.06370	.91980	.84353
	13-13	.4032	.5893	.2375	.5994	.41340	.41000	.59435	.45735	.53063
	14-13	.4033*	1.1325	.3555	.8332	.74400	.63043	.98285	.68113	.78967
	Lease Total	<u>1.6129</u>	<u>4.1588</u>	<u>1.3098</u>	<u>3.1756</u>	<u>2.73430</u>	<u>2.36050</u>	<u>3.66720</u>	<u>2.56428</u>	<u>2.98243</u>

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Ave. Mon.</u>	<u>1/3, 1/3, 1/3, 1/3, 1/3 Wells, Curr. Cum. Ave. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Ave. Mon.</u>
Calstan	1-15	.4032	.1593	.1472	.1177	.15325	.23657	.13850	.20685	.22673
	2-15	.4033*	.5887	.8200	.6116	.70435	.60400	.60015	.60590	.53453
	3-15	.4032	.5910	1.0923	.7628	.84165	.69550	.67690	.71232	.58567
	4-15	.4032	1.0125	1.2111	.8458	1.11180	.87560	.92915	.86815	.75383
	5-15	.4032	1.1219	1.2274	.8571	1.17465	.91750	.98950	.90240	.79407
	6-15	.4033*	1.1892	1.1726	.8952	1.18090	.92170	1.04220	.91508	.82923
	7-15	.4032	.7995	.9826	.7502	.89105	.72843	.77485	.73388	.65097
	8-15	.4032	.5873	.7276	.6124	.65745	.57270	.59985	.58262	.53430
	9-15	.4032	.1379	1.964	.1843	.16715	.24583	.16110	.23045	.24180
	10-15	.4033*	.2989	.5497	.4193	.42430	.41730	.35910	.41780	.37383
	11-15	.4032	.5769	.7253	.5538	.65110	.56847	.56535	.56480	.51130
	12-15	.4032	1.1318	1.2201	.8709	1.17595	.91837	1.00135	.90650	.80197
	13-15	.4032	.2373	.3830	.2995	.31015	.34117	.26840	.33075	.31333
	14-15	.4033*	.1097	.2459	.1923	.17780	.23297	.15100	.23780	.23510
	15-15	.4032	.0939	.1722	.1663	.13305	.22310	.13010	.20890	.22113
	16-15	.4032	.0441	.1128	.0976	.07845	.18670	.07085	.16442	.18164
	Lease Total	<u>6.4516</u>	<u>8.6799</u>	<u>10.9862</u>	<u>8.2368</u>	<u>9.83305</u>	<u>8.70591</u>	<u>8.45835</u>	<u>8.58862</u>	<u>7.78943</u>
	6-16	.4032	1.0633	1.0282	.8654	1.05575	.83823	.97435	.84502	.78397
	11-16	.4033*	.5617	.8168	.6095	.68925	.59393	.58560	.59783	.52483
	12-16	.4032	.6256	.5164	.6782	.57100	.51907	.65190	.55585	.56900
	13-16	.4032	.7759	.7921	.6501	.78400	.65707	.71300	.65532	.60973
	14-16	.4032	.7141	1.0599	.8093	.88700	.72573	.76170	.74663	.64220
	Lease Total	<u>2.0161</u>	<u>3.7606</u>	<u>4.2134</u>	<u>3.6125</u>	<u>3.98700</u>	<u>3.33003</u>	<u>3.68655</u>	<u>3.40065</u>	<u>3.12973</u>
	9-16	.4033*	1.1358	1.2081	.8621	1.17195	.91573	.99895	.90232	.80040
	10-16	.4032	.5820	1.0153	.7247	.79865	.66683	.65335	.68130	.56997
	15-16	.4032	.4285	1.0019	.7151	.71520	.61120	.57180	.63718	.51560
	16-16	.4032	1.2002	1.1545	.9023	1.17735	.91930	1.05125	.91505	.83523
	Lease Total	<u>1.6129</u>	<u>3.3465</u>	<u>4.3798</u>	<u>3.2042</u>	<u>3.86315</u>	<u>3.11306</u>	<u>3.27535</u>	<u>3.13585</u>	<u>2.72120</u>
	6-17	.4033*	.3940	.1914	.2731	.29270	.32957	.33355	.31545	.35680
	11-17	.4032	.4314	.3347	.2347	.33305	.35643	.38305	.35100	.38977
	12-17	.4032	.4410	.1332	.2187	.28710	.32580	.32985	.29902	.35430
	13-17	.4032	.6781	.3248	.4847	.50145	.46870	.58140	.47270	.52200
	14-17	.4033*	1.1316	.5970	.8520	.86430	.71063	.99180	.74598	.79563
	Lease Total	<u>2.0162</u>	<u>3.0761</u>	<u>1.4811</u>	<u>2.1632</u>	<u>2.27860</u>	<u>2.19113</u>	<u>2.61965</u>	<u>2.18415</u>	<u>2.41850</u>

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>$\frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}$ Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Calstan	1-21	.4032	1.2271	1.0607	.8491	1.14390	.89700	1.03810	.88502	.82647
	2-21	.4032	1.1899	1.1487	.8977	1.16930	.91393	1.04380	.90988	.83027
	7-21	.4032	.9507	.9477	.7406	.94920	.76720	.84565	.76055	.69817
	8-21	.4033*	.6317	.8360	.6862	.73385	.62367	.65895	.63930	.57372
	Lease Total	<u>1.6129</u>	<u>3.9994</u>	<u>3.9931</u>	<u>3.1736</u>	<u>3.99625</u>	<u>3.20180</u>	<u>3.58650</u>	<u>3.19475</u>	<u>2.92864</u>
	3-21	.4032	1.0005	1.1012	.8608	1.05085	.83497	.93065	.84143	.75483
	6-21	.4032	.2682	.4153	.3246	.34175	.36223	.29640	.35282	.33200
	Lease Total	<u>.8064</u>	<u>1.2687</u>	<u>1.5165</u>	<u>1.1854</u>	<u>1.39260</u>	<u>1.19720</u>	<u>1.22705</u>	<u>1.19425</u>	<u>1.08683</u>
	3-22	.4032	.3353	.5994	.4801	.46735	.44597	.40770	.45450	.40620
	4-22	.4033*	.4064	.6965	.5446	.55145	.50207	.47550	.51270	.45143
	5-22	.4032	.3784	.7125	.5567	.54545	.49803	.46755	.51270	.44610
	6-22	.4032	.4876	.7516	.6166	.61960	.54747	.55210	.56475	.50247
	11-22	.4032	1.0751	.9617	.7892	1.01840	.81333	.93215	.80730	.75583
	12-22	.4033*	.9845	1.0831	.8466	1.03380	.82363	.91555	.82937	.74480
	13-22	.4032	.6302	.8694	.6962	.74980	.63427	.66320	.64975	.57654
	14-22	.4032	.2427	.4608	.4088	.35175	.36890	.32575	.37888	.35157
Lease Total		<u>3.2258</u>	<u>4.5402</u>	<u>6.1350</u>	<u>4.9388</u>	<u>5.33760</u>	<u>4.63367</u>	<u>4.73950</u>	<u>4.70995</u>	<u>4.23494</u>
	9-23	.4032	.2904	.2138	.2807	.25210	.30247	.28555	.29702	.32477
	10-23	.4033*	.0357	.1562	.1973	.09595	.19840	.11650	.19813	.21210
	11-23	.4032	.2297	.2269	.2191	.22830	.28660	.22440	.26972	.28400
	12-23	.4032	.3284	.4828	.4528	.40560	.40480	.39060	.41680	.39480
	13-23	.4032	.0802	.1722	.1613	.12620	.21853	.12075	.20423	.21490
	14-23	.4033*	.1001	.2653	.2483	.18270	.25623	.17445	.25438	.25073
	15-23	.4032	.0696	.1328	.1558	.09920	.20053	.11070	.18935	.20820
	16-23	.4032	.0527	.1840	.2321	.11835	.21330	.14240	.21800	.22933
	Lease Total	<u>3.2258</u>	<u>1.1828</u>	<u>1.8340</u>	<u>1.9479</u>	<u>1.50840</u>	<u>2.08086</u>	<u>1.56535</u>	<u>2.04763</u>	<u>2.11883</u>
	11-24	.4032	.0987	.1163	.1592	.10750	.20607	.12895	.19435	.22037
	12-24	.4033*	.1758	.2262	.2970	.20100	.26843	.23640	.27557	.29203
	13-24	.4032	.1437	.1660	.2270	.15485	.23764*	.18535	.23498	.25797
	Lease Total	<u>1.2097</u>	<u>.4182</u>	<u>.5085</u>	<u>.6832</u>	<u>.46335</u>	<u>.71214</u>	<u>.55070</u>	<u>.70490</u>	<u>.77037</u>
	4-25	.4032	1.1938	.3882	.8495	.79100	.66173	1.02165	.70867	.81550
	5-25	.4032	.3894	.0762	.3129	.23280	.28960	.35115	.29543	.36850
	Lease Total	<u>.8064</u>	<u>1.5832</u>	<u>.4644</u>	<u>1.1624</u>	<u>1.02380</u>	<u>.95133</u>	<u>1.37280</u>	<u>1.00410</u>	<u>1.18400</u>

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Calstan	3-27	.4033*	.2012	.4402	.3904	.32070	.34823	.29580	.35877	.33163
	4-27	.4032	.3325	.7155	.5730	.52400	.48373	.45275	.50605	.43623
	5-27	.4032	.1995	.4876	.4000	.34355	.36343	.29975	.37258	.33423
	6-27	.4032	.2407	.4115	.3464	.32610	.35180	.29355	.35045	.33010
	11-27	.4033*	.2471	.4917	.4139	.36940	.38070	.33050	.38900	.35477
	12-27	.4032	.3779	.6141	.5039	.49600	.46507	.44090	.47477	.42833
	13-27	.4032	.3244	.5281	.4335	.42625	.41857	.37895	.42230	.38703
	14-27	.4032	.5237	.6708	.5504	.59725	.53257	.53705	.53703	.49244
	Lease Total	<u>3.2258</u>	<u>2.4470</u>	<u>4.3595</u>	<u>3.6115</u>	<u>3.40325</u>	<u>3.34410</u>	<u>3.02925</u>	<u>3.41095</u>	<u>3.09476</u>
	3-4	.4033*	.9917	.7083	.8302	.85000	.70110	.91095	.73337	.74173
	4-4	.4032	.4500	.4625	.5420	.45625	.43857	.49600	.46443	.46507
	5-4	.4032	.6155	.5334	.6254	.57445	.51737	.62045	.54437	.54803
	6-4	.4032	.0357	.0911	.1110	.06340	.17667	.07335	.16025	.18330
CALSTAN TOTAL	12-4	.4033*	1.1862	.7306	.8566	.95840	.77337	1.02140	.79417	.81537
	13-4	.4032	.3339	.2918	.3832	.31285	.34297	.35855	.35303	.37343
	Lease Total	<u>2.4194</u>	<u>3.6130</u>	<u>2.8177</u>	<u>3.3484</u>	<u>3.21535</u>	<u>2.95005</u>	<u>3.48070</u>	<u>3.04962</u>	<u>3.12693</u>
		<u>44.7580</u>	<u>55.7156</u>	<u>59.8329</u>	<u>53.2478</u>	<u>57.77425</u>	<u>53.43551</u>	<u>54.48170</u>	<u>53.38857</u>	<u>51.24043</u>
Can. Export	1-5	.4032	.2813	.3107	.3401	.29600	.33173	.31070	.33383	.34153
	7-5	.4032	.0438	.1018	.1194	.07280	.18293	.08160	.16705	.18880
	8-5	.4033*	.1947	.1470	.1722	.17085	.24834*	.18345	.22930	.25673
	9-5	.4032	.1847	.1194	.1449	.15205	.23577	.16480	.21305	.24427
	Lease Total	<u>1.6129</u>	<u>.7045</u>	<u>.6789</u>	<u>.7766</u>	<u>.69170</u>	<u>.99877</u>	<u>.74055</u>	<u>.94323</u>	<u>1.03133</u>
CAN. EXPORT TOTAL		<u>1.6129</u>	<u>.7045</u>	<u>.6789</u>	<u>.7766</u>	<u>.69170</u>	<u>.99877</u>	<u>.74055</u>	<u>.94323</u>	<u>1.03133</u>
Can. Superior	2-16	.4032	.3998	.7248	.4855	.56230	.50927	.44265	.50332	.42950
	7-16	.4032	1.2416	1.0926	.7473	1.16710	.91247	.99445	.87118	.79737
	8-16	.4033*	.7218	.8279	.5245	.77485	.65100	.62315	.61938	.54987
	Lease Total	<u>1.2097</u>	<u>2.3632</u>	<u>2.6453</u>	<u>1.7573</u>	<u>2.50425</u>	<u>2.07274</u>	<u>2.06025</u>	<u>1.99388</u>	<u>1.77674</u>
	1-22	.4032	.0160	.0755	.0637	.04575	.16490	.03985	.13960	.16097
	7-22	.4032	.3711	.5478	.4612	.45945	.44070	.41615	.44582	.41183
	8-22	.4033*	.2323	.3129	.3313	.27260	.31617	.28180	.31995	.32230
Lease Total		<u>1.2097</u>	<u>.6194</u>	<u>.9362</u>	<u>.8562</u>	<u>.77780</u>	<u>.92177</u>	<u>.73780</u>	<u>.90537</u>	<u>.89510</u>

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3, 1/3 Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Can. Superior	2-28	.4032	.4947	.6853	.5626	.59000	.52773	.52865	.53645	.48683
	7-28	.4032	.4388	.5665	.4650	.50265	.46950	.45190	.46838	.43567
	8-28	.4032	.4484	.5776	.4742	.51300	.47640	.46130	.47585	.44193
	9-28	.4033*	.4185	.5981	.4909	.50830	.47330	.45470	.47770	.43757
	10-28	.4032	.2233	.4346	.3657	.32895	.35370	.29450	.35670	.33073
	15-28	.4032	.5037	.5410	.4675	.52235	.48263	.48560	.47885	.45813
	16-28	.4032	.3905	.5997	.5048	.49510	.46447	.44765	.47455	.43283
	Lease Total	2.8225	2.9179	4.0028	3.3307	3.46035	3.24773	3.12430	3.26848	3.02369
	CAN. SUPERIOR TOTAL	5.2419	5.9005	7.5843	5.9442	6.74240	6.24224	5.92235	6.16773	5.69553
Dome	8-14	.4033*	.3475	.1283	.3829	.23790	.29303	.36520	.31590	.37790
	Lease Total	.4033	.3475	.1283	.3829	.23790	.29303	.36520	.31590	.37790
	1-16	.4032	.3205	.5504	.3410	.43545	.42470	.33075	.40377	.35490
	Lease Total	.4032	.3205	.5504	.3410	.43545	.42470	.33075	.40377	.35490
	3-24	.4032	.1699	.1240	.2543	.14695	.23237	.21210	.23785	.27580
	4-24	.4032	.0450	.0715	.1303	.05825	.17323	.08765	.16250	.19283
	5-24	.4033*	.0360	.0594	.1085	.04770	.16623	.07225	.15180	.18260
	6-24	.4032	.0634	.0617	.1127	.06255	.17610	.08805	.16025	.19310
	Lease Total	1.6129	.3143	.3166	.6058	.31545	.74793	.46005	.71240	.84433
	11-26	.4032	.1543	.1366	.2040	.14545	.23137	.17915	.22453	.25383
	12-26	.4032	.2778	.2612	.3573	.26950	.31407	.31755	.32487	.34610
	Lease Total	.8064	.4321	.3978	.5613	.41495	.54544	.49670	.54940	.59993
CAN. SUPERIOR	1-28	.4033*	.2761	.4974	.3984	.38675	.39227	.33725	.39880	.35927
	Lease Total	.4033	.2761	.4974	.3984	.38675	.39227	.33725	.39880	.35927
	4-3	.4032	1.2663	.2733	.8156	.76980	.64760	1.04095	.68960	.82837
	5-3	.4032	.6007	.1992	.4671	.39995	.40103	.53390	.41755	.49033
	Lease Total	.8064	1.8670	.4725	1.2827	1.16975	1.04863	1.57485	1.10715	1.31870
	12-3	.4032	.3403	.0471	.1408	.19370	.26353	.24055	.23285	.29477
	Lease Total	.4032	.3403	.0471	.1408	.19370	.26353	.24055	.23285	.29477
	1-4	.4033*	.5299	.1312	.4306	.33055	.35480	.48025	.37375	.45460
	Lease Total	.4033	.5299	.1312	.4306	.33055	.35480	.48025	.37375	.45460
	2-4	.4032	.3968	.2536	.3783	.32520	.35120	.38755	.35798	.39277
	7-4	.4032	.1230	.0628	.1148	.09290	.19634*	.11890	.17595	.21367
	Lease Total	.8064	.5198	.3164	.4931	.41810	.54754	.50645	.53393	.60644
DOME TOTAL		6.0484	4.9475	2.8577	4.6366	3.90260	4.61787	4.79205	4.62255	5.21084

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>$\frac{1}{3}, \frac{1}{3}, \frac{1}{3}$ Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Fargo	9-14	.4032	.4896	.1233	.4047	.30645	.33870	.44715	.35520	.43250
	10-14	.4033*	.4377	.0844	.3959	.26105	.30847	.41680	.33033	.41230
	16-14	.4032	.4567	.0632	.6920	.25995	.30770	.57435	.40377	.51730
	Lease Total	<u>1.2097</u>	<u>1.3840</u>	<u>.2709</u>	<u>1.4926</u>	<u>.82745</u>	<u>.95487</u>	<u>1.43630</u>	<u>1.08930</u>	<u>1.36210</u>
	7-18	.4032	.0885	.0274	.0750	.05795	.17303	.08175	.14853	.18890
	8-18	.4032	.1279	.0961	.2425	.11200	.20907	.18520	.21742	.25787
	Lease Total	<u>.8064</u>	<u>.2164</u>	<u>.1235</u>	<u>.3175</u>	<u>.16995</u>	<u>.38210</u>	<u>.26695</u>	<u>.36595</u>	<u>.44677</u>
	1-19	.4033*	.9768	.2554	.6987	.61610	.54517	.83775	.58355	.69293
	2-19	.4032	.2166	.0752	.2057	.14590	.23167	.21115	.22517	.27517
	7-19	.4032	.2888	.0924	.2526	.19060	.26147	.27070	.25925	.31487
	8-19	.4032	.5216	.1832	.5010	.35240	.36933	.51130	.40225	.47527
	Lease Total	<u>1.6129</u>	<u>2.0038</u>	<u>.6062</u>	<u>1.6580</u>	<u>1.30500</u>	<u>1.40764</u>	<u>1.83090</u>	<u>1.47022</u>	<u>1.75824</u>
Lease Total	9-19	.4033*	.3738	.1225	.3657	.24815	.29987	.36975	.31633	.38093
	Lease Total	<u>.4033</u>	<u>.3738</u>	<u>.1225</u>	<u>.3657</u>	<u>.24815</u>	<u>.29987</u>	<u>.36975</u>	<u>.31633</u>	<u>.38093</u>
Lease Total	1-26	.4032	.1482	.1951	.2786	.17165	.24883	.21340	.25627	.27667
	2-26	.4032	.4082	.3078	.4394	.35800	.37307	.42380	.38965	.41693
	7-26	.4032	.9148	.4977	.7104	.70625	.60523	.81260	.65153	.67613
	8-26	.4033*	.2158	.0753	.2245	.14555	.23147	.22015	.22972	.28120
	Lease Total	<u>1.6129</u>	<u>1.6870</u>	<u>1.0759</u>	<u>1.6529</u>	<u>1.38145</u>	<u>1.43860</u>	<u>1.66995</u>	<u>1.50717</u>	<u>1.65093</u>
FARGO TOTAL	5-34	.4032	.0863	.0620	.1131	.07415	.18383	.09970	.16615	.20087
	6-34	.4032	.1313	.0796	.1454	.10545	.20470	.13835	.18987	.22663
	7-34	.4032	.3571	.1953	.3376	.27620	.31853	.34735	.32330	.36597
	11-34	.4033*	.2565	.1654	.3217	.21095	.27507	.28910	.28673	.32717
	12-34	.4032	.0953	.0658	.1139	.08055	.18810	.10460	.16955	.20413
	Lease Total	<u>2.0161</u>	<u>.9265</u>	<u>.5681</u>	<u>1.0317</u>	<u>.74730</u>	<u>1.17023</u>	<u>.97910</u>	<u>1.13560</u>	<u>1.32477</u>
	FARGO TOTAL	<u>7.6613</u>	<u>6.5915</u>	<u>2.7671</u>	<u>6.5184</u>	<u>4.67930</u>	<u>5.67331</u>	<u>6.55495</u>	<u>5.88457</u>	<u>6.92374</u>
Imperial	1-33	.4032	.0128	.1070	.1064	.05990	.17433	.05960	.15735	.17413
	2-33	.4033*	.3330	.4917	.5207	.41235	.40933	.42685	.43717	.41900
	7-33	.4032	.3856	.4037	.4734	.39465	.39750	.42950	.41647	.42073
	9-33	.4032	.1076	.0674	.0963	.08750	.19274*	.10195	.16813	.20237
	10-33	.4032	.6373	.3489	.4407	.49310	.46313	.53900	.45753	.49373
	15-33	.4033*	.4160	.3784	.4968	.39720	.39923	.45640	.42363	.43870
	Lease Total	<u>2.4194</u>	<u>1.8923</u>	<u>1.7971</u>	<u>2.1343</u>	<u>1.84470</u>	<u>2.03626</u>	<u>2.01330</u>	<u>2.06078</u>	<u>2.14866</u>
	IMPERIAL TOTAL	<u>2.4194</u>	<u>1.8923</u>	<u>1.7971</u>	<u>2.1343</u>	<u>1.84470</u>	<u>2.03626</u>	<u>2.01330</u>	<u>2.06078</u>	<u>2.14866</u>

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>$\frac{1}{3}, \frac{1}{3}, \frac{1}{3}$ Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Shell	9-21	.4032	.8902	.7896	.7004	.83990	.69433	.79530	.69585	.66460
	10-21	.4032	.3568	.2945	.2844	.32565	.35150	.32060	.33472	.34813
	11-21	.4032	.0487	.0432	.0473	.04595	.16503	.04800	.13560	.16640
	14-21	.4033*	.3667	.5209	.4620	.44380	.43030	.41435	.43823	.41067
	15-21	.4032	.1502	.2697	.2530	.20995	.27437	.20160	.26902	.26880
	16-21	.4032	.5548	.6970	.6355	.62590	.55167	.59515	.57263	.53117
	Lease Total	2.4193	2.3674	2.6149	2.3826	2.49115	2.46720	2.37500	2.44605	2.38977
	16-32	.4032	.1653	.1138	.1332	.13955	.22743	.14925	.20387	.23390
	Lease Total	.4032	.1653	.1138	.1332	.13955	.22743	.14925	.20387	.23390
	Lease Total	.4033*	.6381	.6667	.6254	.65240	.56933	.63175	.58338	.55560
Shannon	4-33	.4032	.2845	.3809	.3573	.33270	.35620	.32090	.35647	.34833
	5-33	.4032	.0902	.1693	.1634	.12975	.22090	.12680	.20653	.21893
	6-33	.4032	.7401	.6862	.6623	.71315	.60983	.70120	.62295	.60187
	11-33	.4033*	.3110	.4234	.4633	.36720	.37924*	.38715	.40025	.39253
	12-33	.4032	.4359	.3603	.4080	.39810	.39980	.42195	.40185	.41570
	13-33	.4032	.4699	.3893	.4566	.42960	.42080	.46325	.42975	.44323
	14-33	.4033*	.7480	.5700	.6681	.65900	.57377	.70805	.59735	.60647
	Lease Total	3.2259	3.7177	3.6461	3.8044	3.68190	3.52987	3.76105	3.59853	3.58266
	SHELL TOTAL	6.0484	6.2504	6.3748	6.3202	6.31260	6.22450	6.28530	6.24845	6.20633
Shannon	11-18	.4032	.0137	.0057	.0235	.00970	.14087	.01860	.11153	.14680
	12-18	.4032	.1189	.0165	.0901	.06770	.17953	.10450	.15717	.20407
	14-18	.4033*	-	.0022	.0071	.00110	.13517	.00355	.10315	.13680
	Lease Total	1.2097	.1326	.0244	.1207	.07850	.45557	.12665	.37185	.48767
SHANNON TOTAL		1.2097	.1326	.0244	.1207	.07850	.45557	.12665	.37185	.48767
Souris Valley	10-2	.4032	.0318	.1260	.0700	.07890	.18700	.05090	.15775	.16833
	15-2	.4032	.3930	.8267	.4599	.60985	.54097	.42645	.52070	.41870
	16-2	.4033*	.0390	.1585	.0880	.09875	.20027	.06350	.17220	.17677
	Lease Total	1.2097	.4638	1.1112	.6179	.78750	.92824	.54085	.85065	.76380
SOURIS VALLEY TOTAL		1.2097	.4638	1.1112	.6179	.78750	.92824	.54085	.85065	.76380
Sun Oil	15-3	.4032	.0297	.1112	.0674	.07045	.18137	.04855	.15287	.16677
	16-3	.4032	.0351	.2825	.1688	.15880	.24027	.10195	.22240	.20237
	Lease Total	.8064	.0648	.3937	.2362	.22925	.42164	.15050	.37527	.36914
	4-14	.4032	.0725	.1499	.1093	.11120	.20853	.09090	.18373	.19500
	5-14	.4033*	.3557	.4506	.3996	.40315	.40320	.37765	.40230	.38620
Lease Total		.8065	.4282	.6005	.5089	.51435	.61173	.46855	.58603	.58120

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>$\frac{1}{3}, \frac{1}{3}, \frac{1}{3}$ Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Sun Oil	11-14	.4032	.0233	.0032	.0264	.01325	.14323	.02485	.11403	.15097
	12-14	.4032	.1032	.1119	.1022	.10755	.20610	.10270	.18013	.20287
	13-14	.4033*	.1110	.1464	.1336	.12870	.22024*	.12230	.19857	.21597
	Lease Total	<u>1.2097</u>	<u>.2375</u>	<u>.2615</u>	<u>.2622</u>	<u>.24950</u>	<u>.56957</u>	<u>.24985</u>	<u>.49273</u>	<u>.56981</u>
	1-20	.4033*	.9304	.4696	.8114	.70000	.60110	.87090	.65367	.71503
	2-20	.4032	.1016	.1838	.2744	.14270	.22953	.18800	.24075	.25973
	7-20	.4032	.2501	.1651	.2710	.20760	.27280	.26055	.27235	.30810
	Lease Total	<u>1.2097</u>	<u>1.2821</u>	<u>.8185</u>	<u>1.3568</u>	<u>1.05030</u>	<u>1.10343</u>	<u>1.31945</u>	<u>1.16677</u>	<u>1.28286</u>
	3-20	.4032	.7356	.4104	.7092	.57300	.51640	.72240	.56460	.61600
	4-20	.4033*	.4695	.3606	.6229	.41505	.41113	.54620	.46407	.49857
	5-20	.4032	.1631	.1293	.2233	.14620	.23187	.19320	.22973	.26320
	6-20	.4032	.3787	.2374	.4101	.30805	.33977	.39440	.35735	.39733
	Lease Total	<u>1.6129</u>	<u>1.7469</u>	<u>1.1377</u>	<u>1.9655</u>	<u>1.44230</u>	<u>1.49917</u>	<u>1.85620</u>	<u>1.61575</u>	<u>1.77510</u>
	11-20	.4032	.1497	.0811	.1479	.11540	.21133	.14880	.19547	.23360
	12-20	.4033*	.3448	.2643	.4821	.30455	.33747	.41345	.37363	.41007
	Lease Total	<u>.8065</u>	<u>.4945</u>	<u>.3454</u>	<u>.6300</u>	<u>.41995</u>	<u>.54880</u>	<u>.56225</u>	<u>.56910</u>	<u>.64367</u>
	4-21	.4032	.7855	.9926	.7946	.88905	.72710	.79005	.74397	.66110
	5-21	.4032	.1751	.2619	.2097	.21850	.28007	.19240	.26248	.26267
	Lease Total	<u>.8064</u>	<u>.9606</u>	<u>1.2545</u>	<u>1.0043</u>	<u>1.10755</u>	<u>1.00717</u>	<u>.98245</u>	<u>1.00645</u>	<u>.92377</u>
	9-22	.4032	.7647	.4535	.3816	.60910	.54047	.57315	.50075	.51650
	10-22	.4033*	.2026	.6965	.5718	.44955	.43413	.38720	.46855	.39257
	15-22	.4032	.0121	.1425	.1198	.07730	.18593	.06595	.16940	.17837
	16-22	.4032	.1604	.1951	.1684	.17775	.26190	.16440	.23177	.24400
	Lease Total	<u>1.6129</u>	<u>1.1398</u>	<u>1.4876</u>	<u>1.2416</u>	<u>1.31370</u>	<u>1.41343</u>	<u>1.19070</u>	<u>1.37047</u>	<u>1.33144</u>
	5-23	.4032	.3509	.3274	.2987	.33915	.36050	.32480	.34505	.35093
	6-23	.4033*	.0283	.0803	.0880	.05430	.17063	.05815	.14998	.17320
	Lease Total	<u>.8065</u>	<u>.3792</u>	<u>.4077</u>	<u>.3867</u>	<u>.39345</u>	<u>.53113</u>	<u>.38295</u>	<u>.49503</u>	<u>.52413</u>
	3-26	.4032	.1354	.1409	.1596	.13815	.22650	.14750	.20977	.23273
	4-26	.4032	.0818	.2448	.2174	.16330	.24327	.14960	.23680	.23413
	1-27	.4032	.2552	.3019	.2610	.27855	.32010	.25810	.30533	.30647
	2-27	.4033*	.2425	.3054	.2564	.27395	.31707	.24945	.30190	.30073
	7-27	.4032	.2412	.2290	.1977	.23510	.29113	.21945	.26777	.28070
	8-27	.4032	.2567	.5055	.4486	.38110	.38847	.35265	.40350	.36950
	9-27	.4032	.2386	.4512	.4005	.34490	.36433	.31955	.37337	.34743
	10-27	.4033*	.1661	.4265	.3682	.29630	.33197	.26715	.34103	.31253
	15-27	.4032	.2425	.5406	.4549	.39155	.39543	.34870	.41030	.36687
	16-27	.4032	.2832	.1943	.1822	.23875	.29357	.23270	.26573	.28953
	Lease Total	<u>4.0322</u>	<u>2.1432</u>	<u>3.3401</u>	<u>2.9465</u>	<u>2.74165</u>	<u>3.17184</u>	<u>2.54485</u>	<u>3.11550</u>	<u>3.04062</u>

Company	Well Number	Well Count	Current Production	Cumulative Production	Monthly Average	50% Current 50% Cum.	1/3, 1/3 & 1/3 Wells, Curr. & Cum.	50% Current 50% Avg. Mon.	$\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$ Wells, Curr. Cum. Avg. Mon.	1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.
Sun Oil	5-26	.4033*	.1532	.1365	.1211	.14485	.23100	.13715	.20353	.22587
	6-26	.4032	.4095	.4035	.4729	.40650	.40540	.44120	.42227	.42853
	10-26	.4032	.3671	.2150	.3716	.29105	.32843	.36935	.33922	.38063
	Lease Total	1.2097	.9298	.7550	.9656	.84240	.96483	.94770	.96502	1.03503
	SUN OIL TOTAL	14.9194	9.8066	10.8022	11.5043	10.30440	11.84274	10.65545	11.75812	12.07677
E.H. Vallat	13-34	.4032	.2507	.0347	.3799	.14270	.22953	.31530	.26713	.34460
	Lease Total	.4032	.2507	.0347	.3799	.14270	.22953	.31530	.26713	.34460
	E.H. VALLAT TOTAL	.4032	.2507	.0347	.3799	.14270	.22953	.31530	.26713	.34460
West Canadian	2-17	.4033*	.7341	.3350	.6112	.53455	.49080	.67265	.52090	.58287
	7-17	.4032	.4605	.3439	.5132	.40220	.40253	.48685	.43020	.45897
	8-17	.4032	.3797	.3537	.5278	.36670	.37887	.45375	.41610	.43690
	9-17	.4032	1.0838	.5745	.8202	.82915	.68717	.95200	.72042	.76907
	10-17	.4033*	.5792	.3823	.5458	.48075	.45493	.56250	.47765	.50943
	15-17	.4032	.4035	.3655	.5215	.38450	.39073	.46250	.42343	.44273
	16-17	.4032	.6261	.4927	.6472	.55940	.50733	.63665	.54230	.55883
	Lease Total	2.8226	4.2669	2.8476	4.1869	3.55725	3.31236	4.22690	3.53100	3.75880
	9-18	.4032	.3727	.2277	.3933	.30020	.33453	.38300	.34922	.38973
	10-18	.4033*	.2981	.1364	.2488	.21725	.27927	.27345	.27165	.31673
WEST CANADIAN	15-18	.4032	.1014	.1347	.2459	.11805	.21310	.17365	.22130	.25017
	16-18	.4032	.5516	.2904	.4541	.42100	.41507	.50285	.42483	.46963
	Lease Total	1.6129	1.3238	.7892	1.3421	1.05650	1.24197	1.33295	1.26700	1.42626
	WEST CANADIAN TOTAL	4.4355	5.5907	3.6368	5.5290	4.61375	4.55433	5.55985	4.79800	5.18506
FIELD TOTAL		100.0000	100.0000	100.0000	100.0000	100.00000	100.00000	100.00000	100.00000	100.00000

NORTH VIRDEN SCALLION
PENALTY SCALE

<u>WATER CUT</u>	<u>PENALTY FACTOR</u>
0-40	1.0000
40-45	0.9583
45-50	0.8750
50-55	0.7917
55-60	0.7083
60-65	0.6250
65-70	0.5417
70-75	0.4583
75-80	0.3750
80-85	0.2917
85-90	0.2083
90-95	0.1250
95-100	0.0417

NORTH VIRGEN SCALLION EQUITIES WITH WATER PENALTY FACTOR
by Wells, Leases and Company Totals

Company	Well Number	Water Cut	Penalty Factor	50% Current	E Q U I T I E S					50% Current	1/3, 1/3, 1/3
				50% Cum.	Wells, Curr. Cum.	Well, Curr. Cum.	Avg. Mon.	50% Avg. Mon.	Well, Curr.	Avg. Mon.	
B.A.	3-28	11	1.	.48300	.47968	.48592	.43879	.44947			
	5-28	57	.7083	.04475*	.13811	.11665	.04401	.13795			
	6-28	25	1.	.29891	.35484	.35776*	.26607	.33267			
	11-28	19	1.	.49786	.48980	.50596	.45689	.46175			
	12-28	25	1.	.30675	.36016	.32541	.29447	.35188			
	13-28	49	.8750	.11453	.21080	.19958	.11495	.21140			
	14-28	30	1.	.26774	.33372	.31098	.25368	.32429			
	Lease Total			<u>2.01354</u>	<u>2.36711</u>	<u>2.30226</u>	<u>1.86886</u>	<u>2.26941</u>			
	2-34	-	1.	.00134	.15306	.11514	.00190	.15404			
	3-34	-	1.	.30113	.35639	.34938	.33261	.37771			
B.A. TOTAL	4-34	-	1.	.01508	.16238	.12928	.01619	.16370			
	Lease Total			<u>.31755</u>	<u>.67183</u>	<u>.59380</u>	<u>.35070</u>	<u>.69545</u>			
				<u>2.33109</u>	<u>3.03894</u>	<u>2.89606</u>	<u>2.21956</u>	<u>2.96486</u>			
Calstan	6-2	97	.0417	.00132	.00725	.00575	.00082	.00692			
	11-2	47	.8750	.11107	.20845	.18141	.07387	.18361			
	13-2	32	1.	.58952	.55191	.47494	.50832	.49648			
	14-2	56	.7083	.21818	.25575	.23104	.15814	.21516			
	Lease Total			<u>.92009</u>	<u>1.02336</u>	<u>.89314</u>	<u>.74115</u>	<u>.90218</u>			
	9-9	34	1.	.23446	.31114	.28260	.18651	.27888			
	15-9	75	.3750	.01858	.06966	.05806	.01309	.06613			
	16-9	15	1.	1.01776	.84230	.75481	.89293	.75657			
	Lease Total			<u>1.27080</u>	<u>1.22310</u>	<u>1.09547</u>	<u>1.09253</u>	<u>1.10158</u>			
	1-10	48	.8750	.35679*	.37512	.33349	.28041	.32330			
Calstan	2-10	47	.8750	.55021	.50623	.48962	.44395	.43387			
	7-10	24	1.	.57132	.53957	.52482	.42540	.44041			
	8-10	12	1.	.69888	.62606	.60951	.51185	.49887			
	9-10	14	1.	.63260	.58115	.55761*	.47751	.47568			
	10-10	13	1.	.97424	.81279	.79847	.78077	.68071			
	15-10	11	1.	.72648	.64478	.61523	.57532	.54179			
	16-10	66	.5417	.17455	.20078	.17923	.14509	.18086			
	Lease Total			<u>4.68507</u>	<u>4.28648</u>	<u>4.10798</u>	<u>3.64030</u>	<u>3.57549</u>			

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Calstan	3-10	81	.2917	.02323	.06014	.05466	.02506	.06150
	5-10	69	.5417	.26336	.26102	.27152	.32953	.30560
	6-10	50	.7917	.52607	.47719	.46000	.45934	.43155
	11-10	22	1.	1.07603	.88181	.87792	.89422	.75743
	12-10	12	1.	.33942	.38232	.38239	.28164	.34320
	13-10	14	1.	.89116*	.75648	.75917	.76525	.67026
	14-10	8	1.	.99239	.82509	.82722	.80441	.69670
	Lease Total			<u>4.11166</u>	<u>3.64405</u>	<u>3.64288</u>	<u>3.55915</u>	<u>3.26624</u>
	3-11	22	1.	.29507	.35224	.32113	.19749	.28630
	4-11	10	1.	.36903	.40239	.37190	.26203	.32994
	5-11	28	1.	.25194	.32304	.30101	.15844	.25993
	6-11	81	.2917	.07928	.09814	.08839	.05754	.08347
	Lease Total			<u>.99532</u>	<u>1.17581</u>	<u>1.08243</u>	<u>.67350</u>	<u>.95964</u>
	1-11	45	.8750	.26778	.31472	.29391	.17908	.25476
	2-11	60	.6250	.15931	.20312	.17577	.12319	.17877
	7-11	11	1.	.27648	.33967	.31368	.18976	.28110
	8-11	-	1.	.08559	.21020	.17579	.06163	.19443
	Lease Total	6	1.	<u>.78916</u>	<u>1.06771</u>	<u>.95915</u>	<u>.55766</u>	<u>.90906</u>
	12-11			.23936	.31447	.28648	.17715	.27254
	Lease Total			<u>.23936</u>	<u>.31447</u>	<u>.28648</u>	<u>.17715</u>	<u>.27254</u>
	5-13	41	.9583	.69966	.62028	.66707	.94998	.78880
	6-13	65	.5417	.27032	.26573	.28269	.36850	.33193
	Lease Total			<u>.96998</u>	<u>.88601</u>	<u>.94976</u>	<u>1.31648</u>	<u>1.12073</u>
	7-13	41	.9583	.27188	.33017	.42940	.60475	.55533
	10-13	57	.7083	.33435	.33450	.34752	.49000	.43954
	15-13	74	.4583	.10026	.13773	.13648	.15778	.17537
	Lease Total			<u>.70649</u>	<u>.80240</u>	<u>.91340</u>	<u>1.23953</u>	<u>1.17024</u>
	11-13	31	1.	.86700	.74007	.79503	1.14938	.93038
	12-13	23	1.	.88815	.75441	1.03580	1.19189	.95871
	13-13	35	1.	.46015	.46417	.51503	.66597	.60309
	14-13	29	1.	.82810	.71372	.76703	1.10129	.89750
	Lease Total			<u>.3.04338</u>	<u>2.67237</u>	<u>3.11289</u>	<u>4.10913</u>	<u>3.38968</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Ave. Mon.</u>	<u>50% Current</u> <u>50% Ave. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Ave. Mon.</u>
Calstan	1-15	6	1.	.17057	.26783	.23294	.15519	.25769
	2-15	3	1.	.78397	.68380	.68231	.67247	.60752
	3-15	14	1.	.93679	.78739	.80215	.75847	.66564
	4-15	1	1.	1.23748	.99128	.97763	1.04112	.85676
	5-15	54	.7917	1.03509	.82235	.80453	.87777	.71451
	6-15	-	1.	1.31439	1.04347	1.03048	1.16780	.94246
	7-15	-	1.	.99177	.82467	.82643	.86823	.73986
	8-15	-	1.	.73177	.64837	.65609	.67214	.60726
	9-15	-	1.	.18605*	.27831	.25951	.18051	.27482
	10-15	-	1.	.47226	.47243	.47049	.40238	.42488
	11-15	-	1.	.72470	.64358	.63603	.63348	.58112
	12-15	14	1.	1.30888	1.03971	1.02082	1.12202	.91148
	13-15	1	1.	.34521	.38625	.37246	.30074	.35611
	14-15	-	1.	.19790	.28639	.26779	.16920	.26720
	15-15	6	1.	.14809	.25258	.23524	.14578	.25132
	16-15	4	1.	.08732	.21137	.18516	.07939	.20644
Lease Total				10.67224	9.63978	9.46006	9.24669	8.66507
	6-16	21	1.	1.17509	.94898	.95159	1.09177	.89102
	11-16	76	.3750	.28769	.25215	.25246	.24606	.22369
	12-16	56	.7083	.45015	.41302	.44335	.51738	.45805
	13-16	79	.3750	.32723	.27895	.27673	.29959	.25987
	14-16	59	.7083	.69928	.58194	.59553	.60453	.51698
Lease Total				2.93944	2.47504	2.51966	2.75933	2.34961
	9-16	47	.8750	1.14138	.90712	.88910	.97941	.79562
	10-16	70	.4583	.40740*	.34599	.35162	.33551	.29689
	15-16	83	.2917	.23220	.20185	.20931	.18689	.17094
	16-16	1	1.	1.31044	1.04076	1.03045	1.17794	.94928
Lease Total				3.09142	2.49572	2.48048	2.67975	2.21273
	6-17	88	.2083	.06786	.07772	.07400	.07785	.08447
	11-17	86	.2083	.07721	.08405	.08233	.08941	.09228
	12-17	81	.2917	.09322	.10760	.09822	.10781	.11747
	13-17	79	.3750	.20930	.19898	.19961	.24429	.22247
	14-17	31	1.	.96200	.80452	.84006	1.11132	.90427
Lease Total				1.40959	1.27287	1.29422	1.63068	1.42096

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr.Cum.</u>	<u>1/4, 1/4, 1/4</u> <u>Well, Curr.Cum.</u> <u>Ave. Mon.</u>	<u>50% Current</u> <u>50% Ave. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Ave. Mon.</u>
Calstan	1-21	-	1.	1.27321	1.01551	.99663	1.16320	.93932
	2-21	-	1.	1.30148	1.03468	1.02462	1.16959	.94364
	7-21	11	1.	1.05650	.86856	.85646	.94756	.79351
	8-21	11	1.	.81680	.70607	.71992	.73836	.65207
	<u>Lease Total</u>			<u>4.44799</u>	<u>3.62482</u>	<u>3.59763</u>	<u>4.01871</u>	<u>3.32854</u>
	3-21	-	1.	1.16964	.94529	.94754	1.04280	.85790
	6-21	13	1.	.38038	.41009	.39731	.33212	.37735
	<u>Lease Total</u>			<u>1.55002</u>	<u>1.35538</u>	<u>1.34485</u>	<u>1.37492</u>	<u>1.23523</u>
	3-22	4	1.	.52018	.50489	.51182	.45683	.46167
	4-22	1	1.	.61379	.56840	.57736	.53280	.51307
	5-22	2	1.	.60711	.56383	.57736	.52389	.50701
	6-22	1	1.	.68964	.61980	.63597	.61863	.57108
	11-22	2	1.	1.13352	.92079	.90911	1.04447	.85904
	12-22	2	1.	1.15066	.93245	.93396	1.02588	.84650
	13-22	3	1.	.83456	.71807	.73169	.74312	.65527
	14-22	1	1.	.39151	.41764	.42666	.36501	.39958
	<u>Lease Total</u>			<u>5.94097</u>	<u>5.24587</u>	<u>5.30393</u>	<u>5.31063</u>	<u>4.81322</u>
	9-23	62	.6250	.17537	.14326	.20905	.19998	.23070
	10-23	57	.7083	.07564	.15910	.15804	.09246	.17074
	11-23	78	.3750	.09529	.12167	.11389	.09429	.12104
	12-23	5	1.	.45145	.45828	.46936	.43767	.44871
	13-23	11	1.	.14047	.24740	.22999	.13530	.24424
	14-23	17	1.	.20335	.29008	.28646	.19547	.28497
	15-23	54	.7917	.08742	.17974	.16882	.09820	.18734
	16-23	53	.7917	.10429	.19118	.19436	.12633	.20635
	<u>Lease Total</u>			<u>1.33328</u>	<u>1.79071</u>	<u>1.82997</u>	<u>1.37970</u>	<u>1.89409</u>
	11-24	68	.5417	.06481	.12638	.11856	.07827	.13567
	12-24	20	1.	.22372	.30389	.31032	.26488	.33191
	13-24	29	1.	.17235	.26904	.26968	.20769	.29320
	<u>Lease Total</u>			<u>.46088</u>	<u>.69931</u>	<u>.69856</u>	<u>.55084</u>	<u>.76078</u>
	4-25	10	1.	.88041	.74916	.79804	1.14477	.92686
	5-25	67	.5417	.14037	.17761	.18021	.21314	.22688
	<u>Lease Total</u>			<u>1.02078</u>	<u>.92677</u>	<u>.97825</u>	<u>1.35791</u>	<u>1.15374</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Crt</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/2, 1/2, 1/2, 1/2</u> <u>Well, Curr. Cum.</u> <u>Ave. Mon.</u>	<u>50% Current</u> <u>50% Ave. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Ave. Mon.</u>
Calistan	3-27	6	1.	.35695	.39424	.40401	.33145	.37691
	4-27	-	1.	.58323	.54764	.56987	.50731	.49580
	5-27	4	1.	.38238	.41145	.41957	.33587	.37987
	6-27	1	1.	.36296	.39828	.39465	.32893	.37517
	11-27	7	1.	.41116	.43100	.43806	.37033	.40321
	12-27	-	1.	.55207	.52651	.53464	.49403	.48682
	13-27	25	1.	.47443	.47387	.47556	.42462	.43986
	14-27	25	1.	.66476	.60295	.60475	.60177	.55968
	Lease Total			<u>3.78794</u>	<u>3.78592</u>	<u>3.84111</u>	<u>3.39431</u>	<u>3.51734</u>
	3-4	4	1.	.94608	.79373	.82586	1.02073	.84301
	4-4	5	1.	.50783*	.49651	.52300	.55577	.52858
	5-4	9	1.	.63939	.58573	.61302	.69522	.62286
	6-4	86	.2083	.01470	.04166	.03759	.01712	.04339
CALISTAN TOTAL	12-4	10	1.	1.06674	.87555	.89432	1.14449	.92671
	13-4	9	1.	.34821	.38828	.39755	.40176	.42442
	Lease Total			<u>3.52295</u>	<u>3.18146</u>	<u>3.29134</u>	<u>3.83509</u>	<u>3.38897</u>
				<u>57.90881</u>	<u>53.58941</u>	<u>53.68364</u>	<u>54.65644</u>	<u>51.40766</u>
Can. Export	1-5	18	1.	.32946	.37556	.37593	.34814	.38817
	7-5	71	.4583	.03713	.09492	.08621	.04191	.09835
	8-5	35	1.	.19016	.28115	.25822	.20556	.29179
	9-5	59	.7083	.11987	.18906	.16993	.13080	.19665
CAN. EXPORT TOTAL	Lease Total			<u>.67662</u>	<u>.94069</u>	<u>.89029</u>	<u>.72640</u>	<u>.97496</u>
				<u>.67662</u>	<u>.94069</u>	<u>.89029</u>	<u>.72640</u>	<u>.97496</u>
Can. Superior	2-16	51	.7917	.49549	.45646	.44873	.39268	.38647
	7-16	24	1.	1.29903	1.03303	.98104	1.11429	.90627
	8-16	64	.6250	.53902	.46063	.43593	.43640	.39060
	Lease Total			<u>2.33354</u>	<u>1.95012</u>	<u>1.86570</u>	<u>1.94337</u>	<u>1.68334</u>
	1-22	12	1.	.05092	.18669	.15720	.04465	.18295
	7-22	11	1.	.51139	.49893	.50204	.46630	.46806
Lease Total	8-22	11	1.	.30341	.35794	.36030	.31576	.36631
				<u>.86572</u>	<u>1.04356</u>	<u>1.01954</u>	<u>.82671</u>	<u>1.01732</u>
	Lease Total							

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr.</u> <u>Avg. Mon.</u>
Can. Superior	2-28	11	1.	.65669	.59745	.60410	.59236	.55331
	7-28	14	1.	.55947	.53153	.52745	.50636	.49516
	8-28	18	1.	.57099	.53934	.53586	.51688	.50227
	9-28	18	1.	.56576	.53583	.53794	.50950	.49732
	10-28	9	1.	.36614*	.40043	.40168	.32999	.37589
	15-28	22	1.	.58140	.54640*	.53923	.54412	.52069
	16-28	30	1.	.55107	.52584	.53440	.50160	.49193
	Lease Total			<u>3.85152</u>	<u>3.67682</u>	<u>3.68066</u>	<u>3.50087</u>	<u>3.43657</u>
	CAN. SUPERIOR TOTAL			<u>7.05078</u>	<u>6.67050</u>	<u>6.56590</u>	<u>6.27089</u>	<u>6.13723</u>
Dome	8-14	21	1.	.26479	.33175	.35529	.40921	.42950
	Lease Total			<u>.26479</u>	<u>.33175</u>	<u>.35529</u>	<u>.40921</u>	<u>.42950</u>
	1-16	32	1.	.48467	.48081	.45469	.37061	.40336
	Lease Total			<u>.48467</u>	<u>.48081</u>	<u>.45469</u>	<u>.37061</u>	<u>.40336</u>
	3-24	16	1.	.16356	.26307	.26785	.23766	.31346
	4-24	57	.7083	.04592	.13891	.12962	.06956	.15523
	5-24	62	.6250	.03318	.11762	.10685	.05060	.12971
	6-24	60	.6250	.04351	.12460	.11279	.06166	.13717
	Lease Total			<u>.28617</u>	<u>.64420</u>	<u>.61711</u>	<u>.41948</u>	<u>.73557</u>
	11-26	30	1.	.16189	.26194	.25285	.20074	.28849
DOME TOTAL	12-26	11	1.	.29996	.35556	.36584	.35582	.39336
	Lease Total			<u>.46185</u>	<u>.61750</u>	<u>.61869</u>	<u>.55656</u>	<u>.68185</u>
	1-28	27	1.	.43047	.44410	.44346	.37789	.40833
	Lease Total			<u>.43047</u>	<u>.44410</u>	<u>.44346</u>	<u>.37789</u>	<u>.40833</u>
	4-3	-	1.	.85682	.73316	.77657	1.16639	.94149
	5-3	27	1.	.44516	.45401	.47021	.59824	.55728
	Lease Total			<u>1.30198</u>	<u>1.18717</u>	<u>1.24678</u>	<u>1.76463</u>	<u>1.49877</u>
	12-3	77	.3750	.08085	.11190	.09833	.10108	.12563
	Lease Total			<u>.08085</u>	<u>.11190</u>	<u>.09833</u>	<u>.10108</u>	<u>.12563</u>
	1-4	9	1.	.36792	.40168	.42088	.53812	.51668
Fargo	Lease Total			<u>.36792</u>	<u>.40168</u>	<u>.42088</u>	<u>.53812</u>	<u>.51668</u>
	2-4	14	1.	.36196	.39760	.40312	.43425	.44640
	7-4	35	1.	.10340	.22228	.19814	.13323	.24285
	Lease Total			<u>.46536</u>	<u>.61988</u>	<u>.60126</u>	<u>.56748</u>	<u>.68925</u>
	DOME TOTAL			<u>4.14406</u>	<u>4.83899</u>	<u>4.85649</u>	<u>5.10506</u>	<u>5.48894</u>
	9-14	3	1.	.34109	.38345	.39999	.50104	.49156
	10-14	4	1.	.29056	.34923	.37199	.46703	.46860
	16-14	-	1.	.28934	.34835	.45469	.64356	.58794
	Lease Total			<u>.92099</u>	<u>1.08103</u>	<u>1.22667</u>	<u>1.61163</u>	<u>1.54810</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/4, 1/4, 1/4, 1/4</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Fargo	7-18	77	.3750	.02419	.07346	.06272	.03435	.08051
	8-18	77	.3750	.04675	.08876	.09181	.07782	.10991
	Lease Total			.07094	.16222	.15453	.11217	.19042
	1-19	49	.8750	.60003	.54004	.57500	.82137	.68910
	2-19	58	.7083	.11502	.18577	.17960	.16758	.22151
	7-19	72	.4583	.09722	.13566	.13379	.13901	.16400
	8-19	22	1.	.39224	.41813	.45298	.57292	.54017
	Lease Total			1.20451	1.27960	1.34137	1.70088	1.61478
	9-19	23	1.	.27620	.33949	.35622	.41431	.43295
	Lease Total			.27620	.33949	.35622	.41431	.43295
	1-26	21	1.	.19105	.28171	.28859	.23912	.31445
	2-26	14	1.	.39847	.42236	.43879	.47487	.47386
	7-26	5	1.	.78609*	.68519	.71117	.91053	.76846
FARGO TOTAL	8-26	16	1.	.16200	.26205	.25869	.24668	.31960
	Lease Total			1.53761	1.65131	1.69724	1.87120	1.87637
	5-34	34	1.	.08253	.20812	.18710	.11171	.22830
	6-34	28	1.	.11737	.23175*	.21381	.15502	.25758
	7-34	42	.9583	.29460	.34558	.34889	.37298	.39860
	11-34	28	1.	.23480	.31141	.32289	.32394	.37184
	12-34	22	1.	.08966	.21295	.19093	.11720	.23200
	Lease Total			.81896	1.30980	1.26362	1.08085	1.48832
	FARGO TOTAL			4.82921	5.82346	6.03965	6.79104	7.15094
IMPERIAL	1-33	67	.5417	.03612	.10691	.09599	.03618	.10721
	2-33	-	1.	.45896	.46341	.49230	.47829	.47621
	7-33	7	1.	.43926	.45002	.46899	.48126	.47818
	9-33	-	1.	.09739	.21820	.18933	.11423	.23000
	10-33	63	.6250	.34303	.32770	.32202	.37748	.35072
	15-33	4	1.	.44210	.45198	.47705	.51140	.49860
	Lease Total			1.81686	2.01822	2.04568	1.99884	2.14092
	IMPERIAL TOTAL			1.81686	2.01822	2.04568	1.99884	2.14092
Shell	9-21	-	1.	.93484	.78606	.78360	.89114	.75535
	10-21	23	1.	.36246	.39794	.37693	.35924	.39567
	11-21	73	.4583	.02344	.08562	.06999	.02465	.08667
	14-21	42	.9583	.47337*	.46684	.47292	.44492	.44729
	15-21	68	.5417	.12659	.16827	.16411	.12237	.16549
	16-21	-	1.	.69665	.62456	.64484	.66687	.60370
	Lease Total			2.61735	2.52929	2.51239	2.50919	2.45417

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/2, 1/2, 1/2, 1/2</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Shell	16-32	50	.8750	.13591	.22529	.20069	.14633	.23261
	Lease Total			.13591	.22529	.20089	.14633	.23261
	3-33	9	1.	.72615	.64455	.65695	.70788	.63147
	4-33	53	.7917	.29317	.31926	.31781	.28468	.31344
	5-33	60	.7085	.10229	.17713	.16474	.10063	.17625
	6-33	13	1.	.79376	.69040	.70151	.78570	.68405
	11-33	9	1.	.40871	.42935	.45073	.43380	.44613
	12-33	28	1.	.44310	.45262	.45253	.47280	.47246
	13-33	5	1.	.47816	.47640	.48394	.51908	.50375
	14-33	3	1.	.73349	.64958	.67268	.79338	.68928
SHELL TOTAL				<u>3.97885</u>	<u>3.83929</u>	<u>3.90088</u>	<u>4.09795</u>	<u>3.91683</u>
Lease Total				<u>6.73209</u>	<u>6.59387</u>	<u>6.61416</u>	<u>6.75347</u>	<u>6.60361</u>
Shannon	11-18	53	.7917	.00855	.12627	.09944	.01651	.13209
	12-18	6	1.	.07535	.20325	.17699	.11709	.23193
	14-18	-	-	.00123*	.15303	.11616	.00398	.15548
	Lease Total			<u>.08513</u>	<u>.48255</u>	<u>.39259</u>	<u>.13758</u>	<u>.51950</u>
	SHANNON TOTAL			<u>.08513</u>	<u>.48255</u>	<u>.39259</u>	<u>.13758</u>	<u>.51950</u>
Souris Valley	10-2	35	1.	.08782	.21171	.17764	.05703	.19132
	15-2	-	1.	.67878	.61244	.58637	.47784	.47587
	16-2	31	1.	.10991	.22673	.19392	.07115	.20091
	Lease Total			<u>.87651</u>	<u>1.05088</u>	<u>.95793</u>	<u>.60602</u>	<u>.86810</u>
	SOURIS VALLEY TOTAL			<u>.87651</u>	<u>1.05088</u>	<u>.95793</u>	<u>.60602</u>	<u>.86810</u>
Sun Oil	15-3	96	.0417	.00327	.00856	.00717	.00226	.00790
	16-3	63	.6250	.11047	.17001	.15653	.07140	.14375
	Lease Total			<u>.11374</u>	<u>.17857</u>	<u>.16370</u>	<u>.07366</u>	<u>.15165</u>
	4-14	7	1.	.12377	.23608	.20690	.10185	.22163
	5-14	4	1.	.44872	.45647	.45303	.42316	.43894
	Lease Total			<u>.57249</u>	<u>.69255</u>	<u>.65993</u>	<u>.52501</u>	<u>.66057</u>
	11-14	66	.5417	.00799	.08784	.06956	.01508	.09295
	12-14	14	1.	.11971	.23333	.20285	.11508	.23057
	13-14	51	.7917	.11341	.19740	.17704	.10849	.19433
	Lease Total			<u>.24111</u>	<u>.51857</u>	<u>.44945</u>	<u>.23865</u>	<u>.51785</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Sun Oil	1-20	42	.9583	.74664	.65214	.70541	.93515	.77877
	2-20	73	.4583	.07279	.11909	.12425	.09654	.13529
	7-20	50	.8750	.20218	.27024	.26836	.25545	.30639
	<u>Lease Total</u>			<u>1.02161</u>	<u>1.04147</u>	<u>1.09802</u>	<u>1.28714</u>	<u>1.22045</u>
	3-20	56	.7083	.45174	.41410	.45034	.57334	.49589
	4-20	67	.5417	.25024	.25213	.28309	.33153	.30696
	5-20	87	.2083	.03389	.05468	.05388	.04509	.06231
	6-20	75	.4583	.15714	.17629	.18442	.20253	.20697
	<u>Lease Total</u>			<u>.89301</u>	<u>.89720</u>	<u>.97173</u>	<u>1.15249</u>	<u>1.07213</u>
	11-20	56	.7083	.09098	.16947	.15591	.11810	.18805
	12-20	68	.5417	.18362	.20696	.22792	.25096	.25246
	<u>Lease Total</u>			<u>.27460</u>	<u>.37643</u>	<u>.38382</u>	<u>.36906</u>	<u>.44051</u>
	4-21	52	.7917	.78343*	.65170	.66328	.70086	.59486
	5-21	53	.7917	.19254	.25102	.23402	.17068	.23636
	<u>Lease Total</u>			<u>.97597</u>	<u>.90272</u>	<u>.89730</u>	<u>.87154</u>	<u>.83122</u>
	9-22	13	1.	.67795	.61188	.56390	.64222	.58703
	10-22	-	1.	.50037	.49149	.52764	.43386	.44618
	15-22	38	1.	.08604	.21050	.19076	.07390	.20273
	16-22	54	.7917	.15663	.23475	.20663	.14584	.21955
	<u>Lease Total</u>			<u>1.42098</u>	<u>1.54862</u>	<u>1.48893</u>	<u>1.29582</u>	<u>1.45549</u>
	5-23	23	1.	.37749	.40813	.38856	.36394	.39885
	6-23	78	.3750	.02266	.07244	.06333	.02445	.07382
	<u>Lease Total</u>			<u>.40015</u>	<u>.48057</u>	<u>.45189</u>	<u>.38839</u>	<u>.47267</u>
	3-26	43	.9583	.14736	.24573	.22637	.15838	.25348
	4-26	29	1.	.18176	.27541	.26666	.16763	.26610
	1-27	45	.8750	.27128	.31710	.30085	.25305	.30478
	2-27	41	.9583	.29221	.34399	.32579	.26786	.32754
	7-27	62	.6250	.16355	.20600	.18847	.15369	.19940
	8-27	6	1.	.42418	.43979	.45439	.39515	.41995
	9-27	-	1.	.38389	.41247	.42046	.35806	.39487
	10-27	10	1.	.32979	.37583	.38404	.29934	.35522
	15-27	-	1.	.43581	.44767	.46204	.39072	.41697
	16-27	38	1.	.26574	.33236	.29924	.26074	.32906
	<u>Lease Total</u>			<u>2.89557</u>	<u>3.39635</u>	<u>3.32831</u>	<u>2.70462</u>	<u>3.26737</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Sun Oil	5-26 6-26 10-26 <u>Lease Total</u>	50 26 36	.8750 1. 1.	.14107 .45245 .32395 <u>.91747</u> <u>9.72670</u>	.22884 .45896 .37182 <u>1.05962</u> <u>11.09267</u>	.20055 .47552 .38200 <u>1.05807</u> <u>10.95115</u>	.13447 .49437 .41386 <u>1.04270</u> <u>9.94908</u>	.22463 .48705 .43260 <u>1.14428</u> <u>11.23419</u>
SUN OIL TOTAL				<u>.15883</u> <u>.15883</u> <u>.15883</u>	<u>.25986</u> <u>.25986</u> <u>.25986</u>	<u>.30082</u> <u>.30082</u> <u>.30082</u>	<u>.35330</u> <u>.35330</u> <u>.35330</u>	<u>.39166</u> <u>.39166</u> <u>.39166</u>
E.H. Valiat	13-34 <u>Lease Total</u>	10	1.	<u>.15883</u> <u>.15883</u>	<u>.25986</u> <u>.25986</u>	<u>.30082</u> <u>.30082</u>	<u>.35330</u> <u>.35330</u>	<u>.39166</u> <u>.39166</u>
E.H. VALIAT TOTAL				<u>.15883</u>	<u>.25986</u>	<u>.30082</u>	<u>.35330</u>	<u>.39166</u>
West Canadian	2-17 7-17 8-17 9-17 10-17 15-17 16-17 <u>Lease Total</u>	30 70 72 8 63 23 63	1. .4583 .4583 1. .6250 1. .6250	.59498 .20517 .18706 .92288 .33444 .42796 .38915 <u>.3.06164</u>	.55565* .20885 .19658 .77796 .32190 .44235 .35897 <u>2.86226</u>	.58659 .22202 .21475 .81127 .35618 .47683 .38168 <u>3.02952</u>	.75371 .25001 .23301 1.06673 .39392 .51824 .44586 <u>3.66148</u>	.66246 .23907 .22757 .87409 .36187 .50318 .39696 <u>3.26520</u>
	9-18 10-18 15-18 16-18 <u>Lease Total</u>	74 79 51 69	.4583 .3750 .7917 .5417	.15313 .09068 .10402 .25384 <u>.60167</u> <u>3.66331</u>	.17358 .11857 .19100 .25455 <u>.73770</u> <u>3.59996</u>	.18023 .11472 .22222 .25915 <u>.77632</u> <u>3.80564</u>	.19668 .11490 .15404 .30522 <u>.77084</u> <u>4.43232</u>	.20300 .13499 .22510 .28914 <u>.85223</u> <u>4.11743</u>
WEST CANADIAN TOTAL				<u>.15313</u> <u>.09068</u> <u>.10402</u> <u>.25384</u> <u>.60167</u> <u>3.66331</u>	<u>.17358</u> <u>.11857</u> <u>.19100</u> <u>.25455</u> <u>.73770</u> <u>3.59996</u>	<u>.18023</u> <u>.11472</u> <u>.22222</u> <u>.25915</u> <u>.77632</u> <u>3.80564</u>	<u>.19668</u> <u>.11490</u> <u>.15404</u> <u>.30522</u> <u>.77084</u> <u>4.43232</u>	<u>.20300</u> <u>.13499</u> <u>.22510</u> <u>.28914</u> <u>.85223</u> <u>4.11743</u>
FIELD TOTAL				<u>100.00000</u>	<u>100.00000</u>	<u>100.00000</u>	<u>100.00000</u>	<u>100.00000</u>

* These figures have been raised or lowered one to make all totals balance.

All preceding calculations are up to the end of 1958.

NORTH VIRDEN SCALLOP EQUITIES
SUMMARY SHEET

Maximum %age, then reduce first share
* 2.5% of 1.00 = 0.025 of 1.00 = 0.025

Company	Well Count	Current Production (2nd 1/2 1958)	Cumulative Production (end of 1958)	Average Monthly Production (end of 1958)	50% Current Cum.	1/3, 1/3, 1/3 Well, Curr. Cum.	50% Current 50% Avg. Mon.	1/3, 1/3, 1/3 Well, Curr. Cum. Avg. Mon.	1/3, 1/3, 1/3 Well, Curr. Avg. Mon.	
British American	10	4.0322	1.7535	2.4979	2.2701	2.12560	2.76113	2.01170	2.63857	2.66320
California Standard	11	44.7580	55.7156	59.8329	53.2478	2.33109	3.03894	2.21956	2.89606	2.96466
Canadian Export	4	1.6129	0.7045	0.6789	0.7766	57.77425	53.43551	54.48170	53.38857	51.24047
Canadian Superior	13	5.2419	5.9005	7.5843	5.9442	57.90881 * 1	53.58941	54.65644 * 2	53.68364	51.40766
Dome Exploration	15	6.0484	4.9475	2.8577	4.6366	0.69170	0.99877	0.74055	0.94323	1.05123
Fargo Oils	19	7.6613	6.5915	2.7671	6.5184	0.67662	0.94069 * 2	0.72640	0.89029	0.97496
Imperial Oil	6	2.4194	1.8923	1.7971	2.1343	6.74240	6.24224	5.92235	6.16773	5.69553
Shell Oil	15	6.0484	6.2504	6.3748	6.3202	7.05078	6.67050	6.27089	6.55590	6.13723
Shannon Oils	3	1.2097	0.1326	0.0244	0.1207	3.98260	4.61787	4.79205	4.64255	5.21084
Souris Valley	3	1.2097	0.4638	1.1112	0.6179	4.14406	4.83899	5.10506 * 1	4.85649	5.48894
Sun Oil	37	14.9194	9.8066	10.8022	11.5043	4.67930	5.67331	6.55495	5.88457	6.92714
Valiat et al	1	0.4032	0.2507	0.0347	0.3799	4.82921	5.82346	6.79104 * 1	6.07965	7.15094
West Canadian	11	4.4355	5.5907	3.6368	5.5290	1.84470	2.03626	2.01330	2.06078	2.14866
TOTAL	144	100.0000	100.0000	100.0000	100.0000	1.81686	2.01822	1.99884 * 1	2.04568	2.14092
						6.31260	6.22450	6.28530	6.24845	6.20633
						6.73209	6.59387	6.72347 * 1	6.61416	6.60361
						0.07850	0.45577	0.12665	0.37185	0.48767
						0.08513	0.48255	0.13758	0.39259	0.51950
						0.78750	0.92824	0.54085	0.85065	0.76360
						0.87651	1.05088	0.60602	0.95795	0.86810
						10.30440	11.84274	10.65545	11.75812	12.07677
						9.72670	11.09267 * 1	9.94908	10.95115 * 2	11.23419
						0.14270	0.22955	0.31530	0.26713	0.34460
						0.15885	0.25986	0.35330	0.30082	0.39166
						4.61375	4.55433	5.55985	4.79800	5.18506
						3.66351	3.59996	4.43232 * 1	3.80564	4.11745

* Equities with water penalty applied.

**NORTH VIRGEN SCALLOP RIGHTS
by Wells, Leases and Company Totals.**

Company	Well Number	Well Count	Current Production	Cumulative Production	E					1/3, 1/3 & 1/3 Wells, Curr. & Cum.	50% Current 50% Avg. Mon.	4				1/3, 1/3, 1/3 Wells, Curr.
					Q	V	I	T	I			Avg. Mon.	4	4	4	
B.A.	3-28	.4052	.3337	.5342	.4495	.43395				.42370	.39160	.43015	.39547			
	5-28	.4032	.0426	.0709	.0683	.05675				.17223	.05545	.14625	.17337			
	6-28	.4032	.1444	.3927	.3305	.26855				.31343	.23745	.31770	.29270			
	11-28	.4032*	.3162	.5784	.4995	.44730				.43264*	.40775	.44930	.40627			
	12-28	.4032	.3241	.2271	.2015	.27560				.31813	.26280	.28997	.30960			
	13-28	.4032	.0627	.1725	.1718	.11760				.21280	.11725	.20255	.21257			
	14-28	.4032	.2325	.2486	.2203	.24055				.29477	.22640	.27615	.28533			
	Lease Total	2.8225	1.4562	2.2244	1.9412	1.84070				2.16770	1.69870	2.11107	2.07331			
	2-34	.4032	-	.0024	.0034	.00120				.13520	.00170	.10225	.13557			
	3-34	.4032*	.2971	.2440	.2966	.27055				.31480	.29685	.31025	.33233			
B.A. TOTAL	4-34	.4032	-	.0271	.0289	.01355				.14343	.01445	.11480	.14405			
	Lease Total	1.2097	.2971	.2735	.3289	.28530				.59343	.31500	.52730	.61189			
		4.0322	1.7523	2.4979	2.2701	2.12560				2.76113	2.01170	2.63837	2.68520			
Calistan	6-2	.4032	.0051	.0520	.0297	.02855				.15343	.01740	.12250	.14600			
	11-2	.4032	.0456	.1825	.1051	.11405				.21043	.07535	.18410	.18463			
	13-2	.4032	.6828	.3765	.2245	.52965				.48750	.45365	.42175	.43683			
	14-2	.4032*	.1966	.3569	.2019	.27675				.31894*	.19925	.28967	.26727			
	Lease Total	1.6129	.9501	.9679	.5612	.94900				1.17030	.74565	1.01802	1.05473			
	9-9	.4032	.1536	.2877	.1795	.21065				.27483	.16645	.25095	.24537			
	15-9	.4032	.0045	.0845	.0578	.04450				.16407	.03115	.13750	.15217			
	16-9	.4032	1.1447	.6841	.4491	.91440				.74400	.79690	.67028	.66567			
	Lease Total	1.2095	1.3028	1.0563	.6862	1.16955				1.18889	.99450	1.05873	1.08621			
	1-10	.4032*	.3542	.3785	.2178	.36635				.37867	.28600	.33845	.33310			
Calistan	2-10	.4032	.4511	.6788	.4545	.56495				.51103	.45280	.43690	.43621			
	7-10	.4032	.3249	.7017	.4344	.51330				.47660	.37965	.46605	.38750			
	8-10	.4032	.4076	.8482	.5060	.62790				.55300	.45680	.54125	.43683			
	9-10	.4032*	.4116	.7251	.4407	.56835				.51333	.42615	.49517	.41823			
	10-10	.4032	.7112	1.0594	.6824	.87530				.91794*	.69680	.70905	.59893			
	15-10	.4032	.5502	.7552	.4767	.65270				.56953	.51345	.54633	.47670			
	16-10	.4032	.2850	.2940	.1951	.28950				.32740	.23905	.29382	.29371			
	Lease Total	5.2258	5.4958	5.4209	3.4056	4.45835				4.04750	3.45070	3.88702	3.31572			

Company	Well Number	Well Count	Current Production	Cumulative Production	Monthly Average	50% Current 50% Cum.	1/3, 1/3 & 1/3 Wells, Curr. & Cum.	50% Current 50% Avg. Mon.	1/3, 1/3 & 1/3 Wells, Curr. Cum. Avg. Mon.	1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.
Calstan	3-10	.4032	.0339	.1092	.1194	.07155	.18210	.07665	.16642	.18550
	5-10	.4033*	.5823	.2913	.5035	.43680	.42563	.54290	.44510	.49637
	6-10	.4032	.5241	.6699	.5115	.59700	.53240	.51780	.52718	.47960
	11-10	.4032	.8144	1.1191	.7817	.96675	.77890	.79805	.77960	.66643
	12-10	.4032	.1575	.4524	.3452	.30495	.33770	.25135	.33957	.30197
	13-10	.4933*	.6739	.9274	.6920	.80065	.66820	.68295	.67415	.58975
	14-10	.4032	.6839	1.0993	.7519	.89160	.72880	.71790	.73458	.61300
	Lease Total	2.8226	3.4700	4.6686	3.7052	4.06930	3.65373	3.58760	3.66660	3.33260
	3-11	.4032	.1452	.3850	.2073	.26510	.31113	.17625	.28517	.25190
	4-11	.4032	.2130	.4501	.2547	.33155	.35543	.23385	.33025	.29030
	5-11	.4033*	.0696	.3831	.2132	.22635	.28534*	.14140	.26730	.22870
	6-11	.4032	.1674	.3210	.1847	.24420	.29720	.17605	.26908	.25177
	Lease Total	1.6129	.5952	1.5392	.8599	1.06720	1.24910	.72755	1.15180	1.02267
	1-11	.4032	.1253	.4246	.2400	.27495	.31770	.18265	.29828	.25617
	2-11	.4032	.2140	.2440	.1378	.22900	.28707	.17590	.24975	.25167
	7-11	.4033*	.1246	.3722	.2141	.24840	.30003	.16935	.27855	.24733
	8-11	.4032	.0426	.1112	.0674	.07690	.18967	.05500	.15610	.17107
	Lease Total	1.6129	.5065	1.1520	.6595	.82925	1.09047	.58290	.98268	.92624
	12-11	.4032	.1319	.2982	.1843	.21505	.27777	.15810	.25440	.23980
	Lease Total	.4032	.1319	.2982	.1843	.21505	.27777	.15810	.25440	.23980
	5-13	.4033*	1.0120	.2999	.7574	.65595	.57173	.88470	.61815	.72425
	6-13	.4032	.6604	.2363	.5538	.44835	.43330	.60710	.46342	.53913
	Lease Total	.8065	1.6724	.5362	1.3112	1.10430	1.00503	1.49180	1.08157	1.26336
	7-13	.4032	.4478	.0620	.6786	.25490	.30433	.56320	.39790	.50987
	10-13	.4032	.7434	.1048	.4914	.42410	.41714*	.61740	.43570	.54600
	15-13	.4033*	.3453	.0478	.2614	.19655	.26547	.30335	.26445	.33667
	Lease Total	1.2097	1.5365	.2146	1.4314	.87555	.98694	1.48395	1.09805	1.39254
	11-13	.4032	1.1897	.3682	.8629	.77895	.65370	1.02630	.70600	.81860
	12-13	.4032	1.2473	.3486	.8801	.79795	.66637	1.06370	.91980	.84353
	13-13	.4032	.5893	.2375	.5994	.41340	.41000	.59435	.45735	.53063
	14-13	.4033*	1.1325	.3555	.8332	.74400	.63043	.98285	.68113	.78967
	Lease Total	1.6129	4.1588	1.3098	3.1756	2.73430	2.36050	3.66720	2.56428	2.98243

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Calisten	1-15	.4032	.1595	.1472	.1177	.15325	.23657	.13850	.20685	.22673
	2-15	.4033*	.5887	.8200	.6116	.70435	.60400	.60015	.60590	.53453
	3-15	.4032	.5910	1.0923	.7628	.84165	.69550	.67690	.71232	.58567
	4-15	.4032	1.0125	1.2111	.8458	1.11180	.87560	.92915	.86815	.75383
	5-15	.4032	1.1219	1.2274	.8571	1.17465	.91750	.98950	.90240	.79407
	6-15	.4033*	1.1892	1.1726	.8952	1.18090	.92170	1.04220	.91508	.82923
	7-15	.4032	.7995	.9826	.7502	.89105	.72843	.77485	.73388	.65097
	8-15	.4032	.5873	.7276	.6124	.65745	.57270	.59985	.58262	.53430
	9-15	.4032	.1379	.1964	.1843	.16715	.24583	.16110	.23045	.24180
	10-15	.4033*	.2989	.5497	.4193	.42430	.41730	.35910	.41780	.37383
	11-15	.4032	.5769	.7253	.5538	.65110	.56847	.56535	.56480	.51130
	12-15	.4032	1.1318	1.2201	.8709	1.17595	.91837	1.00135	.90650	.80197
	13-15	.4032	.2373	.3830	.2995	.31015	.34117	.26840	.33075	.31533
	14-15	.4033*	.1097	.2459	.1923	.17780	.25297	.15100	.23780	.23510
	15-15	.4032	.0939	.1722	.1663	.13305	.22310	.13010	.20890	.22113
	16-15	.4032	.0441	.1128	.0976	.07845	.18670	.07085	.16442	.18164
	<u>Lease Total</u>	<u>6.4516</u>	<u>8.6799</u>	<u>10.9862</u>	<u>8.2368</u>	<u>9.83305</u>	<u>8.70591</u>	<u>8.45835</u>	<u>8.58862</u>	<u>7.78945</u>
	6-16	.4032	1.0833	1.0282	.8654	1.05575	.83823	.97435	.84502	.78397
	11-16	.4033*	.5617	.8168	.6095	.68925	.59393	.58560	.59783	.52483
	12-16	.4032	.6256	.5164	.6782	.57100	.51507	.65190	.55585	.56900
	13-16	.4032	.7759	.7921	.6501	.78400	.65707	.71300	.65532	.60973
	14-16	.4032	.7141	1.0599	.8093	.88700	.72573	.76170	.74663	.64220
	<u>Lease Total</u>	<u>2.0161</u>	<u>3.7606</u>	<u>4.2134</u>	<u>3.6125</u>	<u>3.98700</u>	<u>3.33003</u>	<u>3.68655</u>	<u>3.40065</u>	<u>3.12975</u>
	9-16	.4033*	1.1358	1.2081	.8621	1.17195	.91573	.99895	.90232	.80040
	10-16	.4032	.5820	1.0153	.7247	.79865	.66683	.65335	.68130	.56997
	15-16	.4032	.4285	1.0019	.7151	.71520	.61120	.57180	.63718	.51560
	16-16	.4032	1.2002	1.1545	.9023	1.17735	.91930	1.05125	.91505	.83523
	<u>Lease Total</u>	<u>1.6129</u>	<u>3.3465</u>	<u>4.3798</u>	<u>3.2042</u>	<u>3.86315</u>	<u>3.11306</u>	<u>3.27535</u>	<u>3.13585</u>	<u>2.72120</u>
	6-17	.4033*	.3940	.1914	.2731	.29270	.32957	.33355	.31545	.35680
	11-17	.4032	.4314	.3347	.2347	.33305	.35643	.38305	.35100	.38977
	12-17	.4032	.4410	.1332	.2187	.28710	.32580	.32985	.29902	.35430
	13-17	.4032	.6781	.3248	.4847	.50145	.46870	.58140	.47270	.52200
	14-17	.4033*	1.1316	.5970	.8520	.86430	.71063	.99180	.74598	.79563
	<u>Lease Total</u>	<u>2.0162</u>	<u>3.0761</u>	<u>1.4811</u>	<u>2.1632</u>	<u>2.27860</u>	<u>2.19113</u>	<u>2.61965</u>	<u>2.18415</u>	<u>2.41850</u>

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3, 1/3, 1/3, 1/3 Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Celstec	1-21	.4032	1.2271	1.0607	.8491	1.14390	.89700	1.03810	.88502	.82647
	2-21	.4032	1.1899	1.1487	.8977	1.16930	.91393	1.04380	.90988	.83027
	7-21	.4032	.9507	.9477	.7406	.94920	.76720	.84565	.76055	.69817
	8-21	.4033*	.6317	.8360	.6862	.73385	.62367	.65895	.63930	.57373
	<u>Lease Total</u>	<u>1.6129</u>	<u>3.9994</u>	<u>3.9931</u>	<u>3.1736</u>	<u>3.99625</u>	<u>3.20180</u>	<u>3.58650</u>	<u>3.19475</u>	<u>2.92864</u>
	3-21	.4032	1.0005	1.1012	.8608	1.05085	.83497	.93065	.84143	.75485
	6-21	.4032	.2682	.4153	.3246	.34175	.36223	.29640	.35282	.33200
	<u>Lease Total</u>	<u>.8064</u>	<u>1.2687</u>	<u>1.5165</u>	<u>1.1854</u>	<u>1.39260</u>	<u>1.19720</u>	<u>1.22705</u>	<u>1.19425</u>	<u>1.08685</u>
	3-22	.4032	.3353	.3994	.4801	.46735	.44597	.40770	.45450	.40620
	4-22	.4033*	.4064	.6965	.5446	.55145	.50207	.47550	.51270	.45143
	5-22	.4032	.3784	.7125	.5567	.54545	.49803	.46755	.51270	.44610
	6-22	.4032	.4876	.7516	.6166	.61960	.54747	.55210	.56475	.50247
	11-22	.4032	1.0751	.9617	.7892	1.01840	.81333	.93215	.80730	.75585
	12-22	.4033*	.9845	1.0831	.8466	1.03380	.82363	.91555	.82937	.74480
	13-22	.4032	.6302	.8694	.6962	.74980	.63427	.66320	.64975	.57654
	14-22	.4032	.2427	.4608	.4088	.35175	.36890	.32575	.37888	.35157
	<u>Lease Total</u>	<u>3.2258</u>	<u>4.5402</u>	<u>6.1350</u>	<u>4.9388</u>	<u>5.33760</u>	<u>4.63367</u>	<u>4.73950</u>	<u>4.70995</u>	<u>4.23494</u>
	9-23	.4032	.2904	.2138	.2807	.25210	.30247	.28555	.29702	.32477
	10-23	.4033*	.0357	.1562	.1973	.09595	.19840	.11650	.19813	.21210
	11-23	.4032	.2297	.2269	.2191	.22830	.28660	.22440	.26972	.28400
	12-23	.4032	.3284	.4828	.4528	.40560	.40480	.39060	.41680	.39480
	13-23	.4032	.0802	.1722	.1613	.12620	.21853	.12075	.20423	.21490
	14-23	.4033*	.1001	.2653	.2483	.18270	.25623	.17445	.25438	.25073
	15-23	.4032	.0656	.1328	.1558	.09920	.20053	.11070	.18955	.20820
	16-23	.4032	.0527	.1840	.2321	.11835	.21330	.14240	.21800	.22933
	<u>Lease Total</u>	<u>3.2258</u>	<u>1.1828</u>	<u>1.8340</u>	<u>1.9479</u>	<u>1.50840</u>	<u>2.18086</u>	<u>1.56535</u>	<u>2.04763</u>	<u>2.11665</u>
	11-24	.4032	.0987	.1163	.1532	.10750	.20607	.12895	.19435	.22037
	12-24	.4033*	.1758	.2262	.2970	.20100	.26843	.23640	.27557	.29203
	13-24	.4032	.1437	.1660	.2270	.15485	.23764*	.18535	.23498	.25797
	<u>Lease Total</u>	<u>1.2097</u>	<u>.4182</u>	<u>.5085</u>	<u>.6832</u>	<u>.46335</u>	<u>.71214</u>	<u>.55070</u>	<u>.70490</u>	<u>.77037</u>
	4-25	.4032	1.1938	.3882	.8495	.79100	.66173	1.02165	.70867	.81550
	5-25	.4032	.3894	.0762	.3129	.23280	.28960	.35115	.29543	.36850
	<u>Lease Total</u>	<u>.8064</u>	<u>1.5832</u>	<u>.4644</u>	<u>1.1624</u>	<u>1.02380</u>	<u>.95133</u>	<u>1.37280</u>	<u>1.00410</u>	<u>1.18400</u>

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Calistan	3-27	.4033*	.2012	.4402	.3904	.32070	.34823	.29580	.35877	.35163
	4-27	.4032	.3325	.7155	.5730	.52400	.48373	.45275	.50605	.43623
	5-27	.4032	.1995	.4876	.4000	.34355	.36343	.29975	.37258	.33423
	6-27	.4032	.2407	.4115	.3464	.32610	.35180	.29355	.35045	.35010
	11-27	.4033*	.2471	.4917	.4139	.36940	.38070	.33050	.38900	.35477
	12-27	.4032	.3779	.6141	.5039	.49600	.46507	.44090	.47477	.42833
	13-27	.4032	.3244	.5281	.4335	.42625	.41857	.37895	.42230	.38703
	14-27	.4032	.5237	.6708	.5504	.59725	.53257	.53705	.53703	.49244
	<u>Lease Total</u>	<u>3.2258</u>	<u>2.4470</u>	<u>4.3595</u>	<u>3.6115</u>	<u>3.40325</u>	<u>3.34410</u>	<u>3.02925</u>	<u>3.41095</u>	<u>3.09476</u>
	3-4	.4033*	.9917	.7083	.8302	.85000	.70110	.91095	.73337	.74173
	4-4	.4032	.4500	.4625	.5420	.45625	.43857	.49600	.46443	.46507
	5-4	.4032	.6155	.5334	.6254	.57445	.51737	.62045	.54437	.54803
	6-4	.4032	.0357	.0911	.1110	.06340	.17667	.07335	.16025	.18330
CALISTAN TOTAL	12-4	.4033*	1.1862	.7306	.8566	.95840	.77337	1.02140	.79417	.81537
	13-4	.4032	.3339	.2918	.3832	.31285	.34297	.35855	.35303	.37343
	<u>Lease Total</u>	<u>2.4194</u>	<u>3.6130</u>	<u>2.8177</u>	<u>3.3484</u>	<u>3.21535</u>	<u>2.95005</u>	<u>3.48070</u>	<u>3.04962</u>	<u>3.12693</u>
	<u>44.7580</u>	<u>55.7156</u>	<u>59.8329</u>	<u>53.2478</u>	<u>57.77425</u>	<u>53.43551</u>	<u>54.48170</u>	<u>53.38857</u>	<u>51.24043</u>	
Can. Export	1-5	.4032	.2813	.3107	.3401	.29600	.33173	.31070	.33383	.34153
	7-5	.4032	.0438	.1018	.1194	.07280	.18293	.08160	.16705	.18880
	8-5	.4033*	.1947	.1470	.1722	.17085	.24834*	.18345	.22930	.25673
	9-5	.4032	.1847	.1194	.1449	.15205	.23577	.16480	.21305	.24427
CAN. EXPORT TOTAL	<u>Lease Total</u>	<u>1.6129</u>	<u>.7045</u>	<u>.6789</u>	<u>.7766</u>	<u>.69170</u>	<u>.99877</u>	<u>.74055</u>	<u>.94323</u>	<u>1.03133</u>
	<u>1.6129</u>	<u>.7045</u>	<u>.6789</u>	<u>.7766</u>	<u>.69170</u>	<u>.99877</u>	<u>.74055</u>	<u>.94323</u>	<u>1.03133</u>	
Can. Superior	2-16	.4032	.3998	.7248	.4855	.56230	.50927	.44265	.50332	.42950
	7-16	.4032	1.2416	1.0926	.7473	1.16710	.91247	.99445	.87118	.79737
	8-16	.4033*	.7218	.8279	.5245	.77485	.65100	.62315	.61938	.54987
	<u>Lease Total</u>	<u>1.2097</u>	<u>2.3632</u>	<u>2.6453</u>	<u>1.7573</u>	<u>2.50425</u>	<u>2.07274</u>	<u>2.06025</u>	<u>1.99388</u>	<u>1.77674</u>
	1-22	.4032	.0160	.0755	.0637	.04575	.16490	.03985	.13960	.16097
	7-22	.4032	.3711	.5478	.4612	.45945	.44070	.41615	.44582	.41183
	8-22	.4033*	.2323	.3129	.3313	.27260	.31617	.28180	.31995	.32230
CAN. EXPORT TOTAL	<u>Lease Total</u>	<u>1.2097</u>	<u>.6194</u>	<u>.9362</u>	<u>.8562</u>	<u>.77780</u>	<u>.92177</u>	<u>.73780</u>	<u>.90537</u>	<u>.89510</u>
	<u>1.2097</u>	<u>.6194</u>	<u>.9362</u>	<u>.8562</u>	<u>.77780</u>	<u>.92177</u>	<u>.73780</u>	<u>.90537</u>	<u>.89510</u>	

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3, 1/3, 1/3 Wells, Curr. Cum. Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.</u>
Can. Superior	2-28	.4032	.4947	.6853	.5626	.59000	.52773	.52865	.53645	.48689
	7-28	.4032	.4388	.5665	.4650	.50265	.46950	.45190	.46838	.43567
	8-28	.4052	.4484	.5776	.4742	.51300	.47640	.46130	.47585	.44193
	9-28	.4033*	.4185	.5981	.4909	.50830	.47330	.45470	.47770	.43757
	10-28	.4032	.2233	.4346	.3657	.32895	.35370	.29450	.35670	.33073
	15-28	.4032	.5037	.5410	.4675	.52235	.48263	.48560	.47885	.45813
	16-28	.4032	.3905	.5997	.5048	.49510	.46447	.44765	.47455	.43285
	Lease Total	2.8225	2.9179	4.0028	3.3307	3.46035	3.24773	3.12430	3.26848	3.02369
	CAN. SUPERIOR TOTAL	5.2419	5.9005	7.5843	5.9442	6.74240	6.24224	5.92235	6.16773	5.69553
Dome	8-14	.4033*	.3475	.1283	.3829	.23790	.29303	.36520	.31590	.37790
	Lease Total	.4033	.3475	.1283	.3829	.23790	.29303	.36520	.31590	.37790
	1-16	.4032	.3205	.5504	.3410	.43545	.42470	.33075	.40377	.35490
	Lease Total	.4032	.3205	.5504	.3410	.43545	.42470	.33075	.40377	.35490
	3-24	.4032	.1699	.1240	.2543	.14695	.23237	.21210	.23785	.27580
	4-24	.4032	.0450	.0715	.1303	.05825	.17323	.06765	.16250	.19283
	5-24	.4033*	.0360	.0594	.1085	.04770	.16623	.07225	.15180	.18260
	6-24	.4032	.0634	.0617	.1127	.06255	.17610	.08805	.16025	.19310
	Lease Total	1.6129	.3143	.3166	.6058	.31545	.74793	.46005	.71240	.84433
	11-26	.4032	.1543	.1366	.2040	.14545	.23137	.17915	.22453	.25382
DOME TOTAL	12-26	.4032	.2778	.2612	.3573	.26950	.31407	.31755	.32487	.34610
	Lease Total	.8064	.4321	.3978	.5613	.41495	.54544	.49670	.54940	.59893
	1-28	.4033*	.2761	.4974	.3984	.38675	.39227	.33725	.39880	.35927
	Lease Total	.4033	.2761	.4974	.3984	.38675	.39227	.33725	.39880	.35927
	4-3	.4032	1.2663	.2753	.8156	.76980	.64760	1.04095	.68960	.82837
	5-3	.4032	.6007	.1992	.4671	.39995	.40103	.53390	.41723	.49033
	Lease Total	.8064	1.8670	.4725	1.2827	1.16975	1.04863	1.57485	1.10715	1.31870
	12-3	.4032	.3403	.0471	.1408	.19370	.26353	.24055	.23285	.29177
	Lease Total	.4032	.3403	.0471	.1408	.19370	.26353	.24055	.23285	.29177
	1-4	.4033*	.5299	.1312	.4306	.33055	.35480	.48025	.37375	.45460
DOME TOTAL	Lease Total	.4033	.5299	.1312	.4306	.33055	.35480	.48025	.37375	.45460
	2-4	.4032	.3968	.2536	.3783	.32520	.35120	.38755	.35798	.39277
	7-4	.4032	.1230	.0628	.1148	.09290	.19634*	.11890	.17595	.21367
	Lease Total	.8064	.5198	.3164	.4931	.41810	.54754	.50645	.53395	.60644
	Lease Total	6.0484	4.9475	2.8577	4.6366	3.90260	4.61787	4.79205	4.62255	5.21084

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Cum. Ave. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Ave. Mon.</u>
Fargo	9-14	.4032	.4896	.1233	.4047	.30645	.33870	.44715	.35520	.43250
	10-14	.4033*	.4377	.0844	.3959	.26105	.30847	.41680	.33033	.41230
	16-14	.4032	.4567	.0632	.6920	.25995	.30770	.57435	.40377	.51730
	<u>Lease Total</u>	<u>1.2097</u>	<u>1.3840</u>	<u>.2709</u>	<u>1.4926</u>	<u>.82745</u>	<u>.95487</u>	<u>1.43830</u>	<u>1.08930</u>	<u>1.36210</u>
	7-18	.4032	.0885	.0274	.0750	.05795	.17303	.08175	.14853	.18890
	8-18	.4032	.1279	.0961	.2425	.11200	.20907	.18520	.21742	.25787
	<u>Lease Total</u>	<u>.8064</u>	<u>.2164</u>	<u>.1235</u>	<u>.3175</u>	<u>.16995</u>	<u>.38210</u>	<u>.26695</u>	<u>.36595</u>	<u>.44677</u>
	1-19	.4033*	.9768	.2554	.6987	.61610	.54517	.83775	.58355	.69293
	2-19	.4032	.2166	.0752	.2057	.14590	.23167	.21115	.22517	.27517
	7-19	.4032	.2888	.0924	.2526	.19060	.26147	.27070	.25925	.31487
	8-19	.4032	.5216	.1832	.5010	.35240	.36933	.51130	.40225	.47527
	<u>Lease Total</u>	<u>1.6129</u>	<u>2.0038</u>	<u>.6062</u>	<u>1.6580</u>	<u>1.30500</u>	<u>1.40764</u>	<u>1.83090</u>	<u>1.47022</u>	<u>1.75824</u>
	9-19	.4033*	.3738	.1225	.3657	.24815	.29987	.36975	.31633	.38095
	<u>Lease Total</u>	<u>.4033</u>	<u>.3738</u>	<u>.1225</u>	<u>.3657</u>	<u>.24815</u>	<u>.29987</u>	<u>.36975</u>	<u>.31633</u>	<u>.38095</u>
FARGO TOTAL	1-26	.4032	.1482	.1951	.2786	.17165	.24883	.21340	.25627	.27667
	2-26	.4032	.4082	.3078	.4394	.35800	.37307	.42380	.38965	.41693
	7-26	.4032	.9148	.4977	.7104	.70625	.60523	.81260	.65153	.67613
	8-26	.4033*	.2158	.0753	.2245	.14555	.23147	.22015	.22972	.28120
	<u>Lease Total</u>	<u>1.6129</u>	<u>1.6870</u>	<u>1.0759</u>	<u>1.6529</u>	<u>1.38145</u>	<u>1.45860</u>	<u>1.66995</u>	<u>1.50717</u>	<u>1.65093</u>
	5-34	.4032	.0863	.0620	.1151	.07415	.18383	.09970	.16615	.20087
	6-34	.4032	.1313	.0796	.1454	.10545	.20470	.13835	.18987	.22663
	7-34	.4032	.3571	.1953	.3376	.27620	.31853	.34735	.32330	.36597
	11-34	.4033*	.2565	.1654	.3217	.21095	.27507	.28910	.28673	.32717
	12-34	.4032	.0953	.0658	.1139	.08055	.18810	.10460	.16925	.20413
	<u>Lease Total</u>	<u>2.0161</u>	<u>.9265</u>	<u>.5681</u>	<u>1.0317</u>	<u>.74730</u>	<u>1.17023</u>	<u>.97910</u>	<u>1.13560</u>	<u>1.32477</u>
	<u>FARGO TOTAL</u>	<u>7.6613</u>	<u>6.5915</u>	<u>2.7671</u>	<u>6.5184</u>	<u>4.67930</u>	<u>5.67331</u>	<u>6.55495</u>	<u>5.88437</u>	<u>6.92374</u>
Imperial	1-33	.4032	.0128	.1070	.1064	.05990	.17433	.05960	.15735	.17415
	2-33	.4033*	.3330	.4917	.5207	.41235	.40933	.42685	.43717	.41900
	7-33	.4032	.3856	.4037	.4734	.39465	.39750	.42950	.41647	.42075
	9-33	.4032	.1076	.0674	.0963	.08750	.19274*	.10195	.16813	.20237
	10-33	.4032	.6373	.3489	.4407	.49310	.46313	.53900	.45753	.49375
	15-33	.4033*	.4160	.3784	.4968	.39720	.39923	.45640	.42363	.43870
	<u>Lease Total</u>	<u>2.4194</u>	<u>1.8923</u>	<u>1.7971</u>	<u>2.1343</u>	<u>1.84470</u>	<u>2.03626</u>	<u>2.01330</u>	<u>2.06078</u>	<u>2.14866</u>
	<u>IMPERIAL TOTAL</u>	<u>2.4194</u>	<u>1.8923</u>	<u>1.7971</u>	<u>2.1343</u>	<u>1.84470</u>	<u>2.03626</u>	<u>2.01330</u>	<u>2.06078</u>	<u>2.14866</u>

Company	Well Number	Well Count	Current Production	Cumulative Production	Monthly Average	50% Current 50% Cum.	1/3, 1/3 & 1/3 Wells, Curr. & Cum.	50% Current 50% Avg. Mon.	$\frac{1}{3}, \frac{1}{3}, \frac{1}{3}$ Wells, Curr. Cum. Avg. Mon.	1/3, 1/3, 1/3 Wells, Curr. Avg. Mon.
Shell	9-21	.4032	.8902	.7896	.7004	.83990	.69433	.79530	.69585	.66460
	10-21	.4032	.3568	.2945	.2844	.32565	.35150	.32060	.33472	.34813
	11-21	.4032	.0487	.0432	.0473	.04595	.16503	.04800	.13560	.16640
	14-21	.4033*	.3667	.5209	.4620	.44380	.43030	.41435	.43823	.41067
	15-21	.4032	.1502	.2697	.2530	.20995	.27437	.20160	.26902	.26880
	16-21	.4032	.5548	.6970	.6355	.62590	.55167	.59515	.57263	.53117
	Lease Total	2.4193	2.3674	2.6145	2.3826	2.49115	2.46720	2.37500	2.44605	2.38977
	16-32	.4032	.1653	.1138	.1332	.13955	.22743	.14925	.20387	.23390
	Lease Total	.4032	.1653	.1138	.1332	.13955	.22743	.14925	.20387	.23390
	3-33	.4033*	.6381	.6667	.6254	.65240	.56933	.63175	.58338	.55560
	4-33	.4032	.2845	.3809	.3573	.33270	.35620	.32090	.35647	.34833
	5-33	.4032	.0902	.1693	.1634	.12975	.22090	.12680	.20653	.21893
	6-33	.4032	.7401	.6862	.6623	.71315	.60983	.70120	.62295	.60187
	11-33	.4033*	.3110	.4234	.4633	.36720	.37924*	.38715	.40025	.39253
SHELL TOTAL	12-33	.4032	.4359	.3603	.4080	.39810	.39980	.42195	.40185	.41570
	13-33	.4032	.4699	.3893	.4566	.42960	.42080	.46325	.42975	.44323
	14-33	.4033*	.7480	.5700	.6681	.65900	.57377	.70805	.59735	.60647
	Lease Total	3.2259	3.7177	3.6461	3.8044	3.68190	3.52987	3.76105	3.59853	3.58266
		6.0484	6.2504	6.3748	6.3202	6.31260	6.22450	6.28530	6.24845	6.20633
Shannon	11-18	.4032	.0137	.0057	.0235	.00970	.14087	.01860	.11153	.14680
	12-18	.4032	.1189	.0165	.0901	.06770	.17953	.10450	.15717	.20407
	14-18	.4033*	-	.0022	.0071	.00110	.13517	.00355	.10315	.13680
	Lease Total	1.2097	.1326	.0244	.1207	.07850	.45557	.12665	.37185	.48767
SHANNON TOTAL		1.2097	.1326	.0244	.1207	.07850	.45557	.12665	.37185	.48767
Souris Valley	10-2	.4032	.0318	.1260	.0700	.07890	.18700	.05090	.15775	.16833
	15-2	.4032	.3930	.8267	.4599	.60985	.54097	.42645	.52070	.41870
	16-2	.4033*	.0390	.1585	.0880	.09875	.20027	.06350	.17220	.17677
	Lease Total	1.2097	.4638	1.1112	.6179	.78750	.92824	.54085	.85065	.76380
SOURIS VALLEY TOTAL		1.2097	.4638	1.1112	.6179	.78750	.92824	.54085	.85065	.76380
Sum Oil	15-3	.4032	.0297	.1112	.0674	.07045	.18137	.04855	.15287	.16677
	16-3	.4032	.0351	.2825	.1688	.15880	.24027	.10195	.22240	.20237
	Lease Total	.8064	.0648	.3937	.2362	.22925	.42164	.15050	.37527	.36914
	4-14	.4032	.0725	.1499	.1093	.11120	.20853	.09090	.18573	.19500
	5-14	.4033*	.3557	.4506	.3996	.40315	.40320	.37765	.40230	.38620
	Lease Total	.8065	.4282	.6005	.5089	.51435	.61173	.46855	.58603	.58120

<u>Company</u>	<u>Well Number</u>	<u>Well Count</u>	<u>Current Production</u>	<u>Cumulative Production</u>	<u>Monthly Average</u>	<u>50% Current 50% Cum.</u>	<u>1/3, 1/3 & 1/3 Wells, Curr. & Cum.</u>	<u>50% Current 50% Ave. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Cum. Ave. Mon.</u>	<u>1/3, 1/3, 1/3 Wells, Curr. Ave. Mon.</u>
Sun Oil	11-14	.4032	.0233	.0032	.0264	.01325	.14323	.02485	.11403	.15097
	12-14	.4032	.1032	.1119	.1022	.10755	.20610	.10270	.18013	.20287
	13-14	.4033*	.1110	.1464	.1336	.12870	.22024*	.12230	.19857	.21597
	<u>Lease Total</u>	<u>1.2097</u>	<u>.2375</u>	<u>.2615</u>	<u>.2622</u>	<u>.24950</u>	<u>.56957</u>	<u>.24985</u>	<u>.49273</u>	<u>.56981</u>
	1-20	.4033*	.9304	.4696	.8114	.70000	.60110	.87090	.65367	.71505
	2-20	.4032	.1016	.1838	.2744	.14270	.22953	.18800	.24075	.25973
	7-20	.4032	.2501	.1651	.2710	.20760	.27280	.26055	.27235	.30810
	<u>Lease Total</u>	<u>1.2097</u>	<u>1.2821</u>	<u>.8185</u>	<u>1.3568</u>	<u>1.05030</u>	<u>1.10343</u>	<u>1.31945</u>	<u>1.16677</u>	<u>1.28286</u>
	3-20	.4032	.7356	.4104	.7092	.57300	.51640	.72240	.56460	.61600
	4-20	.4033*	.4695	.3606	.6229	.41505	.41113	.54620	.46407	.49857
	5-20	.4032	.1631	.1293	.2233	.14620	.23187	.19320	.22973	.26320
	6-20	.4032	.3787	.2374	.4101	.30805	.33977	.39440	.35735	.39733
	<u>Lease Total</u>	<u>1.6129</u>	<u>1.7469</u>	<u>1.1377</u>	<u>1.9655</u>	<u>1.44230</u>	<u>1.49917</u>	<u>1.85620</u>	<u>1.61575</u>	<u>1.77510</u>
	11-20	.4032	.1497	.0811	.1479	.11540	.21133	.14880	.19547	.23360
	12-20	.4033*	.3448	.2643	.4821	.30455	.33747	.41345	.37363	.41007
	<u>Lease Total</u>	<u>.8065</u>	<u>.4945</u>	<u>.3454</u>	<u>.6300</u>	<u>.41995</u>	<u>.54880</u>	<u>.56225</u>	<u>.56910</u>	<u>.64367</u>
	4-21	.4032	.7855	.9926	.7946	.88905	.72710	.79005	.74397	.66116
	5-21	.4032	.1751	.2619	.2097	.21850	.28007	.19240	.26248	.26267
	<u>Lease Total</u>	<u>.8064</u>	<u>.9606</u>	<u>1.2545</u>	<u>1.0043</u>	<u>1.10755</u>	<u>1.00717</u>	<u>.98245</u>	<u>1.00645</u>	<u>.92377</u>
	9-22	.4032	.7647	.4535	.3816	.60910	.54047	.57315	.50075	.51650
	10-22	.4033*	.2026	.6965	.5718	.44955	.43413	.38720	.46855	.39257
	15-22	.4032	.0121	.1425	.1198	.07730	.18595	.06595	.16940	.17837
	16-22	.4032	.1604	.1951	.1684	.17775	.26190	.16440	.23177	.24400
	<u>Lease Total</u>	<u>1.6129</u>	<u>1.1398</u>	<u>1.4876</u>	<u>1.2416</u>	<u>1.31370</u>	<u>1.41343</u>	<u>1.19070</u>	<u>1.37047</u>	<u>1.33144</u>
	5-23	.4032	.3509	.3274	.2987	.33915	.36050	.32480	.34505	.35095
	6-23	.4033*	.0283	.0803	.0880	.05430	.17063	.05815	.14998	.17320
	<u>Lease Total</u>	<u>.8065</u>	<u>.3792</u>	<u>.4077</u>	<u>.3867</u>	<u>.39345</u>	<u>.53113</u>	<u>.38295</u>	<u>.49503</u>	<u>.52413</u>
	3-26	.4032	.1354	.1409	.1596	.13815	.22650	.14750	.20977	.23273
	4-26	.4032	.0818	.2448	.2174	.16330	.24327	.14960	.23680	.23413
	1-27	.4032	.2552	.3019	.2610	.27855	.32010	.25810	.30533	.30647
	2-27	.4033*	.2425	.3054	.2564	.27395	.31707	.24945	.30190	.30073
	7-27	.4032	.2412	.2290	.1977	.23510	.29113	.21945	.26777	.28070
	8-27	.4032	.2567	.5055	.4486	.38110	.38847	.35265	.40350	.36950
	9-27	.4032	.2386	.4512	.4005	.34490	.36433	.31955	.37337	.34743
	10-27	.4033*	.1661	.4265	.3682	.29630	.33197	.26715	.34103	.31253
	15-27	.4032	.2425	.5406	.4549	.39155	.39543	.34870	.41030	.36687
	16-27	.4032	.2832	.1943	.1822	.23875	.29357	.23270	.26573	.28953
	<u>Lease Total</u>	<u>4.0322</u>	<u>2.1432</u>	<u>3.3401</u>	<u>2.9465</u>	<u>2.74165</u>	<u>3.17184</u>	<u>2.54485</u>	<u>3.11550</u>	<u>3.04062</u>

Company	Well Number	Well Count	Current Production	Cumulative Production	Monthly Average	50% Current 50% Cum.	1/3, 1/3 & 1/3 Wells, Curr. & Cum.	50% Current 50% Avg. Mon.	1/3, 1/3 & 1/3 Wells, Curr. & Cum. Ave. Mon.	1/3, 1/3, 1/3 Wells, Curr. Ave. Mon.
Sun Oil	5-26 6-26 10-26	.4033* .4032 .4032	.1532 .4095 .3671	.1365 .4035 .2150	.1211 .4729 .3716	.14485 .40650 .29105	.23100 .40540 .32843	.13715 .44120 .36935	.20353 .42227 .33922	.22587 .42853 .38063
	Lease Total	1.2097	.9298	.7550	.9656	.84240	.96485	.94770	.96502	1.09505
SUN OIL TOTAL		14.9194	9.8086	10.8022	11.5043	10.30440	11.84274	10.65545	11.75812	12.07677
E.H. Vallat	13-34	.4032	.2507	.0347	.3799	.14270	.22953	.31530	.26713	.34460
	Lease Total	.4032	.2507	.0347	.3799	.14270	.22953	.31530	.26713	.34460
E.H. VALLAT TOTAL		.4032	.2507	.0347	.3799	.14270	.22953	.31530	.26713	.34460
West Canadian	2-17 7-17 8-17 9-17 10-17 15-17 16-17	.4033* .4032 .4032 .4032 .4033* .4032 .4032	.7341 .4605 .3797 1.0838 .5792 .4035 .6261	.3350 .3439 .3537 .5745 .3823 .3655 .4927	.6112 .5132 .5278 .8202 .5458 .5215 .6472	.53455 .40220 .36670 .82915 .48075 .38450 .55940	.49080 .40253 .37887 .68717 .45495 .39073 .50733	.67265 .48685 .45375 .95200 .56250 .46250 .63665	.52090 .43020 .41610 .72042 .47765 .42343 .54230	.58287 .45897 .43690 .76907 .50945 .44275 .55885
	Lease Total	2.8226	4.2869	2.8476	4.1869	3.55725	3.31236	4.22890	3.53100	3.75880
	9-18	.4032	.3727	.2277	.3953	.30020	.33455	.38700	.34922	.38975
	10-18	.4033*	.2981	.1364	.2488	.21725	.27927	.27345	.27165	.31675
	15-18	.4032	.1014	.1347	.2459	.11805	.21310	.17365	.22130	.25017
	16-18	.4032	.5516	.2904	.4541	.42100	.41507	.50285	.42483	.46963
	Lease Total	1.6129	1.3238	.7892	1.3421	1.05550	1.24197	1.33295	1.26700	1.42626
WEST CANADIAN TOTAL		4.4352	5.5907	3.6368	5.5290	4.61375	4.55433	5.55985	4.79800	5.18506
FIELD TOTAL		100.0000	100.0000	100.0000	100.0000	100.00000	100.00000	100.00000	100.00000	100.00000

215. EAST GARDEN
JUL 2000

NORTH VIRDEN SCALLION
PENALTY SCALE

<u>WATER CUT</u>	<u>PENALTY FACTOR</u>
0-40	1.0000
40-45	0.9583
45-50	0.8750
50-55	0.7917
55-60	0.7083
60-65	0.6250
65-70	0.5417
70-75	0.4583
75-80	0.3750
80-85	0.2917
85-90	0.2083
90-95	0.1250
95-100	0.0417

NORTH VIRDEN SCALLION EQUITIES WITH WATER PENALTY FACTOR
by Wells, Leases and Company Totals

Company	Well Number	Water Cut	Penalty Factor	E Q U I T I E S					50% Current 50% Cum.	50% Current 50% Avg. Mon.	1/3, 1/3, 1/3 Well, Curr.
				1/3, 1/3, 1/3 Wells, Curr. Cum.	1/3, 1/3, 1/3 Well, Curr. Cum.	Avg. Mon.	1/3, 1/3, 1/3 Well, Curr.	Avg. Mon.			
B.A.	3-28	11	1.	.48300	.47968	.48592	.43879	.44947			
	5-28	57	.7083	.04475*	.13811	.11665	.04401	.13795			
	6-28	25	1.	.29891	.35484	.35776*	.26607	.33267			
	11-28	19	1.	.49786	.48980	.50596	.45689	.46175			
	12-28	25	1.	.30675	.36016	.32541	.29447	.35188			
	13-28	49	.8750	.11453	.21080	.19958	.11495	.21140			
	14-28	30	1.	.26774	.33372	.31098	.25368	.32429			
	Lease Total			<u>2.01354</u>	<u>2.36711</u>	<u>2.30226</u>	<u>1.86886</u>	<u>2.26941</u>			
	2-34	-	1.	.00134	.15306	.11514	.00190	.15404			
	3-34	-	1.	.30113	.35639	.34938	.33261	.37771			
	4-34	-	1.	.01508	.16238	.12928	.01619	.16370			
	Lease Total			<u>.31752</u>	<u>.67183</u>	<u>.59380</u>	<u>.35070</u>	<u>.69545</u>			
	B.A. TOTAL			<u>2.33109</u>	<u>3.03894</u>	<u>2.89606</u>	<u>2.21956</u>	<u>2.96486</u>			
Calstan	6-2	97	.0417	.00132	.00725	.00575	.00062	.00692			
	11-2	47	.8750	.11107	.20845	.18141	.07387	.18361			
	13-2	32	1.	.58952	.55191	.47494	.50832	.49648			
	14-2	56	.7083	.21818	.25575	.23104	.15814	.21516			
	Lease Total			<u>.92009</u>	<u>1.02336</u>	<u>.89914</u>	<u>.74115</u>	<u>.90218</u>			
	9-9	34	1.	.23446	.31114	.28260	.18651	.27888			
	15-9	75	.3750	.01858	.06966	.05806	.01309	.06613			
	16-9	15	1.	1.01776	.84230	.75481	.89293	.06613			
	Lease Total			<u>1.27080</u>	<u>1.22310</u>	<u>1.09547</u>	<u>1.09253</u>	<u>1.10158</u>			
	1-10	48	.8750	.35679*	.37512	.33349	.28041	.32330			
	2-10	47	.8750	.55021	.50623	.48962	.44395	.43387			
	7-10	24	1.	.57132	.53957	.52482	.42540	.44041			
	8-10	12	1.	.69888	.62606	.60951	.51185	.49887			
	9-10	14	1.	.63260	.58115	.55761*	.47751	.47568			
	10-10	13	1.	.97424	.81279	.79847	.78077	.68071			
	15-10	11	1.	.72648	.64478	.61523	.57532	.54179			
	16-10	66	.5417	.17455	.20078	.17923	.14509	.18086			
	Lease Total			<u>4.68507</u>	<u>4.28648</u>	<u>4.10798</u>	<u>3.64030</u>	<u>3.57549</u>			

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr.</u> <u>Avg. Mon.</u>
Celistan	3-10	81	.2917	.02323	.06014	.05466	.02506	.06150
	5-10	69	.5417	.26336	.26102	.27152	.32953	.30560
	6-10	50	.7917	.52607	.47719	.46000	.45934	.43155
	11-10	22	1.	1.07603	.88181	.87792	.89422	.75743
	12-10	12	1.	.33942	.38232	.38239	.28164	.34320
	13-10	14	1.	.89116*	.75648	.75917	.76525	.67026
	14-10	8	1.	.99239	.82509	.82722	.80441	.69670
	<u>Lease Total</u>			<u>4.11166</u>	<u>3.64405</u>	<u>3.64288</u>	<u>3.55915</u>	<u>3.26624</u>
	3-11	22	1.	.29507	.35224	.32113	.19749	.28630
	4-11	10	1.	.36903	.40239	.37190	.26203	.32994
	5-11	28	1.	.25194	.32304	.30101	.15844	.25993
	6-11	81	.2917	.07928	.09814	.08839	.05754	.08347
	<u>Lease Total</u>			<u>.99532</u>	<u>1.17581</u>	<u>1.08243</u>	<u>.67550</u>	<u>.95864</u>
	1-11	45	.8750	.26778	.31472	.29391	.17908	.25476
	2-11	60	.6250	.15931	.20312	.17577	.12319	.17877
	7-11	11	1.	.27648	.33967	.31368	.18976	.28110
	8-11	-	1.	.08559	.21020	.17579	.06163	.19443
	<u>Lease Total</u>			<u>.78916</u>	<u>1.06771</u>	<u>.95915</u>	<u>.53665</u>	<u>.90908</u>
	12-11	6	1.	.23936	.31447	.28648	.17715	.27254
	<u>Lease Total</u>			<u>.23936</u>	<u>.31447</u>	<u>.28648</u>	<u>.17715</u>	<u>.27254</u>
	5-13	41	.9583	.69966	.62028	.66707	.94998	.78880
	6-13	65	.5417	.27032	.26573	.28269	.36850	.33193
	<u>Lease Total</u>			<u>.95998</u>	<u>.88601</u>	<u>.94976</u>	<u>1.31848</u>	<u>1.12073</u>
	7-13	41	.9583	.27188	.33017	.42940	.60475	.55533
	10-13	57	.7083	.33435	.33450	.34752	.49000	.43954
	15-13	74	.4583	.10026	.13773	.13648	.15578	.17537
	<u>Lease Total</u>			<u>.70649</u>	<u>.80240</u>	<u>.91340</u>	<u>1.25053</u>	<u>1.17024</u>
	11-13	31	1.	.86700	.74007	.79503	1.14938	.93038
	12-13	23	1.	.88815	.75441	1.03580	1.19189	.95871
	13-13	35	1.	.46013	.46417	.51503	.66597	.60309
	14-13	29	1.	.82810	.71372	.76703	1.10129	.89750
	<u>Lease Total</u>			<u>3.04338</u>	<u>2.67237</u>	<u>3.11289</u>	<u>4.10913</u>	<u>3.38968</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Calistan	1-15	6	1.	.17057	.26783	.23294	.15519	.25769
	2-15	3	1.	.78397	.68380	.68231	.67247	.60752
	3-15	14	1.	.93679	.78739	.80215	.75847	.66564
	4-15	1	1.	1.23748	.99128	.97763	1.04112	.85676
	5-15	54	.7917	1.03509	.82235	.80453	.87777	.71451
	6-15	-	1.	1.31439	1.04347	1.03048	1.16780	.94246
	7-15	-	1.	.99177	.82467	.82643	.86823	.73986
	8-15	-	1.	.73177	.64837	.65609	.67214	.60726
	9-15	-	1.	.18605*	.27831	.25951	.18051	.27482
	10-15	-	1.	.47226	.47243	.47049	.40238	.42486
	11-15	-	1.	.72470	.64358	.63603	.63348	.58112
	12-15	14	1.	1.30888	1.03971	1.02082	1.12202	.91148
	13-15	1	1.	.34521	.38625	.37246	.30074	.35611
	14-15	-	1.	.19790	.28639	.26779	.16920	.26720
	15-15	6	1.	.14809	.25258	.23524	.14578	.25132
	16-15	4	1.	.08732	.21137	.18516	.07939	.20644
	<u>Lease Total</u>			<u>10.67224</u>	<u>9.63978</u>	<u>9.46006</u>	<u>9.24669</u>	<u>8.66507</u>
	6-16	21	1.	1.17509	.94898	.95159	1.09177	.89102
	11-16	76	.3750	.28769	.25215	.25246	.24606	.22369
	12-16	56	.7083	.45015	.41302	.44335	.51738	.45805
	13-16	79	.3750	.32723	.27895	.27673	.29959	.25987
	14-16	59	.7083	.69928	.58194	.59553	.60453	.51698
	<u>Lease Total</u>			<u>2.93944</u>	<u>2.47504</u>	<u>2.51966</u>	<u>2.75933</u>	<u>2.34961</u>
	9-16	47	.8750	1.14138	.90712	.88910	.97941	.79562
	10-16	70	.4583	.40740*	.34599	.35162	.33551	.29689
	15-16	83	.2917	.23220	.20185	.20931	.18689	.17094
	16-16	1	1.	1.31044	1.04076	1.03045	1.17794	.94928
	<u>Lease Total</u>			<u>3.09142</u>	<u>2.49572</u>	<u>2.48048</u>	<u>2.67975</u>	<u>2.21273</u>
	6-17	88	.2083	.06786	.07772	.07400	.07785	.08447
	11-17	86	.2083	.07721	.08405	.08233	.08941	.09228
	12-17	81	.2917	.09322	.10760	.09822	.10781	.11747
	13-17	79	.3750	.20930	.19898	.19961	.24429	.22247
	14-17	31	1.	.96200	.80452	.84006	1.11132	.90427
	<u>Lease Total</u>			<u>1.40959</u>	<u>1.27287</u>	<u>1.29422</u>	<u>1.63068</u>	<u>1.42096</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Celstien	1-21	-	1.	1.27321	1.01551	.99653	1.16320	.99392
	2-21	-	1.	1.30148	1.03468	1.02462	1.16959	.94364
	7-21	11	1.	1.05650	.86856	.85646	.94756	.79351
	8-21	11	1.	.81680	.70607	.71992	.73836	.65207
	<u>Lease Total</u>			<u>4.44799</u>	<u>3.62482</u>	<u>3.59763</u>	<u>4.01871</u>	<u>3.32854</u>
	3-21	-	1.	1.16964	.94529	.94754	1.04280	.85790
	6-21	13	1.	.38038	.41009	.39731	.33212	.37733
	<u>Lease Total</u>			<u>1.55002</u>	<u>1.35538</u>	<u>1.34485</u>	<u>1.37492</u>	<u>1.23523</u>
	3-22	4	1.	.52018	.50489	.51182	.45683	.46167
	4-22	1	1.	.61379	.56840	.57736	.53280	.51307
	5-22	2	1.	.60711	.56383	.57736	.52389	.50701
	6-22	1	1.	.68964	.61980	.63597	.61863	.57108
	11-22	2	1.	1.13352	.92079	.90911	1.04447	.85904
	12-22	2	1.	1.15066	.93245	.93396	1.02588	.84650
	13-22	3	1.	.83456	.71807	.73169	.74312	.65527
	14-22	1	1.	.39151	.41764	.42666	.36501	.39958
	<u>Lease Total</u>			<u>5.94097</u>	<u>5.24587</u>	<u>5.30393</u>	<u>5.31063</u>	<u>4.81322</u>
	9-23	62	.6250	.17537	.14326	.20905	.19998	.23070
	10-23	57	.7083	.07564	.15910	.15804	.09246	.17074
	11-23	78	.3750	.09529	.12167	.11389	.09429	.12104
	12-23	5	1.	.45145	.45828	.46936	.43767	.44871
	13-23	11	1.	.14047	.24740	.22999	.13530	.24424
	14-23	17	1.	.20335	.29008	.28646	.19547	.28497
	15-23	54	.7917	.08742	.17974	.16882	.09820	.18734
	16-23	53	.7917	.10429	.19118	.19436	.12633	.20635
	<u>Lease Total</u>			<u>1.33328</u>	<u>1.79071</u>	<u>1.82997</u>	<u>1.37970</u>	<u>1.89409</u>
	11-24	68	.5417	.06481	.12638	.11856	.07827	.13567
	12-24	20	1.	.22372	.30389	.31032	.26488	.33191
	13-24	29	1.	.17235	.26904	.26968	.20769	.29320
	<u>Lease Total</u>			<u>.46088</u>	<u>.69931</u>	<u>.69856</u>	<u>.55084</u>	<u>.76078</u>
	4-25	10	1.	.88041	.74916	.79804	1.14477	.92886
	5-25	67	.5417	.14037	.17761	.18021	.23314	.22688
	<u>Lease Total</u>			<u>1.02078</u>	<u>.92677</u>	<u>.97825</u>	<u>1.35791</u>	<u>1.15374</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Calstan	3-27	6	1.	.35695	.39424	.40401	.33145	.37691
	4-27	-	1.	.58323	.54764	.56987	.50731	.49580
	5-27	4	1.	.38238	.41145	.41957	.33587	.37987
	6-27	1	1.	.36296	.39828	.39465	.32893	.37517
	11-27	7	1.	.41116	.43100	.43806	.37033	.40321
	12-27	-	1.	.55207	.52651	.53464	.49403	.48682
	13-27	25	1.	.47443	.47387	.47556	.42462	.43988
	14-27	25	1.	.66476	.60293	.60475	.60177	.55968
	Lease Total			<u>3.78794</u>	<u>3.78592</u>	<u>3.84111</u>	<u>3.39431</u>	<u>3.51734</u>
	3-4	4	1.	.94608	.79373	.82586	<u>1.02073</u>	.84301
	4-4	5	1.	.50783*	.49651	.52300	.55577	.52858
	5-4	9	1.	.63939	.58573	.61302	.69522	.62286
	6-4	86	.2083	.01470	.04166	.03759	.01712	.04339
	12-4	10	1.	1.06674	.87555	.89432	1.14449	.92671
	13-4	9	1.	.34821	.38828	.39755	.40176	.42442
CALSTAN TOTAL				<u>3.52295</u>	<u>3.18146</u>	<u>3.29134</u>	<u>3.83509</u>	<u>3.38897</u>
Lease Total				<u>57.90881</u>	<u>53.58941</u>	<u>53.68364</u>	<u>54.65644</u>	<u>51.40766</u>
Can. Export	1-5	18	1.	.32946	.37556	.37593	.34814	.38817
	7-5	71	.4583	.03713	.09492	.08621	.04191	.09835
	8-5	35	1.	.19016	.28115	.25822	.20556	.29175
	9-5	59	.7083	.11987	.18906	.16993	.13080	.19665
	Lease Total			<u>.67662</u>	<u>.94069</u>	<u>.89029</u>	<u>.72640</u>	<u>.97496</u>
CAN. EXPORT TOTAL				<u>.67662</u>	<u>.94069</u>	<u>.89029</u>	<u>.72640</u>	<u>.97496</u>
Can. Superior	2-16	51	.7917	.49549	.45646	.44873	.39268	.38647
	7-16	24	1.	1.29903	1.03303	.98104	1.11429	.90627
	8-16	64	.6250	.53902	.46063	.43593	.43640	.39060
	Lease Total			<u>2.33354</u>	<u>1.95012</u>	<u>1.86570</u>	<u>1.94337</u>	<u>1.68334</u>
	1-22	12	1.	.05092	.18669	.15720	.04465	.18295
	7-22	11	1.	.51139	.49893	.50204	.46630	.46806
Lease Total	8-22	11	1.	.30341	.35794	.36030	.31576	.36631
	Lease Total			<u>.86572</u>	<u>1.04356</u>	<u>1.01954</u>	<u>.82671</u>	<u>1.01732</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Ave. Mon.</u>	<u>50% Current</u> <u>50% Cum.</u> <u>4/7/15</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Ave. Mon.</u>
Can. Superior	2-28	11	1.	.65669	.59745	.60410	.59236	.55331
	7-28	14	1.	.55947	.53153	.52745	.50636	.49516
	8-28	18	1.	.57099	.53934	.53586	.51688	.50227
	9-28	18	1.	.56576	.53583	.53794	.50950	.49732
	10-28	9	1.	.36614*	.40043	.40168	.32999	.37589
	15-28	22	1.	.58140	.54640*	.53923	.54412	.52069
	16-28	30	1.	.55107	.52584	.53440	.50160	.49193
	Lease Total			<u>3.85152</u>	<u>3.67682</u>	<u>3.68066</u>	<u>3.50087</u>	<u>3.43657</u>
CAN. SUPERIOR TOTAL				<u>7.05076</u>	<u>6.67050</u>	<u>6.56590</u>	<u>6.27089</u>	<u>6.13723</u>
Dome	8-14	21	1.	.26479	.33175	.35529	.40921	.42956
	Lease Total			<u>.26479</u>	<u>.33175</u>	<u>.35529</u>	<u>.40921</u>	<u>.42956</u>
	1-16	32	1.	.48467	.48081	.45469	.37061	.40336
	Lease Total			<u>.48467</u>	<u>.48081</u>	<u>.45469</u>	<u>.37061</u>	<u>.40336</u>
	3-24	16	1.	.16356	.26307	.26785	.23766	.31346
	4-24	57	.7083	.04592	.13891	.12962	.06956	.15523
	5-24	62	.6250	.03318	.11762	.10685	.05060	.12971
	6-24	60	.6250	.04351	.12460	.11279	.06166	.13717
	Lease Total			<u>.28617</u>	<u>.64420</u>	<u>.61711</u>	<u>.41948</u>	<u>.73557</u>
	11-26	30	1.	.16189	.26194	.25285	.20074	.28849
	12-26	11	1.	.29996	.35556	.36584	.35582	.39336
	Lease Total			<u>.46185</u>	<u>.61750</u>	<u>.61869</u>	<u>.55656</u>	<u>.68185</u>
	1-28	27	1.	.43047	.44410	.44346	.37789	.40833
	Lease Total			<u>.43047</u>	<u>.44410</u>	<u>.44346</u>	<u>.37789</u>	<u>.40833</u>
	4-3	-	1.	.85682	.73316	.77657	1.16639	.94149
	5-3	27	1.	.44516	.45401	.47021	.59824	.55728
	Lease Total			<u>1.30198</u>	<u>1.18717</u>	<u>1.24678</u>	<u>1.76463</u>	<u>1.49877</u>
	12-3	77	.3750	.08085	.11190	.09833	.10108	.12563
	Lease Total			<u>.08085</u>	<u>.11190</u>	<u>.09833</u>	<u>.10108</u>	<u>.12563</u>
	1-4	9	1.	.36792	.40168	.42088	.53812	.51668
	Lease Total			<u>.36792</u>	<u>.40168</u>	<u>.42088</u>	<u>.53812</u>	<u>.51668</u>
	2-4	14	1.	.36196	.39760	.40312	.43425	.44640
	7-4	35	1.	.10340	.22228	.19814	.13323	.24285
	Lease Total			<u>.46536</u>	<u>.61988</u>	<u>.60126</u>	<u>.56748</u>	<u>.68925</u>
DOVE TOTAL				<u>4.14406</u>	<u>4.83899</u>	<u>4.85649</u>	<u>5.10506</u>	<u>5.48894</u>
Fargo	9-14	3	1.	.34109	.38345	.39999	.50104	.49156
	10-14	4	1.	.29056	.34923	.37199	.46703	.46860
	16-14	-	1.	.28934	.34835	.45469	.64336	.58794
	Lease Total			<u>.92099</u>	<u>1.08103</u>	<u>1.22667</u>	<u>1.61163</u>	<u>1.54810</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr.</u> <u>Avg. Mon.</u>
Fargo	7-18	77	.3750	.02419	.07346	.06272	.03435	.08051
	8-18	77	.3750	.04675	.08876	.09181	.07782	.10991
	<u>Lease Total</u>			<u>.07094</u>	<u>.16222</u>	<u>.15453</u>	<u>.11217</u>	<u>.19042</u>
	1-19	49	.8750	.60003	.54004	.57500	.82137	.68910
	2-19	58	.7083	.11502	.18577	.17960	.16758	.22151
	7-19	72	.4583	.09722	.13566	.13379	.13901	.16400
	8-19	22	1.	.39224	.41813	.45296	.57292	.54017
	<u>Lease Total</u>			<u>1.20451</u>	<u>1.27960</u>	<u>1.34137</u>	<u>1.70088</u>	<u>1.61478</u>
	9-19	23	1.	.27620	.33949	.35622	.41431	.43295
	<u>Lease Total</u>			<u>.27620</u>	<u>.33949</u>	<u>.35622</u>	<u>.41431</u>	<u>.43295</u>
	1-26	21	1.	.19105	.28171	.28859	.23912	.31445
	2-26	14	1.	.39847	.42236	.43879	.47487	.47386
	7-26	5	1.	.78609*	.68519	.71117	.91053	.76846
	8-26	16	1.	.16200	.26205	.25869	.24668	.31960
	<u>Lease Total</u>			<u>1.53761</u>	<u>1.65131</u>	<u>1.69724</u>	<u>1.87120</u>	<u>1.87637</u>
	5-34	34	1.	.08253	.20812	.18710	.11171	.22830
	6-34	28	1.	.11737	.23175*	.21381	.15502	.25758
	7-34	42	.9583	.29460	.34558	.34889	.37298	.39860
	11-34	28	1.	.23480	.31141	.32289	.32394	.37184
	12-34	22	1.	.08966	.21295	.19093	.11720	.23200
FARGO TOTAL	<u>Lease Total</u>			<u>4.82921</u>	<u>5.82346</u>	<u>6.03965</u>	<u>6.79104</u>	<u>7.15094</u>
IMPERIAL	1-33	67	.5417	.03612	.10691	.09599	.03618	.10721
	2-33	-	1.	.45896	.46341	.49230	.47829	.47621
	7-33	7	1.	.43926	.45002	.46899	.48126	.47818
	9-33	-	1.	.09739	.21820	.18933	.11423	.23000
	10-33	63	.6250	.34303	.32770	.32202	.37748	.35072
	15-33	4	1.	.44210	.45198	.47705	.51140	.49860
	<u>Lease Total</u>			<u>1.81686</u>	<u>2.01822</u>	<u>2.04568</u>	<u>1.99884</u>	<u>2.14092</u>
	IMPERIAL TOTAL			<u>1.81686</u>	<u>2.01822</u>	<u>2.04568</u>	<u>1.99884</u>	<u>2.14092</u>
Shell	9-21	-	1.	.93484	.78606	.78360	.89114	.75535
	10-21	23	1.	.36246	.39794	.37693	.35924	.39567
	11-21	73	.4583	.02344	.08562	.06999	.02465	.08667
	14-21	42	.9583	.47337*	.46684	.47292	.44492	.44729
	15-21	68	.5417	.12659	.16827	.16411	.12237	.16549
	16-21	-	1.	.69665	.62456	.64484	.66667	.60370
	<u>Lease Total</u>			<u>2.61735</u>	<u>2.52929</u>	<u>2.51239</u>	<u>2.50919</u>	<u>2.45417</u>

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Avg. Mon.</u>	<u>1/3, 1/3, 1/3</u> <u>Well, Curr.</u> <u>Avg. Mon.</u>
Shell	16-32	50	.8750	.13591	.22529	.20089	.14632	.23261
	Lease Total			.13591	.22529	.20089	.14632	.23261
	3-33	9	1.	.72615	.64455	.65695	.70783	.63147
	4-33	53	.7917	.29317	.31926	.31781	.28466	.31344
	5-33	60	.7083	.10229	.17713	.16474	.10963	.17625
	6-33	13	1.	.79376	.59040	.70151	.78570	.68405
	11-33	9	1.	.40871	.42935	.45073	.43380	.44613
	12-33	28	1.	.44310	.45262	.45253	.47280	.47246
	13-33	5	1.	.47816	.47640	.48394	.51908	.50375
	14-33	3	1.	.73349	.64958	.67268	.79338	.68928
	Lease Total			3.97883	3.83929	3.90088	4.09795	3.91663
SHELL TOTAL				6.73209	6.59387	6.61416	6.75347	6.60361
Shannon	11-18	53	.7917	.00855	.12627	.09944	.01651	.13209
	12-18	6	1.	.07535	.20325	.17699	.11709	.23193
	14-18	-	-	.00123*	.15303	.11616	.00398	.15548
	Lease Total			.08513	.48235	.39259	.13758	.51950
SHANNON TOTAL				.08513	.48235	.39259	.13758	.51950
Souris Valley	10-2	35	1.	.08782	.21171	.17764	.05703	.19132
	15-2	-	1.	.67878	.61244	.58637	.47784	.47587
	16-2	31	1.	.10991	.22673	.19392	.07115	.20091
	Lease Total			.87651	1.05088	.95793	.60602	.86810
SOURIS VALLEY TOTAL				.87651	1.05088	.95793	.60602	.86810
Sun Oil	15-3	96	.0417	.00327	.00856	.00717	.00226	.00790
	16-3	63	.6250	.11047	.17001	.15653	.07140	.14375
	Lease Total			.11374	.17857	.16370	.07366	.15165
	4-14	7	1.	.12377	.23608	.20690	.10185	.22163
	5-14	4	1.	.44872	.45647	.45303	.42316	.43894
	Lease Total			.57249	.69255	.65993	.52501	.66057
	11-14	66	.5417	.00799	.08784	.06956	.01508	.09295
	12-14	14	1.	.11971	.23333	.20285	.11508	.23057
	13-14	51	.7917	.11341	.19740	.17704	.10849	.19433
	Lease Total			.24111	.51857	.44945	.23865	.51785

<u>Company</u>	<u>Well Number</u>	<u>Water Cut</u>	<u>Penalty Factor</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr. Cum.</u> <u>Avg. Mon.</u>	<u>50% Current</u> <u>50% Cum.</u>	<u>1/3, 1/3, 1/3</u> <u>Wells, Curr.</u> <u>Avg. Mon.</u>
Sun. Oil	1-20	42	.9583	.74664	.65214	.70541	.93515	.77877
	2-20	73	.4583	.07279	.11909	.12425	.09654	.13529
	7-20	50	.8750	.20218	.27024	.26836	.25545	.30639
	<u>Lease Total</u>			<u>1.02161</u>	<u>1.04147</u>	<u>1.09602</u>	<u>1.28714</u>	<u>1.22045</u>
	3-20	56	.7083	.45174	.41410	.45034	.57334	.49589
	4-20	67	.5417	.25024	.25213	.28309	.33153	.30696
	5-20	87	.2083	.03389	.05468	.05388	.04509	.06231
	6-20	75	.4583	.15714	.17629	.18442	.20253	.20697
	<u>Lease Total</u>			<u>.89301</u>	<u>.89720</u>	<u>.97173</u>	<u>1.15249</u>	<u>1.07215</u>
	11-20	56	.7083	.09098	.16947	.15591	.11810	.18805
	12-20	68	.5417	.18362	.20696	.22792	.25096	.25246
	<u>Lease Total</u>			<u>.27460</u>	<u>.37643</u>	<u>.38382</u>	<u>.36906</u>	<u>.44051</u>
	4-21	52	.7917	.78343*	.65170	.66328	.70086	.59486
	5-21	53	.7917	.19254	.25102	.23402	.17068	.23636
	<u>Lease Total</u>			<u>.97597</u>	<u>.90272</u>	<u>.89730</u>	<u>.87154</u>	<u>.83122</u>
	9-22	13	1.	.67795	.61188	.56390	.64222	.58703
	10-22	-	1.	.50037	.49149	.52764	.43386	.44618
	15-22	38	1.	.08604	.21050	.19076	.07390	.20273
	16-22	54	.7917	.15663	.23475	.20663	.14584	.21955
	<u>Lease Total</u>			<u>1.42098</u>	<u>1.54862</u>	<u>1.48893</u>	<u>1.29582</u>	<u>1.45549</u>
	5-23	23	1.	.37749	.40813	.38856	.36394	.39885
	6-23	78	.3750	.02266	.07244	.06333	.02445	.07382
	<u>Lease Total</u>			<u>.40015</u>	<u>.48057</u>	<u>.45189</u>	<u>.38839</u>	<u>.47267</u>
	3-26	43	.9583	.14736	.24573	.22637	.15838	.25348
	4-26	29	1.	.18176	.27541	.26666	.16763	.26610
	1-27	45	.8750	.27128	.31710	.30085	.25305	.30478
	2-27	41	.9583	.29221	.34399	.32579	.26786	.32754
	7-27	62	.6250	.16355	.20600	.18847	.15369	.19940
	8-27	6	1.	.42418	.43979	.45439	.39515	.41995
	9-27	-	1.	.38389	.41247	.42046	.35806	.39487
	10-27	10	1.	.32979	.37583	.38404	.29934	.35522
	15-27	-	1.	.43581	.44767	.46204	.39072	.41697
	16-27	38	1.	.26574	.33236	.29924	.26074	.32906
	<u>Lease Total</u>			<u>2.89557</u>	<u>3.39635</u>	<u>3.32831</u>	<u>2.70462</u>	<u>3.26737</u>

Company	Well Number	Water Cut	Penalty Factor	50% Current 50% Cum.	$\frac{1}{3}, \frac{1}{3}, \frac{1}{3}$ Wells, Curr. Cum.	$\frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}$ Well, Curr. Cum. Avg. Mon.	50% Current 50% Avg. Mon.	$\frac{1}{3}, \frac{1}{3}, \frac{1}{3}$ Well, Curr. Avg. Mon.
Sun Oil	5-26 6-26 10-26 Lease Total	50 26 36	.8750 1. 1.	.14107 .45245 .32395 .91747 9.72670	.22884 .45896 .37182 1.05962 11.09267	.20055 .47552 .38200 1.05807 10.95115	.13447 .49437 .41386 1.04270 9.94908	.22463 .48705 .43260 1.14428 11.23419
SUN OIL TOTAL								
E.H. Valhalla	13-34 Lease Total	10	1.	.15883 .15883 .15883	.25986 .25986 .25986	.30082 .30082 .30082	.35330 .35330 .35330	.39166 .39166 .39166
E.H. VALHALLA TOTAL								
West Canadian	2-17 7-17 8-17 9-17 10-17 15-17 16-17 Lease Total	30 70 72 8 63 23 63	1. .4583 .4583 1. .6250 1. .6250	.59498 .20517 .18706 .92288 .33444 .42796 .38915 3.06164	.55565* .20885 .19658 .77796 .32190 .44235 .35897 2.86226	.58659 .22202 .21475 .81127 .33618 .47683 .38168 3.02932	.75371 .25001 .23301 1.06673 .39392 .51824 .44586 3.66148	.66246 .23907 .22757 .87409 .36187 .50318 .39696 3.26520
WEST CANADIAN TOTAL								
Lease Total	9-18 10-18 15-18 16-18	74 79 51 69	.4583 .3750 .7917 .5417	.15313 .09068 .10402 .25384 .60167 3.66331	.17358 .11857 .19100 .25455 .73770 3.59996	.18023 .11472 .22222 .25915 .77632 3.80564	.19668 .11490 .15404 .30522 .77084 4.43232	.20300 .13499 .22510 .28914 .85223 4.11743
FIELD TOTAL				100.00000	100.00000	100.00000	100.00000	100.00000

* These figures have been raised or lowered one to make all totals balance.

All preceding calculations are up to the end of 1958.



THE CALIFORNIA STANDARD COMPANY

MEDICAL ARTS BUILDING, 329A - 6TH AVENUE S.W., CALGARY, ALBERTA.

August 22nd, 1960.

TO: ALL NORTH VIRDEN SCALLION OPERATORS

NORTH VIRDEN SCALLION FIELD EQUITY CALCULATION - 1ST HALF, 1960

Equities for the proposed North Virden Scallion Unit have been revised to include production for the first six months of 1960. Participation for each well, lease and company has been calculated as follows:

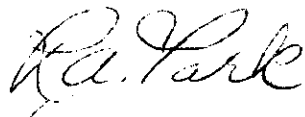
- (1) Average monthly production equity - the cumulative production divided by the number of months on production.
- (2) Current production equity for the first six months of 1960.
- (3) Penalized average monthly production equity - (1) above penalized for water cut. The penalty factor was obtained by subtracting the fractional water cut for the first six months of 1960 from 1.0000.
- (4) $1/2$ current production equity, (2) above, and $1/2$ penalized average monthly production equity, (3) above - participation formula proposed by The California Standard Company.

Four wells, Calstan 11-4 and 14-4, 12-26 WPM and Fargo 15-4 and 14-34, 11-26 WPM, produced during the first half of 1960 but were not included in this calculation because they have not produced for at least six months.

Production for Vallat 16-33 and 13-34, 11-26 WPM was estimated for the month of June as the production figures were not available.

No water penalty has been applied to those wells which did not produce during the period.

RAP:jka


for
L. A. SWANSON, Chairman,
North Virden Scallion Operators Committee.

August 18th, 1960.

NORTH VIRDEN SCALLION
EQUITY CALCULATION
FIRST HALF, 1960

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>The British American Oil Co. Ltd.</u>				
3-28	4983	2945	5329	4137
5-28	0804	0596	0649	0623
6-28	3467	1649	3382	2515
11-28	5382	1698	5716	3707
12-28	2622	2488	2596	2542
13-28	2269	4935	0777	2856
14-28	2737	2102	2184	2143
	<u>22264</u>	<u>16413</u>	<u>20633</u>	<u>18523</u>
2-34	0023	-	0030	0015
3-34	3594	5194	2693	3944
4-34	0249	-	0329	0164
	<u>3866</u>	<u>5194</u>	<u>3052</u>	<u>4123</u>
	<u>26130</u>	<u>21607</u>	<u>23685</u>	<u>22646</u>
<u>The California Standard Company</u>				
6-02	0313	-	0413	0207
11-02	1453	2104	0785	1444
13-02	3154	3635	2814	3225
14-02	2431	1109	1238	1173
	<u>7351</u>	<u>6848</u>	<u>5250</u>	<u>6049</u>
9-09	1997	0704	0609	0657
15-09	0579	-	0764	0382
16-09	7709	17091	8609	12850
	<u>10285</u>	<u>17795</u>	<u>9982</u>	<u>13889</u>
1-10	2871	2870	3103	2986
2-10	5660	5557	2849	4203
7-10	5128	3580	4588	4084
8-10	5920	2955	5606	4281
9-10	5510	5402	6529	5965

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>The California Standard Company .. cont'd.</u>				
10-10	8727	9692	9243	9468
15-10	6077	5513	6725	6119
16-10	2541	2812	1654	2233
	<u>42434</u>	<u>38381</u>	<u>40297</u>	<u>39339</u>
3-10	1129	0440	0361	0400
5-10	5504	5216	1475	3346
6-10	6233	5601	3484	4542
11-10	9791	9668	9751	9710
12-10	3733	1580	4500	3040
13-10	8328	6700	10241	8470
14-10	9005	6996	11813	9405
	<u>43723</u>	<u>36201</u>	<u>41625</u>	<u>38913</u>
3-11	2517	2938	2379	2658
4-11	3224	3926	3827	3877
5-11	2425	1164	2869	2016
6-11	2089	0896	0525	0711
	<u>10255</u>	<u>8924</u>	<u>9600</u>	<u>9262</u>
1-11	2871	1736	2936	2336
2-11	1713	1651	0696	1173
7-11	2454	1401	3114	2258
8-11	0764	0302	0282	0292
	<u>7802</u>	<u>5090</u>	<u>7028</u>	<u>6059</u>
12-11	2089	1104	1903	1503
	<u>2089</u>	<u>1104</u>	<u>1903</u>	<u>1503</u>
5-13	5353	1089	5892	3491
6-13	4786	2549	1896	2222
	<u>10139</u>	<u>3638</u>	<u>7788</u>	<u>5713</u>
7-13	5272	4309	4064	4187
10-13	5099	5879	4325	5102
15-13	2818	2941	1580	2260
	<u>13189</u>	<u>13129</u>	<u>9969</u>	<u>11549</u>
11-13	9746	8583	7570	8077
12-13	8745	7055	8892	7973
13-13	4329	1307	5018	3163
14-13	7703	4498	6408	5453
	<u>30523</u>	<u>21443</u>	<u>27888</u>	<u>24666</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>The California Standard Company .. cont'd.</u>				
1-15	1667	3506	1817	2661
2-15	8525	15185	10595	12890
3-15	10678	16788	9306	13047
4-15	10747	10429	13711	12070
5-15	11661	16962	3891	10427
6-15	11701	12534	15239	13886
7-15	9810	14389	12628	13509
8-15	8490	10657	10939	10798
9-15	1887	1280	2491	1885
10-15	5035	6106	6648	6377
11-15	6893	9619	8876	9248
12-15	11938	17371	11203	14287
13-15	3634	3320	4550	3935
14-15	2188	1557	2812	2184
15-15	1811	1114	2388	1751
16-15	1001	0233	0911	0572
	<u>107666</u>	<u>141050</u>	<u>118005</u>	<u>129527</u>
9-16	11251	12294	3513	7904
10-16	8461	1576	0795	1185
15-16	8855	7645	1509	4577
16-16	12368	19839	15771	17805
	<u>40935</u>	<u>41354</u>	<u>21588</u>	<u>31471</u>
1-21	11905	18326	14764	16545
2-21	12367	18301	15951	17126
7-21	9590	11147	11363	11255
8-21	7952	5294	9587	7441
	<u>41814</u>	<u>53068</u>	<u>51665</u>	<u>52367</u>
3-21	12119	17788	14661	16224
6-21	3837	2676	3914	3295
	<u>15956</u>	<u>20464</u>	<u>18575</u>	<u>19519</u>
3-22	5162	1618	6579	4099
4-22	6378	5549	8368	6958
5-22	6927	7764	8945	8355
6-22	7199	5740	9346	7543
11-22	10192	11324	13313	12318
12-22	10601	9933	13834	11884
13-22	8276	6373	10694	8533
14-22	4520	3276	5711	4494
	<u>59255</u>	<u>51577</u>	<u>76790</u>	<u>64184</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>The California Standard Company .. cont'd.</u>				
9-23	4097	3594	1656	2625
10-23	1748	0356	0670	0513
11-23	2413	1151	1392	1271
12-23	5348	6372	6267	6320
13-23	2222	4156	1511	2833
14-23	2859	2764	1312	2038
15-23	1771	3425	0604	2015
16-23	2680	3177	1177	2177
	<u>23138</u>	<u>24995</u>	<u>14589</u>	<u>19792</u>
11-24	1916	3861	0756	2308
12-24	4016	7923	2675	5299
13-24	2928	6562	1890	4226
	<u>8860</u>	<u>18346</u>	<u>5321</u>	<u>11833</u>
4-25	9561	6903	11544	9224
5-25	2853	3042	2017	2529
	<u>12414</u>	<u>9945</u>	<u>13561</u>	<u>11753</u>
3-27	4242	2629	5402	4016
4-27	6673	5654	8659	7156
5-27	4387	2596	5705	4151
6-27	3959	2937	5073	4005
11-27	4705	2727	5164	3945
12-27	5955	5077	6884	5981
13-27	4879	2969	5136	4052
14-27	6453	5419	7466	6442
	<u>41253</u>	<u>30008</u>	<u>49489</u>	<u>39748</u>
3-04	9838	8159	12240	10199
4-04	5706	2961	7278	5120
5-04	7240	5774	8782	7278
6-04	1875	6175	1133	3654
12-04	11864	18193	14882	16538
13-04	3970	2413	4547	3480
	<u>40493</u>	<u>43675</u>	<u>48862</u>	<u>46269</u>
	<u>569574</u>	<u>587035</u>	<u>579775</u>	<u>583405</u>

Canadian Export Gas & Oil Ltd.

1-05	4080	4654	4543	4598
7-05	1013	-	1337	0669
8-05	1696	0893	0797	0845
9-05	2153	4162	2287	3224
	<u>8942</u>	<u>9709</u>	<u>8964</u>	<u>9336</u>
	<u>8942</u>	<u>9709</u>	<u>8964</u>	<u>9336</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Canadian Superior Oil of California, Ltd.</u>				
2-16	6736	7490	3806	5648
7-16	10440	15233	11175	13204
8-16	7917	11113	3006	7060
	<u>25093</u>	<u>33836</u>	<u>17987</u>	<u>25912</u>
1-22	0602	-	0795	0397
7-22	5353	3571	4653	4112
8-22	4288	6524	3534	5029
	<u>10243</u>	<u>10095</u>	<u>8982</u>	<u>9538</u>
2-28	6730	6338	6831	6585
7-28	5562	4934	5916	5425
8-28	5492	3654	4588	4121
9-28	5764	3427	5062	4244
10-28	5093	9786	4228	7007
15-28	5735	5299	5933	5616
16-28	5892	5233	5730	5482
	<u>40268</u>	<u>38671</u>	<u>38288</u>	<u>38480</u>
	<u>75604</u>	<u>82602</u>	<u>65257</u>	<u>73930</u>
<u>Dome Petroleum Limited</u>				
7-14	6898	8965	3838	6401
8-14	4613	7872	2261	5067
	<u>11511</u>	<u>16837</u>	<u>6099</u>	<u>11468</u>
1-16	3918	2317	2139	2228
	<u>3918</u>	<u>2317</u>	<u>2139</u>	<u>2228</u>
3-24	3704	5804	2152	3978
4-24	0955	-	1261	0630
5-24	0787	-	1039	0520
6-24	1389	3462	1428	1945
	<u>6835</u>	<u>9266</u>	<u>4880</u>	<u>7073</u>
11-26	1991	1360	2629	1994
12-26	3762	2818	4967	3893
	<u>5753</u>	<u>4178</u>	<u>7596</u>	<u>5887</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Dome Petroleum Limited .. cont'd.</u>				
1-28	4456	2900	3719	3309
	<u>4456</u>	<u>2900</u>	<u>3719</u>	<u>3309</u>
4-03	11870	17919	15672	16796
5-03	4352	1700	5746	3723
	<u>16222</u>	<u>19619</u>	<u>21418</u>	<u>20519</u>
12-03	0747	-	0986	0493
	<u>0747</u>	<u>-</u>	<u>0986</u>	<u>0493</u>
1-04	4636	3893	5646	4769
	<u>4636</u>	<u>3893</u>	<u>5646</u>	<u>4769</u>
2-04	4207	4504	5164	4834
7-04	1337	1605	1413	1509
	5544	6109	6577	6343
	<u>59622</u>	<u>65119</u>	<u>59060</u>	<u>62089</u>
<u>Fargo Oils Ltd.</u>				
9-14	3802	2466	2019	2243
10-14	3785	4085	2339	3212
16-14	5602	6519	4461	5490
	<u>13189</u>	<u>13070</u>	<u>8819</u>	<u>10945</u>
1-26	2720	1982	2779	2380
2-26	4780	3465	4405	3935
7-26	7812	6578	9190	7884
8-26	2211	2008	2456	2232
	<u>17523</u>	<u>14033</u>	<u>18830</u>	<u>16431</u>
5-34	1146	0873	0874	0874
6-34	1592	1962	1318	1640
7-34	3380	2453	2051	2252
11-34	3160	3120	2233	2676
12-34	1314	1507	1297	1402
	10592	9915	7773	8844
	<u>41304</u>	<u>37018</u>	<u>35422</u>	<u>36220</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Imperial Oil Limited</u>				
1-33	1019	0420	1345	0883
2-33	5429	2982	7168	5075
7-33	4850	2363	2526	2444
9-33	1146	1279	1513	1396
10-33	5787	7258	5203	6231
15-33	5498	4906	7259	6082
	<u>23729</u>	<u>19208</u>	<u>25014</u>	<u>22111</u>
	<u>23729</u>	<u>19208</u>	<u>25014</u>	<u>22111</u>
<u>Landa Oil Company</u>				
7-02	0035	-	0046	0023
10-02	0845	0571	0769	0670
15-02	5620	4307	7420	5864
16-02	1024	0564	0929	0746
	<u>7524</u>	<u>5442</u>	<u>9164</u>	<u>7303</u>
	<u>7524</u>	<u>5442</u>	<u>9164</u>	<u>7303</u>
<u>Shell Oil Company of Canada, Limited</u>				
9-21	9179	11561	11868	11715
10-21	3588	4159	3819	3989
11-21	0585	0677	0342	0509
14-21	5330	4349	3902	4126
15-21	2807	2128	1372	1750
16-21	7633	6759	9729	8244
	<u>29122</u>	<u>29633</u>	<u>31032</u>	<u>30333</u>
16-32	1453	0737	0783	0760
	<u>1453</u>	<u>0737</u>	<u>0783</u>	<u>0760</u>
3-33	7680	6744	8518	7631
4-33	3982	2193	1767	1980
5-33	1707	1025	0246	0635
6-33	7986	6825	7681	7253
11-33	4312	0940	4536	2738
12-33	4786	4156	4171	4164
13-33	5266	4786	6484	5635
14-33	8230	8876	10584	9730
	<u>43949</u>	<u>35545</u>	<u>43987</u>	<u>39766</u>
	<u>74524</u>	<u>65915</u>	<u>75802</u>	<u>70859</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Sun Oil Company</u>				
15-03	0810	0139	0043	0091
16-03	1783	0044	0115	0079
	<u>2593</u>	<u>0183</u>	<u>0158</u>	<u>0170</u>
4-14	1279	0941	1499	1220
5-14	4531	3266	5745	4506
6-14	6262	7443	8102	7772
	<u>12072</u>	<u>11650</u>	<u>15346</u>	<u>13498</u>
11-14	0075	-	0099	0050
12-14	1210	1023	1276	1149
13-14	1505	1031	1111	1071
	<u>2790</u>	<u>2054</u>	<u>2486</u>	<u>2270</u>
4-21	9879	9808	6012	7910
5-21	2234	1189	1487	1338
	<u>12113</u>	<u>10997</u>	<u>7499</u>	<u>9248</u>
9-22	4925	4840	5731	5286
10-22	6348	4395	8383	6389
15-22	1545	2623	1289	1956
16-22	1927	1806	1541	1673
	<u>14745</u>	<u>13664</u>	<u>16944</u>	<u>15304</u>
5-23	3739	3500	3612	3556
6-23	0833	0372	0224	0298
	<u>4572</u>	<u>3872</u>	<u>3836</u>	<u>3854</u>
1-27	3067	2930	2158	2544
2-27	2963	2177	2155	2166
3-26	1586	0498	1015	0757
4-26	2662	6085	3131	4608
7-27	2361	1993	0990	1491
8-27	4751	2456	6273	4365
9-27	4312	2466	5693	4079
10-27	3970	2216	4859	3538
15-27	5133	3651	6777	5214
16-27	2205	1527	1762	1644
	<u>33010</u>	<u>25999</u>	<u>34813</u>	<u>30406</u>
5-26	1644	2569	1689	2129
6-26	5110	3492	5268	4380
10-26	4097	3964	4155	4060
	<u>10851</u>	<u>10025</u>	<u>11112</u>	<u>10569</u>
	<u>92746</u>	<u>78444</u>	<u>92194</u>	<u>85319</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>E. H. Vallat Limited</u>				
16-33	0706	1042	0447	0745
	<u>0706</u>	<u>1042</u>	<u>0447</u>	<u>0745</u>
13-34	5596	8597	6912	7754
	<u>5596</u>	<u>8597</u>	<u>6912</u>	<u>7754</u>
9-04	7037	8430	9197	8814
10-04	6962	9832	9107	9469
	<u>13999</u>	<u>18262</u>	<u>18304</u>	<u>18283</u>
	<u>20301</u>	<u>27901</u>	<u>25663</u>	<u>26782</u>
Grand Total	<u>1000000</u>	<u>1000000</u>	<u>1000000</u>	<u>1000000</u>



THE CALIFORNIA STANDARD COMPANY

MEDICAL ARTS BUILDING, 329A - 6TH AVENUE S.W., CALGARY, ALBERTA.

August 22nd, 1960.

TO: ALL NORTH VIRDEN SCALLION OPERATORS

NORTH VIRDEN SCALLION FIELD EQUITY CALCULATION - 1ST HALF, 1960

Equities for the proposed North Virden Scallion Unit have been revised to include production for the first six months of 1960. Participation for each well, lease and company has been calculated as follows:

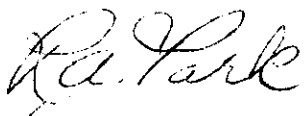
- (1) Average monthly production equity - the cumulative production divided by the number of months on production.
- (2) Current production equity for the first six months of 1960.
- (3) Penalized average monthly production equity - (1) above penalized for water cut. The penalty factor was obtained by subtracting the *fractional* water cut for the first six months of 1960 from 1.0000.
- (4) 1/2 current production equity, (2) above, and 1/2 penalized average monthly production equity, (3) above - participation formula proposed by The California Standard Company.

Four wells, Calstan 11-4 and 14-4, 12-26 WPM and Fargo 15-4 and 14-34, 11-26 WPM, produced during the first half of 1960 but were not included in this calculation because they have not produced for at least six months.

Production for Vallat 16-33 and 13-34, 11-26 WPM was estimated for the month of June as the production figures were not available.

No water penalty has been applied to those wells which did not produce during the period.

RAP:jka


for
L. A. SWANSON, Chairman,
North Virden Scallion Operators Committee.

August 18th, 1960.

NORTH VIRDEN SCALLION
EQUITY CALCULATION
FIRST HALF, 1960

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>The British American Oil Co. Ltd.</u>				
3-28	4983	2945	5329	4137
5-28	0804	0596	0649	0623
6-28	3467	1649	3382	2515
11-28	5382	1698	5716	3707
12-28	2622	2488	2596	2542
13-28	2269	4935	0777	2856
14-28	2737	2102	2184	2143
	<u>22264</u>	<u>16413</u>	<u>20633</u>	<u>18523</u>
2-34	0023	-	0030	0015
3-34	3594	5194	2693	3944
4-34	0249	-	0329	0164
	3866	5194	3052	4123
	<u>26130</u>	<u>21607</u>	<u>23685</u>	<u>22646</u>
<u>The California Standard Company</u>				
6-02	0313	-	0413	0207
11-02	1453	2104	0785	1444
13-02	3154	3635	2814	3225
14-02	2431	1109	1238	1173
	<u>7351</u>	<u>6848</u>	<u>5250</u>	<u>6049</u>
9-09	1997	0704	0609	0657
15-09	0579	-	0764	0382
16-09	7709	17091	8609	12850
	<u>10285</u>	<u>17795</u>	<u>9982</u>	<u>13889</u>
1-10	2871	2870	3103	2986
2-10	5660	5557	2849	4203
7-10	5128	3580	4588	4084
8-10	5920	2955	5606	4281
9-10	5510	5402	6529	5965

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>The California Standard Company .. cont'd.</u>				
10-10	8727	9692	9243	9468
15-10	6077	5513	6725	6119
16-10	2541	2812	1654	2233
	<u>42434</u>	<u>38381</u>	<u>40297</u>	<u>39339</u>
3-10	1129	0440	0361	0400
5-10	5504	5216	1475	3346
6-10	6233	5601	3484	4542
11-10	9791	9668	9751	9710
12-10	3733	1580	4500	3040
13-10	8328	6700	10241	8470
14-10	9005	6996	11813	9405
	<u>43723</u>	<u>36201</u>	<u>41625</u>	<u>38913</u>
3-11	2517	2938	2379	2658
4-11	3224	3926	3827	3877
5-11	2425	1164	2869	2016
6-11	2089	0896	0525	0711
	<u>10255</u>	<u>8924</u>	<u>9600</u>	<u>9262</u>
1-11	2871	1736	2936	2336
2-11	1713	1651	0696	1173
7-11	2454	1401	3114	2258
8-11	0764	0302	0282	0292
	<u>7802</u>	<u>5090</u>	<u>7028</u>	<u>6059</u>
12-11	2089	1104	1903	1503
	<u>2089</u>	<u>1104</u>	<u>1903</u>	<u>1503</u>
5-13	5353	1089	5892	3491
6-13	4786	2549	1896	2222
	<u>10139</u>	<u>3638</u>	<u>7788</u>	<u>5713</u>
7-13	5272	4309	4064	4187
10-13	5099	5879	4325	5102
15-13	2818	2941	1580	2260
	<u>13189</u>	<u>13129</u>	<u>9969</u>	<u>11549</u>
11-13	9746	8583	7570	8077
12-13	8745	7055	8892	7973
13-13	4329	1307	5018	3163
14-13	7703	4498	6408	5453
	<u>30523</u>	<u>21443</u>	<u>27888</u>	<u>24666</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
The California Standard Company .. cont'd.				
1-15	1667	3506	1817	2661
2-15	8525	15185	10595	12890
3-15	10678	16788	9306	13047
4-15	10747	10429	13711	12070
5-15	11661	16962	3891	10427
6-15	11701	12534	15239	13886
7-15	9810	14389	12628	13509
8-15	8490	10657	10939	10798
9-15	1887	1280	2491	1885
10-15	5035	6106	6648	6377
11-15	6893	9619	8876	9248
12-15	11938	17371	11203	14287
13-15	3634	3320	4550	3935
14-15	2188	1557	2812	2184
15-15	1811	1114	2388	1751
16-15	1001	0233	0911	0572
	<u>107666</u>	<u>141050</u>	<u>118005</u>	<u>129527</u>
9-16	11251	12294	3513	7904
10-16	8461	1576	0795	1185
15-16	8855	7645	1509	4577
16-16	12368	19839	15771	17805
	<u>40935</u>	<u>41354</u>	<u>21588</u>	<u>31471</u>
1-21	11905	18326	14764	16545
2-21	12367	18301	15951	17126
7-21	9590	11147	11363	11255
8-21	7952	5294	9587	7441
	<u>41814</u>	<u>53068</u>	<u>51665</u>	<u>52367</u>
3-21	12119	17788	14661	16224
6-21	3837	2676	3914	3295
	<u>15956</u>	<u>20464</u>	<u>18575</u>	<u>19519</u>
3-22	5162	1618	6579	4099
4-22	6378	5549	8368	6958
5-22	6927	7764	8945	8355
6-22	7199	5740	9346	7543
11-22	10192	11324	13313	12318
12-22	10601	9933	13834	11884
13-22	8276	6373	10694	8533
14-22	4520	3276	5711	4494
	<u>59255</u>	<u>51577</u>	<u>76790</u>	<u>64184</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>The California Standard Company .. cont'd.</u>				
9-23	4097	3594	1656	2625
10-23	1748	0356	0670	0513
11-23	2413	1151	1392	1271
12-23	5348	6372	6267	6320
13-23	2222	4156	1511	2833
14-23	2859	2764	1312	2038
15-23	1771	3425	0604	2015
16-23	2680	3177	1177	2177
	<u>23138</u>	<u>24995</u>	<u>14589</u>	<u>19792</u>
11-24	1916	3861	0756	2308
12-24	4016	7923	2675	5299
13-24	2928	6562	1890	4226
	<u>8860</u>	<u>18346</u>	<u>5321</u>	<u>11833</u>
4-25	9561	6903	11544	9224
5-25	2853	3042	2017	2529
	<u>12414</u>	<u>9945</u>	<u>13561</u>	<u>11753</u>
3-27	4242	2629	5402	4016
4-27	6673	5654	8659	7156
5-27	4387	2596	5705	4151
6-27	3959	2937	5073	4005
11-27	4705	2727	5164	3945
12-27	5955	5077	6884	5981
13-27	4879	2969	5136	4052
14-27	6453	5419	7466	6442
	<u>41253</u>	<u>30008</u>	<u>49489</u>	<u>39748</u>
3-04	9838	8159	12240	10199
4-04	5706	2961	7278	5120
5-04	7240	5774	8782	7278
6-04	1875	6175	1133	3654
12-04	11864	18193	14882	16538
13-04	3970	2413	4547	3480
	<u>40493</u>	<u>43675</u>	<u>48862</u>	<u>46269</u>
	<u>569574</u>	<u>587035</u>	<u>579775</u>	<u>583405</u>

Canadian Export Gas & Oil Ltd.

1-05	4080	4654	4543	4598
7-05	1013	-	1337	0669
8-05	1696	0893	0797	0845
9-05	2153	4162	2287	3224
	<u>8942</u>	<u>9709</u>	<u>8964</u>	<u>9336</u>
	<u>8942</u>	<u>9709</u>	<u>8964</u>	<u>9336</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Canadian Superior Oil of California, Ltd.</u>				
2-16	6736	7490	3806	5648
7-16	10440	15233	11175	13204
8-16	7917	11113	3006	7060
	<u>25093</u>	<u>33836</u>	<u>17987</u>	<u>25912</u>
1-22	0602	-	0795	0397
7-22	5353	3571	4653	4112
8-22	4288	6524	3534	5029
	<u>10243</u>	<u>10095</u>	<u>8982</u>	<u>9538</u>
2-28	6730	6338	6831	6585
7-28	5562	4934	5916	5425
8-28	5492	3654	4588	4121
9-28	5764	3427	5062	4244
10-28	5093	9786	4228	7007
15-28	5735	5299	5933	5616
16-28	5892	5233	5730	5482
	<u>40268</u>	<u>38671</u>	<u>38288</u>	<u>38480</u>
	<u>75604</u>	<u>82602</u>	<u>65257</u>	<u>73930</u>
<u>Dome Petroleum Limited</u>				
7-14	6898	8965	3838	6401
8-14	4613	7872	2261	5067
	<u>11511</u>	<u>16837</u>	<u>6099</u>	<u>11468</u>
1-16	3918	2317	2139	2228
	<u>3918</u>	<u>2317</u>	<u>2139</u>	<u>2228</u>
3-24	3704	5804	2152	3978
4-24	0955	-	1261	0630
5-24	0787	-	1039	0520
6-24	1389	3462	1428	1945
	<u>6835</u>	<u>9266</u>	<u>4880</u>	<u>7073</u>
11-26	1991	1360	2629	1994
12-26	3762	2818	4967	3893
	<u>5753</u>	<u>4178</u>	<u>7596</u>	<u>5887</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Dome Petroleum Limited .. cont'd.</u>				
1-28	4456	2900	3719	3309
	<u>4456</u>	<u>2900</u>	<u>3719</u>	<u>3309</u>
4-03	11870	17919	15672	16796
5-03	4352	1700	5746	3723
	<u>16222</u>	<u>19619</u>	<u>21418</u>	<u>20519</u>
12-03	0747	-	0986	0493
	<u>0747</u>	<u>-</u>	<u>0986</u>	<u>0493</u>
1-04	4636	3893	5646	4769
	<u>4636</u>	<u>3893</u>	<u>5646</u>	<u>4769</u>
2-04	4207	4504	5164	4834
7-04	1337	1605	1413	1509
	5544	6109	6577	6343
	<u>59622</u>	<u>65119</u>	<u>59060</u>	<u>62089</u>
<u>Fargo Oils Ltd.</u>				
9-14	3802	2466	2019	2243
10-14	3785	4085	2339	3212
16-14	5602	6519	4461	5490
	<u>13189</u>	<u>13070</u>	<u>8819</u>	<u>10945</u>
1-26	2720	1982	2779	2380
2-26	4780	3465	4405	3935
7-26	7812	6578	9190	7884
8-26	2211	2008	2456	2232
	<u>17523</u>	<u>14033</u>	<u>18830</u>	<u>16431</u>
5-34	1146	0873	0874	0874
6-34	1592	1962	1318	1640
7-34	3380	2453	2051	2252
11-34	3160	3120	2233	2676
12-34	1314	1507	1297	1402
	10592	9915	7773	8844
	<u>41304</u>	<u>37018</u>	<u>35422</u>	<u>36220</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Imperial Oil Limited</u>				
1-33	1019	0420	1345	0883
2-33	5429	2982	7168	5075
7-33	4850	2363	2526	2444
9-33	1146	1279	1513	1396
10-33	5787	7258	5203	6231
15-33	5498	4906	7259	6082
	<u>23729</u>	<u>19208</u>	<u>25014</u>	<u>22111</u>
	<u>23729</u>	<u>19208</u>	<u>25014</u>	<u>22111</u>
<u>Landa Oil Company</u>				
7-02	0035	-	0046	0023
10-02	0845	0571	0769	0670
15-02	5620	4307	7420	5864
16-02	1024	0564	0929	0746
	<u>7524</u>	<u>5442</u>	<u>9164</u>	<u>7303</u>
	<u>7524</u>	<u>5442</u>	<u>9164</u>	<u>7303</u>
<u>Shell Oil Company of Canada, Limited</u>				
9-21	9179	11561	11868	11715
10-21	3588	4159	3819	3989
11-21	0585	0677	0342	0509
14-21	5330	4349	3902	4126
15-21	2807	2128	1372	1750
16-21	7633	6759	9729	8244
	<u>29122</u>	<u>29633</u>	<u>31032</u>	<u>30333</u>
16-32	1453	0737	0783	0760
	<u>1453</u>	<u>0737</u>	<u>0783</u>	<u>0760</u>
3-33	7680	6744	8518	7631
4-33	3982	2193	1767	1980
5-33	1707	1025	0246	0635
6-33	7986	6825	7681	7253
11-33	4312	0940	4536	2738
12-33	4786	4156	4171	4164
13-33	5266	4786	6484	5635
14-33	8230	8876	10584	9730
	<u>43949</u>	<u>35545</u>	<u>43987</u>	<u>39766</u>
	<u>74524</u>	<u>65915</u>	<u>75802</u>	<u>70859</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>Sun Oil Company</u>				
15-03	0810	0139	0043	0091
16-03	1783	0044	0115	0079
	<u>2593</u>	<u>0183</u>	<u>0158</u>	<u>0170</u>
4-14	1279	0941	1499	1220
5-14	4531	3266	5745	4506
6-14	6262	7443	8102	7772
	<u>12072</u>	<u>11650</u>	<u>15346</u>	<u>13498</u>
11-14	0075	-	0099	0050
12-14	1210	1023	1276	1149
13-14	1505	1031	1111	1071
	<u>2790</u>	<u>2054</u>	<u>2486</u>	<u>2270</u>
4-21	9879	9808	6012	7910
5-21	2234	1189	1487	1338
	<u>12113</u>	<u>10997</u>	<u>7499</u>	<u>9248</u>
9-22	4925	4840	5731	5286
10-22	6348	4395	8383	6389
15-22	1545	2623	1289	1956
16-22	1927	1806	1541	1673
	<u>14745</u>	<u>13664</u>	<u>16944</u>	<u>15304</u>
5-23	3739	3500	3612	3556
6-23	0833	0372	0224	0298
	<u>4572</u>	<u>3872</u>	<u>3836</u>	<u>3854</u>
1-27	3067	2930	2158	2544
2-27	2963	2177	2155	2166
3-26	1586	0498	1015	0757
4-26	2662	6085	3131	4608
7-27	2361	1993	0990	1491
8-27	4751	2456	6273	4365
9-27	4312	2466	5693	4079
10-27	3970	2216	4859	3538
15-27	5133	3651	6777	5214
16-27	2205	1527	1762	1644
	<u>33010</u>	<u>25999</u>	<u>34813</u>	<u>30406</u>
5-26	1644	2569	1689	2129
6-26	5110	3492	5268	4380
10-26	4097	3964	4155	4060
	<u>10851</u>	<u>10025</u>	<u>11112</u>	<u>10569</u>
	<u>92746</u>	<u>78444</u>	<u>92194</u>	<u>85319</u>

<u>Well Number</u>	<u>Average Monthly Equity</u>	<u>Current Production Equity</u>	<u>Penalized Average Monthly Equity</u>	<u>50 - 50 Current Prod. - Penalized Average Monthly</u>
<u>E. H. Vallat Limited</u>				
16-33	0706	1042	0447	0745
	<u>0706</u>	<u>1042</u>	<u>0447</u>	<u>0745</u>
13-34	5596	8597	6912	7754
	<u>5596</u>	<u>8597</u>	<u>6912</u>	<u>7754</u>
9-04	7037	8430	9197	8814
10-04	6962	9832	9107	9469
	13999	18262	18304	18283
	<u>20301</u>	<u>27901</u>	<u>25663</u>	<u>26782</u>
Grand Total	<u>1000000</u>	<u>1000000</u>	<u>1000000</u>	<u>1000000</u>

The California Statewide

Mr. J. D. Brown,
Department of
Superiority of the State of California,
Legislative Building,
Sacramento, California.

Dear Mr. Brown:

Following our earlier conversation, Mr. Brown, Mr. Butler and myself will be in the July 26, 1934, at the office of your staff in Room Building, at 1111, to discuss and review our the North Vind-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-1229-1230-1231-1232-1233-1234-1235-1236-1237-1238-1239-1240-1241-1242-1243-1244-1245-1246-1247-1248-1249-1250-1251-1252-1253-1254-1255-1256-1257-1258-1259-1260-1261-1262-1263-1264-1265-1266-1267-1268-1269-1270-1271-1272-1273-1274-1275-1276-1277-1278-1279-1280-1281-1282-1283-1284-1285-1286-1287-1288-1289-1290-1291-1292-1293-1294-1295-1296-1297-1298-1299-1300-1301-1302-1303-1304-1305-1306-1307-1308-1309-1310-1311-1312-1313-1314-1315-1316-1317-1318-1319-1320-1321-1322-1323-1324-1325-1326-1327-1328-1329-1330-1331-1332-1333-1334-1335-1336-1337-1338-1339-1340-1341-1342-1343-1344-1345-1346-1347-1348-1349-1350-1351-1352-1353-1354-1355-1356-1357-1358-1359-1360-1361-1362-1363-1364-1365-1366-1367-1368-1369-1370-1371-1372-1373-1374-1375-1376-1377-1378-1379-1380-1381-1382-1383-1384-1385-1386-1387-1388-1389-1390-1391-1392-1393-1394-1395-1396-1397-1398-1399-1400-1401-1402-1403-1404-1405-1406-1407-1408-1409-1410-1411-1412-1413-1414-1415-1416-1417-1418-1419-1420-1421-1422-1423-1424-1425-1426-1427-1428-1429-1430-1431-1432-1433-1434-1435-1436-1437-1438-1439-1440-1441-1442-1443-1444-1445-1446-1447-1448-1449-1450-1451-1452-1453-1454-1455-1456-1457-1458-1459-1460-1461-1462-1463-1464-1465-1466-1467-1468-1469-1470-1471-1472-1473-1474-1475-1476-1477-1478-1479-1480-1481-1482-1483-1484-1485-1486-1487-1488-1489-1490-1491-1492-1493-1494-1495-1496-1497-1498-1499-1500-1501-1502-1503-1504-1505-1506-1507-1508-1509-1510-1511-1512-1513-1514-1515-1516-1517-1518-1519-1520-1521-1522-1523-1524-1525-1526-1527-1528-1529-1530-1531-1532-1533-1534-1535-1536-1537-1538-1539-1540-1541-1542-1543-1544-1545-1546-1547-1548-1549-1550-1551-1552-1553-1554-1555-1556-1557-1558-1559-1560-1561-1562-1563-1564-1565-1566-1567-1568-1569-1570-1571-1572-1573-1574-1575-1576-1577-1578-1579-1580-1581-1582-1583-1584-1585-1586-1587-1588-1589-1590-1591-1592-1593-1594-1595-1596-1597-1598-1599-1600-1601-1602-1603-1604-1605-1606-1607-1608-1609-1610-1611-1612-1613-1614-1615-1616-1617-1618-1619-1620-1621-1622-1623-1624-1625-1626-1627-1628-1629-1630-1631-1632-1633-1634-1635-1636-1637-1638-1639-1640-1641-1642-1643-1644-1645-1646-1647-1648-1649-1650-1651-1652-1653-1654-1655-1656-1657-1658-1659-1660-1661-1662-1663-1664-1665-1666-1667-1668-1669-1670-1671-1672-1673-1674-1675-1676-1677-1678-1679-1680-1681-1682-1683-1684-1685-1686-1687-1688-1689-1690-1691-1692-1693-1694-1695-1696-1697-1698-1699-1700-1701-1702-1703-1704-1705-1706-1707-1708-1709-1710-1711-1712-1713-1714-1715-1716-1717-1718-1719-1720-1721-1722-1723-1724-1725-1726-1727-1728-1729-1730-1731-1732-1733-1734-1735-1736-1737-1738-1739-1740-1741-1742-1743-1744-1745-1746-1747-1748-1749-1750-1751-1752-1753-1754-1755-1756-1757-1758-1759-1760-1761-1762-1763-1764-1765-1766-1767-1768-1769-1770-1771-1772-1773-1774-1775-1776-1777-1778-1779-1780-1781-1782-1783-1784-1785-1786-1787-1788-1789-1790-1791-1792-1793-1794-1795-1796-1797-1798-1799-1800-1801-1802-1803-1804-1805-1806-1807-1808-1809-1810-1811-1812-1813-1814-1815-1816-1817-1818-1819-1820-1821-1822-1823-1824-1825-1826-1827-1828-1829-1830-1831-1832-1833-1834-1835-1836-1837-1838-1839-1840-1841-1842-1843-1844-1845-1846-1847-1848-1849-1850-1851-1852-1853-1854-1855-1856-1857-1858-1859-1860-1861-1862-1863-1864-1865-1866-1867-1868-1869-1870-1871-1872-1873-1874-1875-1876-1877-1878-1879-1880-1881-1882-1883-1884-1885-1886-1887-1888-1889-1890-1891-1892-1893-1894-1895-1896-1897-1898-1899-1900-1901-1902-1903-1904-1905-1906-1907-1908-1909-1910-1911-1912-1913-1914-1915-1916-1917-1918-1919-1920-1921-1922-1923-1924-1925-1926-1927-1928-1929-1930-1931-1932-1933-1934-1935-1936-1937-1938-1939-1940-1941-1942-1943-1944-1945-1946-1947-1948-1949-1950-1951-1952-1953-1954-1955-1956-1957-1958-1959-1960-1961-1962-1963-1964-1965-1966-1967-1968-1969-1970-1971-1972-1973-1974-1975-1976-1977-1978-1979-1980-1981-1982-1983-1984-1985-1986-1987-1988-1989-1990-1991-1992-1993-1994-1995-1996-1997-1998-1999-2000-2001-2002-2003-2004-2005-2006-2007-2008-2009-2010-2011-2012-2013-2014-2015-2016-2017-2018-2019-2020-2021-2022-2023-2024-2025-2026-2027-2028-2029-2030-2031-2032-2033-2034-2035-2036-2037-2038-2039-2040-2041-2042-2043-2044-2045-2046-2047-2048-2049-2050-2051-2052-2053-2054-2055-2056-2057-2058-2059-2060-2061-2062-2063-2064-2065-2066-2067-2068-2069-2070-2071-2072-2073-2074-2075-2076-2077-2078-2079-2080-2081-2082-2083-2084-2085-2086-2087-2088-2089-2090-2091-2092-2093-2094-2095-2096-2097-2098-2099-2100-2101-2102-2103-2104-2105-2106-2107-2108-2109-2110-2111-2112-2113-2114-2115-2116-2117-2118-2119-2120-2121-2122-2123-2124-2125-2126-2127-2128-2129-2130-2131-2132-2133-2134-2135-2136-2137-2138-2139-2140-2141-2142-2143-2144-2145-2146-2147-2148-2149-2150-2151-2152-2153-2154-2155-2156-2157-2158-2159-2160-2161-2162-2163-2164-2165-2166-2167-2168-2169-2170-2171-2172-2173-2174-2175-2176-2177-2178-2179-2180-2181-2182-2183-2184-2185-2186-2187-2188-2189-2190-2191-2192-2193-2194-2195-2196-2197-2198-2199-2200-2201-2202-2203-2204-2205-2206-2207-2208-2209-2210-2211-2212-2213-2214-2215-2216-2217-2218-2219-2220-2221-2222-2223-2224-2225-2226-2227-2228-2229-2230-2231-2232-2233-2234-2235-2236-2237-2238-2239-2240-2241-2242-2243-2244-2245-2246-2247-2248-2249-2250-2251-2252-2253-2254-2255-2256-2257-2258-2259-2260-2261-2262-2263-2264-2265-2266-2267-2268-2269-2270-2271-2272-2273-2274-2275-2276-2277-2278-2279-2280-2281-2282-2283-2284-2285-2286-2287-2288-2289-2290-2291-2292-2293-2294-2295-2296-2297-2298-2299-2300-2301-2302-2303-2304-2305-2306-2307-2308-2309-2310-2311-2312-2313-2314-2315-2316-2317-2318-2319-2320-2321-2322-2323-2324-2325-2326-2327-2328-2329-2330-2331-2332-2333-2334-2335-2336-2337-2338-2339-2340-2341-2342-2343-2344-2345-2346-2347-2348-2349-2350-2351-2352-2353-2354-2355-2356-2357-2358-2359-2360-2361-2362-2363-2364-2365-2366-2367-2368-2369-2370-2371-2372-2373-2374-2375-2376-2377-2378-2379-2380-2381-2382-2383-2384-2385-2386-2387-2388-2389-2390-2391-2392-2393-2394-2395-2396-2397-2398-2399-2400-2401-2402-2403-2404-2405-2406-2407-2408-2409-2410-2411-2412-2413-2414-2415-2416-2417-2418-2419-2420-2421-2422-2423-2424-2425-2426-2427-2428-2429-2430-2431-2432-2433-2434-2435-2436-2437-2438-2439-2440-2441-2442-2443-2444-2445-2446-2447-2448-2449-2450-2451-2452-2453-2454-2455-2456-2457-2458-2459-2460-2461-2462-2463-2464-2465-2466-2467-2468-2469-2470-2471-2472-2473-2474-2475-2476-2477-2478-2479-2480-2481-2482-2483-2484-2485-2486-2487-2488-2489-2490-2491-2492-2493-2494-2495-2496-2497-2498-2499-2500-2501-2502-2503-2504-2505-2506-2507-2508-2509-2510-2511-2512-2513-2514-2515-2516-2517-2518-2519-2520-2521-2522-2523-2524-2525-2526-2527-2528-2529-2530-2531-2532-2533-2534-2535-2536-2537-2538-2539-2540-2541-2542-2543-2544-2545-2546-2547-2548-2549-2550-2551-2552-2553-2554-2555-2556-2557-2558-2559-2560-2561-2562-2563-2564-2565-2566-2567-2568-2569-2570-2571-2572-2573-2574-2575-2576-2577-2578-2579-2580-2581-2582-2583-2584-2585-2586-2587-2588-2589-2590-2591-2592-2593-2594-2595-2596-2597-2598-2599-2600-2601-2602-2603-2604-2605-2606-2607-2608-2609-2610-2611-2612-2613-2614-2615-2616-2617-2618-2619-2620-2621-2622-2623-2624-2625-2626-2627-2628-2629-2630-2631-2632-2633-2634-2635-2636-2637-2638-2639-2640-2641-2642-2643-2644-2645-2646-2647-2648-2649-2650-2651-2652-2653-2654-2655-2656-2657-2

NORTH VIRDEN SCALLION FIELD
UNITIZATION PROPOSAL

The California Standard Company

July, 1960.

NORTH VIRDEN SCALLION FIELD
UNITIZATION PROPOSAL

The California Standard Company submits the following unitization proposal for consideration by the North Virden Scallion Operators.

- 1) The area to be unitized to exclude the west flank, which is a natural water drive area. (See Figure 1)
- 2) Qualifying tracts be legal subdivisions containing a producible oil well.
- 3) The participation formula be comprised of two factors weighted equally - a current production factor and an average monthly oil production factor penalized for water production.
- 4) Equalization of investment to include all tangible equipment except casing.

Unit Area

The main purpose of unitizing the North Virden Scallion Field is to initiate a water flood scheme to substantially increase oil recovery from the pool and accelerate economic depletion. The western flank of the field is currently producing under a fairly active natural water drive, and the recovery is not expected to be enhanced greatly by any supplemental water injection. The proposed unit area, therefore, excludes Sections 7, 8, west half of 16, 17, 18, 19 and 20 and would exclude any further development in the general area. The map, Figure 1, shows the outline of the proposed unit area based on wells on production at December 31st, 1959.

Qualifying Tracts

It is proposed that developed acreage only be included within the unit area. A qualifying tract could be defined as a legal subdivision containing a producible oil well, which at some time during it's life produced a minimum of 3 barrels of oil per day for at least one months duration.

Participation Formula

It is proposed that the participation formula be comprised of two basic factors weighted equally - a current production factor and an average monthly oil production factor penalized for water production. The current production factor, besides representing current income, would be a measure of remaining primary or natural depletion production. The average monthly production factor, when adjusted for water production, represents the secondary recovery which can be expected from a lease. Average monthly production is a measure of the long term producibility and oil-in-place of a well. Water production is a negative consideration which will likely mean reduced recovery by water flooding, as well as water flood control problems. Therefore, a factor derived from the long term producibility

of a well, suitably adjusted for water production, is a reasonable measure of water flood recovery.

The individual factors would be calculated as follows:

1. "Current Production Factor" - the percentage for a tract would be computed by dividing the oil production of the tract for the six month interval January to June, 1960, by the total oil production of all the Unit tracts for the same six month period.
2. Adjusted average monthly oil production factor would be computed as follows:
 - a) Determine average monthly production for each tract by dividing cumulative oil production to July 1st, 1960, by the number of full months since first production.
 - b) Calculate the percentage of the total of average monthly productions for each tract.
 - c) Calculate a fractional water out using the oil and water production for the six month period January to June, 1960.
 - d) Multiply the percentage obtained in (b) for each tract by one minus its appropriate fractional water cut.
 - e) Determine the final "adjusted average monthly production factor" penalized for water production by summing the products obtained in (d) and redetermining a percentage of the total for each tract.

The resulting participation factor for each tract would be determined by taking one-half of the sum of the current production and adjusted average monthly production factors appropriate to each tract.

ADDENDA

INTRODUCTION

The purpose of this addenda is to present:

1. A brief review of the production history and predicted future production of the proposed unit area of the North Virden Scallion Field.
2. A review of experience gained in the Daly Field water flood as it might apply to the proposed North Virden water injection scheme.
3. A review of the estimated capital investment required for the proposed North Virden water injection scheme and estimated operating costs assuming The California Standard Company is the Unit Operator.

PRODUCTION HISTORY AND FUTURE PERFORMANCE

Oil production under natural depletion and under water flooding is shown in Figure 2. The future production rate under natural depletion was predicted using the barrels of oil per day per well curve of Figure 3 and estimates of reserves from individual well decline curves.

The oil production under water flooding was estimated to increase over about a two year period to a maximum. The maximum rate was determined by assuming each remaining producing well would increase due to water injection to the peak production rate of its previous history. Ultimate reserves were estimated to be about 22% of the oil-in-place or an increase of about 10% over natural depletion.

THE DALY WATER FLOOD

Actual Experience Applicable to the North Virden Scallion Field

The California Standard Company has operated a water flood in the Daly Field, Manitoba, since the middle of 1953. The project began as a single 80 acre five-spot pilot scheme with four injection wells and expanded in stages until now there are twenty injection wells. The map of a portion of the Daly Field, Figure 4, shows the five-spot injection pattern and the area affected by water injection. Table I gives a summary of injection data for the water injection wells.

The response to the water flood has been very satisfactory as evidenced by the oil production curves of wells Calstan Daly 15-1, 3-12 and 5-12 (see Figures 5, 6, 7). These wells, though they are some of the better wells of the Daly flood area, would be analagous to wells in the floodable areas of the North Virden Scallion Field. The overall increase in oil production for the water flood area is shown in Figure 8 and indicates that currently the production rate is double what it would have been without water injection. The cumulative oil production from the water flood area to December 31st, 1959 was 1,690,000 barrels of which 420,000 barrels is the estimated net increase due to flooding.

The total production cost in the water flood area for 1959 amounted to \$7.46 per day per well, of which \$2.09 was the cost of operation of the injection facilities. This 39% increase in producing costs gave a 84% increase in oil production.

The capital investment in injection facilities has been as follows:

Injection plant (including alternations)	\$ 125,000
High pressure injection lines	71,000
Water supply facilities	
Jurassic water well (used 1954-55)	48,000
Salt water gathering system	142,000
	<hr/>
Total	\$ 386,000

The salt water gathering system also served to solve the produced water disposal problem, therefore should not be considered in full as a cost against water flooding.

COST ESTIMATES OF UNITIZED WATER FLOOD

Capital Investment

The capital investment required in the proposed water flood project for the North Virden Scallion Field has been presented before and can be summarized again as follows:

<u>Year</u>	<u>Program</u>	<u>Amount</u>
I	Inject in 9 nine-spots using produced salt water	\$ 200,000
II	Pipeline to Assiniboine River, additional 61 five-spots and 9 nine-spots	840,000
V	Salt water gathering system	104,000
		<hr/>
	Total	\$1,144,000

Detailed cost estimates are shown in Table II and the water injection scheme is illustrated in the map, Figure 9.

The exact scheduling of the investment may be modified at the time the unit is formed. The number of wells converted to injection in the first stage of water flooding will depend on the supply of produced salt water available. Possibilities such as flowing back Devonian and Ashville disposal wells for additional water may expand the initial program.

Operating Costs

Estimates of operating costs have been made assuming that The California Standard Company would be the Operator of the proposed North Virden Scallion Unit. The following summary of expenses is based on Calstan's present operating experience in the North Virden Field and the water flood operation in the Daly Field:

	AMOUNT IN DOLLARS PER WELL PER DAY		
	<u>Initial Take Over Normal Production Operations</u>	<u>First Stage Partial Water Flood Operation</u>	<u>Complete Water Flood Operation</u>
Company labour	0.95	1.02	1.09
Material and supplies, parts, power, vehicle rental	1.70	1.83	2.00
Contract services, well pulling and repairs, salt water hauling	0.72	0.72	0.70
Surface rentals, taxes	<u>1.70</u>	<u>1.71</u>	<u>1.74</u>
Sub-total Direct Production Expense	5.07	5.28	5.62
District Expense \$50/well/month	1.64	1.64	1.64
Overhead \$30/well/month	<u>0.99</u>	<u>0.99</u>	<u>0.99</u>
Total Production Expense \$/well/day	7.70	7.91	8.25
Estimated Production Rate bbls/day/well	15.7		31.0
Total Production Expense ¢/bbl.	49		27

A more detailed breakdown and description of costs and expenses is shown in Table III.

The California Standard Company currently operates 369 wells in Manitoba, 111 of which are in the North Virden Field. Taking over operation of the proposed Unit will add 112 wells, with a total of 213 in the Unit area. During the initial take over of operation, it is felt that the per well production cost will not be reduced appreciably compared to our present operation. On the other hand, during the evolution toward full water flood operation, savings experienced from the more efficient use of labour and producing facilities will offset a large part of the additional costs associated with water injection facilities.

TABLE I
DAILY WATER FLOOD
WATER INJECTION HISTORY

	<u>Injection Well</u>	<u>Date on Injection</u>	<u>Initial Rate Bbls/day</u>	<u>Current Rate Bbls/day</u>	<u>Cum. Inj. Dec.31/59 Bbls.</u>
Expansion Pilot No. 1 Flood	(2-12	July 11/53	350	160	547,403
	(10A-1	July 14/53	400	25	101,767
	(14-1	July 17/53	600	90	346,764
	(16-1	July 20/53	650	45	177,285
	(8-11	Nov. 27/54	350	75	216,179
	(6-12	Dec. 6/54	400	80	279,896
	(12-12	Dec. 6/54	750	85	226,889
	(10-11	Dec. 20/55	400	330	452,001
	(12-11	Dec. 21/55	600	60	230,533
Expansion No. 2	(6-11	Dec. 25/55	600	15	136,476
	(14-11	Jan. 5/56	550	30	162,570
	(16-11	Nov. 16/56	100	30	38,224
	(4-13	Nov. 16/56	400	--	218,088
	(2-14	Nov. 16/56	500	55	129,634
	(8-14	Nov. 16/56	350	--	412,232
	(4-12	Nov. 9/57	500	150	193,326
	(16-2	Oct. 6/59	550	550	43,062
Expansion No. 3	(2-11	Oct. 5/59	450	420	34,743
	(10-12	Oct. 19/59	450	510	32,787
	(14-12	Oct. 16/59	450	490	34,022
	TOTAL		9,400	3,200	4,013,881

TABLE II

NORTH VIRDEN WATER INJECTION SCHEME

Capital Costs

Year I

Low Pressure Salt Water Supply System	4,200
Water Flood Plant #4 (9-16)	9,800
High Pressure Injection Lines (9-9 spots)	93,800
Injection Well Conversions (9 wells)	43,500
Reworks	<u>30,500</u>
Sub-total	\$181,800
10% Contingencies	<u>18,200</u>
Total Cost of Year I Program	\$200,000

Year II

Supply Line from Assiniboine River	152,000
Water Flood Plants #1, 2 and 3	30,000
High Pressure Injection Lines	299,000
Injection Well Conversions (61 wells)	<u>282,600</u>
Sub-total	\$763,600
10% Contingencies	<u>76,400</u>
Total Cost of Year II Program	\$840,000

Year V

Install Salt Water Gathering System	<u>104,000</u>
Total Cost North Virden Scallion Water Flood	<u><u>\$1,144,000</u></u>

TABLE III

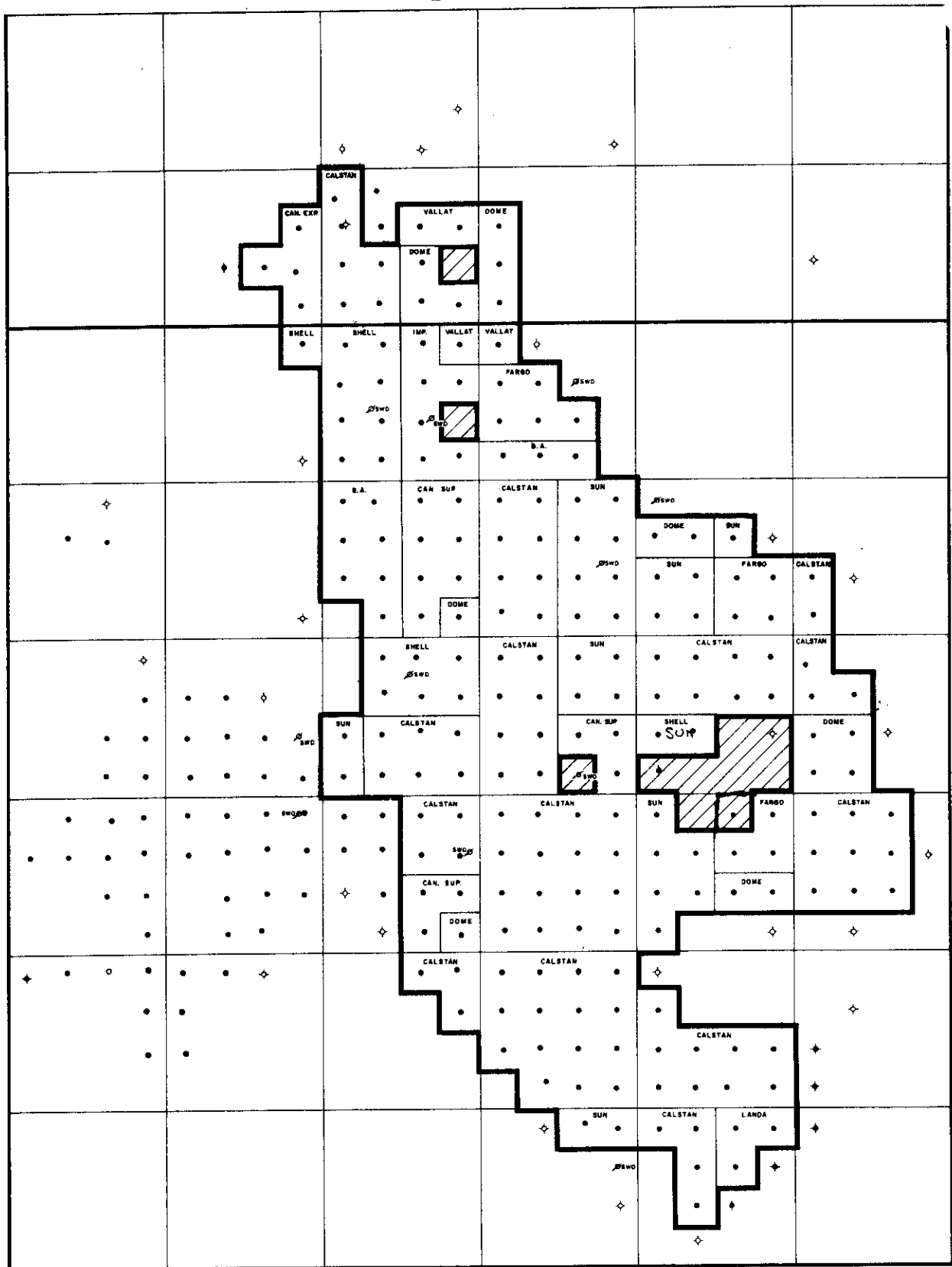
PROPOSED NORTH VILFEN SCALLION UNITOperating CostsThe California Standard Company Unit Operator

<u>Classification</u>	<u>(Amount in dollars per day per well)</u>			<u>Remarks</u>
	<u>(1) Initial Take-Over Normal Production Operations</u>	<u>(2) First Stage Partial Water Flood Operation</u>	<u>(3) Complete Water Flood Operation</u>	
Labour	0.95	1.02	1.09	1 field foreman, 1 lead pumper; (1) 11, (2) 12, and (3) 13 pumpers
Materials and supplies	0.28	0.28	0.40	(3) increase for water treatment chemicals, treatolite, etc.
Replacement parts	0.20	0.25	0.30	Increase for water flood equipment
Fuel, power, water	1.05	1.13	1.13	(2) Add 100 HP in motors; (3) no increase due to decreased number producing wells
Equipment rental	0.17	0.17	0.17	
Well pulling	0.10	0.10	0.10	
Well pump repairs	0.05	0.05	0.05	
Technical services	0.02	0.02	0.02	
Roads and location maintenance	0.05	0.05	0.05	
Hauling	0.20	0.20	0.20	
Maintenance and repairs	0.30	0.30	0.37	
Lease obligations and surface rentals	0.50	0.50	0.50	
Taxes	<u>1.20</u>	<u>1.21</u>	<u>1.24</u>	
TOTAL DIRECT PRODUCTION EXPENSE	5.07	5.28	5.62	

TABLE III

(continued)

<u>Classification</u>	<u>(1) Initial Take-Over Normal Production Operations</u>	<u>(2) First Stage Partial Water Flood Operation</u>	<u>(3) Complete Water Flood Operation</u>	<u>Remarks</u>
District Expense	1.64	1.64	1.64	Viriden production office - \$50/well/month
Overhead	0.99	0.99	0.99	Calgary administrative and engineering \$30/well/ month
TOTAL PRODUCTION EXPENSE	7.70	7.91	8.25	
Estimated Production Rate	15.7		31.0	
Production Expense ¢/bbl.	49		27	



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FIGURE 1
NORTH VIRDEN SCALLION FIELD
PROPOSED UNIT AREA

UNIT AREA EXCLUDED FROM UNIT AREA

SCALE IN MILES

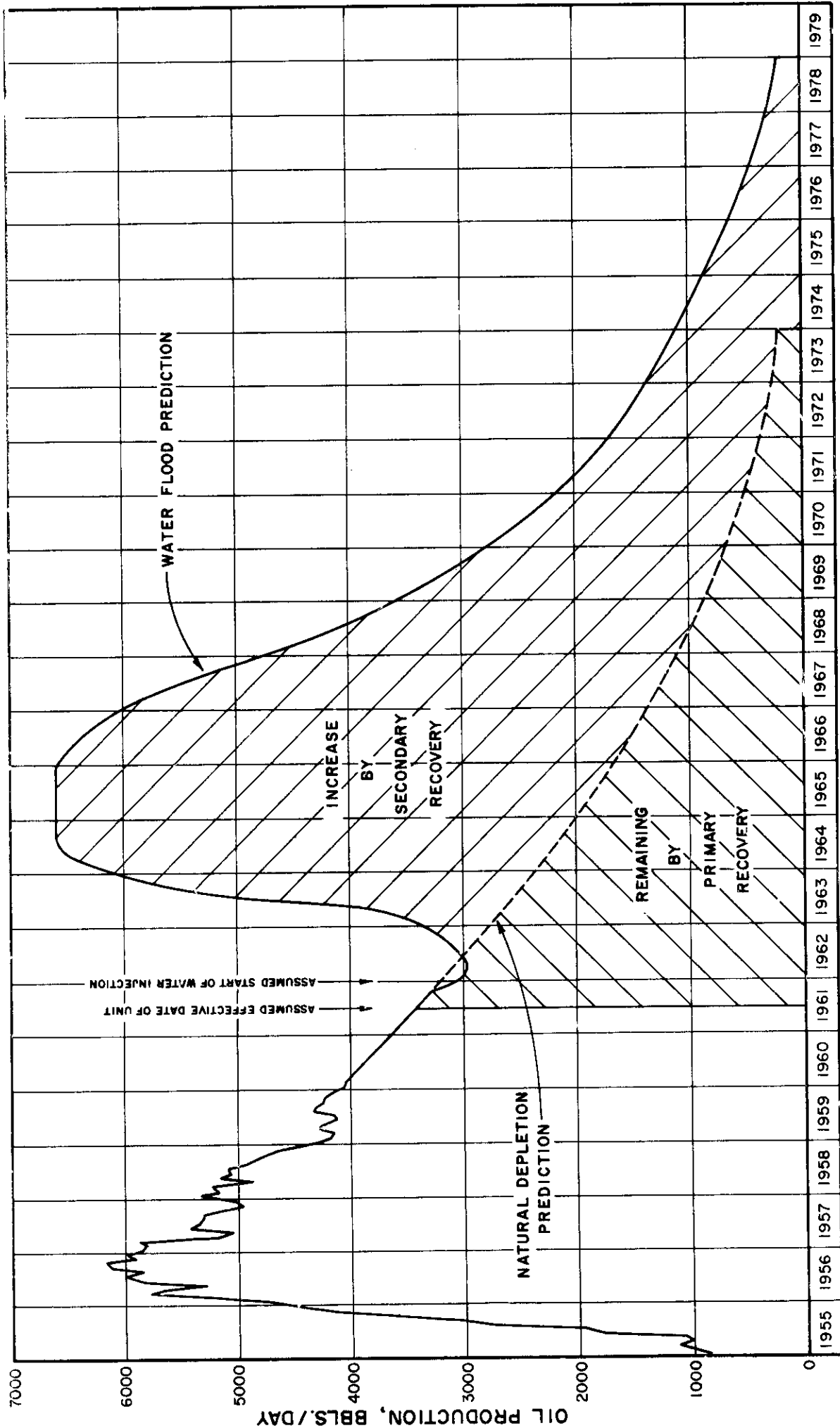


FIGURE 2
PROPOSED NORTH VIRDEN SCALLION UNIT
PREDICTED OIL PRODUCTION

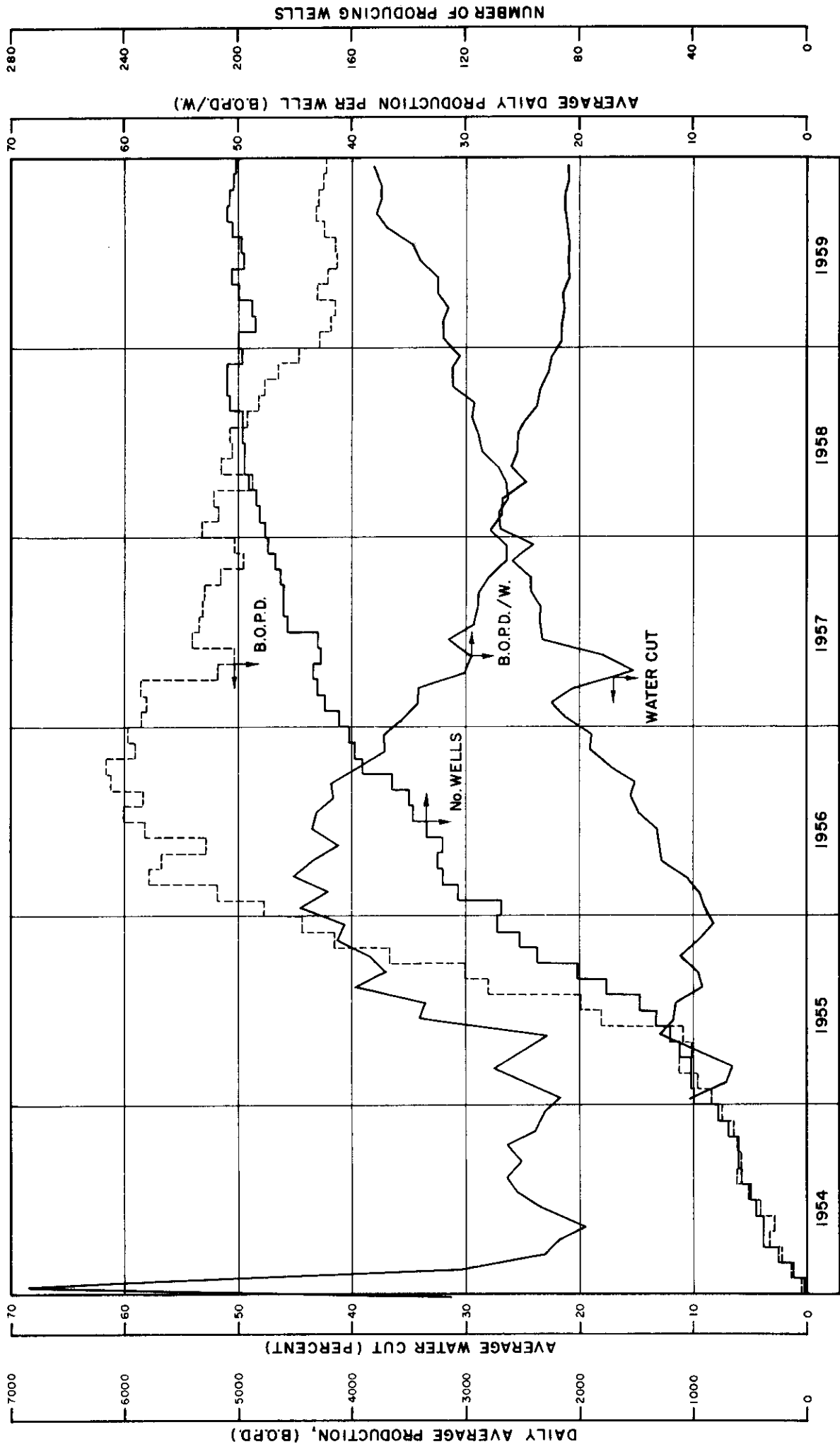
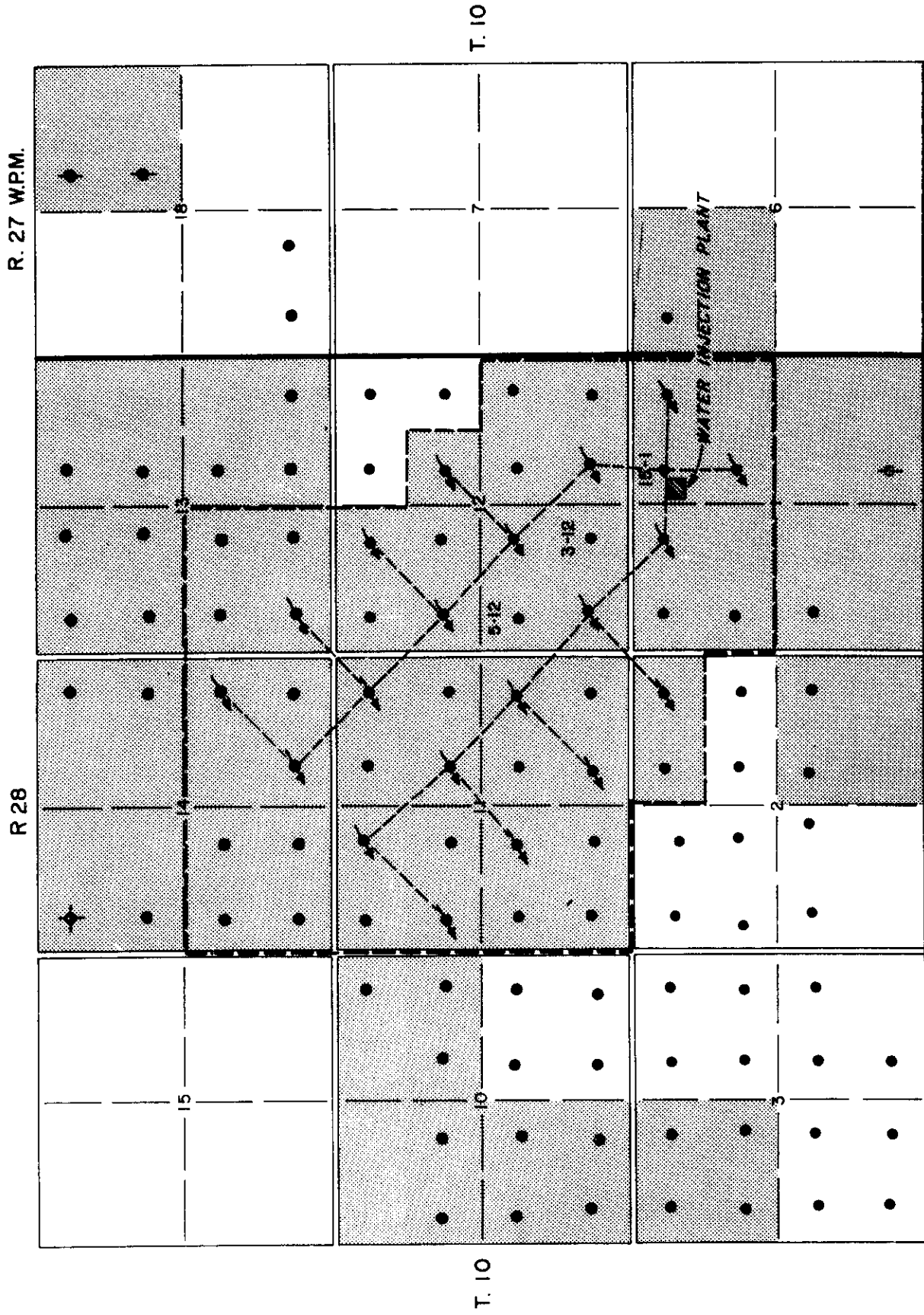


FIGURE 3
 NORTH VIRDEN SCALLION FIELD
 PRODUCTION HISTORY OF PROPOSED UNIT AREA



- L E G E N D -
- INJECTION WELL
 - INJECTION LINES
 - WATER FLOOD AREA
 - CALISTAN LAND

FIGURE 4

DALY FIELD

WATER FLOOD AREA

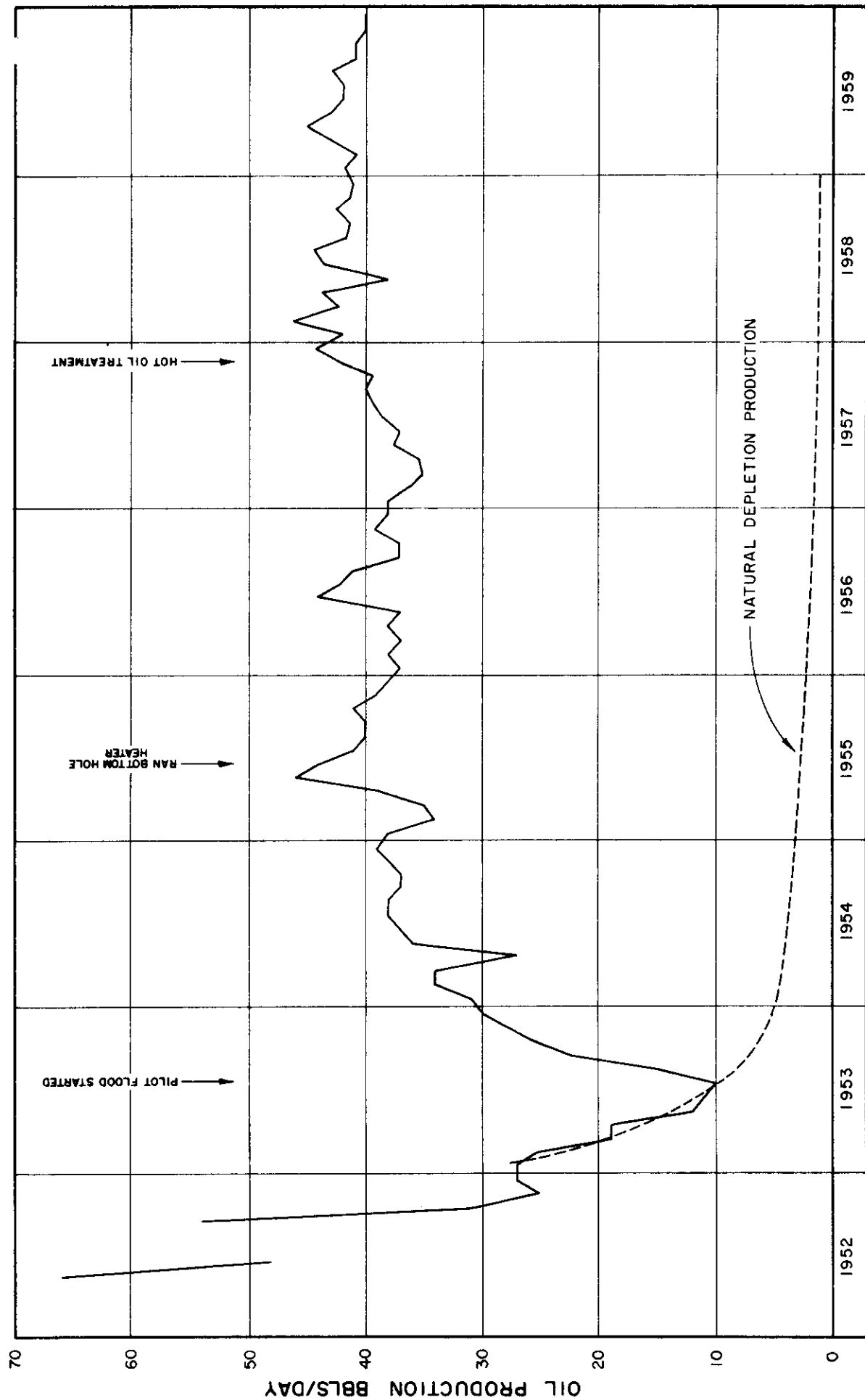


FIGURE 5
OIL PRODUCTION HISTORY
CALSTAN DALY 15 - 1

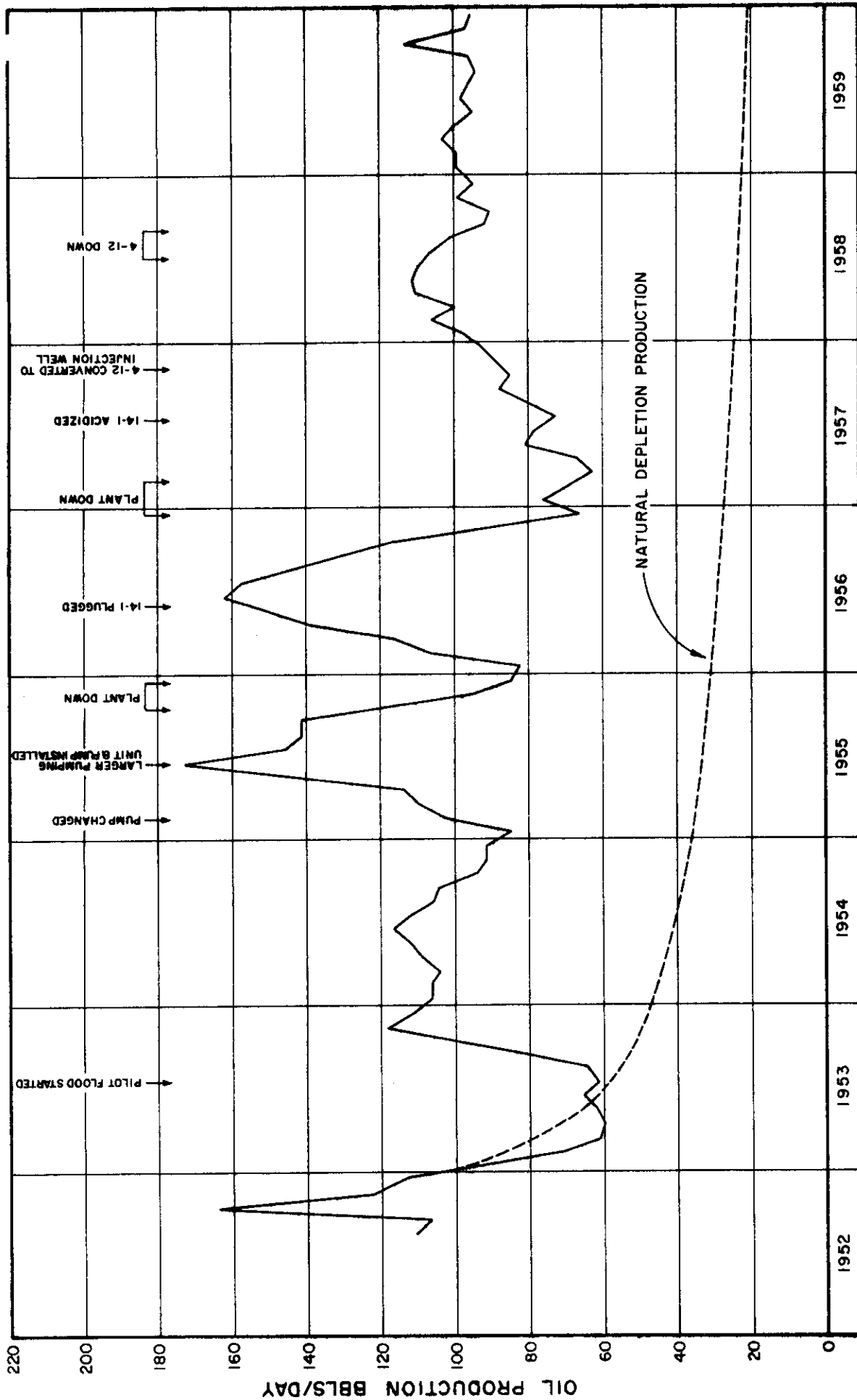


FIGURE 6
OIL PRODUCTION HISTORY
CALSTAN DALY 3-12

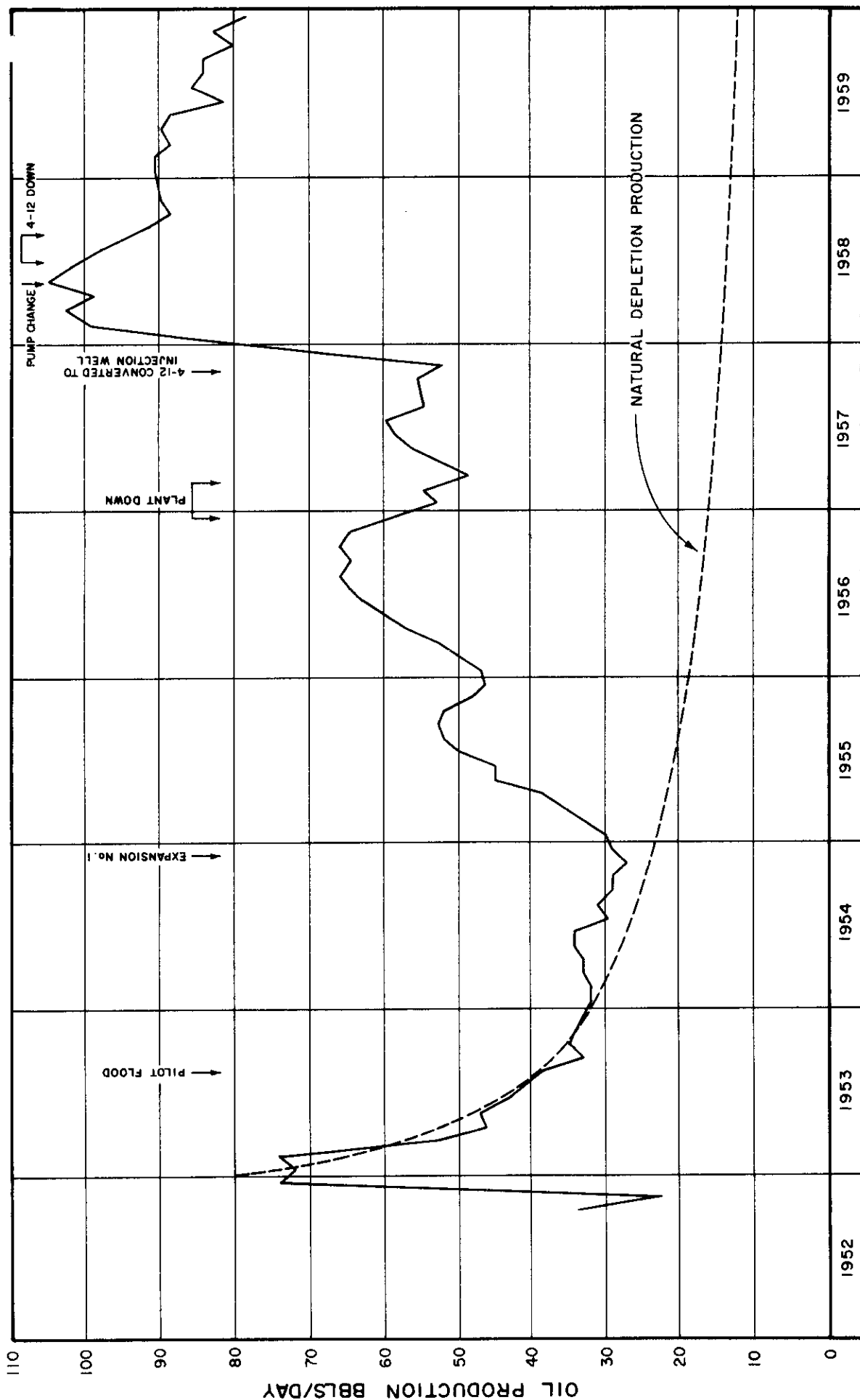


FIGURE 7
OIL PRODUCTION HISTORY
CALSTAN DALY 5-12

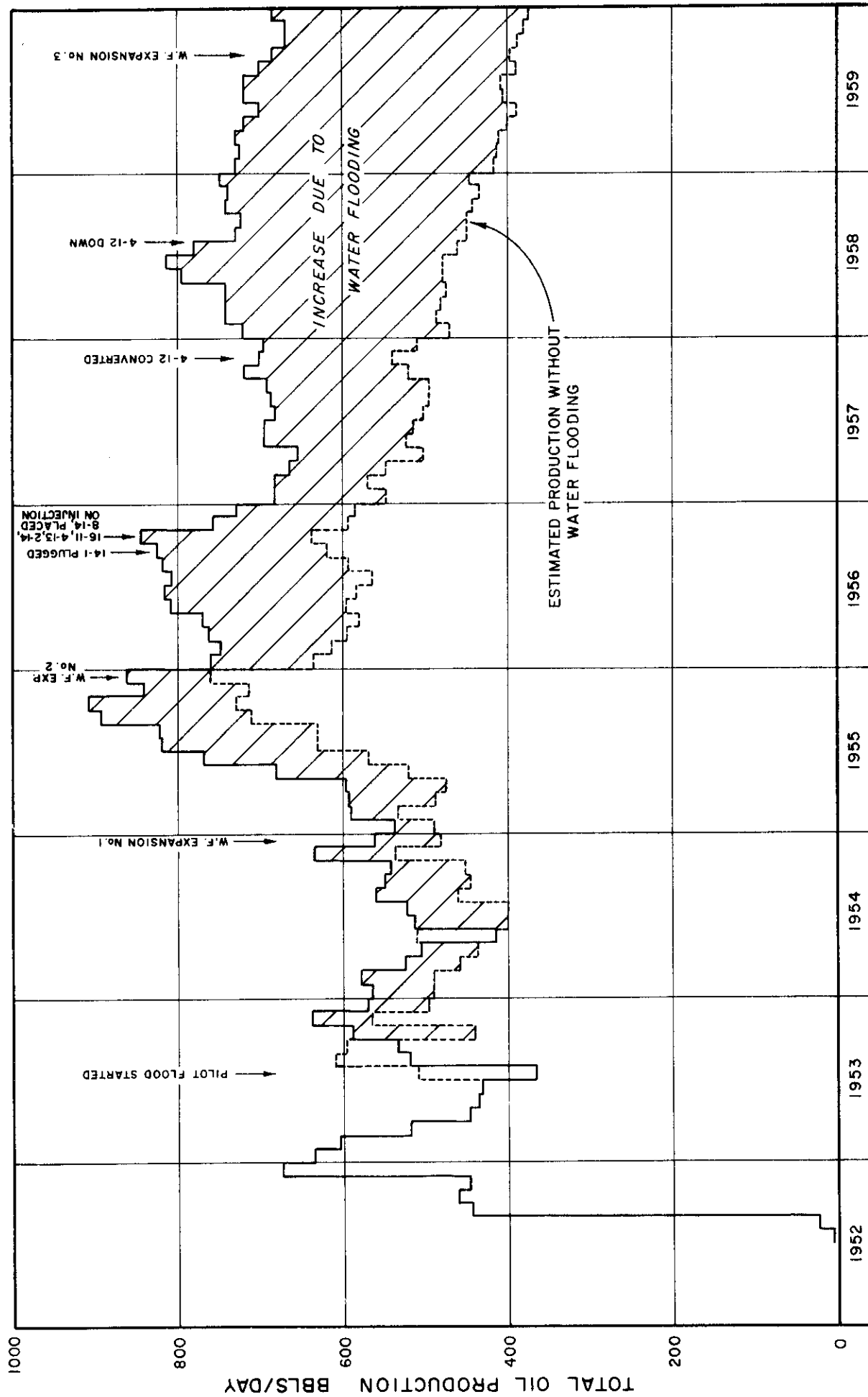


FIGURE B
DALY WATER FLOOD AREA
OIL PRODUCTION HISTORY

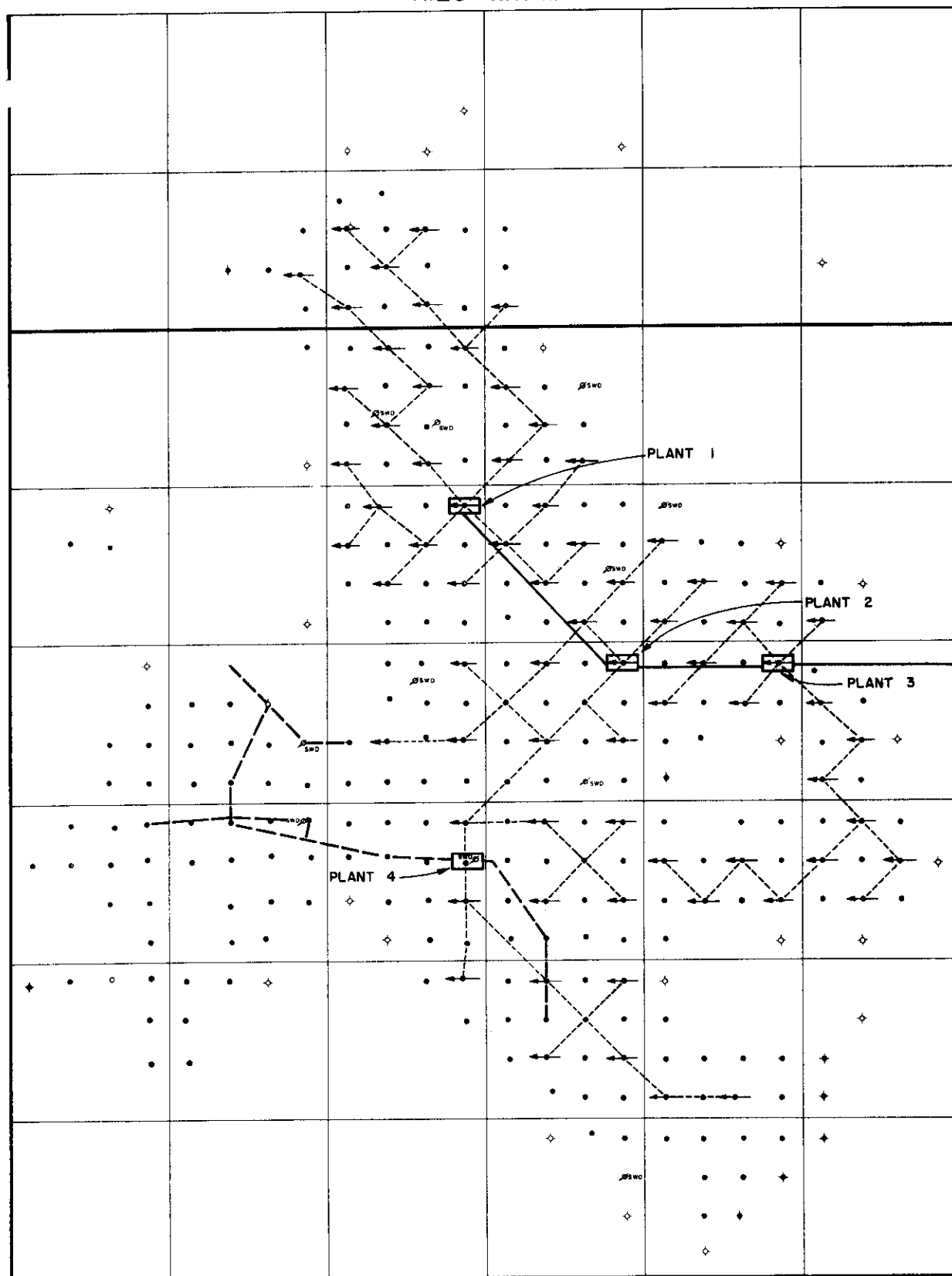


FIGURE 9

NORTH VIRDEN SCALLION FIELD WATER INJECTION SCHEME

- PROPOSED INJECTION WELL
- HIGH PRESSURE INJECTION LINES
- FRESH WATER SUPPLY FROM ASSINIBOINE RIVER
- SALT WATER SUPPLY LINE

SCALE IN MILES

July 10/59

11/21

10/2/1904
10/2/1904

[illegible]

March 28, 1960.


E. H. Vallat Ltd.,
* Michael Building,
3rd Street West at 9th Avenue,
Calgary, Alberta.

Dear Sir:

I have read with interest your letter of March 16th, setting out your views in connection with the proposed Water Flood Unitization project of the North Virden Scallion field.

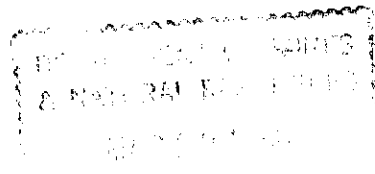
It would appear very likely, that this matter will be the subject of a hearing before The Board. If and when this meeting is held, The Board will be extremely interested in having you repeat your views at this time.

Yours very truly,


J. S. Richards,
Director of Mines.

JSR/glp

c.c. to: Mr. M. J. Gobert,
Senior Petroleum Engineer.



E. H. VALLAT LTD.

8 MICHAEL BUILDING
3RD STREET WEST AT 8TH AVENUE
CALGARY ALTA

16th March, 1958

Mr. J.S. Richards,
Director of Mines,
Dept. of Mines & Natural Resources,
Province of Manitoba,
WINNIPEG, Manitoba.

Dear Sir,

Re: North Virden-Scallion field.
Water Flood Unitization project.

This company has been a participant in the North Virden-Scallion field since 1957, and the past year has undertaken some independent operations. Its portion of total interest in the field is quite small and all of its expenditures have been on the peripheral established production. Its efforts have not met with unqualified success, since it has participated in a whole series of disappointments and drilled one for its own account. However, these endeavours have served to emphasize the variable conditions existing in the field, and underline the marginal character of the accumulation.

Nevertheless, this company does have some thoughts about attempting to extend limits of production in the field. In our opinion, this effort should be completed and carefully appraised before a decision on water flooding the wells is reached.

This company is greatly disturbed over the push to complete a whole unit for the purpose of flooding all the field under flood except the westerly portion which is now considered to have been drowned out. The basic concern is to do with costs and reward, and a re-appraisal of the reservoir study completed by the California Standard Company in May 1958 once again emphasizes the engineers' indications of the numerous unfavourable aspects due to the heterogeneity of the producing zones that this field has when it comes to an effective and successful salvaging of extra oil out of a water flood.

During the 34 years that I have been associated with various phases of the oil industry, I have

BHV:TH

"E. H. VALLEY"

Yours very truly,

It is noted as you and your associates are given great discretionary powers in respect to utilizing secondary recovery operations under the Amended Mining Act, I should like to suggest a cautious approach to this project. In my opinion, it is not desirable to turn into a flood project for all except the western sector of the field.

There is, I think, may be quite a difference of facts and not desirable in other parts of the Daily field. Remarks that flooding looks to be beneficial in some no specific data has been passed on, only the General refused to make this information available, but so experiments have been under way. The company has had experience in the Daily field, where some flooding from the California Standard Company regarding covering. We have attempted to obtain further information.

the field. premature to set up the programme for a major portion we that the flood is a good thing, but I believe recovery versus additional costs, could possibly proper one. Its results, measured in additional and it would seem that this pilot approach is still a pilot flood to determine what the results might make is that the discussions last summer had to be that had less attraction. The point I am trying heretofore encountered a secondary recovery project specialist in reservoir engineering, I have never secondary recovery projects, and while I am not to be exposed to a number of pressure maintenance