



Conservation

Petroleum & Energy

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Winnipeg MB R3G 3P2
CANADA

Ph: (204) 945-6577

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September 6, 2000

Mr. J. Yves Gauthier, P. Eng.
Manager, Exploitation
Zargon Oil & Gas Ltd.
Suite 2850, 605-5th Avenue SW
Calgary AB T2P 3H5

Dear Mr. Gauthier:

**Re: Daly Unit No. 4 - EOR Project
Determination of Third Tier Oil**

This is to advise that in accordance with the Crown Disposition and Incentives Regulation, a portion of production from Zargon Oil & Gas Ltd.'s waterflood in Daly Unit No.4 qualifies as third tier oil. The effective date of full implementation of the EOR project is June 1, 2000.

A Third Tier EOR Factor (TTEF) of 0.2441 has been determined by the Branch in accordance with "Informational Notice 00-2" (enclosed). A copy of the calculation for determination of the TTEF is attached for your reference.

Crown Royalty and Freehold Production Tax is to be calculated commencing with the June 2000 production month. To assist in your determination of Crown Royalty and Freehold Production Tax, the Branch has enclosed a diskette of spreadsheets in Excel format. Please ensure that a completed version of this diskette is submitted to the Branch by mail or email addressed to cpage@em.gov.mb.ca, along with Zargon's monthly production reports.

If you have any questions regarding the determination of the TTEF, please contact John Fox, Chief Petroleum Engineer at (204)945-6574. For information on EOR royalty/tax calculations, please contact Carrol Page, Production Tax Clerk at (204)945-8662, or the undersigned at (204)945-6570.

Sincerely,

A handwritten signature in cursive script, reading "Carol D. Martiniuk".

Carol D. Martiniuk, P. Geo.
Manager, Administration & Geology

c.c. J.N. Fox, P. Eng., Chief Petroleum Engineer
C. Page, Production Tax Clerk

Encl.

Third Tier EOR Factor Calculation

05-Sep-00

| | |
|---|-----------------------|
| Unit | Daly Unit No. 4 |
| Operator | Zargon Oil & Gas Ltd. |
| Effective Date of Third EOR Production | 01-Jun-00 |
| Cumulative Unit Production (m3) | 194779.8 |
| Primary + Current EOR Rec. Reserves (m3) | 268314 |
| Incremental EOR Rec. Reserves (IERR) (m3) | 23750 |
| Total Remaining Rec. Reserves (TRES) (m3) | 97284.2 |
| Third Tier EOR Factor (TTEF) | 0.2441 |

Comments

1/ Phase 1 injectors, 14D-35-9-28 & 16C-35-9-28, on injection Jun/00
2/ Branch estimates incremental EOR rec. reserves of 11875 m3 per injection pattern
(see Branch reserves estimates (20-Mar-00))



March 20, 2000

J. Yves Gauthier, P.Eng.
Manager, Exploitation
Zargon Oil & Gas Ltd.
Suite 2850, 605-5th Avenue S.W.
Calgary AB T2P 3H5

Dear Mr. Gauthier:

**Re: Daly Unit No. 4
Waterflood Order No. 10**

The Branch has completed its review of your application to expand the waterflood in Daly Unit No. 4. Attached is Waterflood Order No. 10 approving additional injection on 8 ha spacing in a portion of the unit area. Waterflood Order No. 10 replaces Board Order No. PM 53 dated January 22, 1987. Schedule B of the Order contains well siting conditions for wells and oil and gas facilities. The siting conditions are based on the original reduced spacing approval for the Unit and refer to a report entitled "Impact Minimization of Reducing Spacing Units in the Daly Field" by R.A. Berrien Associates (Rural) Ltd. A copy of the report is available from the Branch.

Expansion of the waterflood in Daly Unit No. 4 will result in a portion of production from the Unit qualifying for third tier royalty and production tax rates. Attached is a copy of a draft Informational Notice entitled "Determination of Third Tier Oil from New EOR Projects". The notice proposes that a Third Tier EOR Factor, TTEF, be established for the Unit. The Third Tier EOR Factor will be applied to old and new oil production from the Unit to determine the Unit's Third Tier EOR Production for royalty and tax purposes. The TTEF is based on the ratio of incremental EOR recoverable reserves to total remaining recoverable reserves for the Unit.

The Branch has estimated incremental EOR recoverable reserve for the waterflood expansion project of 47,500 m³ (4.8% OOIP) or 11,875 m³ per injection pattern. The Branch's waterflood production forecast is based on a maximum producing rate of 7.8 m³/d, one year after injection commences and a 3.3% decline rate thereafter. The decline rate used is equal to the project area decline rate for the period Dec/95 to Oct/99. No attempt was made to evaluate the incremental reserves on an individual pattern basis. The Branch's estimate is 5% lower than Zargon's estimate of 12,500 m³ per injection pattern or 50,000 m³ (5% OOIP) in total.

Zargon did not provide an estimate of remaining recoverable reserves for the Unit. The Branch conducted decline curve analysis over a range of different time periods. The exponential decline rates determined ranged from a low of 4.4% to a high of 5.5%. The Branch believes the decline rate of 4.4%, determined between Nov/95 and Jan/99, to be the most representative of unit performance. This analysis period excludes the majority of 1999, when as many as 13 wells were shut-in due to low oil prices. Based on an economic limit of 8.2 m³/d for the Unit (0.2 m³/d/well), the estimated remaining recoverable reserves as of December 31, 1999 are 123,635 m³ including the incremental EOR recoverable reserves.

Based on this reserve analysis, the Branch has determined a Third Tier EOR Factor, TTEF, of 0.3842 for the Unit when all four wells are on injection and 0.1921 when the two injectors already drilled commence injection. Zargon is requested to comment on the Branch's reserve estimates for the Unit and the waterflood expansion project and the proposed TTEF.

If you have any question in respect this matter please contact the undersigned at (204) 945-6574.

Yours truly,

A handwritten signature in black ink, appearing to be 'J. N. Fox', with a large, stylized loop at the end.

John N. Fox, P.Eng.

cc: Administration
Paulette Seymour
Virden District Office

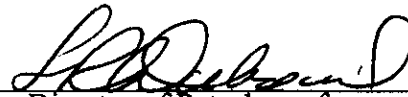
**MINISTERIAL ORDER
WATERFLOOD ORDER NO. 10**

**Pertaining to Waterflood Operations
in Daly Unit No. 4**

- 1.0 The Unit Operator shall conduct waterflood operations by injecting water into the Lodgepole Formation underlying the Unit Area through the wells listed in Schedule A. The Director may approve the conversion of other wells in the Unit Area to water injection.
- 1.1 The selection of any new wellsite within the Unit Area shall conform to the conditions of approval, as originally set out in the Oil and Natural Gas Conservation Board decision report on reduce 8 ha spacing dated January 16, 1987, and listed in Schedule B.
- 1.2 Every injection well shall be completed as approved under Section 47 of the Drilling and Production Regulation.
- 1.3 The maximum wellhead pressure at which water may be injected is 9000 kPa.
- 1.4 The Director may, from time to time, establish a maximum or minimum rate at which water may be injected into a well.
- 1.5 The annulus of each injection well shall be pressure tested in accordance with Section 50 of the Drilling and Production Regulation.
- 2.0 The Unit Operator shall conduct an annual survey to determine the level and distribution of reservoir pressure in the pool. A summary of the results of any pressure surveys conducted during the year are to be included in the annual waterflood progress report required under Section 73 of the Drilling and Production Regulation.
- 2.1 The frequency of pressure surveys may be reduced where the Director is satisfied that more frequent surveys will not assist the Unit Operator in monitoring the effectiveness of the waterflood.
- 2.2 The Unit Operator is responsible for monitoring the effectiveness of the waterflood and for collecting such reservoir data and other information as is necessary to evaluate and optimize waterflood performance.
- 2.3 The Unit Operator is to advise the Petroleum and Energy Branch of the suspension of water injection at any well, any indication of channelling or breakthrough of injected water to a producing well or out of zone and any other detrimental effects that may be attributable to the waterflood operations.
- 3.0 The Unit Operator shall file a report of production or injection for each well in the pool in accordance with Section 120 of the Drilling and Production Regulation.

- 4.0 The Unit Operator shall file an annual waterflood progress report in accordance with Section 73 of the Drilling and Production Regulation.
- 5.0 Oil and Natural Gas Conservation Board Order No. PM 53 dated January 22, 1987 is rescinded.

MARCH 20, 2000
Date


Director of Petroleum for
Minister of Conservation

Schedule A

Waterflood Order No. 10

Daly Unit No. 4

Water Injection Wells

Zargon Daly Unit No. 4 WIW 15D-27-9-28 (WPM)

Zargon Daly Unit No. 4 WIW 7-35-9-28 (WPM)

Daly Unit No.4 DIR A14-35-9-28 (WPM)

Daly Unit No.4 DIR A16-35-9-28 (WPM)

Daly Unit No.4 DIR A9-35-9-28 (WPM)

Daly Unit No.4 DIR A11-35-9-28 (WPM)

Schedule B

Waterflood Order No. 10

Well Siting Conditions

1. The proposed wellsites and other facilities shall be located and installed in accordance with the Placement Criteria provided in the report entitled "Impact Minimization of Reducing Spacing Units in the Daly Field" by R.A. Berrien Associates (Rural) Ltd. (hereinafter referred to as "the Berrien Report").
2. Notwithstanding Condition No. 1, the following specific criteria shall be utilized in locating and installing new facilities:
 - a) Electric power will be installed underground.
 - b) Wherever practicable in conjunction with new facilities, existing power lines will be installed underground and access roads will be modified or relocated to lessen their impact on agricultural operations.
 - c) All facilities located within 200 metres of any aircraft runway will be appropriately marked or painted so as to be clearly visible from the air.
 - d) Wherever practicable, facilities will be located so as to take full advantage of any existing obstacles and thereby minimize the impact of the facility on agricultural operations.
 - e) If in the opinion of the landowner and the Director, the proposed location of a wellsite would result in a significant impact on agricultural operations, the wellsite shall be relocated to a suitable surface location to be determined as indicated below, and the proposed well drilled directionally if necessary.
 - f) Wherever practicable, lease access will be through use of non built-up trails instead of built-up roads.
3. Prior to commencement of surveying for construction of any new facilities related to these approvals, the Unit Operator shall submit to the Petroleum and Energy Branch complete details of location and type of planned facility. Such details should employ and be accompanied by the appropriate Section map or maps from the Berrien Report. Any departure from the recommendations of the Berrien Report shall be clearly noted and justified.
4. The proposed facility site shall be jointly inspected by the landowner and a Petroleum Inspector.

5. If the landowner indicates his general agreement with the location of the proposed facility, the Director will notify the Unit Operator that an application may be submitted for a drilling licence or for approval to construct the proposed facility.
6. If the landowner and the Petroleum Inspector are of the opinion that agricultural impacts can be significantly reduced by relocation of the proposed facility, the Director will request the Unit Operator to consider the recommended relocation.
7. If the Unit Operator declines to relocate a proposed facility to alleviate concerns expressed by the landowner and the Petroleum Inspector, the Director shall determine if the degree of impact caused by the facility is acceptable. If the degree of impact is deemed to be acceptable, the Director shall notify the Unit Operator to make application for approval of the facility. If the degree of impact is deemed to be unacceptable, the Director shall inform the Unit Operator that he is not prepared to approve the facility unless it is relocated to a suitable location.
8. Upon application for approval of a surface facility which is proposed to be located less than forty-five metres from a government road allowance, the Unit Operator shall submit, in support of the application, written evidence that the Rural Municipality or the Department of Highways and Government Services, as the case may be, concurs with the proposed location of the facility.



Memorandum

Date: March 20, 2000

To: Bob Dubreuil
Director
Petroleum & Energy

From: John Fox
Chief Petroleum Engineer
Petroleum & Energy

Subject: Daly Unit No. 4
Waterflood Expansion

Telephone:

Zargon Oil and Gas Ltd., operator of Daly Unit No. 4, has made application to expand the waterflood in Daly Unit No. 4 by drilling four additional water injection wells in Section 35-9-28 (WPM).

Recommendations

It is recommended that waterflood expansion be approved and Waterflood Order No. 10 (attached) be issued to replace existing Board Order No. PM 53.

Attached is a letter to Zargon outlining our proposed methodology for calculating Third Tier EOR Production for the Unit. The letter also requests Zargon comment on the Branch's reserve estimates for the Unit and waterflood expansion project and the proposed Third Tier EOR Factor.

Discussion

Zargon completed the drilling of two water injection wells in Daly Unit No. 4 in December 1999. The two wells, 14D-35-9-28 and 16C-35-9-28, are part of a project to develop (4) 8 ha inverted 5-spot injection patterns in the Unit (see Fig. 1). The four injection wells are planned to be drilled directionally from pads and will not result in reduced well spacing at the surface (see Fig. 2). The four injectors only require the existing surface lease be enlarged by 0.61 ha. The landowner, Howard Hayhurst, consented to the drilling of the first two injection wells. The other two injectors, 9C-35-9-28 and 11D-35-9-28, are planned to be drilled within 2 years following an evaluation of the new waterflood patterns.

Zargon selected the project area based on a number of factors:

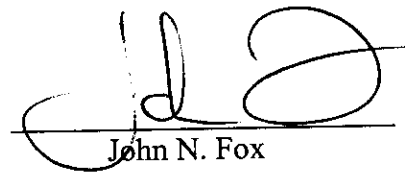
- good reservoir quality - the project area exhibits the best porosity and permeability and highest mobile oil saturation

- no correlative rights issues - the proposed injection wells are located more than 0.4 km from the unit boundary and are separated from the unit boundary by at least one row of production wells
- high reservoir pressure - the project area is receiving pressure support from Daly Unit No. 3 to the north (see Fig. 3)

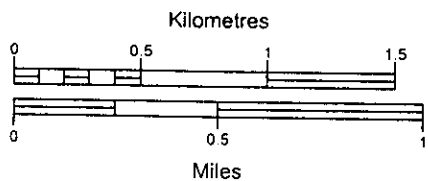
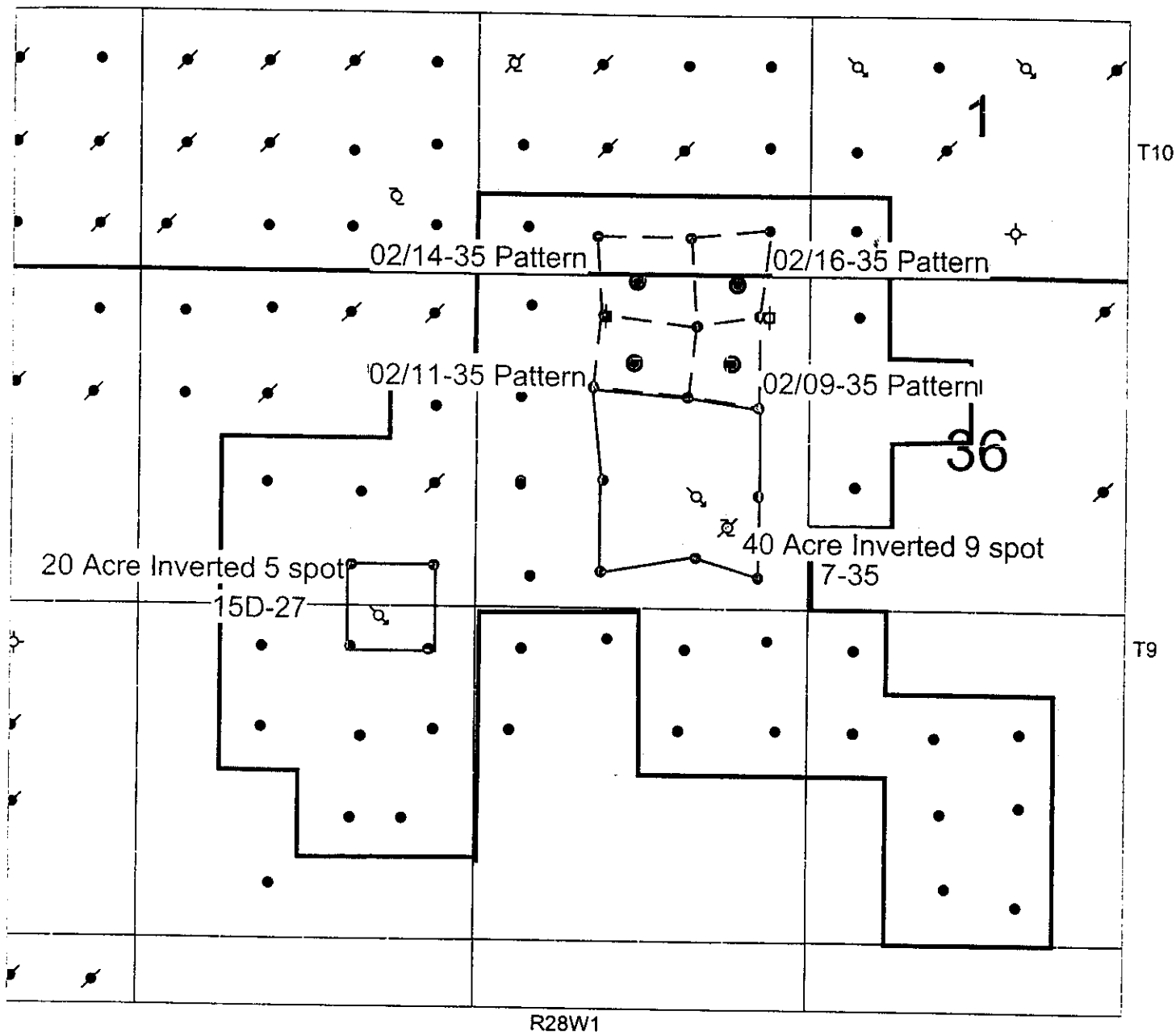
Zargon estimates that each inverted 5-spot injection pattern will recover an additional $12.5 \times 10^3 \text{ m}^3$ or $50.0 \times 10^3 \text{ m}^3$ in total. The Branch has conducted a review of the performance of Daly Unit No. 4 to determine whether Zargon's incremental waterflood recovery estimate is reasonable. The Branch's incremental reserves estimate of $47.5 \times 10^3 \text{ m}^3$ closely matches Zargon's estimates. A copy of the Branch's review is attached as Appendix 1.

Expansion of the waterflood in Daly Unit No. 4 will result in a portion of the Unit production qualifying for third tier royalty and tax rates. The Branch has determined a Third Tier EOR Factor, TTEF, of 0.3842 for the Unit when all four wells are on injection and 0.1921 when the two injectors already drilled commence injection. The Third Tier EOR Factor will be applied to old and new oil production from the Unit to determine the Unit's Third Tier EOR Production for royalty and tax purposes. Zargon will be requested to comment on the Branch's reserve estimates for the Unit and the waterflood expansion project and the proposed TTEF.

The existing waterflood project in Daly Unit No. 4 is approved under Board Order No. PM 53 dated January 22, 1987. It is proposed to replace the existing Board Order with Waterflood Order No. 10 (attached). There is no need to advertise Zargon's proposed waterflood expansion project at this time because there are no correlative rights or land use issues. However, if at some future date Zargon plans to expand the number of 8 ha injection patterns, then notice of the expanded waterflood project may be required. It is recommended that Waterflood Order No. 10 be issued approving the four additional injection wells.



John N. Fox



● Proposed Injection Well

WELL SYMBOLS

| | | | | |
|-------|-------|-------|-------|-------|
| ● OIL | ⚡ AO | ⊕ D&A | ⚡ WI | ⚡ AWD |
| ⚡ WD | ⚡ AWI | ⊕ STN | ⊕ PTN | ⊕ J&A |
| □ SL | | | | |

| | | |
|--|-------------------------|---|
| Zargon Oil & Gas Ltd. | | |
| Daly Unit No. 4 | | |
| Existing & Proposed WF Patterns | | |
| Figure 1 | | |
| Licensed to : Zargon Oil & Gas Ltd. | | |
| <small>geoLOGIC systems ltd. (403) 242-1992 www.geologic.com</small> | By : Scale = 1:30000 | Date : 2000/02/11 Project : daly unit #4 |

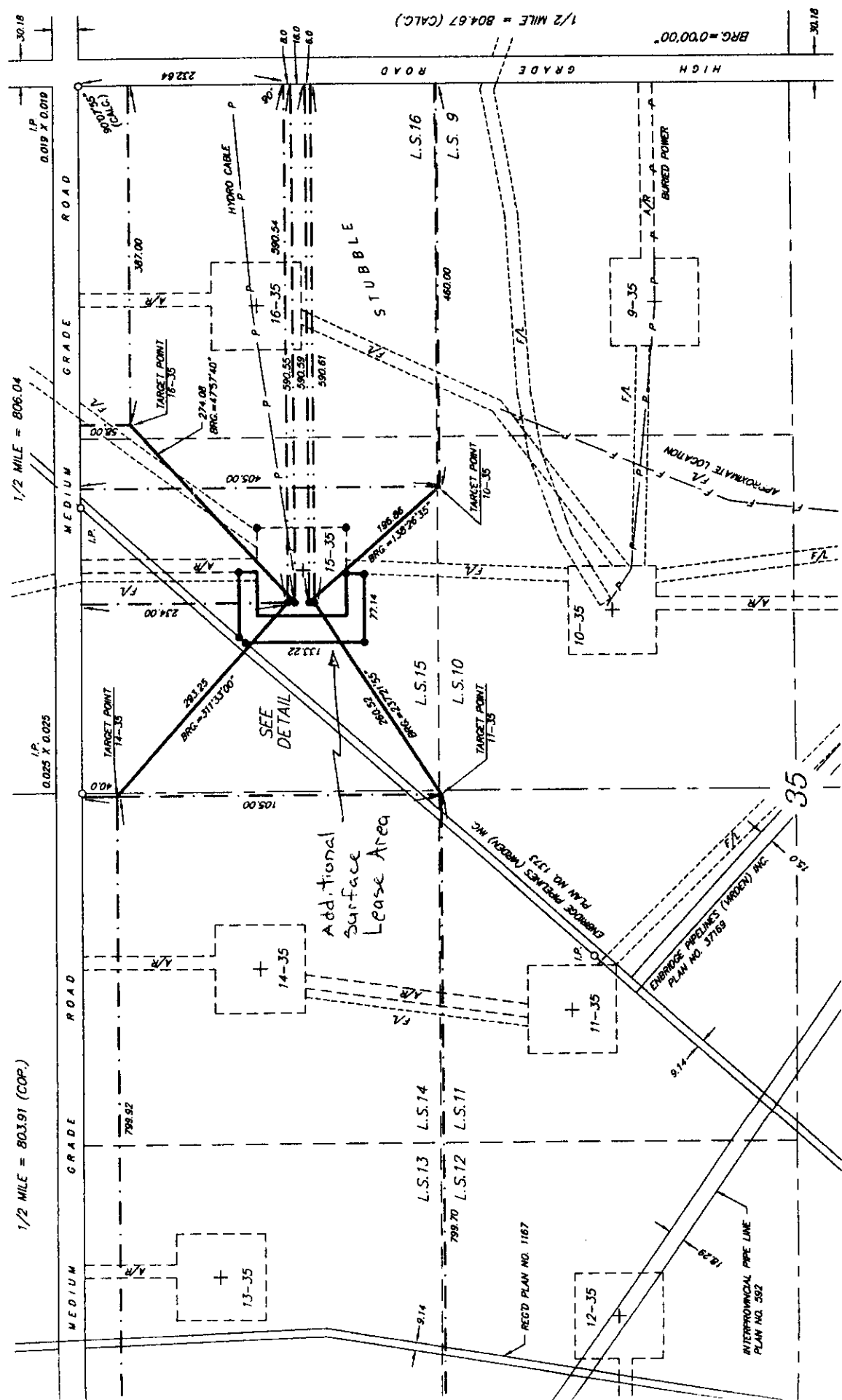
David J. Quirk, MLS

Manitoba Land Surveyor
110 King Street
Estevan, Saskatchewan
S4A 2A7
Phone (306)634-2636
Fax (306)634-3164

263.25
BRG = 311°55'00"

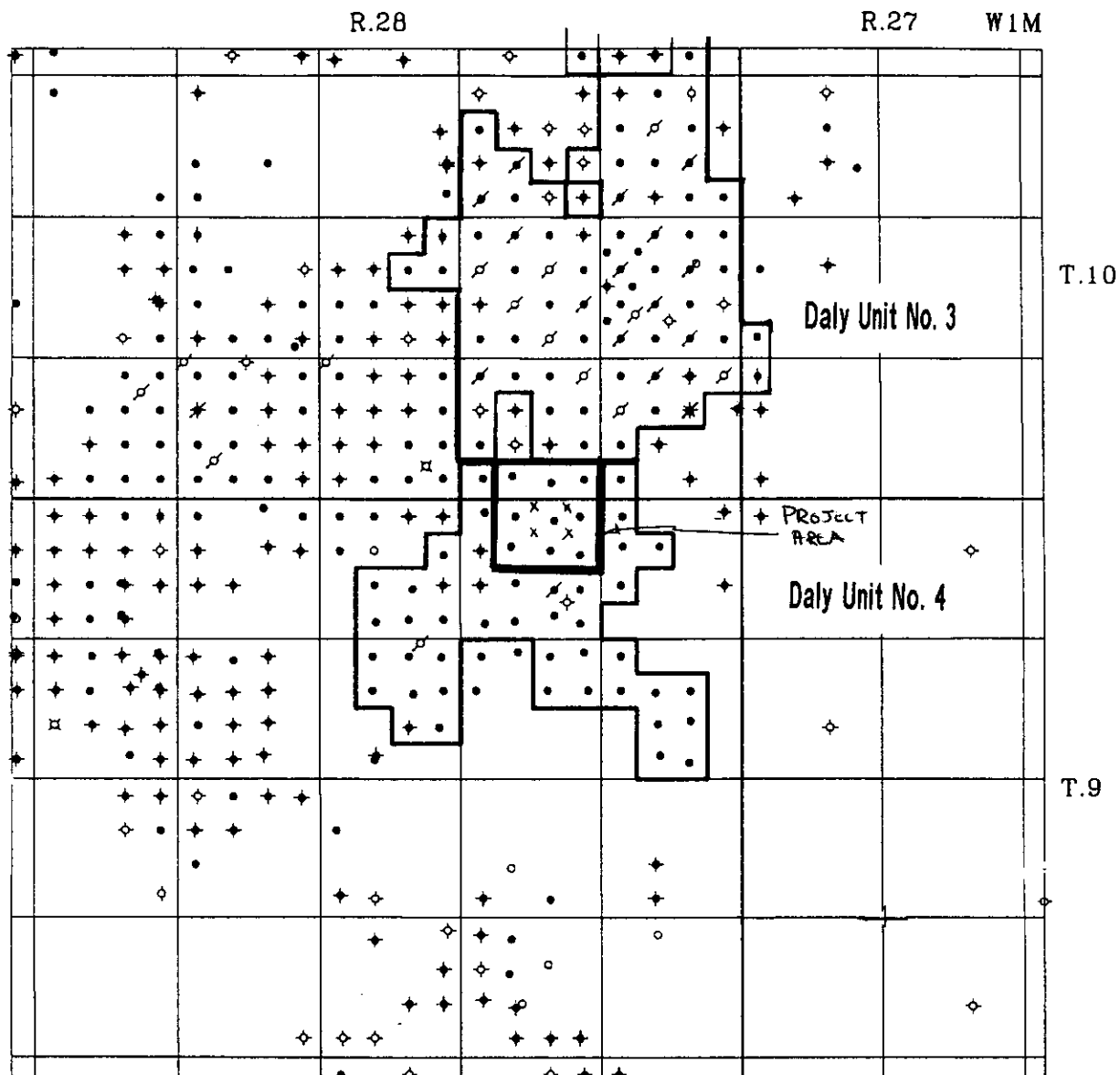
DRY -
SLOUGH

52°59'00"
257°00'



FILE NO.:

Figure 2



X - Proposed Injectors



| | |
|---|--------------------|
| Manitoba Units | |
| DALY UNIT NO. 4 BOARD ORDER NO. PM53 | |
| Figure No. 3 | |
| SCALE: 1:80,000 | DATE: July 1, 1997 |
| SOURCE: s962918/xd3 | DRAWING: XD3 |

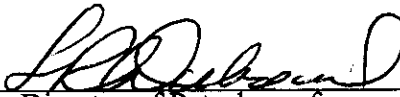
**MINISTERIAL ORDER
WATERFLOOD ORDER NO. 10**

**Pertaining to Waterflood Operations
in Daly Unit No. 4**

- 1.0 The Unit Operator shall conduct waterflood operations by injecting water into the Lodgepole Formation underlying the Unit Area through the wells listed in Schedule A. The Director may approve the conversion of other wells in the Unit Area to water injection.
- 1.1 The selection of any new wellsite within the Unit Area shall conform to the conditions of approval, as originally set out in the Oil and Natural Gas Conservation Board decision report on reduce 8 ha spacing dated January 16, 1987, and listed in Schedule B.
- 1.2 Every injection well shall be completed as approved under Section 47 of the Drilling and Production Regulation.
- 1.3 The maximum wellhead pressure at which water may be injected is 9000 kPa.
- 1.4 The Director may, from time to time, establish a maximum or minimum rate at which water may be injected into a well.
- 1.5 The annulus of each injection well shall be pressure tested in accordance with Section 50 of the Drilling and Production Regulation.
- 2.0 The Unit Operator shall conduct an annual survey to determine the level and distribution of reservoir pressure in the pool. A summary of the results of any pressure surveys conducted during the year are to be included in the annual waterflood progress report required under Section 73 of the Drilling and Production Regulation.
- 2.1 The frequency of pressure surveys may be reduced where the Director is satisfied that more frequent surveys will not assist the Unit Operator in monitoring the effectiveness of the waterflood.
- 2.2 The Unit Operator is responsible for monitoring the effectiveness of the waterflood and for collecting such reservoir data and other information as is necessary to evaluate and optimize waterflood performance.
- 2.3 The Unit Operator is to advise the Petroleum and Energy Branch of the suspension of water injection at any well, any indication of channelling or breakthrough of injected water to a producing well or out of zone and any other detrimental effects that may be attributable to the waterflood operations.
- 3.0 The Unit Operator shall file a report of production or injection for each well in the pool in accordance with Section 120 of the Drilling and Production Regulation.

- 4.0 The Unit Operator shall file an annual waterflood progress report in accordance with Section 73 of the Drilling and Production Regulation.
- 5.0 Oil and Natural Gas Conservation Board Order No. PM 53 dated January 22, 1987 is rescinded.

MARCH 20, 2000
Date


Director of Petroleum for
Minister of Conservation

Schedule A

Waterflood Order No. 10

Daly Unit No. 4

Water Injection Wells

Zargon Daly Unit No. 4 WIW 15D-27-9-28 (WPM)

Zargon Daly Unit No. 4 WIW 7-35-9-28 (WPM)

Daly Unit No.4 DIR A14-35-9-28 (WPM)

Daly Unit No.4 DIR A16-35-9-28 (WPM)

Daly Unit No.4 DIR A9-35-9-28 (WPM)

Daly Unit No.4 DIR A11-35-9-28 (WPM)

Schedule B

Waterflood Order No. 10

Well Siting Conditions

1. The proposed wellsites and other facilities shall be located and installed in accordance with the Placement Criteria provided in the report entitled "Impact Minimization of Reducing Spacing Units in the Daly Field" by R.A. Berrien Associates (Rural) Ltd. (hereinafter referred to as "the Berrien Report").
2. Notwithstanding Condition No. 1, the following specific criteria shall be utilized in locating and installing new facilities:
 - a) Electric power will be installed underground.
 - b) Wherever practicable in conjunction with new facilities, existing power lines will be installed underground and access roads will be modified or relocated to lessen their impact on agricultural operations.
 - c) All facilities located within 200 metres of any aircraft runway will be appropriately marked or painted so as to be clearly visible from the air.
 - d) Wherever practicable, facilities will be located so as to take full advantage of any existing obstacles and thereby minimize the impact of the facility on agricultural operations.
 - e) If in the opinion of the landowner and the Director, the proposed location of a wellsite would result in a significant impact on agricultural operations, the wellsite shall be relocated to a suitable surface location to be determined as indicated below, and the proposed well drilled directionally if necessary.
 - f) Wherever practicable, lease access will be through use of non built-up trails instead of built-up roads.
3. Prior to commencement of surveying for construction of any new facilities related to these approvals, the Unit Operator shall submit to the Petroleum and Energy Branch complete details of location and type of planned facility. Such details should employ and be accompanied by the appropriate Section map or maps from the Berrien Report. Any departure from the recommendations of the Berrien Report shall be clearly noted and justified.
4. The proposed facility site shall be jointly inspected by the landowner and a Petroleum Inspector.

5. If the landowner indicates his general agreement with the location of the proposed facility, the Director will notify the Unit Operator that an application may be submitted for a drilling licence or for approval to construct the proposed facility.
6. If the landowner and the Petroleum Inspector are of the opinion that agricultural impacts can be significantly reduced by relocation of the proposed facility, the Director will request the Unit Operator to consider the recommended relocation.
7. If the Unit Operator declines to relocate a proposed facility to alleviate concerns expressed by the landowner and the Petroleum Inspector, the Director shall determine if the degree of impact caused by the facility is acceptable. If the degree of impact is deemed to be acceptable, the Director shall notify the Unit Operator to make application for approval of the facility. If the degree of impact is deemed to be unacceptable, the Director shall inform the Unit Operator that he is not prepared to approve the facility unless it is relocated to a suitable location.
8. Upon application for approval of a surface facility which is proposed to be located less than forty-five metres from a government road allowance, the Unit Operator shall submit, in support of the application, written evidence that the Rural Municipality or the Department of Highways and Government Services, as the case may be, concurs with the proposed location of the facility.

Appendix 1

Daly Unit No. 4

Reserves Estimates

Daly Unit No. 4 produces primarily new oil but there is one tract in the Unit, 8-34-9-28, which is old oil. With the commencement of injection into the newly drilled injection wells, a portion of production from the Unit will qualify for third tier oil. In accordance with our draft Information Notice – “Determination of Third Tier Oil from New EOR Projects”, the Branch will determine a Third Tier EOR Factor, TTEF, to be applied to the Unit old and new oil production to determine the Unit Third Tier EOR Production. The TTEF is based on the ratio of incremental EOR recoverable reserves to total remaining recoverable reserves for the Unit.

1.0 Daly Unit No. 4 Reserves – Current Operating Conditions

In December 1999, there were 41 wells on production in the Unit and 8 producers were shut-in and had been shut-in for a significant period of time (16 – 71 months). Current production from the Unit is 17.2 m³ OPD at a WOR of 8.0 m³/m³. The average well produces 0.4 m³ OPD, with only one well producing more than 1 m³ OPD. Cumulative production to December 31, 1999 is 192,179 m³.

Zargon did not provide an estimate of remaining recoverable reserves for the Unit. The Branch has conducted decline curve analysis over a range of different time periods. The exponential decline rates determined ranged from a low of 4.4% to a high of 5.5%. The Branch believes the decline rate of 4.4%, determined between Nov/95 and Jan/99, to be the most representative of unit performance (see Fig. 1). This analysis period excludes the majority of 1999, when as many as 13 wells were shut-in due to low oil prices. Based on an economic limit of 8.2 m³/d for the Unit (0.2 m³/d/well), the estimated remaining recoverable reserves as of December 31, 1999 are 76,135 m³ and the ultimate recoverable reserves are 268,314 m³.

The remaining recoverable reserves estimate is very sensitive to the economic limit used. For example currently in the Unit there are 6 wells producing below the economic limit of 0.2 m³/d, eliminating these wells drops the economic limit for the Unit from 8.2 m³/d to 7 m³/d, and increases the remaining recoverable reserves by 9335 m³. It is recommended that the Branch request Zargon provide an estimate of remaining recoverable reserves for the Unit for comparison with the Branch estimate.

Chevron applied in Mar/86 for approval to conduct a 8 ha waterflood in Daly Unit No. 4. In its application, Chevron estimated OOIP in the Unit of 5084 10³m³ and primary and waterflood recoveries of 3% OOIP and 11% OOIP, respectively. In a 1953 reservoir study, Chevron estimated primary recovery of 5.1% OOIP for the Daly Lodgepole A Pool. Based on Chevron's Unit OOIP, the estimated ultimate recovery factor for the Unit under current operating conditions is 5.3% OOIP. The ultimate

recovery consists of a primary recovery of 4.8% OOIP and a secondary recovery from the pilot waterflood (two injection patterns) of 0.5% OOIP.

2.0 Waterflood Reserves – 15D-27 and 7-35 Injection Patterns

Zargon has evaluated primary and secondary recoverable reserves for the two current injection patterns in the Unit. The 15D-27 injection pattern is an inverted 5-spot on 8 ha spacing. The 7-35 injection pattern is an inverted 9-spot on 16 ha spacing (see Fig. 2).

2.1 15D-27-9-28 Injection Pattern

Injection into 15D-27 commenced in Dec/88. Initially water was injected at approximately 17 times the production rate, resulting in a cumulative VRR of 5.8 after only 3 years. Waterflood response was observed after 4 months and production peaked at 1.9 times the pre-waterflood rate, 8 months after injection commenced. Zargon has estimated primary recoverable reserves of $28.6 \times 10^3 \text{ m}^3$ (4.8% OOIP) for the 15D-27 injection pattern and secondary recoverable reserves of $52.3 \times 10^3 \text{ m}^3$ (9% OOIP).

The Branch has reviewed Zargon's estimates of primary and secondary recovery and reached similar conclusions. The Branch estimates primary and secondary reserves for the 15D-27 injection pattern of $25.3 \times 10^3 \text{ m}^3$ (4.3% OOIP) and $53.3 \times 10^3 \text{ m}^3$ (9% OOIP), respectively (see Fig. 3).

2.2 7-35-9-28 Injection Pattern

The 7-35 injection pattern has shown poor response to waterflooding. Zargon estimates an ultimate recovery of $34.2 \times 10^3 \text{ m}^3$ (4.4% OOIP), which is representative of primary recovery conditions.

It appears from the performance of the two injection patterns that injection on 8 ha spacing improves waterflood response probably as a result of increased lateral pay continuity and better areal sweep efficiency.

3.0 Waterflood Expansion Project Reserves

Zargon plans to drill four injectors on 8 ha spacing at

- 9C-35-9-28
- 11D-35-9-28
- 14D-35-9-28
- 16C-35-9-28

Two injectors, 14D-35 and 16C-35 have been drilled and are awaiting approval to commence injection.

The Branch has reviewed the performance of the 9 producers in the waterflood expansion project (see Fig. 2). Currently 8 of the 9 wells are producing, with only the 3-2-10-28 well shut-in. In Dec/99, production from the project area was 4.1 m³ OPD, accounting for 24% of the Unit production. Cumulative production from the project area is 41,401.6 m³. Based on Chevron's reservoir mapping, OOIP in the project area is 994.4 10³m³. Current recovery is 4.2% OOIP. The high current recovery supports Zargon's belief that the project area is receiving pressure support from Daly Unit No. 3 to the north.

The Branch has analyzed remaining recoverable reserves for the project area. Production from the project area experienced large rate variations in 1992-93 and again in 1995. Decline curve analysis indicates a decline rate of 7-8% between 1992 and late-1995, followed by a decline rate of less than 3.5% between late-1995 and 1999. The current project area production rate is actually higher than the average monthly rate for 21 of the past 36 months, dating back to Jan/97.

The Branch estimates primary recoverable reserves for the project area of 60,804 m³ (6.1% OOIP), based on the current production rate of 4.1 m³/d and the unit decline rate of 4.4%, which is slightly higher than the current project area decline rate (see Fig. 4).

Zargon has estimated incremental waterflood recoverable reserves of 12,500 m³ per injection pattern, 50,000 m³ (5% OOIP) in total. The Branch has estimated incremental waterflood recoverable reserves of 47,500 m³ (4.8% OOIP) or 11,875 m³ per injection pattern. The Branch's waterflood production forecast is based on a maximum producing rate of 7.8 m³/d, one year after injection commences and a 3.3% decline rate thereafter (see Fig. 4). The decline rate used is equal to the project area decline rate for the period decline Dec/95 to Oct/99. No attempt was made to evaluate the incremental reserves on an individual pattern basis. The Branch's estimate is based on the 15D-27 injection pattern waterflood performance.

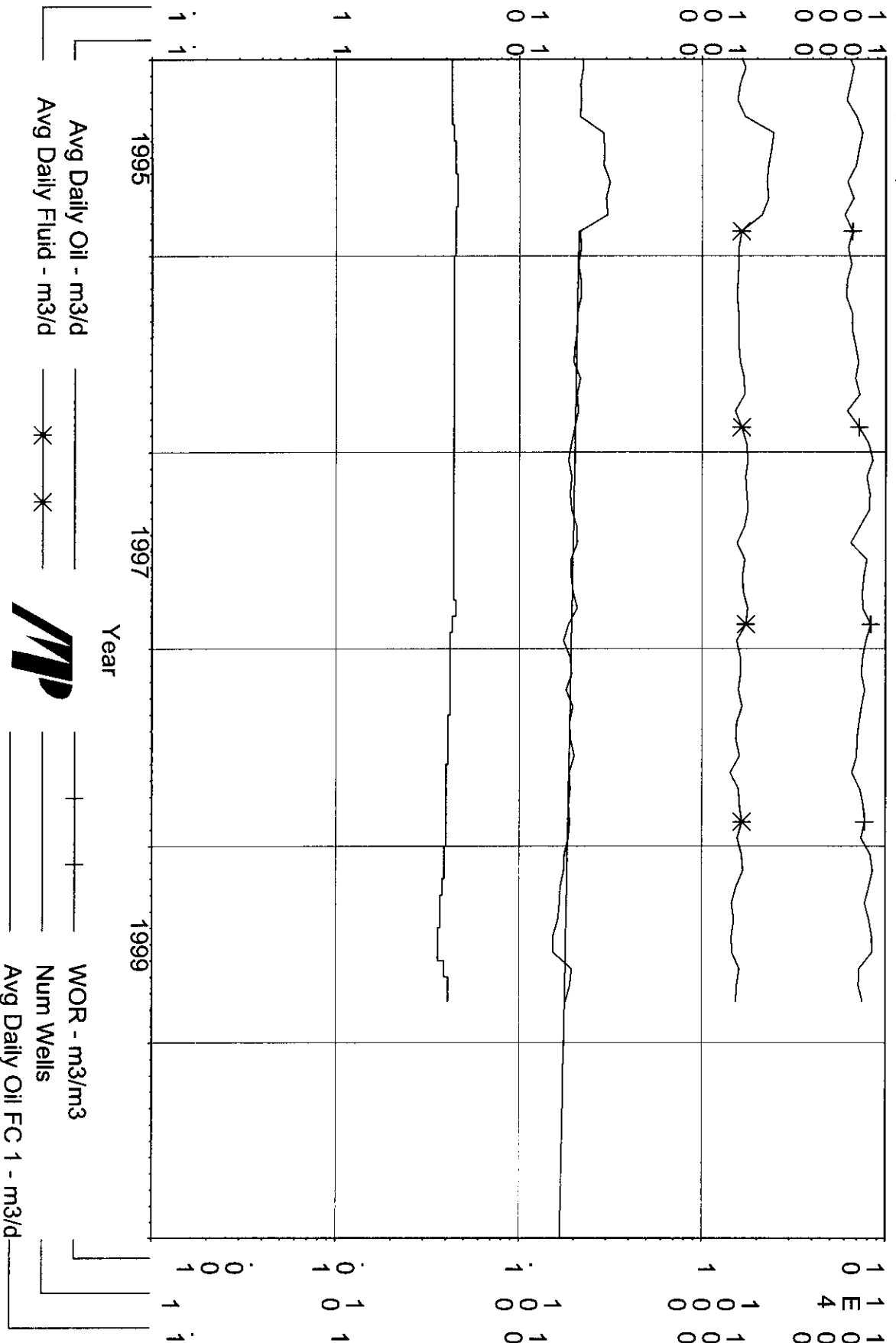
Based on the Branch's analysis the Third Tier EOR Factor, TTEF, for the Unit would be 0.3842 when all 4 wells are on injection and 0.1921 when the 2 injectors already drilled commence injection. The Third Tier EOR Factor will be applied to old oil and new oil production from the Unit to determine the Unit's Third Tier EOR Production for royalty and tax purposes.

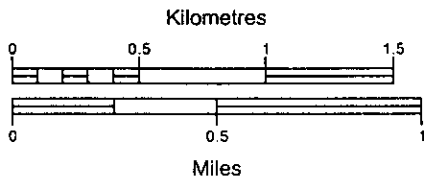
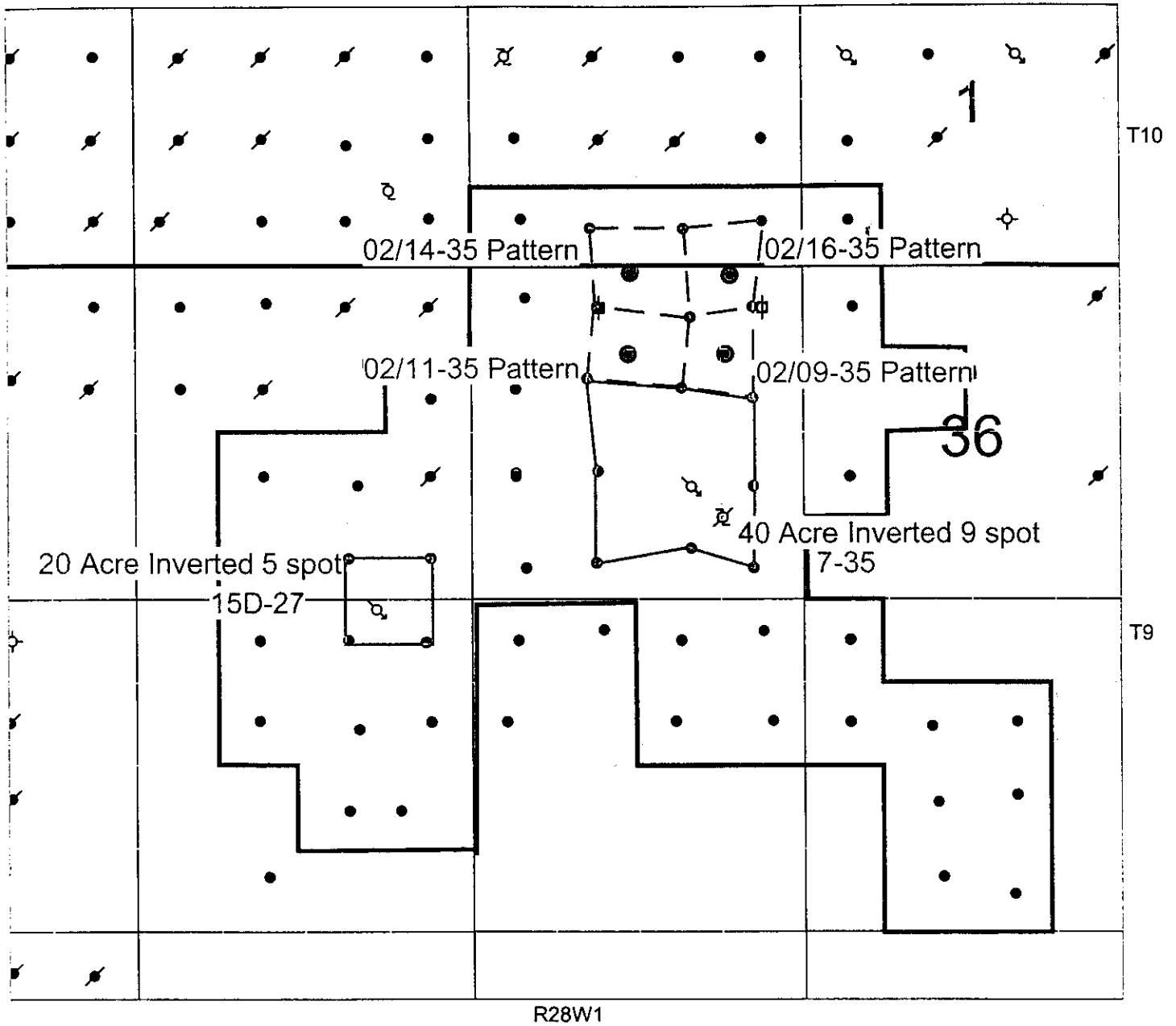
Daily Unit #4 Summary Well Data 09/62-10/99

Operator:
Field:
Zone:
Type: Unknown
Group: Daily Unit No. 4

Avg Daily Oil FC 1 (Rate-Time)
qi: 21.3374 m3/d, Nov, 1995 to Jan/99
qf: 8.18342 m3/d, Feb, 2017
d(Exp): 4.39287 CTD: 191122 m3
RR: 77190.6 m3 Tot: 268312 m3

Production Cums
Oil: 191122 m3
Gas: 0 E6m3
Water: 866998 m3
Cond: 0 m3





● Proposed Injection Well

WELL SYMBOLS

| | | | | |
|-------|-------|-------|-------|-------|
| ● OIL | ⚡ AO | ⊕ D&A | ⚡ WI | ⚡ AWD |
| ⚡ WD | ⚡ AWI | ⊕ STN | ⊕ PTN | ⊕ J&A |
| □ SL | | | | |

Zargon Oil & Gas Ltd.

Daly Unit No. 4
Existing & Proposed WF Patterns

Figure 2

Licensed to : Zargon Oil & Gas Ltd.



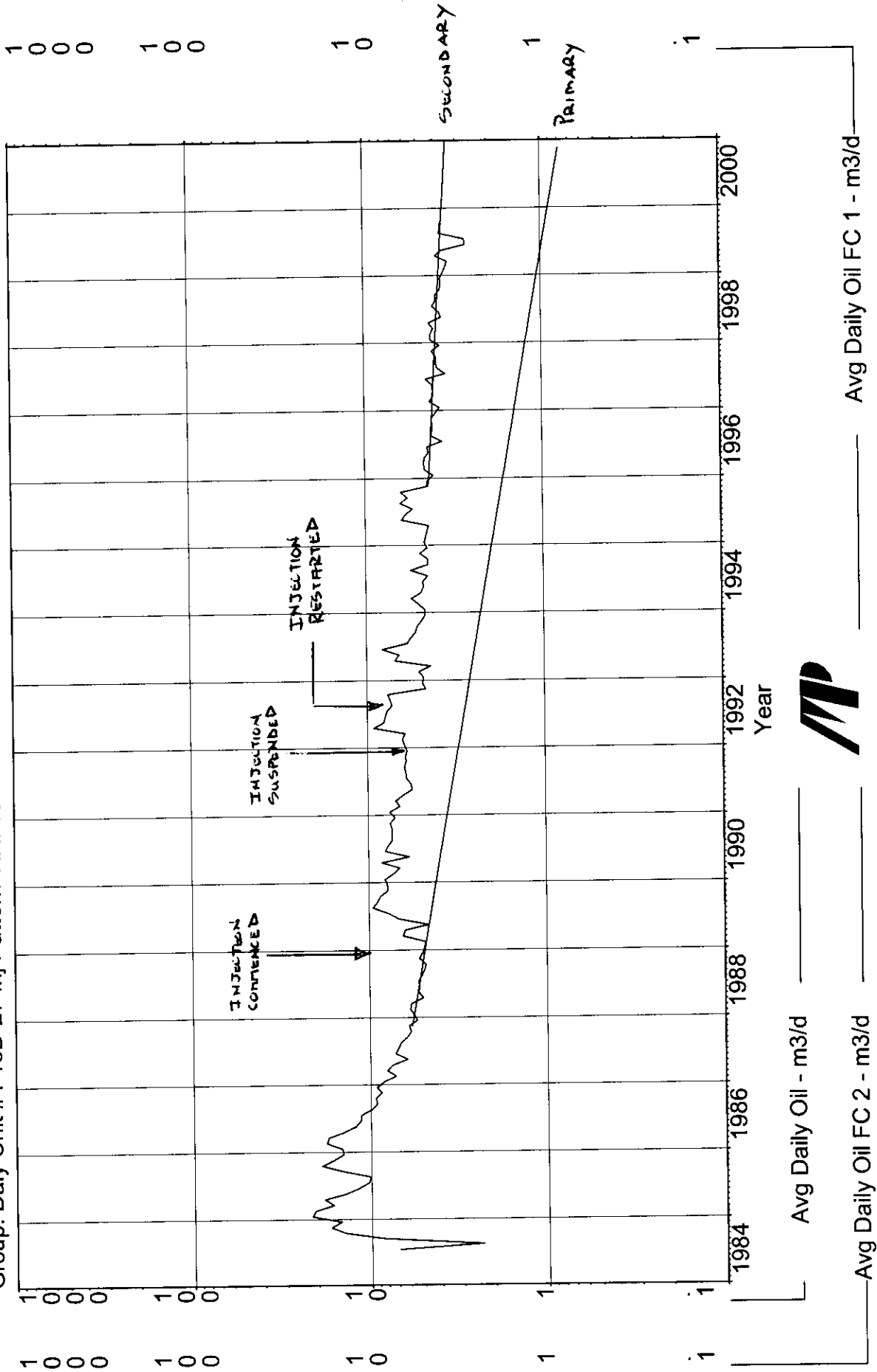
geoLOGIC
systems ltd.
(403) 262-1982
www.geologic.com

By :
Scale = 1:30000

Date : 2000/02/11
Project : daly unit #4

Production Summary Well Data 07/84-10/99

Operator: _____
 Field: _____
 Zone: _____
 Type: Unknown
 Group: Dally Unit #4 15D-27 Inj Pattern RR: 19475.5 m3 Tot: 53317.6 m3
 Avg Daily Oil FC 1 (Rate-Time)
 qi: 4.4274 m3/d, Nov, 1995
 qf: 0.797231 m3/d, Oct, 2029
 di(Exp): 4.91741 CTD: 33842.1 m3
 Production Cums
 Oil: 33842.1 m3
 Gas: 0 E6m3
 Water: 28132.8 m3
 Cond: 0 m3



Avg Daily Oil - m3/d

Avg Daily Oil FC 2 - m3/d

Avg Daily Oil FC 1 - m3/d

Fig. 3

Summary Well Data 11/83-10/99
 Avg Daily Oil FC 1 (Rate-Time)
 qi: 7.8 m3/d, Jan, 2001
 qf: 1.5978 m3/d, Feb, 2048
 di(Exp): 3.3 CTD: 41148.6 m3
 RR: 66464.1 m3 Tot: 107613 m3

Production Cums
 Oil: 41148.6 m3
 Gas: 0 E6m3
 Water: 95156 m3
 Cond: 0 m3

Operator:
 Field:
 Zone:
 Type: Unknown
 Group: Daly Unit #4 WF Expansion

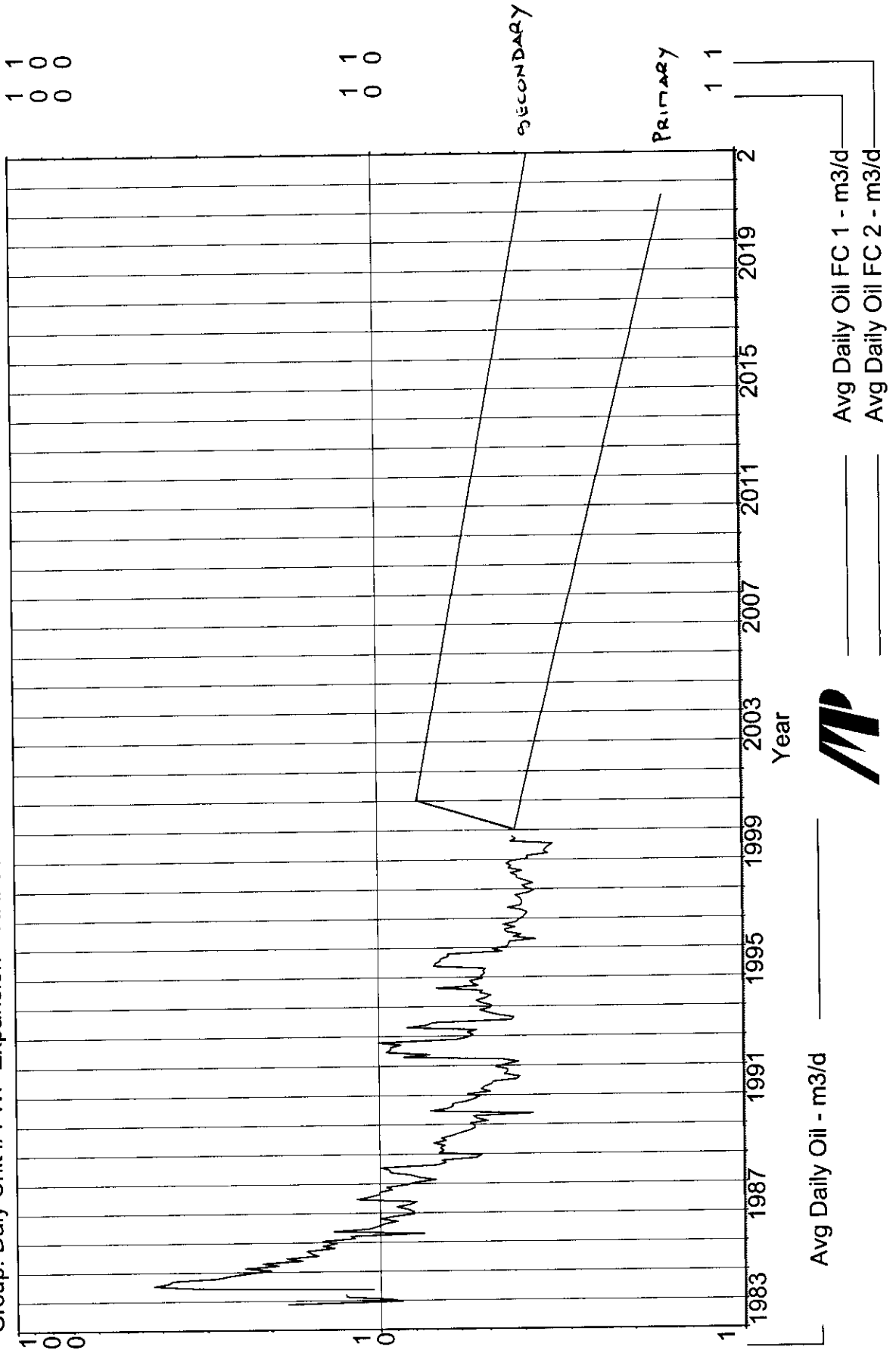


Fig. 4



March 20, 2000

J. Yves Gauthier, P.Eng.
Manager, Exploitation
Zargon Oil & Gas Ltd.
Suite 2850, 605-5th Avenue S.W.
Calgary AB T2P 3H5

Dear Mr. Gauthier:

**Re: Daly Unit No. 4
Waterflood Order No. 10**

The Branch has completed its review of your application to expand the waterflood in Daly Unit No. 4. Attached is Waterflood Order No. 10 approving additional injection on 8 ha spacing in a portion of the unit area. Waterflood Order No. 10 replaces Board Order No. PM 53 dated January 22, 1987. Schedule B of the Order contains well siting conditions for wells and oil and gas facilities. The siting conditions are based on the original reduced spacing approval for the Unit and refer to a report entitled "Impact Minimization of Reducing Spacing Units in the Daly Field" by R.A. Berrien Associates (Rural) Ltd. A copy of the report is available from the Branch.

Expansion of the waterflood in Daly Unit No. 4 will result in a portion of production from the Unit qualifying for third tier royalty and production tax rates. Attached is a copy of a draft Informational Notice entitled "Determination of Third Tier Oil from New EOR Projects". The notice proposes that a Third Tier EOR Factor, TTEF, be established for the Unit. The Third Tier EOR Factor will be applied to old and new oil production from the Unit to determine the Unit's Third Tier EOR Production for royalty and tax purposes. The TTEF is based on the ratio of incremental EOR recoverable reserves to total remaining recoverable reserves for the Unit.

The Branch has estimated incremental EOR recoverable reserve for the waterflood expansion project of 47,500 m³ (4.8% OOIP) or 11,875 m³ per injection pattern. The Branch's waterflood production forecast is based on a maximum producing rate of 7.8 m³/d, one year after injection commences and a 3.3% decline rate thereafter. The decline rate used is equal to the project area decline rate for the period Dec/95 to Oct/99. No attempt was made to evaluate the incremental reserves on an individual pattern basis. The Branch's estimate is 5% lower than Zargon's estimate of 12,500 m³ per injection pattern or 50,000 m³ (5% OOIP) in total.

Zargon did not provide an estimate of remaining recoverable reserves for the Unit. The Branch conducted decline curve analysis over a range of different time periods. The exponential decline rates determined ranged from a low of 4.4% to a high of 5.5%. The Branch believes the decline rate of 4.4%, determined between Nov/95 and Jan/99, to be the most representative of unit performance. This analysis period excludes the majority of 1999, when as many as 13 wells were shut-in due to low oil prices. Based on an economic limit of 8.2 m³/d for the Unit (0.2 m³/d/well), the estimated remaining recoverable reserves as of December 31, 1999 are 123,635 m³ including the incremental EOR recoverable reserves.

Based on this reserve analysis, the Branch has determined a Third Tier EOR Factor, TTEF, of 0.3842 for the Unit when all four wells are on injection and 0.1921 when the two injectors already drilled commence injection. Zargon is requested to comment on the Branch's reserve estimates for the Unit and the waterflood expansion project and the proposed TTEF.

If you have any question in respect this matter please contact the undersigned at (204) 945-6574.

Yours truly,

John N. Fox, P.Eng.

cc: Administration
Paulette Seymour
Viriden District Office

WF EXPANSION PROJECT

WELLS. ØH

| | |
|-------|------|
| 9-35 | 0.88 |
| 10-35 | 0.88 |
| 11-35 | 0.46 |
| 14-35 | 0.47 |
| 15-35 | 0.51 |
| 16-35 | 0.72 |
| 1-2 | 4 |
| 2-2 | 76 |
| 3-2 | 1.42 |

Σ 9.47

$$GOIP = 10000 \times 16.2 \times 9.47 \times (1 - 0.3) \times \frac{1}{1.08}$$

$$= 994350.$$

a. Daly Unit No. 4

Aver. h = 8.3 m

Φ_{aver} = 13.4%

b. WF. EXPANSION PROJECT

h_{aver} = 6.7 m.

Φ = 15.7%

NOTE: Chevron's Øh mapping
cut-offs
Φ = 13%
SW = 507
K = 1 md

CHEVRON'S original applk

- Chevron originally applied to conduct a 8 ha
- recovery estimates

↳ MAR. 86 for approval
waterflood ↳ Daly Unit No. 4

primary 3% OOIP
waterflood 17% OOIP

Daly Lodgepole A Pool primary - 5.1% OOIP (1993
reservoir studies)

| | |
|-----------|----------------------|
| | <u>011</u> Jan/00 |
| 9-35-9-28 | 10.6 |
| 10-35 | 12.0 |
| 11-35 | 19.2 |
| 14-35 | 8.6 |
| 15-35 | 10.9 |
| 16-35 | 18.1 |
| 1-2-10-28 | 20.8 |
| 2-2 | 28.1 |
| 3-2 | — |
| | 128.2 |

(23.77 of unit area)

012
Dec.

UNIT TOTAL
541.8

10.7
12.2
18.6
8.6
10.9
18.3
20.9
28.0
—
128.2

project
area
cum mod
31-Dec-99

41401.6

WF EXPANSION PROJECT

GOIP - 994,350 m³

ZARGON'S Recovery estimates

- no primary estimate

Δ WF recovery $4 * 12500 = 50000 \text{ m}^3$ (5.03% OVID)

| | | | |
|-----------------|--------|---|------------------------|
| ENT. PRODUCTION | OCT-99 | - | 41148.6 m ³ |
| | NOV-99 | | 124.8 |
| | DEC-99 | | 128.2 |
| | TOTAL | | 41401.6 |

CURRENT RECOVERY 4.2% OVID

JAN-99 - 128.3 m³

- currently 2 wells producing, 3-2-10-28 SI

- aver. production - Dec-99 - 4.1 m³/c, 24% of fluid production -

- Zargan believes the project area is receiving pressure support from Dalg Unit No. 3, which would account for the higher average primary recovery

- low decline rates also indicates possibility of pressure support

REM. Rec. Res. (Primary)

| | |
|-----------------|-------------|
| JAN/96 - DEC/96 | Dec - 0.93% |
| DEC/96 - DEC/98 | Dec - 1.68% |
| NOV/92 - OCT/99 | Dec - 7.03% |
| OCT/93 - OCT/99 | Dec - 7.22% |
| JAN/94 - OCT/99 | Dec - 7.67% |
| MAR/93 - OCT/99 | Dec - 7.27% |

| REM Rec Res | ULT Rec Res |
|-------------|-------------------------|
| 86871 | " " " |
| 46331 | (too high, unrealistic) |
| 8766 | 49915 |
| 8512 | 49661 |
| 7988 | |
| 8558 | |

RET REC RES WATERFLOOD EXPANSION PROJECT

| | | RET. | uH. |
|------------------|-------|----------------------|----------------------|
| DEC/95 to OCT/99 | 3.31% | 21405 m ³ | 62554 m ³ |
| NOV/95 to DEC/98 | 3.46% | 20285 m ³ | 61434 |
| SEP/93 to OCT/99 | 6.98% | 9127 m ³ | |
| JUL/93 to JAN/99 | 5.47 | 12506 m ³ | |
| SEP/94 to JAN/99 | 8.37 | 7135 | |
| JUN/87 to JAN/99 | 5.72 | 11858 | |
| FEB/89 to DEC/98 | 4.64 | 10000 | |
| NOV/93 to JAN/99 | 7.38 | 8463 | |

The production history of the WF expansion proj. area is characterized by a large variation in production rates in 1992 & 93 & again in 1995, followed by a relatively low rate of decline from 1996-99.

- decline curve analysis indicates a decline rate of less than 3.5% from late-95 to present
- while the period 1992 to late-95, the decline rate was substantially higher between 7-8%
- ultimate recoverable reserves for the project area under current operating conditions are between 60800 - ~~61434~~ m³ (6.1% COIP)

~~RET REC RES~~
20739 m³

based on use of unit decline rate of eco. limit of 1.6 m³/d

$$Q_T = 41149 + 365(4.1 - 1.6)$$

~~044~~

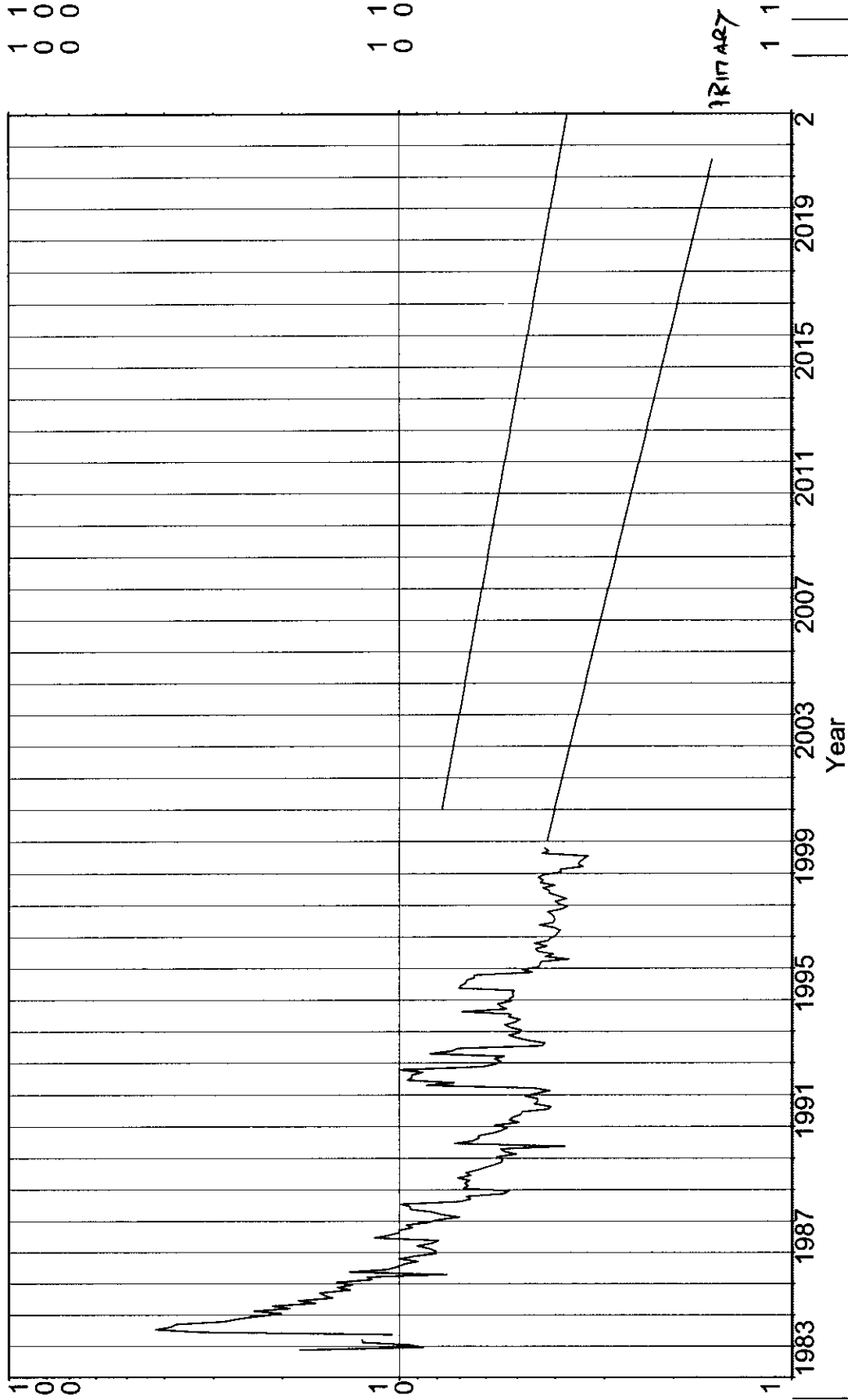
* Q_T from Merak decline curve analysis OCT/99 19656 L³ - 253 ~~101402.6~~

Summary Well Data 11/83-10/99

Operator:
Field:
Zone:
Type: Unknown
Group: Daly Unit #4 WF Expansion

Avg Daily Oil FC 2 (Rate-Time)
qi: 4.2 m3/d, Jan, 2000
qf: 1.59461 m3/d, Jul, 2021
di(Exp): 4.4 CTD: 41148.6 m3
RR: 19655.6 m3 Tot: 60804.2 m3

Production Cums
Oil: 41148.6 m3
Gas: 0 E6m3
Water: 95156 m3
Cond: 0 m3



Avg Daily Oil - m3/d



Avg Daily Oil FC 1 - m3/d
Avg Daily Oil FC 2 - m3/d

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280
Hist.Data : 11/83-10/99
Operator :
Field :

Date : 8/17/5 3:37:12 am
User : jfox
On Prod : 02/09
Status : Unknown
Zone :

Production Data from November, 1983 to December, 1999

| Year | Avg Daily Oil m3/d | Monthly Oil m3 | Cum Oil m3 | Avg Daily Fluid m3/d | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------|---------------|-------------------------|---------------------|--------------|-----------|
| Nov., 1983 | 18.05 | 36.1 | 36.1 | 33.5579 | 31 | 0.858726 | 1 |
| Dec., 1983 | 8.704 | 217.6 | 253.7 | 14.5918 | 147.1 | 0.676011 | 1 |
| Jan., 1984 | 9.42857 | 165 | 418.7 | 32.4841 | 403.4 | 2.44485 | 2 |
| Feb., 1984 | 12.4341 | 254.9 | 673.6 | 33.3177 | 428 | 1.67909 | 2 |
| Mar., 1984 | 12.4979 | 293.7 | 967.3 | 30.0395 | 412.1 | 1.40313 | 2 |
| Apr., 1984 | | | | | | | |
| May., 1984 | 10.4581 | 149.9 | 1117.2 | 49.2186 | 555.5 | 3.7058 | 3 |
| Jun., 1984 | 32.6571 | 609.6 | 1726.8 | 74.7519 | 785.5 | 1.28855 | 6 |
| Jul., 1984 | 42.2033 | 643.6 | 2370.4 | 93.0874 | 775.7 | 1.20525 | 7 |
| Aug., 1984 | 38.5933 | 718.8 | 3089.2 | 81.7834 | 804.1 | 1.11867 | 8 |
| Sep., 1984 | 37.4703 | 1039.8 | 4129 | 74.4237 | 1025 | 0.985767 | 9 |
| Oct., 1984 | 28.3117 | 817.5 | 4946.5 | 57.2939 | 836.5 | 1.02324 | 9 |
| Nov., 1984 | 26.0949 | 701.3 | 5647.8 | 51.0068 | 669.2 | 0.954228 | 9 |
| Dec., 1984 | 23.0381 | 711.3 | 6359.1 | 43.8806 | 643.2 | 0.90426 | 9 |
| Jan., 1985 | 20.1 | 616.4 | 6975.5 | 40.0067 | 610.2 | 0.989942 | 9 |
| Feb., 1985 | 23.655 | 630.8 | 7606.3 | 42.8317 | 511.1 | 0.810241 | 9 |
| Mar., 1985 | 19.1323 | 593.1 | 8199.4 | 40.7633 | 670.3 | 1.13016 | 9 |
| Apr., 1985 | 21.1933 | 630.5 | 8829.9 | 41.7068 | 610 | 0.967486 | 9 |
| May., 1985 | 16.4461 | 487.9 | 9317.8 | 40.0657 | 700.5 | 1.43575 | 9 |
| Jun., 1985 | 18.1983 | 541.4 | 9859.2 | 39.8299 | 643.3 | 1.18822 | 9 |
| Jul., 1985 | 14.8668 | 449.1 | 10308.3 | 36.033 | 639.2 | 1.42329 | 9 |
| Aug., 1985 | 15.5602 | 449.3 | 10757.6 | 40.651 | 724.3 | 1.61206 | 9 |
| Sep., 1985 | 16.0483 | 465.4 | 11223 | 37.7174 | 628.2 | 1.34981 | 9 |
| Oct., 1985 | 13.3874 | 407.2 | 11630.2 | 35.6738 | 677.7 | 1.66429 | 9 |
| Nov., 1985 | 14.4269 | 375.1 | 12005.3 | 29.4756 | 391.1 | 1.04266 | 9 |
| Dec., 1985 | 13.2272 | 389.1 | 12394.4 | 21.0789 | 230.8 | 0.593164 | 9 |
| Jan., 1986 | 14.4784 | 424.7 | 12819.1 | 46.6359 | 943.1 | 2.22063 | 9 |
| Feb., 1986 | 11.7955 | 328.8 | 13147.9 | 38.0931 | 732.9 | 2.22901 | 9 |
| Mar., 1986 | 12.1058 | 331.9 | 13479.8 | 28.3895 | 446.3 | 1.34468 | 9 |
| Apr., 1986 | 7.56 | 226.8 | 13706.6 | 18.51 | 328.4 | 1.44797 | 7 |
| May., 1986 | 13.4625 | 359 | 14065.6 | 31.4159 | 478.6 | 1.33315 | 9 |
| Jun., 1986 | 10.7106 | 311.5 | 14377.1 | 30.1526 | 565.3 | 1.81477 | 9 |
| Jul., 1986 | 10.1119 | 304.2 | 14681.3 | 25.4006 | 459.8 | 1.51151 | 9 |
| Aug., 1986 | 9.72442 | 297 | 14978.3 | 31.6889 | 670.7 | 2.25825 | 9 |
| Sep., 1986 | 8.95 | 268.5 | 15246.8 | 28.6306 | 590.3 | 2.19851 | 9 |
| Oct., 1986 | 10.0161 | 310.5 | 15557.3 | 27.9463 | 555.7 | 1.78969 | 9 |
| Nov., 1986 | 9.18667 | 275.6 | 15832.9 | 22.234 | 391.3 | 1.41981 | 9 |
| Dec., 1986 | 8.07097 | 250.2 | 16083.1 | 21.2003 | 406.9 | 1.6263 | 9 |
| Jan., 1987 | 8.07094 | 246.5 | 16329.6 | 21.7738 | 418.4 | 1.69736 | 9 |
| Feb., 1987 | 8.4 | 233.1 | 16562.7 | 20.9947 | 349.4 | 1.49893 | 9 |
| Mar., 1987 | 9.0129 | 279.4 | 16842.1 | 23.8846 | 460.9 | 1.64961 | 9 |
| Apr., 1987 | 8.24667 | 247.4 | 17089.5 | 25.3836 | 514 | 2.07761 | 9 |
| May., 1987 | 7.94348 | 243.6 | 17333.1 | 31.0502 | 708.5 | 2.90846 | 9 |
| Jun., 1987 | 11.6168 | 345.6 | 17678.7 | 32.5194 | 621.7 | 1.7989 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : 8/17/95 3:37:12 am
User : jfox

Production Data from November, 1983 to December, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Monthly Oil m3 | Cum Oil m3 | Avg Daily Fluid m3/d | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------|---------------|-------------------------|---------------------|--------------|-----------|
| Jul., 1987 | 10.7122 | 329.4 | 18008.1 | 30.4795 | 607.7 | 1.84487 | 9 |
| Aug., 1987 | 10.0632 | 310.7 | 18318.8 | 26.7445 | 514.9 | 1.65723 | 9 |
| Sep., 1987 | 10.0233 | 300.7 | 18619.5 | 27.8444 | 534.5 | 1.77752 | 9 |
| Oct., 1987 | 9.27419 | 287.5 | 18907 | 28.2944 | 589.5 | 2.05043 | 9 |
| Nov., 1987 | 9.61333 | 288.4 | 19195.4 | 27.7842 | 545 | 1.88974 | 9 |
| Dec., 1987 | 8.45807 | 262.2 | 19457.6 | 22.7682 | 443.5 | 1.69146 | 9 |
| Jan., 1988 | 8.02258 | 248.7 | 19706.3 | 20.6842 | 392.4 | 1.5778 | 9 |
| Feb., 1988 | 7.01724 | 203.5 | 19909.8 | 21.6341 | 423.8 | 2.08256 | 9 |
| Mar., 1988 | 7.80333 | 234.1 | 20143.9 | 23.6168 | 474.3 | 2.02606 | 9 |
| Apr., 1988 | 8.25 | 247.5 | 20391.4 | 21.3003 | 391.4 | 1.58141 | 9 |
| May., 1988 | 9.37765 | 265.7 | 20657.1 | 21.4241 | 341.2 | 1.28416 | 9 |
| Jun., 1988 | 9.39263 | 276.3 | 20933.4 | 22.9061 | 397.4 | 1.43829 | 9 |
| Jul., 1988 | 9.94516 | 308.3 | 21241.7 | 26.4592 | 511.8 | 1.66007 | 9 |
| Aug., 1988 | 7.00645 | 217.2 | 21458.9 | 22.687 | 486 | 2.23757 | 9 |
| Sep., 1988 | 6.57071 | 196.3 | 21655.2 | 22.7276 | 482.6 | 2.45848 | 9 |
| Oct., 1988 | 6.75172 | 195.8 | 21851 | 18.6133 | 343.9 | 1.75638 | 9 |
| Nov., 1988 | 5.41 | 162.3 | 22013.3 | 13.739 | 249.8 | 1.53913 | 9 |
| Dec., 1988 | 5.24211 | 157.7 | 22171 | 14.4721 | 277.6 | 1.7603 | 9 |
| Jan., 1989 | 6.86452 | 212.8 | 22383.8 | 16.0579 | 284.9 | 1.33882 | 9 |
| Feb., 1989 | 6.67143 | 186.8 | 22570.6 | 18.9422 | 343.5 | 1.83887 | 9 |
| Mar., 1989 | 6.8129 | 211.2 | 22781.8 | 19.4901 | 392.9 | 1.86032 | 9 |
| Apr., 1989 | 6.60333 | 198.1 | 22979.9 | 19.3429 | 382.1 | 1.92882 | 9 |
| May., 1989 | 7.11136 | 208.6 | 23188.5 | 16.7077 | 281.4 | 1.34899 | 9 |
| Jun., 1989 | 6.56292 | 194.7 | 23383.2 | 19.4355 | 381.8 | 1.96097 | 9 |
| Jul., 1989 | 6.76599 | 208.9 | 23592.1 | 20.884 | 435.8 | 2.08617 | 9 |
| Aug., 1989 | 6.33871 | 196.5 | 23788.6 | 26.6125 | 628.4 | 3.19796 | 9 |
| Sep., 1989 | 6.02667 | 180.8 | 23969.4 | 28.0893 | 661.8 | 3.6604 | 9 |
| Oct., 1989 | 5.70364 | 176.1 | 24145.5 | 20.9547 | 470.8 | 2.67348 | 9 |
| Nov., 1989 | 5.47333 | 164.2 | 24309.7 | 19.9557 | 434.4 | 2.64555 | 9 |
| Dec., 1989 | 5.45806 | 169.2 | 24478.9 | 20.2314 | 457.9 | 2.70627 | 9 |
| Jan., 1990 | 5.63239 | 173.9 | 24652.8 | 20.8575 | 470 | 2.7027 | 9 |
| Feb., 1990 | 5.02857 | 140.8 | 24793.6 | 19.7129 | 411.1 | 2.91974 | 9 |
| Mar., 1990 | 5.38435 | 154.8 | 24948.4 | 20.2632 | 427.7 | 2.76292 | 9 |
| Apr., 1990 | 5.50427 | 161 | 25109.4 | 18.5255 | 380.8 | 2.36522 | 8 |
| May., 1990 | 3.77796 | 115.7 | 25225.1 | 9.70615 | 181.5 | 1.56871 | 8 |
| Jun., 1990 | 7.24686 | 216.5 | 25441.6 | 18.0919 | 323.9 | 1.49607 | 9 |
| Jul., 1990 | 6.5 | 201.5 | 25643.1 | 17.6287 | 344.9 | 1.71166 | 9 |
| Aug., 1990 | 6.26992 | 192.8 | 25835.9 | 19.4597 | 405.5 | 2.10322 | 9 |
| Sep., 1990 | 6.28667 | 188.6 | 26024.5 | 17.3794 | 332.7 | 1.76405 | 9 |
| Oct., 1990 | 5.77166 | 178.2 | 26202.7 | 18.0916 | 380.3 | 2.13412 | 9 |
| Nov., 1990 | 5.48619 | 163.9 | 26366.6 | 19.5572 | 420.3 | 2.56437 | 9 |
| Dec., 1990 | 5.3 | 164.3 | 26530.9 | 20.7572 | 479.1 | 2.91601 | 9 |
| Jan., 1991 | 5.70323 | 176.8 | 26707.7 | 21.4896 | 489.3 | 2.76753 | 9 |
| Feb., 1991 | 4.94634 | 135.2 | 26842.9 | 20.3327 | 420.5 | 3.11021 | 9 |
| Mar., 1991 | 5.23365 | 158.1 | 27001 | 21.1653 | 481.2 | 3.04364 | 9 |
| Apr., 1991 | 5.12295 | 150.7 | 27151.7 | 19.7394 | 429.9 | 2.85269 | 9 |
| May., 1991 | 4.89498 | 134 | 27285.7 | 16.8716 | 327.8 | 2.44627 | 8 |
| Jun., 1991 | 4.85488 | 132.7 | 27418.4 | 21.946 | 467.1 | 3.51997 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : 8/17/95 3:37:12 am
User : jfox

Production Data from November, 1983 to December, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Monthly Oil m3 | Cum Oil m3 | Avg Daily Fluid m3/d | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------|---------------|-------------------------|---------------------|--------------|-----------|
| Jul., 1991 | 4.16774 | 129.2 | 27547.6 | 21.8986 | 549.6 | 4.25387 | 9 |
| Aug., 1991 | 4.10312 | 120.7 | 27668.3 | 20.5752 | 484.5 | 4.01408 | 9 |
| Sep., 1991 | 4.51667 | 135.5 | 27803.8 | 21.5353 | 510.5 | 3.76753 | 9 |
| Oct., 1991 | 4.42105 | 136.5 | 27940.3 | 21.2651 | 520 | 3.80952 | 9 |
| Nov., 1991 | 4.43333 | 133 | 28073.3 | 20.3286 | 476.8 | 3.58496 | 9 |
| Dec., 1991 | 4.77681 | 123.6 | 28196.9 | 24.1219 | 500.5 | 4.04935 | 9 |
| Jan., 1992 | 4.43549 | 122.9 | 28319.8 | 19.765 | 424.7 | 3.45566 | 7 |
| Feb., 1992 | 4.12414 | 119.6 | 28439.4 | 17.1949 | 379 | 3.1689 | 6 |
| Mar., 1992 | 4.56314 | 131 | 28570.4 | 19.0348 | 415.4 | 3.17099 | 7 |
| Apr., 1992 | 8.54182 | 156.6 | 28727 | 40.9619 | 594.3 | 3.79502 | 9 |
| May., 1992 | 7.24557 | 143.1 | 28870.1 | 40.4943 | 656.6 | 4.5884 | 8 |
| Jun., 1992 | 9.56111 | 172.1 | 29042.2 | 53.2264 | 785.9 | 4.56653 | 9 |
| Jul., 1992 | 9.29258 | 172.3 | 29214.5 | 44.5362 | 653.4 | 3.79222 | 9 |
| Aug., 1992 | 9.296 | 174.3 | 29388.8 | 44.3561 | 657.3 | 3.77108 | 9 |
| Sep., 1992 | 8.71579 | 158.7 | 29547.5 | 45.8839 | 676.7 | 4.26402 | 9 |
| Oct., 1992 | 10.0422 | 186.2 | 29733.7 | 50.7064 | 753.9 | 4.04887 | 9 |
| Nov., 1992 | 6.10879 | 182.5 | 29916.2 | 28.2035 | 660 | 3.61644 | 9 |
| Dec., 1992 | 5.67805 | 174.6 | 30090.8 | 22.6301 | 521.2 | 2.98511 | 8 |
| Jan., 1993 | 5.5 | 170.5 | 30261.3 | 22.3476 | 522.2 | 3.06276 | 8 |
| Feb., 1993 | 5.70357 | 159.7 | 30421 | 22.8525 | 480.1 | 3.00626 | 8 |
| Mar., 1993 | 5.3871 | 167 | 30588 | 19.8346 | 447.8 | 2.68144 | 8 |
| Apr., 1993 | 8.36682 | 151.3 | 30739.3 | 50.7078 | 765.6 | 5.06015 | 9 |
| May., 1993 | 7.35721 | 140.4 | 30879.7 | 48.8836 | 792.4 | 5.64387 | 9 |
| Jun., 1993 | 7.10727 | 130.3 | 31010 | 51.5649 | 815 | 6.2548 | 9 |
| Jul., 1993 | 4.30968 | 133.6 | 31143.6 | 29.2567 | 773.3 | 5.78817 | 9 |
| Aug., 1993 | 4.24239 | 130.1 | 31273.7 | 32.7801 | 875.1 | 6.72636 | 9 |
| Sep., 1993 | 4.69168 | 138.6 | 31412.3 | 30.2136 | 753.9 | 5.43939 | 9 |
| Oct., 1993 | 4.99032 | 154.7 | 31567 | 29.8054 | 769.2 | 4.9722 | 9 |
| Nov., 1993 | 5.26 | 157.8 | 31724.8 | 24.1923 | 567.9 | 3.59886 | 9 |
| Dec., 1993 | 4.93548 | 153 | 31877.8 | 23.0893 | 562.7 | 3.67778 | 9 |
| Jan., 1994 | 4.88387 | 151.4 | 32029.2 | 20.7989 | 493.3 | 3.25826 | 9 |
| Feb., 1994 | 5.20721 | 144.5 | 32173.7 | 23.4545 | 506.3 | 3.50381 | 9 |
| Mar., 1994 | 5.37908 | 160.7 | 32334.4 | 30.4158 | 747.9 | 4.65401 | 9 |
| Apr., 1994 | 5.07667 | 152.3 | 32486.7 | 25.6756 | 617.9 | 4.05712 | 9 |
| May., 1994 | 4.9129 | 152.3 | 32639 | 27.0022 | 684.7 | 4.49573 | 9 |
| Jun., 1994 | 5.26364 | 154.4 | 32793.4 | 25.85 | 603.8 | 3.91062 | 9 |
| Jul., 1994 | 5.17407 | 156.3 | 32949.7 | 26.2997 | 638.1 | 4.08253 | 9 |
| Aug., 1994 | 6.93234 | 155.4 | 33105.1 | 37.6402 | 688.3 | 4.42921 | 9 |
| Sep., 1994 | 5.31548 | 158.8 | 33263.9 | 26.8442 | 643.1 | 4.04975 | 9 |
| Oct., 1994 | 5.49699 | 167.2 | 33431.1 | 26.5734 | 641 | 3.83373 | 9 |
| Nov., 1994 | 5.61 | 168.3 | 33599.4 | 25.4358 | 594.7 | 3.53357 | 9 |
| Dec., 1994 | 5.16848 | 158.5 | 33757.9 | 26.2718 | 647.1 | 4.08265 | 9 |
| Jan., 1995 | 5.22581 | 162 | 33919.9 | 26.6894 | 665.3 | 4.10679 | 9 |
| Feb., 1995 | 5.09909 | 139.8 | 34059.7 | 25.37 | 555.7 | 3.97496 | 9 |
| Mar., 1995 | 5.1498 | 159 | 34218.7 | 24.8703 | 608.8 | 3.82893 | 9 |
| Apr., 1995 | 5.07448 | 151.6 | 34370.3 | 24.0257 | 566.1 | 3.73417 | 9 |
| May., 1995 | 7.04348 | 162 | 34532.3 | 34.1422 | 623.2 | 3.84691 | 9 |
| Jun., 1995 | 6.96135 | 154.6 | 34686.9 | 33.1123 | 580.7 | 3.75615 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : 8/17/5 3:37:13 am
User : jfox

Production Data from November, 1983 to December, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Monthly Oil m3 | Cum Oil m3 | Avg Daily Fluid m3/d | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------|---------------|-------------------------|---------------------|--------------|-----------|
| Jul., 1995 | 6.75909 | 148.7 | 34835.6 | 32.4393 | 564.9 | 3.79892 | 9 |
| Aug., 1995 | 6.74118 | 152.8 | 34988.4 | 36.978 | 685.3 | 4.48495 | 9 |
| Sep., 1995 | 6.43019 | 142 | 35130.4 | 35.1742 | 634.7 | 4.46972 | 9 |
| Oct., 1995 | 6.44165 | 149.5 | 35279.9 | 36.8517 | 705.7 | 4.7204 | 9 |
| Nov., 1995 | 4.56544 | 134.3 | 35414.2 | 28.5267 | 704.8 | 5.24795 | 9 |
| Dec., 1995 | 4.85341 | 136.3 | 35550.5 | 23.8383 | 533.1 | 3.91123 | 9 |
| Jan., 1996 | 4.4129 | 136.8 | 35687.3 | 21.4697 | 528.7 | 3.86477 | 8 |
| Feb., 1996 | 4.36897 | 126.7 | 35814 | 20.0571 | 454.9 | 3.59037 | 8 |
| Mar., 1996 | 4.35628 | 134.5 | 35948.5 | 20.9347 | 511.8 | 3.8052 | 8 |
| Apr., 1996 | 3.69231 | 102 | 36050.5 | 20.3274 | 459.5 | 4.5049 | 8 |
| May., 1996 | 4.23871 | 131.4 | 36181.9 | 19.6793 | 478.6 | 3.64231 | 8 |
| Jun., 1996 | 4.03419 | 118 | 36299.9 | 18.5112 | 423.4 | 3.58814 | 8 |
| Jul., 1996 | 4.42903 | 137.3 | 36437.2 | 18.0213 | 421.3 | 3.06846 | 8 |
| Aug., 1996 | 4.48387 | 139 | 36576.2 | 17.8246 | 413.5 | 2.97482 | 8 |
| Sep., 1996 | 4.20085 | 123.4 | 36699.6 | 16.9789 | 375.3 | 3.04133 | 8 |
| Oct., 1996 | 4.52581 | 140.3 | 36839.9 | 14.702 | 315.4 | 2.24804 | 8 |
| Nov., 1996 | 4.16949 | 123 | 36962.9 | 16.8357 | 373.6 | 3.0374 | 8 |
| Dec., 1996 | 4.10508 | 121.1 | 37084 | 17.1171 | 383.8 | 3.16928 | 8 |
| Jan., 1997 | 3.99004 | 120.2 | 37204.2 | 17.303 | 401 | 3.33611 | 8 |
| Feb., 1997 | 3.93543 | 109.7 | 37313.9 | 16.6367 | 354 | 3.22698 | 8 |
| Mar., 1997 | 3.88387 | 120.4 | 37434.3 | 16.3791 | 387.3 | 3.21678 | 8 |
| Apr., 1997 | 4.01667 | 120.5 | 37554.8 | 17.6451 | 408.8 | 3.39253 | 8 |
| May., 1997 | 4.39355 | 136.2 | 37691 | 20.9019 | 511.7 | 3.75698 | 8 |
| Jun., 1997 | 4.04333 | 121.3 | 37812.3 | 20.8584 | 504.4 | 4.15829 | 8 |
| Jul., 1997 | 4.0129 | 124.4 | 37936.7 | 19.1211 | 468.3 | 3.76447 | 8 |
| Aug., 1997 | 4.02276 | 123.7 | 38060.4 | 17.8684 | 425.7 | 3.44139 | 8 |
| Sep., 1997 | 4.08111 | 110.7 | 38171.1 | 16.9456 | 348.9 | 3.15176 | 8 |
| Oct., 1997 | 4.18138 | 129.1 | 38300.2 | 17.8156 | 420.9 | 3.26026 | 8 |
| Nov., 1997 | 3.85882 | 114.8 | 38415 | 14.8084 | 325.7 | 2.83711 | 8 |
| Dec., 1997 | 3.71935 | 115.3 | 38530.3 | 13.3081 | 297.2 | 2.57762 | 8 |
| Jan., 1998 | 3.90645 | 121.1 | 38651.4 | 15.0082 | 344.1 | 2.84145 | 8 |
| Feb., 1998 | 3.99643 | 111.9 | 38763.3 | 15.5196 | 322.6 | 2.88293 | 8 |
| Mar., 1998 | 3.74089 | 115.5 | 38878.8 | 14.4632 | 331 | 2.8658 | 8 |
| Apr., 1998 | 3.91297 | 116.9 | 38995.7 | 16.1189 | 364.6 | 3.11891 | 8 |
| May., 1998 | 4.13388 | 126.6 | 39122.3 | 18.1667 | 429.7 | 3.39416 | 8 |
| Jun., 1998 | 4.14237 | 122.2 | 39244.5 | 18.0934 | 411.5 | 3.36743 | 8 |
| Jul., 1998 | 4.29594 | 132.1 | 39376.6 | 17.1108 | 394 | 2.98259 | 8 |
| Aug., 1998 | 3.99892 | 123.3 | 39499.9 | 15.5174 | 355.1 | 2.87997 | 7 |
| Sep., 1998 | 4.36425 | 130.2 | 39630.1 | 15.7326 | 339.1 | 2.60445 | 7 |
| Oct., 1998 | 4.29355 | 133.1 | 39763.2 | 15.8019 | 356.7 | 2.67994 | 7 |
| Nov., 1998 | 4.41333 | 132.4 | 39895.6 | 16.2419 | 354.8 | 2.67976 | 7 |
| Dec., 1998 | 4.28387 | 132.8 | 40028.4 | 16.189 | 369 | 2.77861 | 7 |
| Jan., 1999 | 3.86129 | 119.7 | 40148.1 | 15.3598 | 356.4 | 2.97744 | 6 |
| Feb., 1999 | 3.88024 | 108 | 40256.1 | 15.1454 | 313.5 | 2.90278 | 6 |
| Mar., 1999 | 3.4 | 105.4 | 40361.5 | 11.9821 | 266 | 2.52372 | 5 |
| Apr., 1999 | 3.48667 | 104.6 | 40466.1 | 12.2482 | 262.8 | 2.51243 | 5 |
| May., 1999 | 3.44899 | 106.2 | 40572.3 | 12.7192 | 285.4 | 2.68738 | 5 |
| Jun., 1999 | 3.37667 | 101.3 | 40673.6 | 12.2348 | 265.7 | 2.6229 | 5 |

Production Report

Group : Daly Unit #4 WF Expansion
 Well : Summary Well
 : 000000280
 Hist.Data : 11/83-10/99
 Operator :
 Field :

Date : 8/17/95 3:55:24 am
 User : jfox
 On Prod : 02/09
 Status : Unknown
 Zone :

Production Data from July, 1999 to October, 1999

| Year | Avg Daily Oil m3/d | Monthly Oil m3 | Cum Oil m3 | Avg Daily Fluid m3/d | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------|---------------|-------------------------|---------------------|--------------|-----------|
| Jul., 1999 | 3.29355 | 102.1 | 40775.7 | 11.6273 | 258.3 | 2.52987 | 5 |
| Aug., 1999 | 4.31228 | 122.9 | 40898.6 | 15.1177 | 307.9 | 2.50529 | 6 |
| Sep., 1999 | 4.15398 | 124.1 | 41022.7 | 14.7098 | 315.3 | 2.54069 | 8 |
| Oct., 1999 | 4.24979 | 125.9 | 41148.6 | 15.9647 | 347 | 2.75616 | 8 |

WATERFLOOD EXPANSION PROJECT

WATERFLOOD PRODUCTION FORECAST

- based on the ISD-27 injection pattern, within 8 months of injection commencing production had increased by 1.9 * pre-waterflood rates
- incremental wf recovery for ISD-27 is estimated to be. 4.2% OOIP (Zargoun)
4.7% OOIP (P&E)
- ratio of primary to secondary recovery is $\frac{9.0\%}{4.8} = 1.9 * (\text{Zargoun})$

$$\frac{9.0\%}{4.3\%} = 2.1 * (\text{P&E})$$

WF PROD FORECAST

ANALOGY

$$\begin{aligned} \text{ultimate rec WF expansion} \\ 6.2 \times 1.9 &= 11.8\% \text{ OOIP} \\ 6.2 \times 2.1 &= 13.0\% \text{ OOIP} \end{aligned}$$

(1) $IP = 41 * 1.9 = 7.8 \text{ m}^3/\text{d}$

assume. no change in decline rate, project area production decline < unit average d ISD-27 in pattern

$$Q_{WF} = \frac{365(7.8 - 1.8)}{0.044} = 58068 \text{ m}^3$$

$$\Delta Q_{\text{oct-99}} = Q_{WF} - Q_P = 58068 - 19658 = 38410 \text{ m}^3$$

(Area 3.8% OOIP)
ult rec 10% OOIP

too low

WF PROD. FORECAST

USE
Σ

(2) IP: 7.8 L3/d (01-JAN-00)

ECONOMIC LIMIT = 1.6 L3/d (8 wells currently producing)

DECLINE = 3.3% (currently WF expansion area decline)

$$Q_{WF}^{R_{lim} Res} = Q_{2000} + Q_{WF}^{2001+}$$

$$Q_{WF}^{R_{lim} Res} = 365 \left(\frac{7.8 + 4.1}{2} \right) + 66464 = 67139$$

$$\Delta Q_{WF} = 67139 - 19658 = 47481 \quad \text{USE } 47500 \text{ m}^3$$

Δ recovery factor 4.8 % oil

alt. recovery factor 108288 L3 (10.9% oil)

THIRD) TIER ERR FACTOR (JAN-00)

$$\frac{\Delta ERR_{R_{lim} Res}}{TOTAL_{R_{lim} Res}} = \frac{IERR}{TRTS}$$

$$IERR = 47500$$

$$TRTS = 76134.5 + 47500 = 123635$$

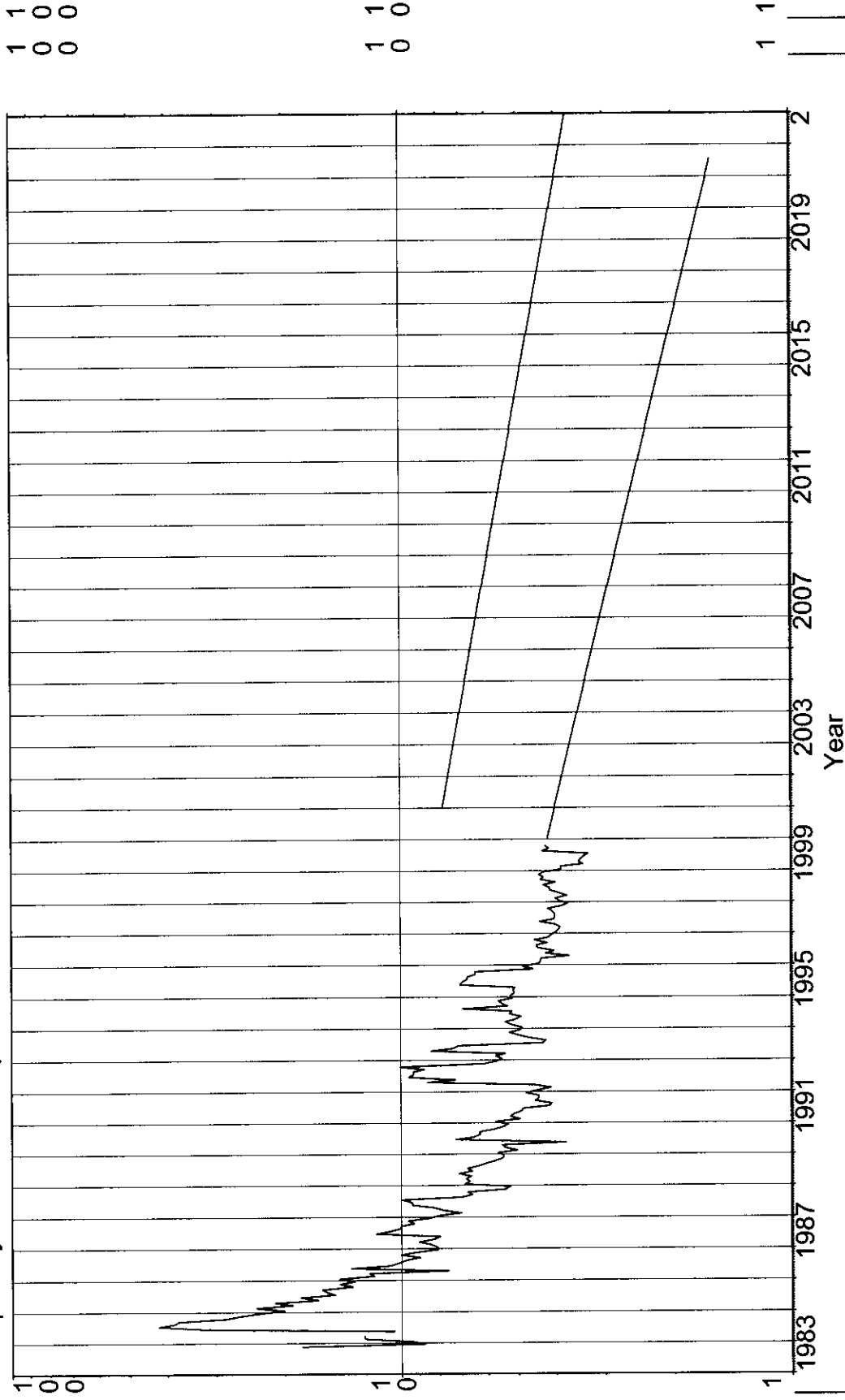
$$TTEF = \frac{47500}{123635} = 0.3842$$

Summary Well Data 11/83-10/99

Operator:
Field:
Zone:
Type: Unknown
Group: Daily Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)
qi: 7.8 m3/d, Jan, 2001
qf: 1.5978 m3/d, Feb, 2048
di(Exp): 3.3 CTD: 41148.6 m3
RR: 66464.1 m3 Tot: 107613 m3

Production Cums
Oil: 41148.6 m3
Gas: 0 E6m3
Water: 95156 m3
Cond: 0 m3



Avg Daily Oil - m3/d



Avg Daily Oil FC 1 - m3/d
Avg Daily Oil FC 2 - m3/d

1 1
0 0
0 0

1 1
0 0

1 1

Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit #4 WF Expansion RR: 86870.8 m3 Tot: 128019 m3

Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

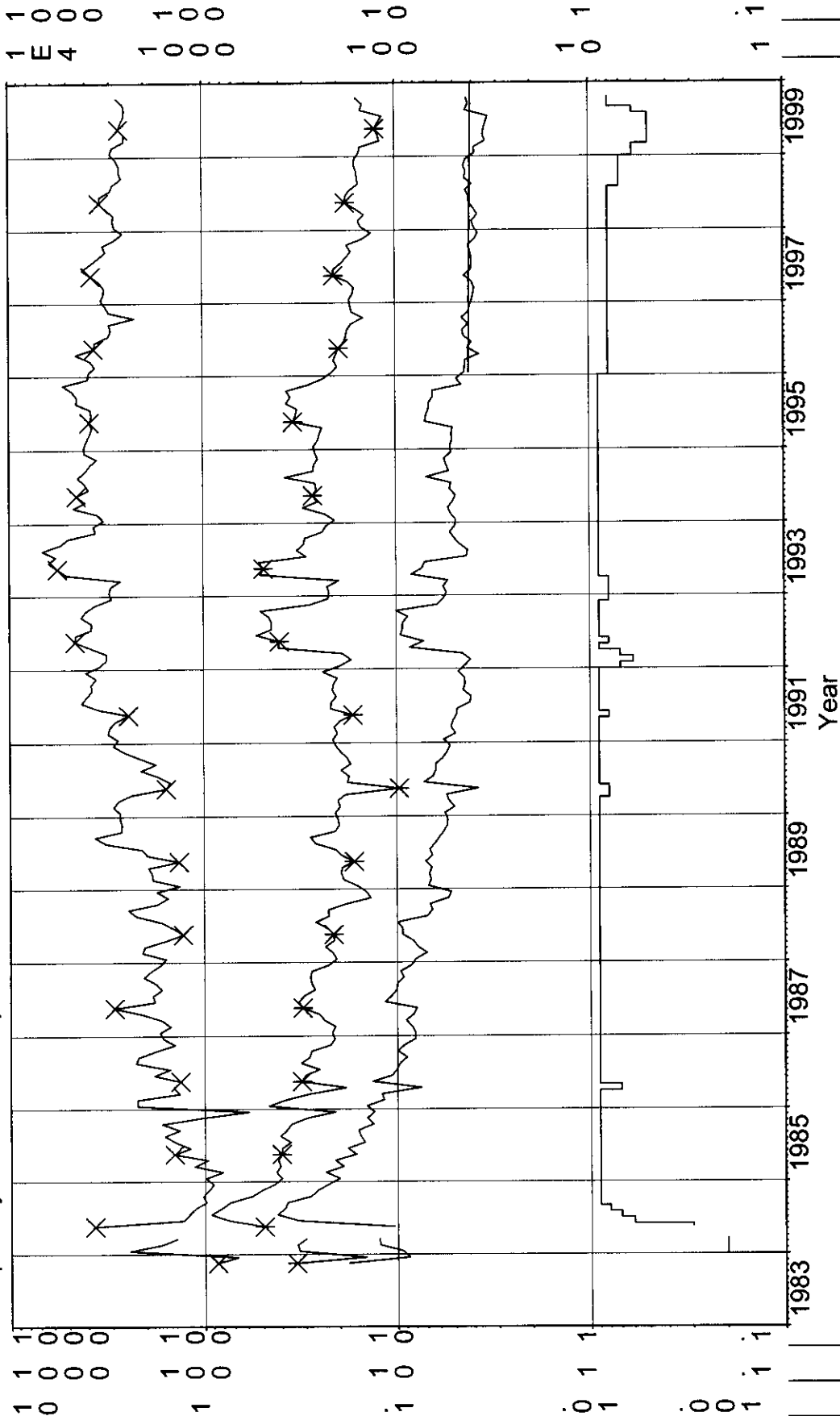
Cond: 0 m3

Avg Daily Oil FC 1 (Rate-Time)

qi: 4.18271 m3/d, Jan, 1996

qf: 1.79886 m3/d, Aug, 2086

di(Exp): 0.929341 CTD: 41148.6 m3



Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3



Num Wells

Avg Daily Oil FC 1 - m3/d

Operator:

Field:

Zone:

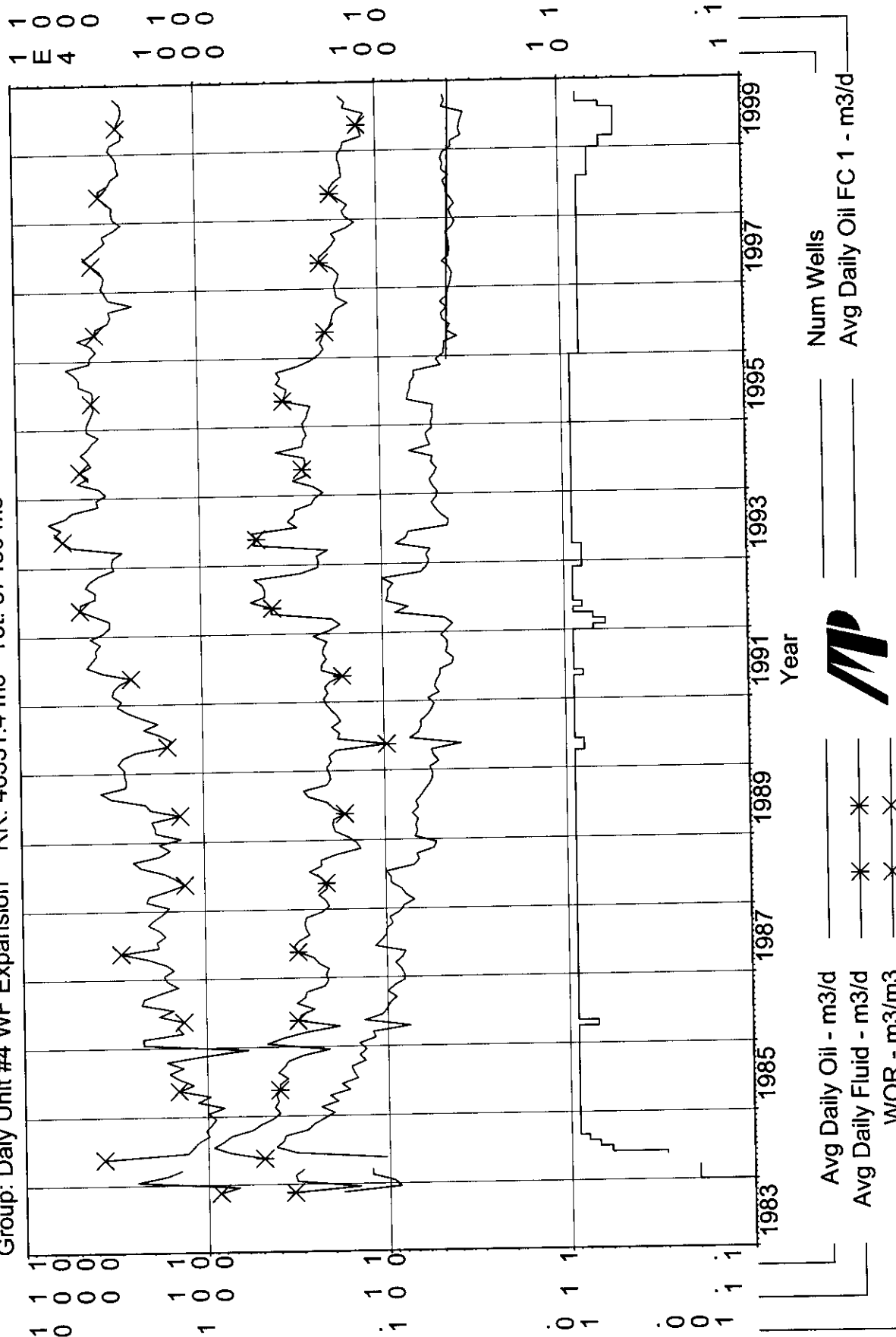
Type: Unknown

Group: Daly Unit #4 WF Expansion

Production Cums
Oil: 41148.6 m3
Gas: 0 E6m3
Water: 95156 m3
Cond: 0 m3

di(Exp): 1 68099 CTD: 41148.6 m3

RR- 46331.4 m3 Tot: 87480 m3



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit #4 WF Expansion

Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3

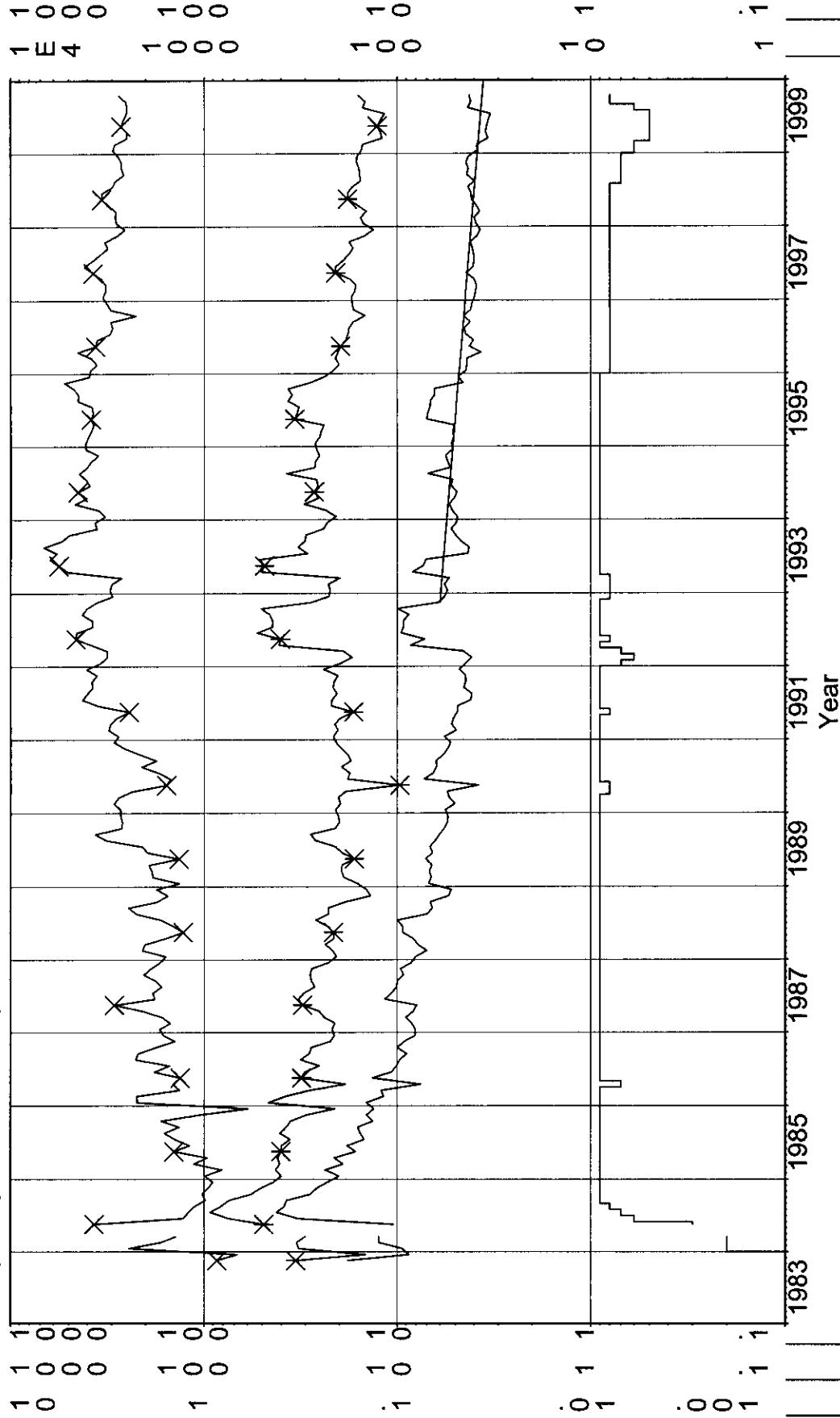
Avg Daily Oil FC 1 (Rate-Time)

qi: 6.04211 m3/d, Nov, 1992

qf: 1.79946 m3/d, Jun, 2009

di(Exp): 7.02505 CTD: 41148.6 m3

RR: 8765.87 m3 Tot: 49914.5 m3



Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3

Num Wells

Avg Daily Oil FC 1 - m3/d



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Dally Unit #4 WF Expansion RR: 8512.47 m3 Tot: 49661.1 m3

Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

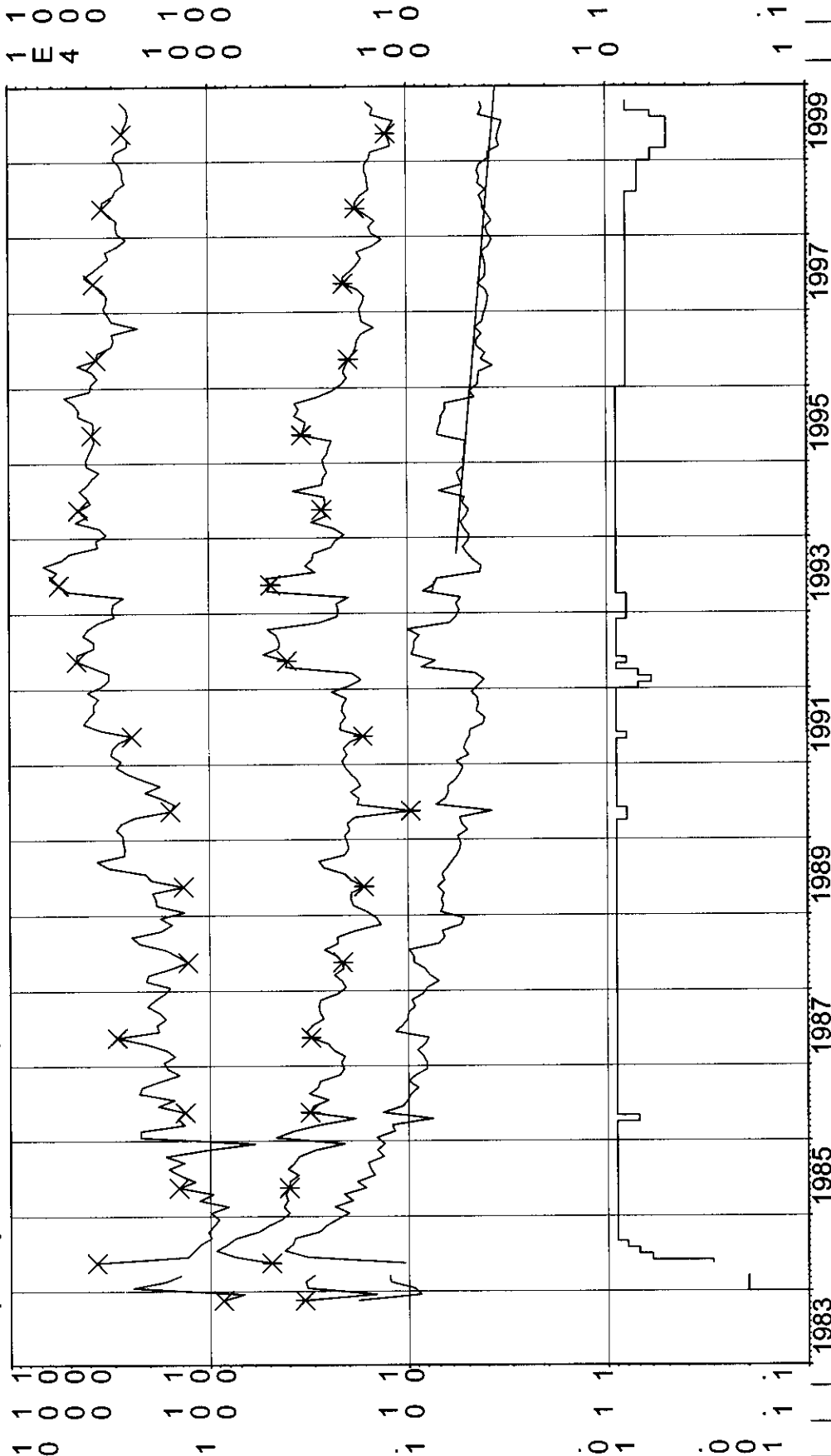
Cond: 0 m3

Avg Daily Oil FC 1 (Rate-Time)

qi: 5.70203 m3/d, Oct, 1993

qf: 1.7964 m3/d, Feb, 2009

di(Exp): 7.21836 CTD: 41148.6 m3



Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3

Num Wells

Avg Daily Oil FC 1 - m3/d



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Dally Unit #4 WF Expansion RR: 7988.45 m3 Tot: 49137 m3

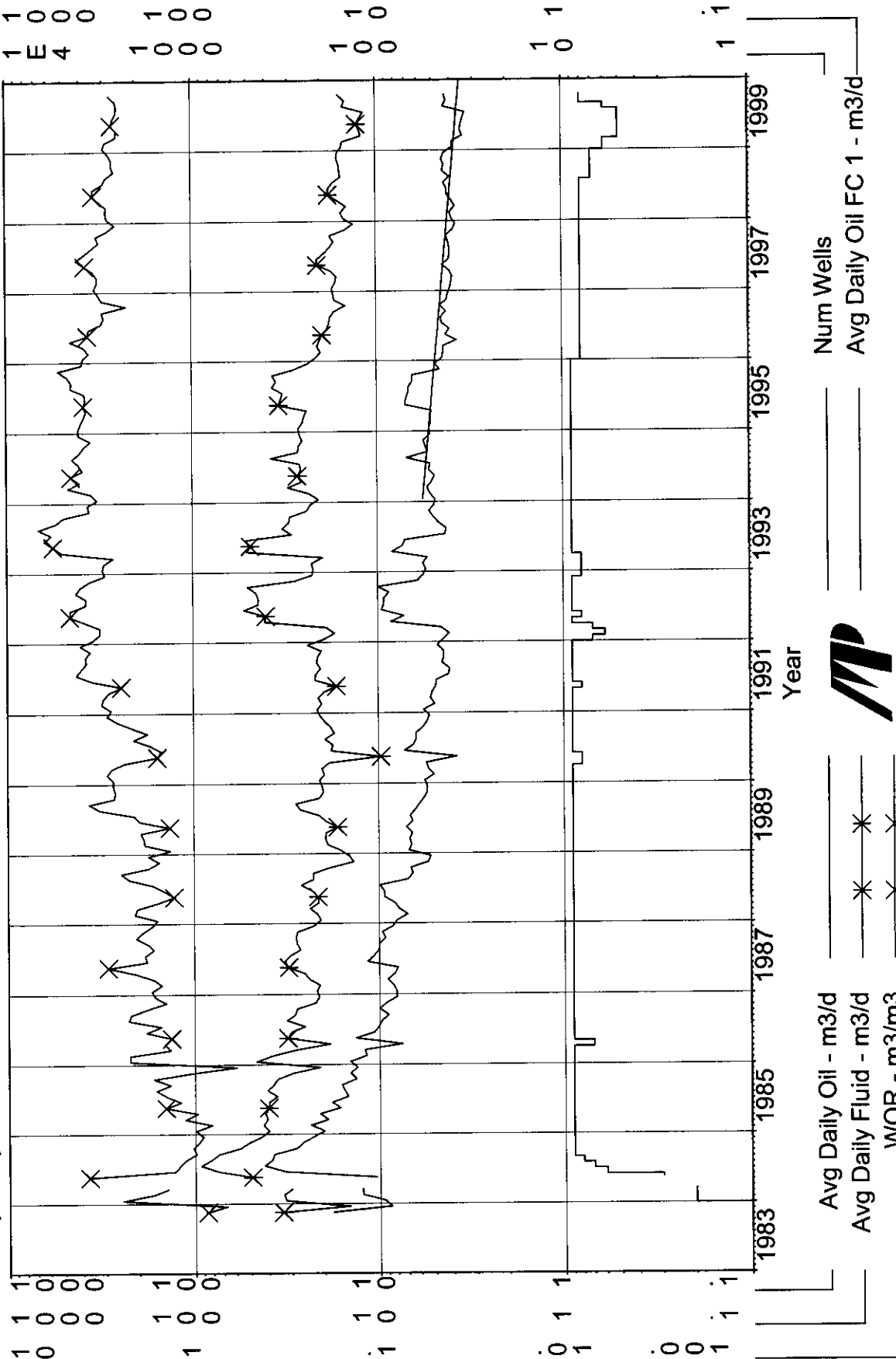
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit #4 WF Expansion

Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3

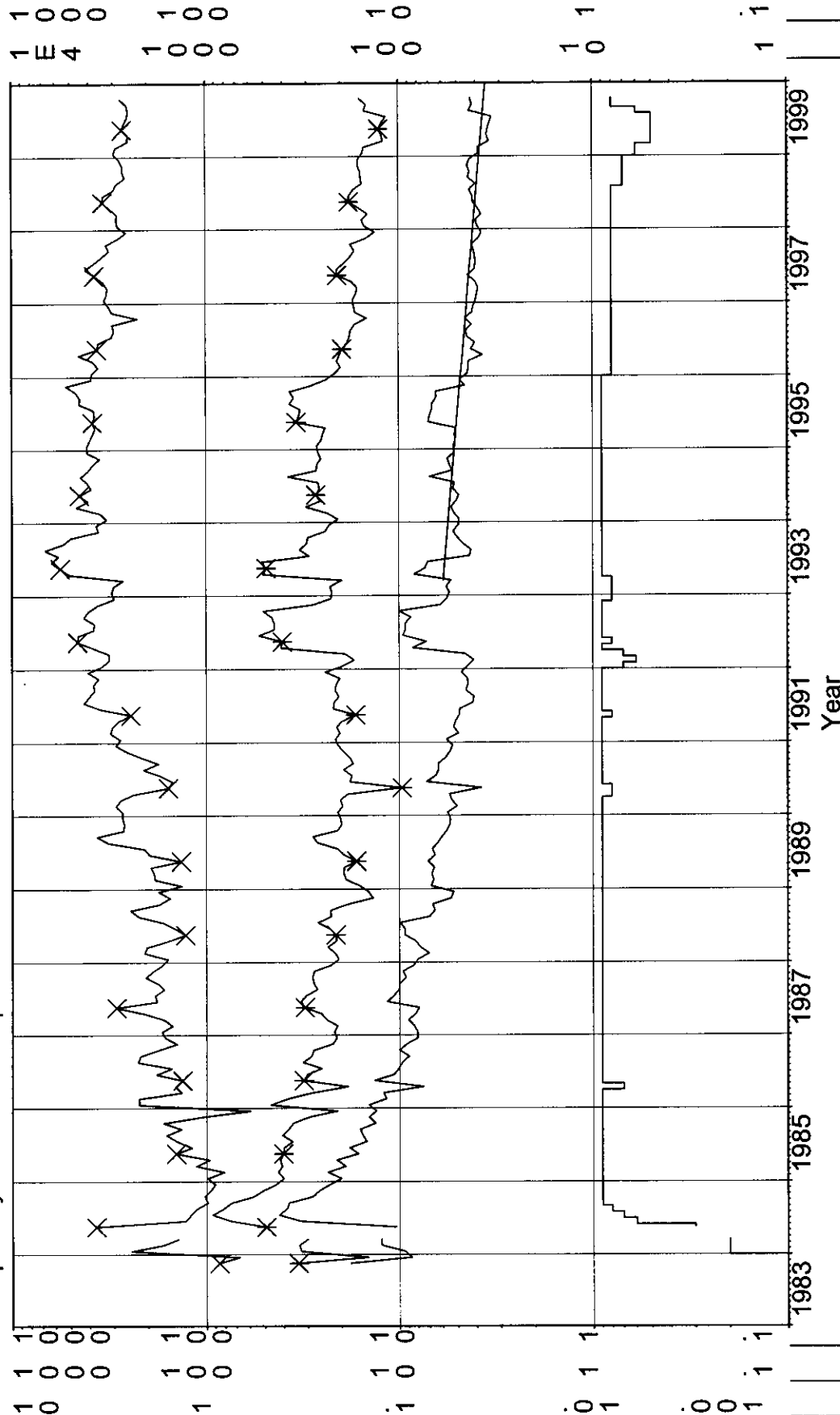
Avg Daily Oil FC 1 (Rate-Time)

qi: 5.95668 m3/d, Mar, 1993

qf: 1.79832 m3/d, Dec, 2008

di(Exp): 7.26914 CTD: 41148.6 m3

RR: 8558.72 m3 Tot: 49707.3 m3



Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3

Num Wells

Avg Daily Oil FC 1 - m3/d



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Dally Unit #4 WF Expansion

Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3

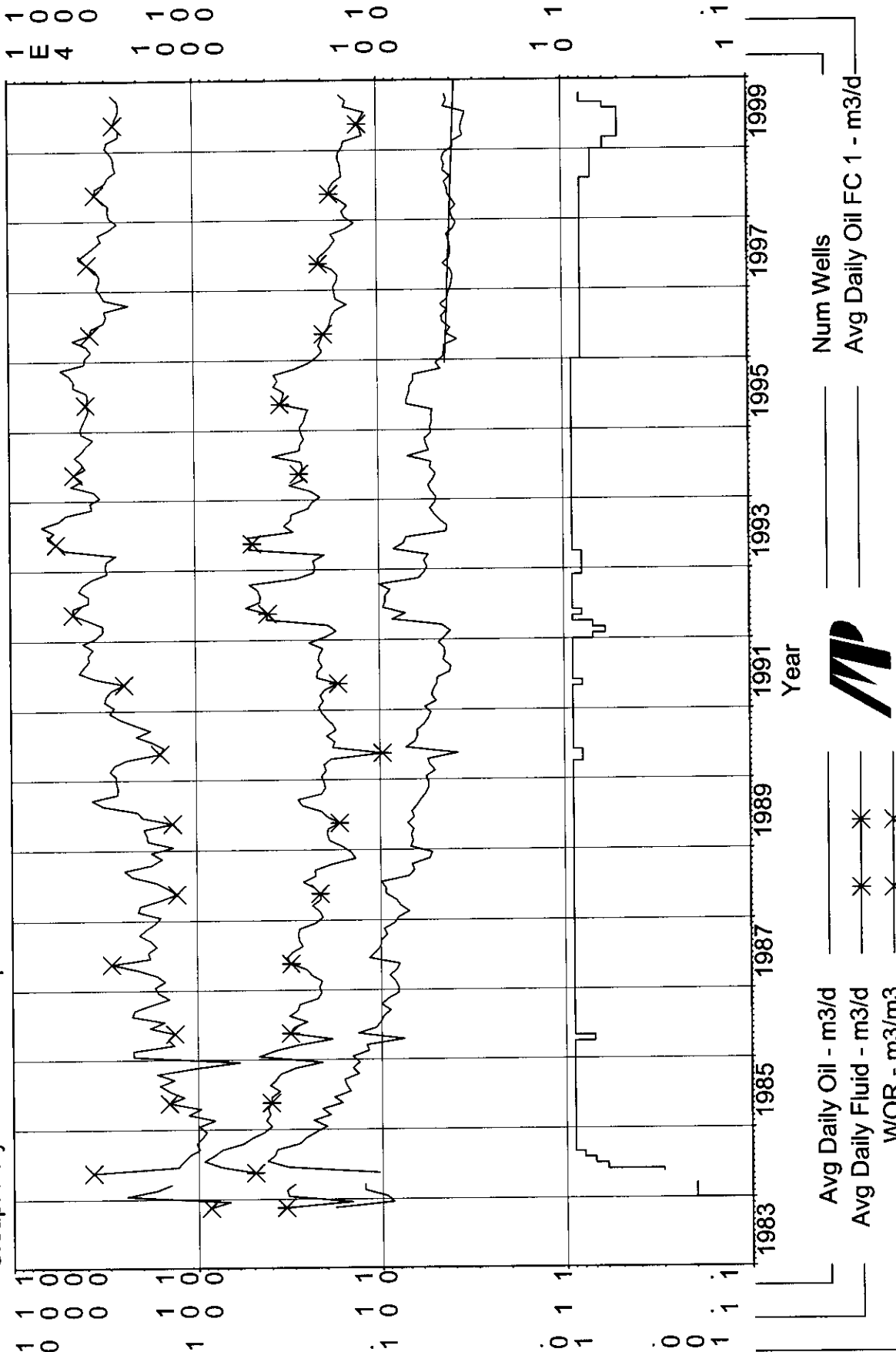
Avg Daily Oil FC 1 (Rate-Time)

qi: 4.33128 m3/d, Dec, 1995

qf: 1.79694 m3/d, Jan, 2022

di(Exp): 3.3063 CTD: 41148.6 m3

RR: 21405.1 m3 Tot: 62553.7 m3



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)

qi: 4.33128 m3/d, Dec, 1995

qf: 1.79694 m3/d, Jan, 2022

di(Exp): 3.3063 CTD: 41148.6 m3

RR: 21405.1 m3 Tot: 62553.7 m3

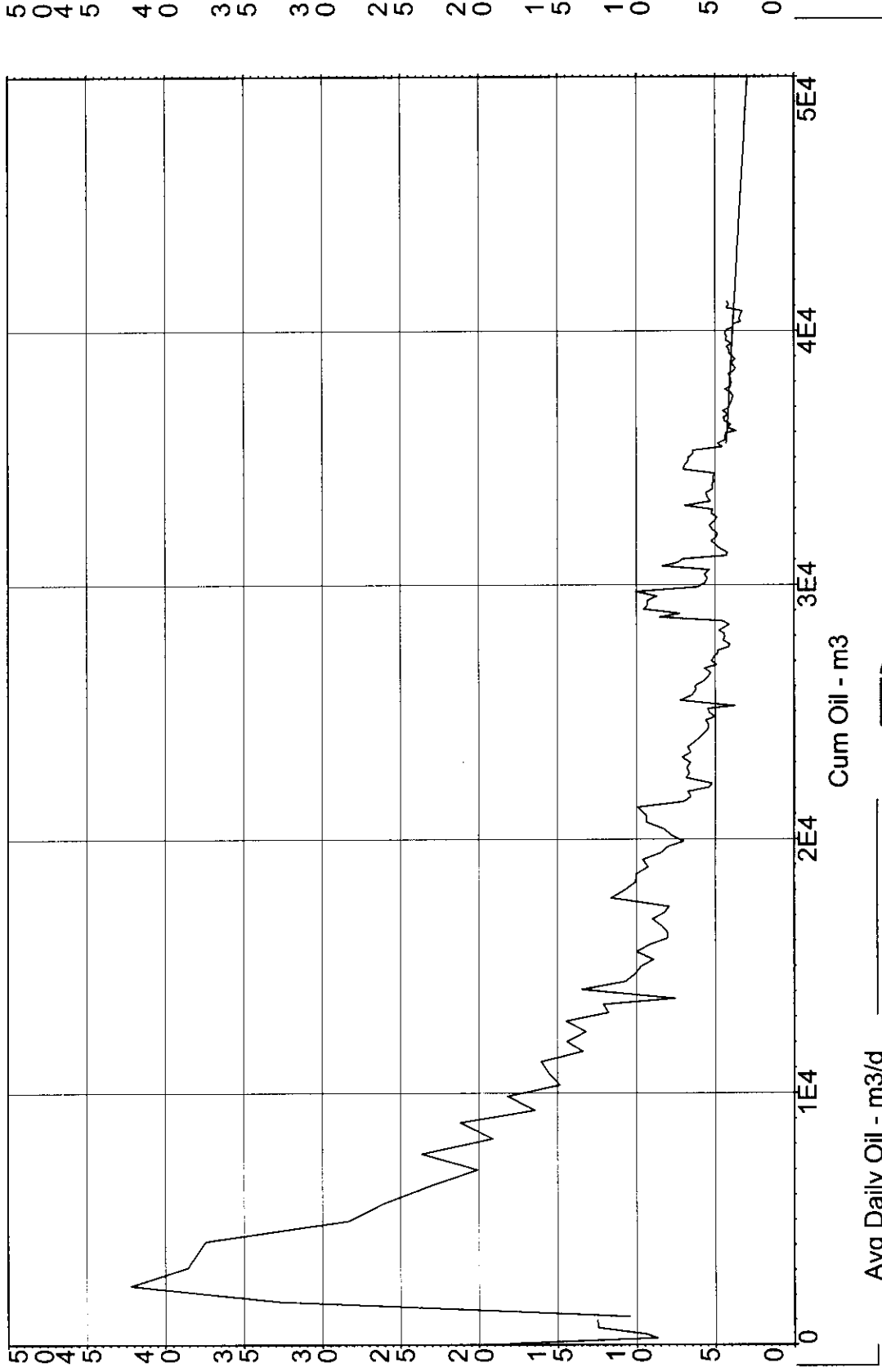
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Avg Daily Oil - m3/d

Cum Oil - m3

Avg Daily Oil FC 1 - m3/d



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Dally Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)

qi: 4.36252 m3/d, Nov, 1995

qf: 1.79774 m3/d, Nov, 2020

di(Exp): 3.46203 CTD: 41148.6 m3

RR: 20285.3 m3 Tot: 61433.9 m3

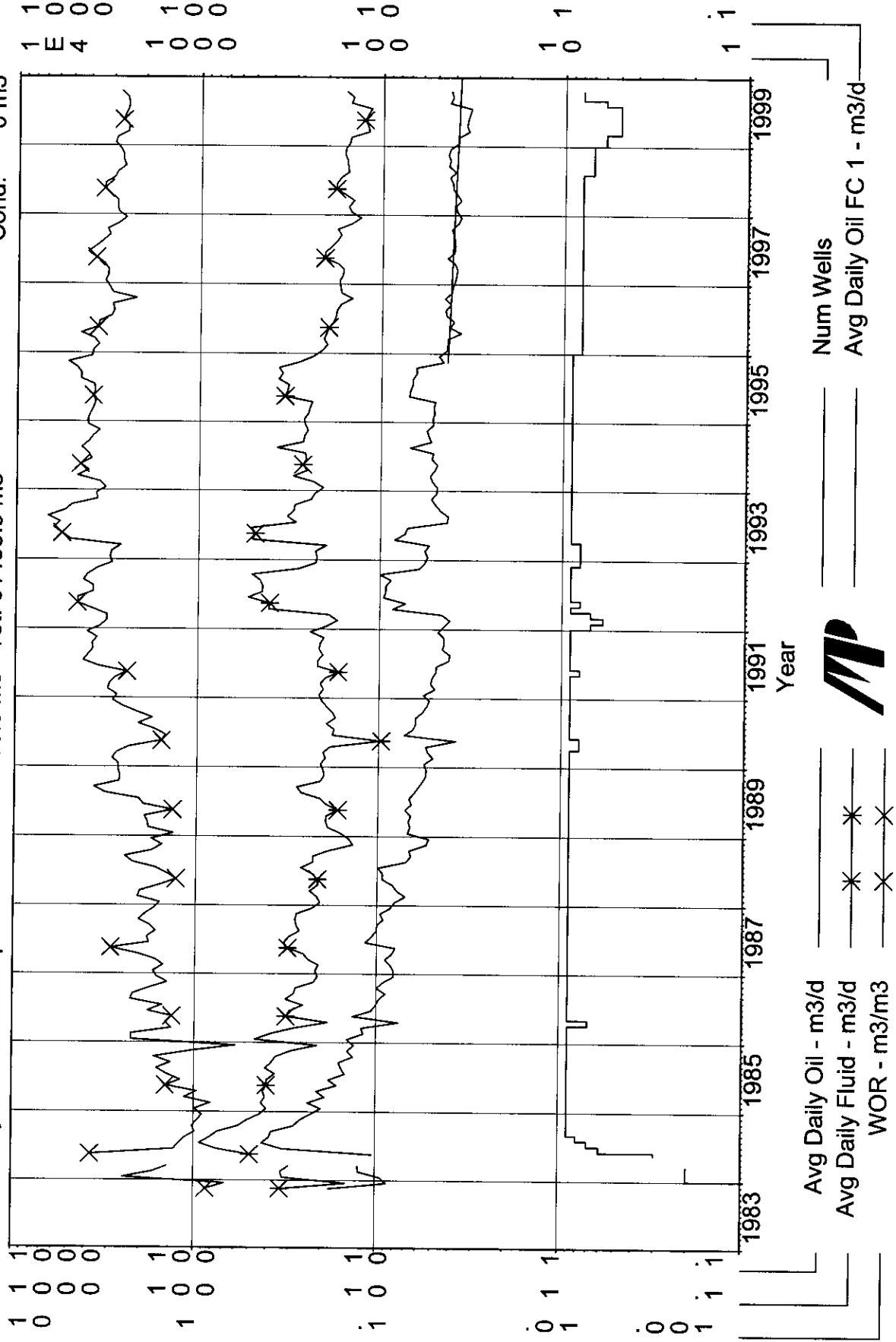
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)

qi: 4.36252 m3/d, Nov, 1995

qf: 1.79774 m3/d, Nov, 2020

di(Exp): 3.46203 CTD: 41148.6 m3

RR: 20285.3 m3 Tot: 61433.9 m3

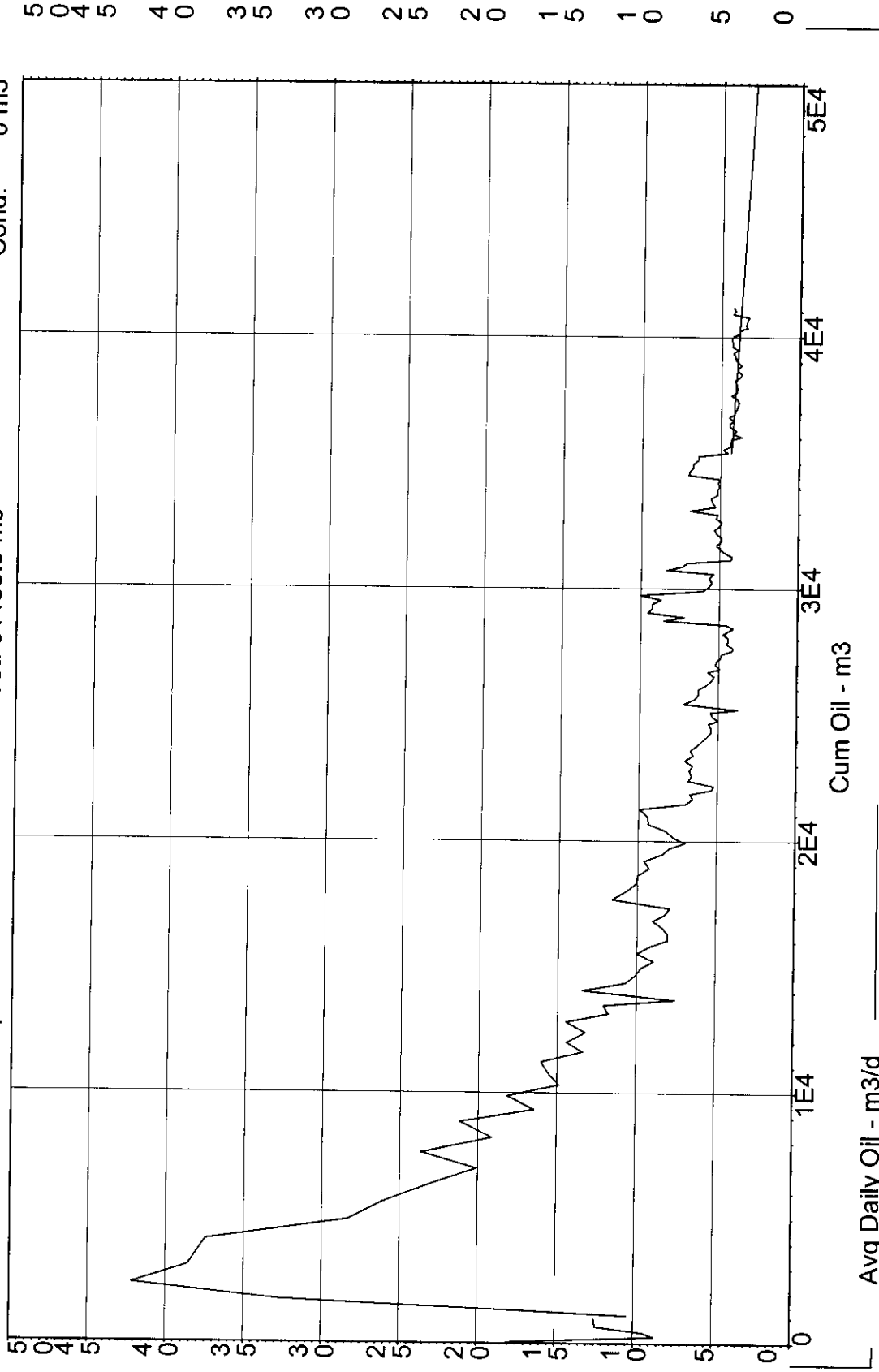
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Avg Daily Oil - m3/d

Cum Oil - m3

Avg Daily Oil FC 1 - m3/d

MP

Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)

qi: 5.67759 m3/d, Sep, 1993

qf: 1.79373 m3/d, Jul, 2009

di(Exp): 6.98331 CTD: 41148.6 m3

RR: 9127.46 m3 Tot: 50276.1 m3

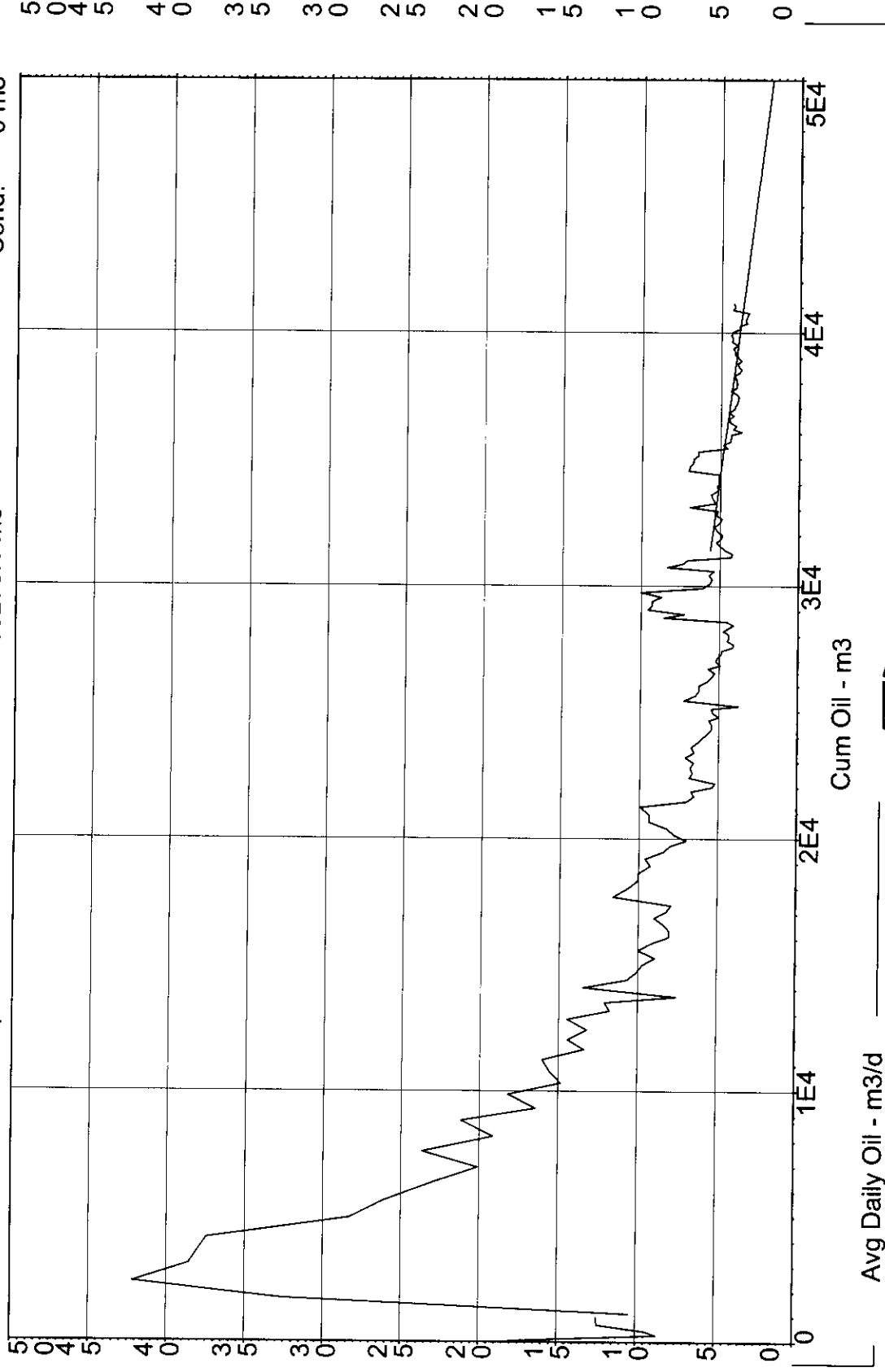
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Avg Daily Oil - m3/d

Cum Oil - m3

Avg Daily Oil FC 1 - m3/d

MP

Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)

qi: 5.27313 m3/d, Jul, 1993

qf: 1.79249 m3/d, Dec, 2012

di(Exp): 5.36983 CTD: 41148.6 m3

RR: 12506.3 m3 Tot: 53654.9 m3

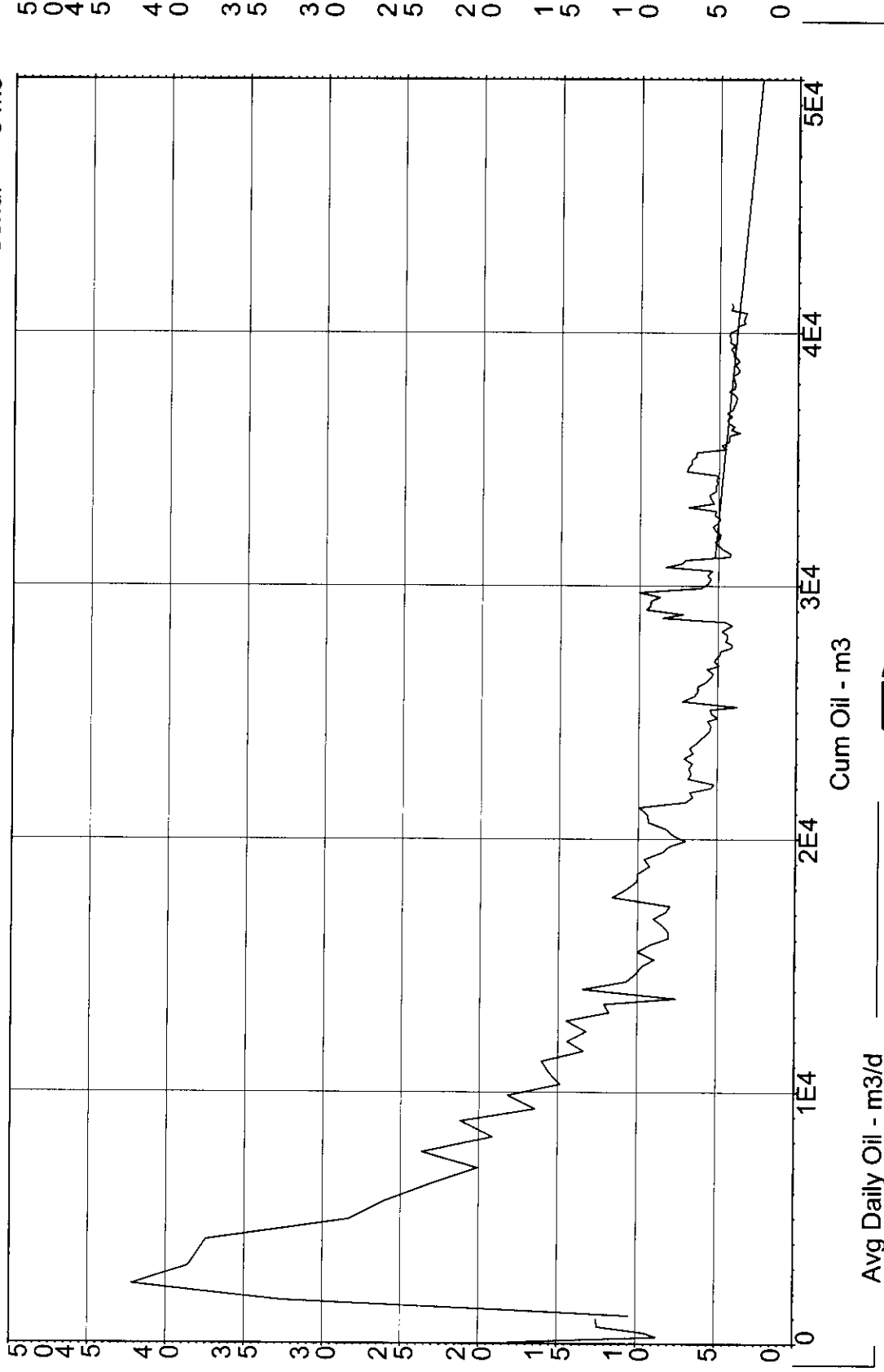
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Avg Daily Oil - m3/d

Cum Oil - m3

Avg Daily Oil FC 1 - m3/d

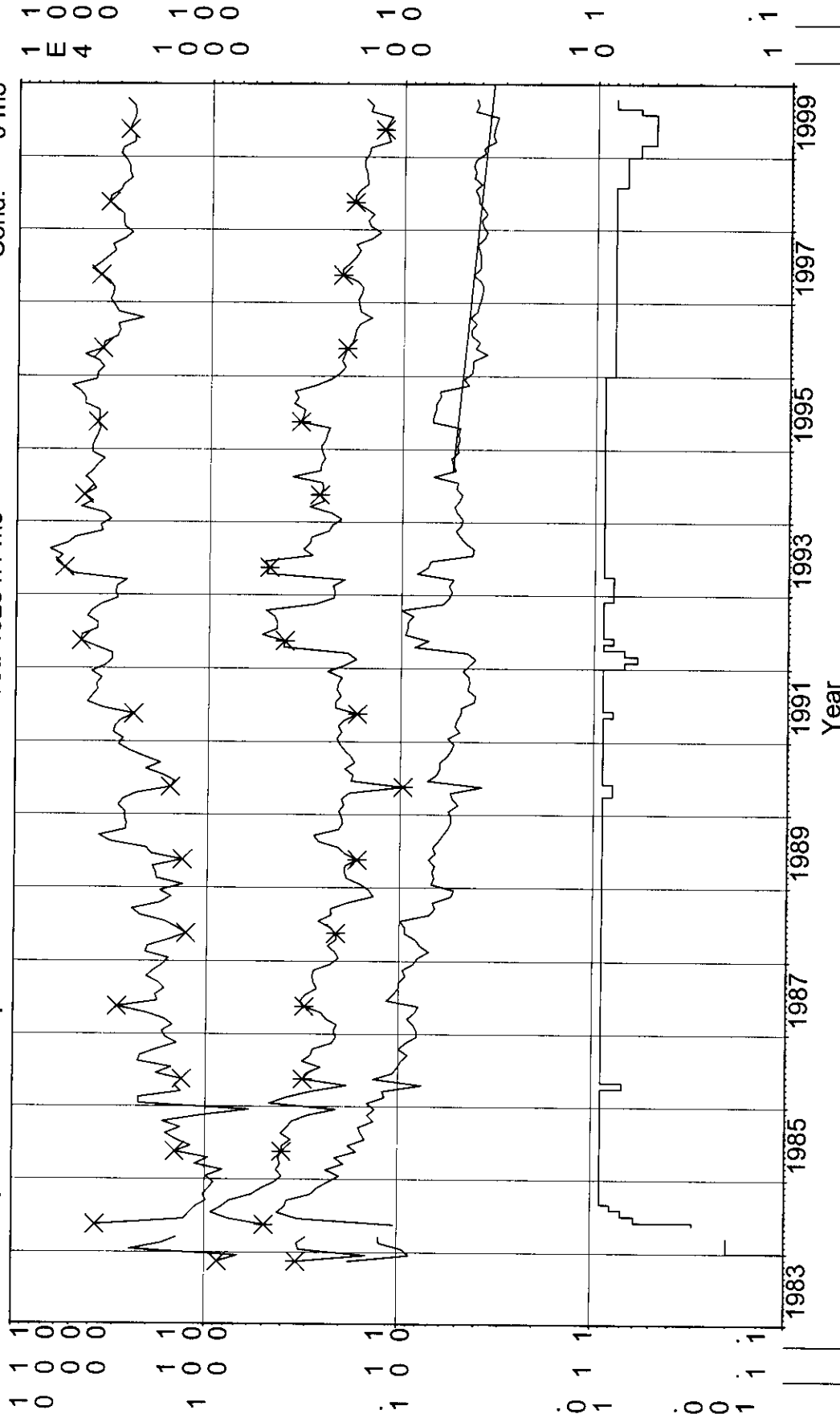
MP

Summary Well Data 11/83-10/99
 Avg Daily Oil FC 1 (Rate-Time)
 qi: 5.54466 m3/d, Sep, 1994
 qf: 1.79382 m3/d, Jul, 2007
 di(Exp): 8.36587 CTD: 41148.6 m3
 Group: Daly Unit #4 WF Expansion RR: 7135.5 m3 Tot: 48284.1 m3

Operator:
 Field:
 Zone:

Production Cums
 Oil: 41148.6 m3
 Gas: 0 E6m3
 Water: 95156 m3
 Cond: 0 m3

Type: Unknown



Avg Daily Oil - m3/d
 Avg Daily Fluid - m3/d
 WOR - m3/m3



Num Wells
 Avg Daily Oil FC 1 - m3/d

Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)

qi: 5.54466 m3/d, Sep, 1994

qf: 1.79382 m3/d, Jul, 2007

di(Exp): 8.36587 CTD: 41148.6 m3

RR: 7135.5 m3 Tot: 48284.1 m3

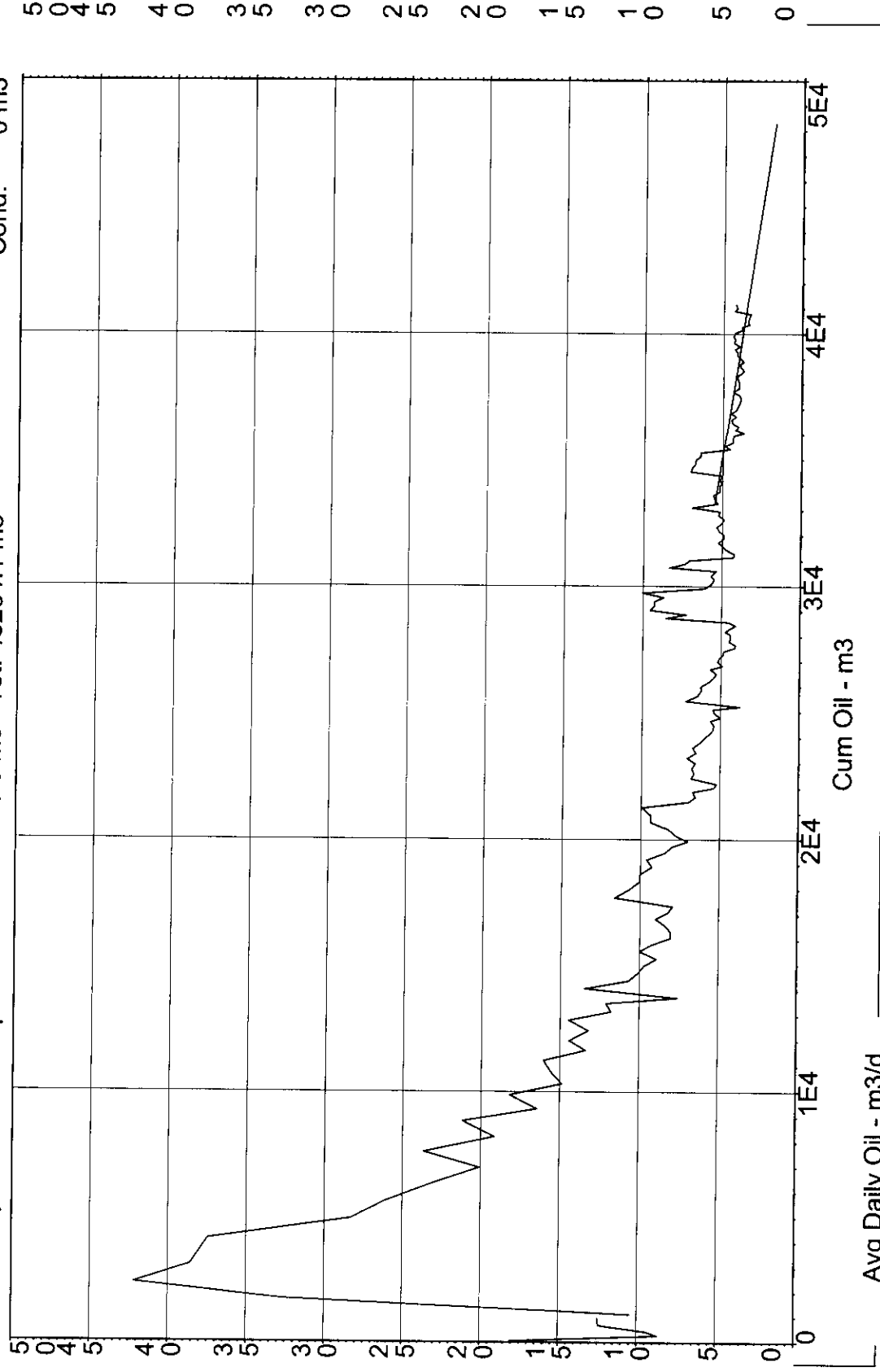
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Avg Daily Oil - m3/d

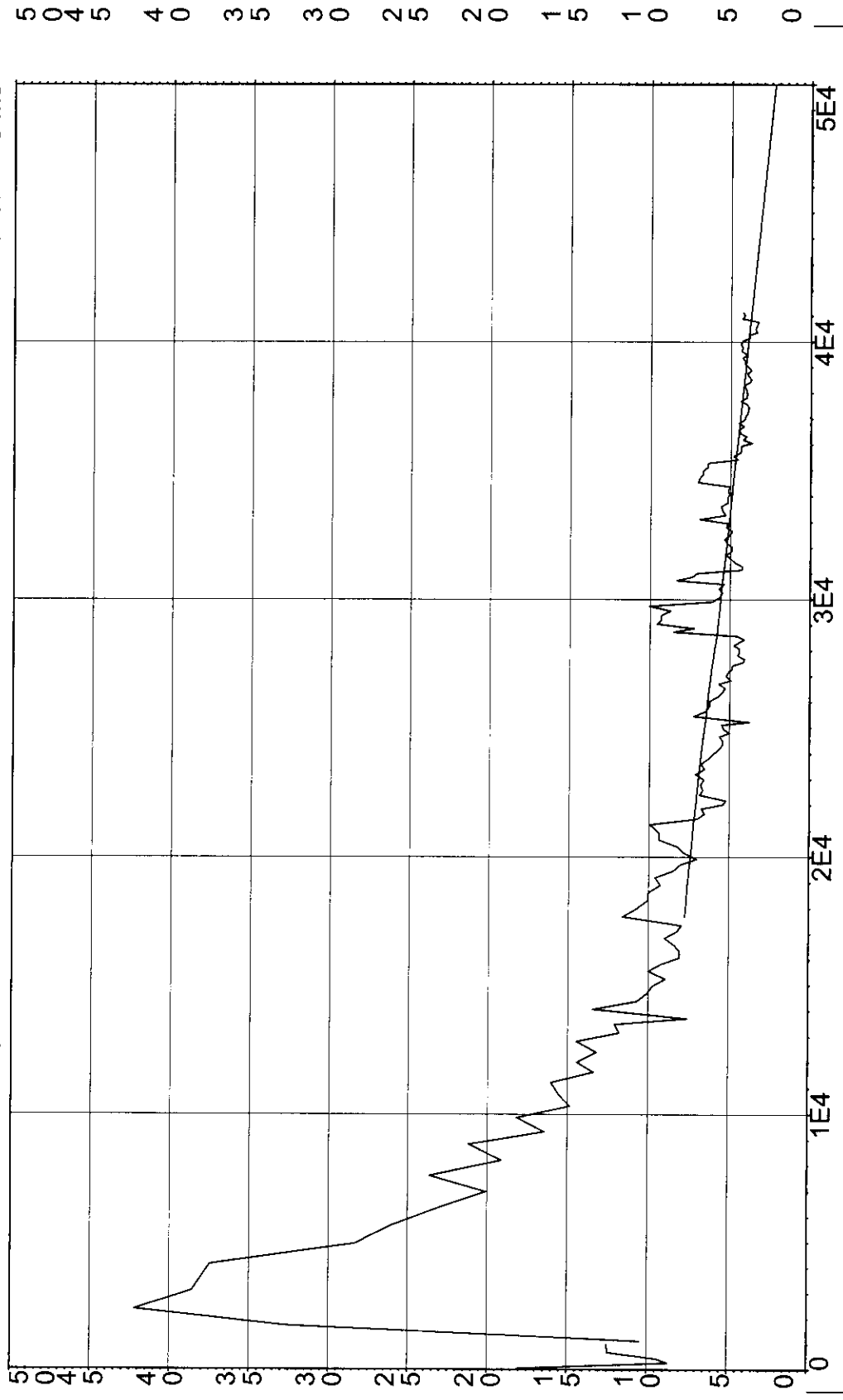
Cum Oil - m3

Avg Daily Oil FC 1 - m3/d

MP

Operator: Summary Well Data 11/83-10/99
 Field: Avg Daily Oil FC 1 (Rate-Time)
 Zone: qi: 7.77914 m3/d, Jun, 1987
 Type: Unknown qf: 1.79819 m3/d, Mar, 2012
 Group: Daly Unit #4 WF Expansion di(Exp): 5.71703 CTD: 41148.6 m3
 RR: 11858 m3 Tot: 53006.6 m3

Production Cums
 Oil: 41148.6 m3
 Gas: 0 E6m3
 Water: 95156 m3
 Cond: 0 m3



Avg Daily Oil - m3/d _____ Cum Oil - m3 _____ Avg Daily Oil FC 1 - m3/d _____



Summary Well Data 11/83-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit #4 WF Expansion

Avg Daily Oil FC 1 (Rate-Time)

qi: 6.5269 m3/d, Feb, 1989

qf: 1.79766 m3/d, Feb, 2016

di(Exp): 4.63985 CTD: 41148.6 m3

RR: 16000.1 m3 Tot: 57148.7 m3

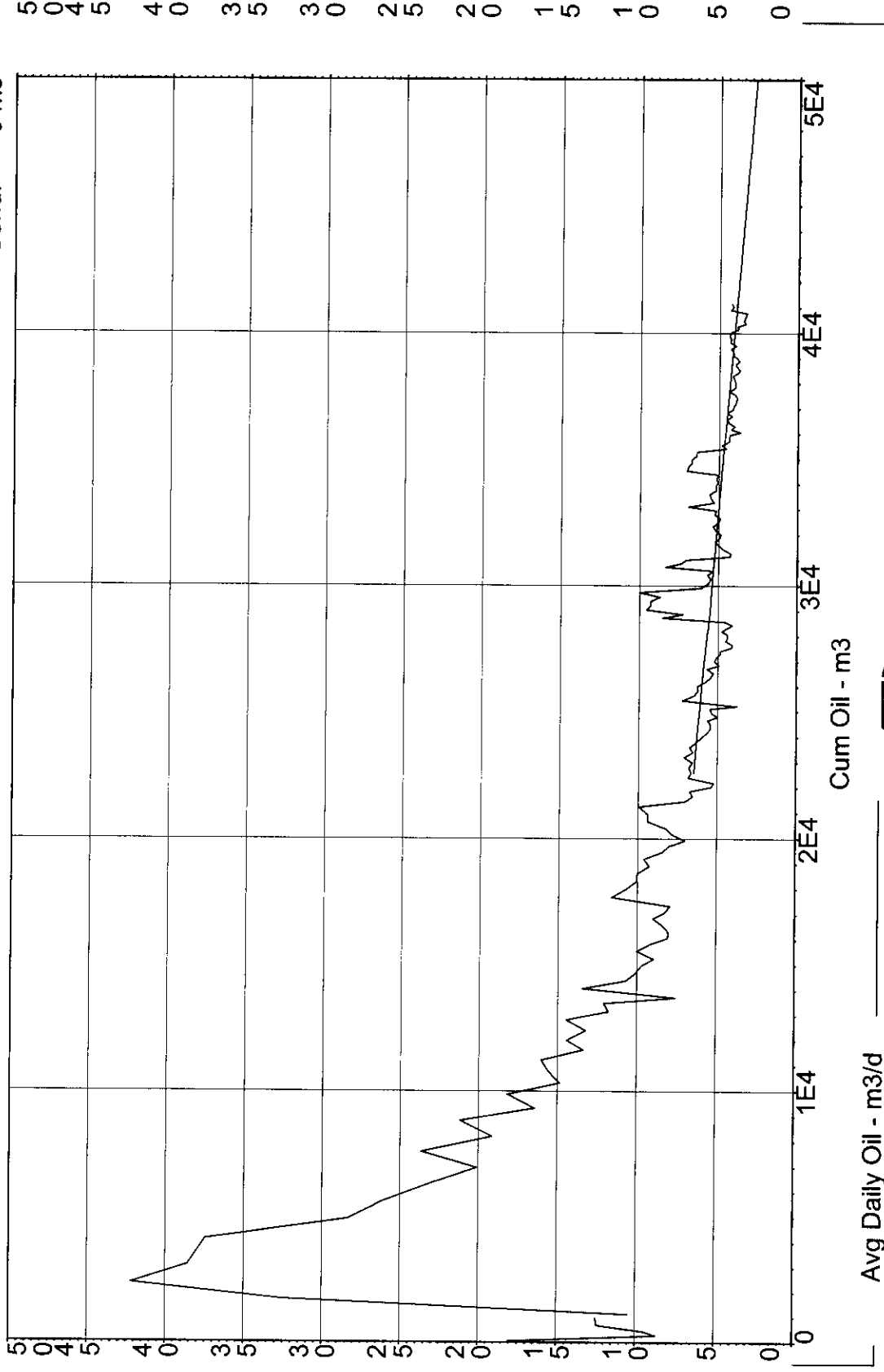
Production Cums

Oil: 41148.6 m3

Gas: 0 E6m3

Water: 95156 m3

Cond: 0 m3



Avg Daily Oil - m3/d

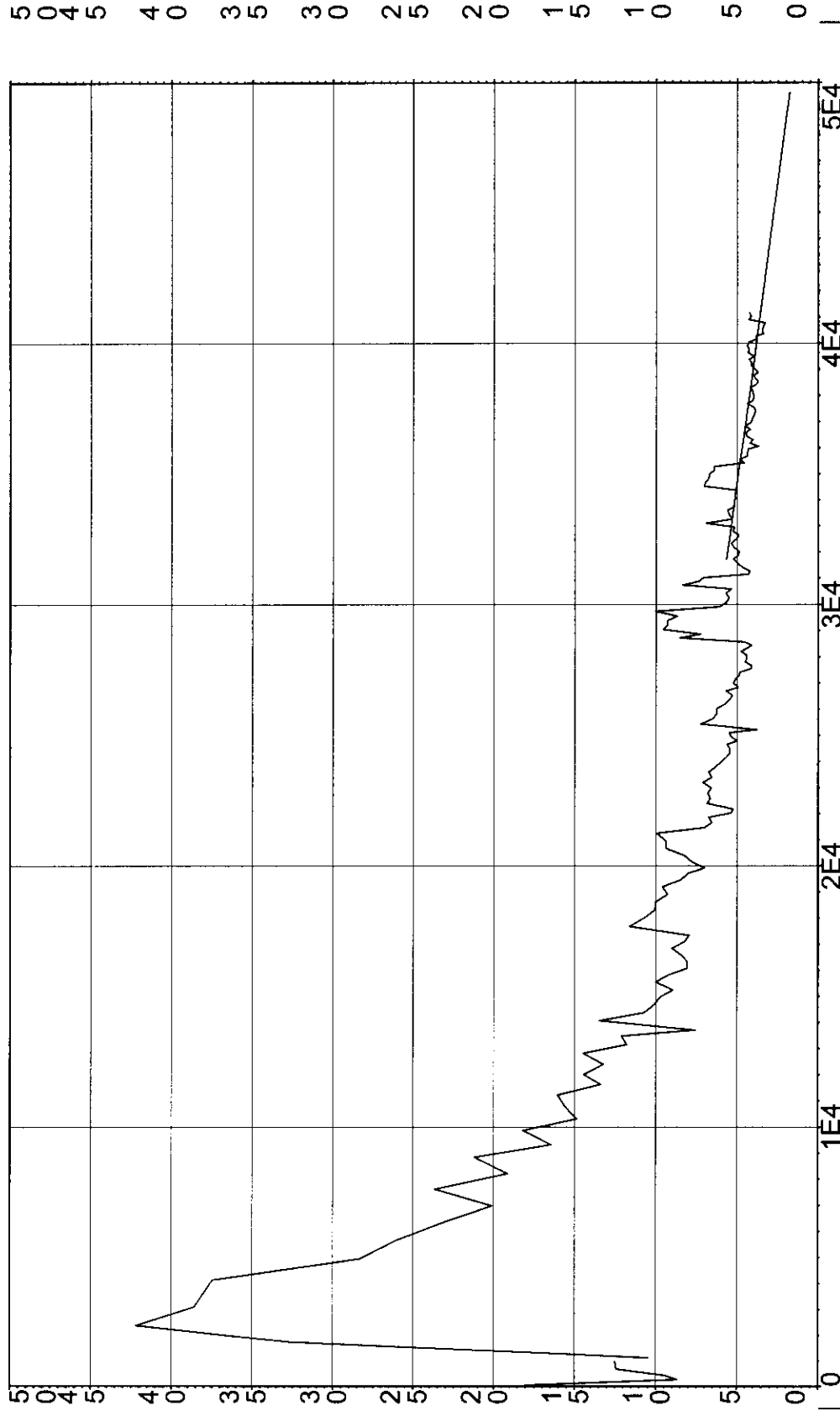
Cum Oil - m3

Avg Daily Oil FC 1 - m3/d

M

Summary Well Data 11/83-10/99
 Avg Daily Oil FC 1 (Rate-Time)
 qi: 5.70752 m3/d, Nov, 1993
 qf: 1.7896 m3/d, Nov, 2008
 di(Exp): 7.38428 CTD: 41148.6 m3
 Group: Daly Unit #4 WF Expansion RR: 8463.24 m3 Tot: 49611.8 m3

Operator:
 Field:
 Zone:
 Type: Unknown
 Production Cums
 Oil: 41148.6 m3
 Gas: 0 E6m3
 Water: 95156 m3
 Cond: 0 m3



Avg Daily Oil - m3/d _____ Avg Daily Oil FC 1 - m3/d _____



Production Report

Group : Daly Unit #4 WF Expansion
 Well : Summary Well
 : 000000280
 Hist.Data : 11/83-10/99
 Operator :
 Field :

Date : August 7, 2005 9:35:01 am
 User : jfox
 On Prod : 02/09
 Status : Unknown
 Zone :

Production Data from November, 1983 to October, 1999

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------------|--------------|-----------|
| Nov., 1983 | 18.05 | 33.5579 | 0.858726 | 1 |
| Dec., 1983 | 8.704 | 14.5918 | 0.676011 | 1 |
| Jan., 1984 | 9.42857 | 32.4841 | 2.44485 | 2 |
| Feb., 1984 | 12.4341 | 33.3177 | 1.67909 | 2 |
| Mar., 1984 | 12.4979 | 30.0395 | 1.40313 | 2 |
| Apr., 1984 | | | | |
| May., 1984 | 10.4581 | 49.2186 | 3.7058 | 3 |
| Jun., 1984 | 32.6571 | 74.7519 | 1.28855 | 6 |
| Jul., 1984 | 42.2033 | 93.0874 | 1.20525 | 7 |
| Aug., 1984 | 38.5933 | 81.7834 | 1.11867 | 8 |
| Sep., 1984 | 37.4703 | 74.4237 | 0.985767 | 9 |
| Oct., 1984 | 28.3117 | 57.2939 | 1.02324 | 9 |
| Nov., 1984 | 26.0949 | 51.0068 | 0.954228 | 9 |
| Dec., 1984 | 23.0381 | 43.8806 | 0.90426 | 9 |
| Jan., 1985 | 20.1 | 40.0067 | 0.989942 | 9 |
| Feb., 1985 | 23.655 | 42.8317 | 0.810241 | 9 |
| Mar., 1985 | 19.1323 | 40.7633 | 1.13016 | 9 |
| Apr., 1985 | 21.1933 | 41.7068 | 0.967486 | 9 |
| May., 1985 | 16.4461 | 40.0657 | 1.43575 | 9 |
| Jun., 1985 | 18.1983 | 39.8299 | 1.18822 | 9 |
| Jul., 1985 | 14.8668 | 36.033 | 1.42329 | 9 |
| Aug., 1985 | 15.5602 | 40.651 | 1.61206 | 9 |
| Sep., 1985 | 16.0483 | 37.7174 | 1.34981 | 9 |
| Oct., 1985 | 13.3874 | 35.6738 | 1.66429 | 9 |
| Nov., 1985 | 14.4269 | 29.4756 | 1.04266 | 9 |
| Dec., 1985 | 13.2272 | 21.0789 | 0.593164 | 9 |
| Jan., 1986 | 14.4784 | 46.6359 | 2.22063 | 9 |
| Feb., 1986 | 11.7955 | 38.0931 | 2.22901 | 9 |
| Mar., 1986 | 12.1058 | 28.3895 | 1.34468 | 9 |
| Apr., 1986 | 7.56 | 18.51 | 1.44797 | 7 |
| May., 1986 | 13.4625 | 31.4159 | 1.33315 | 9 |
| Jun., 1986 | 10.7106 | 30.1526 | 1.81477 | 9 |
| Jul., 1986 | 10.1119 | 25.4006 | 1.51151 | 9 |
| Aug., 1986 | 9.72442 | 31.6889 | 2.25825 | 9 |
| Sep., 1986 | 8.95 | 28.6306 | 2.19851 | 9 |
| Oct., 1986 | 10.0161 | 27.9463 | 1.78969 | 9 |
| Nov., 1986 | 9.18667 | 22.234 | 1.41981 | 9 |
| Dec., 1986 | 8.07097 | 21.2003 | 1.6263 | 9 |
| Jan., 1987 | 8.07094 | 21.7738 | 1.69736 | 9 |
| Feb., 1987 | 8.4 | 20.9947 | 1.49893 | 9 |
| Mar., 1987 | 9.0129 | 23.8846 | 1.64961 | 9 |
| Apr., 1987 | 8.24667 | 25.3836 | 2.07761 | 9 |
| May., 1987 | 7.94348 | 31.0502 | 2.90846 | 9 |
| Jun., 1987 | 11.6168 | 32.5194 | 1.7989 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : August 7, 2005 9:35:01 am
User : jfox

Production Data from November, 1983 to October, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------------|--------------|-----------|
| Jul., 1987 | 10.7122 | 30.4795 | 1.84487 | 9 |
| Aug., 1987 | 10.0632 | 26.7445 | 1.65723 | 9 |
| Sep., 1987 | 10.0233 | 27.8444 | 1.77752 | 9 |
| Oct., 1987 | 9.27419 | 28.2944 | 2.05043 | 9 |
| Nov., 1987 | 9.61333 | 27.7842 | 1.88974 | 9 |
| Dec., 1987 | 8.45807 | 22.7682 | 1.69146 | 9 |
| Jan., 1988 | 8.02258 | 20.6842 | 1.5778 | 9 |
| Feb., 1988 | 7.01724 | 21.6341 | 2.08256 | 9 |
| Mar., 1988 | 7.80333 | 23.6168 | 2.02606 | 9 |
| Apr., 1988 | 8.25 | 21.3003 | 1.58141 | 9 |
| May., 1988 | 9.37765 | 21.4241 | 1.28416 | 9 |
| Jun., 1988 | 9.39263 | 22.9061 | 1.43829 | 9 |
| Jul., 1988 | 9.94516 | 26.4592 | 1.66007 | 9 |
| Aug., 1988 | 7.00645 | 22.687 | 2.23757 | 9 |
| Sep., 1988 | 6.57071 | 22.7276 | 2.45848 | 9 |
| Oct., 1988 | 6.75172 | 18.6133 | 1.75638 | 9 |
| Nov., 1988 | 5.41 | 13.739 | 1.53913 | 9 |
| Dec., 1988 | 5.24211 | 14.4721 | 1.7603 | 9 |
| Jan., 1989 | 6.86452 | 16.0579 | 1.33882 | 9 |
| Feb., 1989 | 6.67143 | 18.9422 | 1.83887 | 9 |
| Mar., 1989 | 6.8129 | 19.4901 | 1.86032 | 9 |
| Apr., 1989 | 6.60333 | 19.3429 | 1.92882 | 9 |
| May., 1989 | 7.11136 | 16.7077 | 1.34899 | 9 |
| Jun., 1989 | 6.56292 | 19.4355 | 1.96097 | 9 |
| Jul., 1989 | 6.76599 | 20.884 | 2.08617 | 9 |
| Aug., 1989 | 6.33871 | 26.6125 | 3.19796 | 9 |
| Sep., 1989 | 6.02667 | 28.0893 | 3.6604 | 9 |
| Oct., 1989 | 5.70364 | 20.9547 | 2.67348 | 9 |
| Nov., 1989 | 5.47333 | 19.9557 | 2.64555 | 9 |
| Dec., 1989 | 5.45806 | 20.2314 | 2.70627 | 9 |
| Jan., 1990 | 5.63239 | 20.8575 | 2.7027 | 9 |
| Feb., 1990 | 5.02857 | 19.7129 | 2.91974 | 9 |
| Mar., 1990 | 5.38435 | 20.2632 | 2.76292 | 9 |
| Apr., 1990 | 5.50427 | 18.5255 | 2.36522 | 8 |
| May., 1990 | 3.77796 | 9.70615 | 1.56871 | 8 |
| Jun., 1990 | 7.24686 | 18.0919 | 1.49607 | 9 |
| Jul., 1990 | 6.5 | 17.6287 | 1.71166 | 9 |
| Aug., 1990 | 6.26992 | 19.4597 | 2.10322 | 9 |
| Sep., 1990 | 6.28667 | 17.3794 | 1.76405 | 9 |
| Oct., 1990 | 5.77166 | 18.0916 | 2.13412 | 9 |
| Nov., 1990 | 5.48619 | 19.5572 | 2.56437 | 9 |
| Dec., 1990 | 5.3 | 20.7572 | 2.91601 | 9 |
| Jan., 1991 | 5.70323 | 21.4896 | 2.76753 | 9 |
| Feb., 1991 | 4.94634 | 20.3327 | 3.11021 | 9 |
| Mar., 1991 | 5.23365 | 21.1653 | 3.04364 | 9 |
| Apr., 1991 | 5.12295 | 19.7394 | 2.85269 | 9 |
| May., 1991 | 4.89498 | 16.8716 | 2.44627 | 8 |
| Jun., 1991 | 4.85488 | 21.946 | 3.51997 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : August 7, 2005 9:35:02 am
User : jfox

Production Data from November, 1983 to October, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------------|--------------|-----------|
| Jul., 1991 | 4.16774 | 21.8986 | 4.25387 | 9 |
| Aug., 1991 | 4.10312 | 20.5752 | 4.01408 | 9 |
| Sep., 1991 | 4.51667 | 21.5353 | 3.76753 | 9 |
| Oct., 1991 | 4.42105 | 21.2651 | 3.80952 | 9 |
| Nov., 1991 | 4.43333 | 20.3286 | 3.58496 | 9 |
| Dec., 1991 | 4.77681 | 24.1219 | 4.04935 | 9 |
| Jan., 1992 | 4.43549 | 19.765 | 3.45566 | 7 |
| Feb., 1992 | 4.12414 | 17.1949 | 3.1689 | 6 |
| Mar., 1992 | 4.56314 | 19.0348 | 3.17099 | 7 |
| Apr., 1992 | 8.54182 | 40.9619 | 3.79502 | 9 |
| May., 1992 | 7.24557 | 40.4943 | 4.5884 | 8 |
| Jun., 1992 | 9.56111 | 53.2264 | 4.56653 | 9 |
| Jul., 1992 | 9.29258 | 44.5362 | 3.79222 | 9 |
| Aug., 1992 | 9.296 | 44.3561 | 3.77108 | 9 |
| Sep., 1992 | 8.71579 | 45.8839 | 4.26402 | 9 |
| Oct., 1992 | 10.0422 | 50.7064 | 4.04887 | 9 |
| Nov., 1992 | 6.10879 | 28.2035 | 3.61644 | 9 |
| Dec., 1992 | 5.67805 | 22.6301 | 2.98511 | 8 |
| Jan., 1993 | 5.5 | 22.3476 | 3.06276 | 8 |
| Feb., 1993 | 5.70357 | 22.8525 | 3.00626 | 8 |
| Mar., 1993 | 5.3871 | 19.8346 | 2.68144 | 8 |
| Apr., 1993 | 8.36682 | 50.7078 | 5.06015 | 9 |
| May., 1993 | 7.35721 | 48.8836 | 5.64387 | 9 |
| Jun., 1993 | 7.10727 | 51.5649 | 6.2548 | 9 |
| Jul., 1993 | 4.30968 | 29.2567 | 5.78817 | 9 |
| Aug., 1993 | 4.24239 | 32.7801 | 6.72636 | 9 |
| Sep., 1993 | 4.69168 | 30.2136 | 5.43939 | 9 |
| Oct., 1993 | 4.99032 | 29.8054 | 4.9722 | 9 |
| Nov., 1993 | 5.26 | 24.1923 | 3.59886 | 9 |
| Dec., 1993 | 4.93548 | 23.0893 | 3.67778 | 9 |
| Jan., 1994 | 4.88387 | 20.7989 | 3.25826 | 9 |
| Feb., 1994 | 5.20721 | 23.4545 | 3.50381 | 9 |
| Mar., 1994 | 5.37908 | 30.4158 | 4.65401 | 9 |
| Apr., 1994 | 5.07667 | 25.6756 | 4.05712 | 9 |
| May., 1994 | 4.9129 | 27.0022 | 4.49573 | 9 |
| Jun., 1994 | 5.26364 | 25.85 | 3.91062 | 9 |
| Jul., 1994 | 5.17407 | 26.2997 | 4.08253 | 9 |
| Aug., 1994 | 6.93234 | 37.6402 | 4.42921 | 9 |
| Sep., 1994 | 5.31548 | 26.8442 | 4.04975 | 9 |
| Oct., 1994 | 5.49699 | 26.5734 | 3.83373 | 9 |
| Nov., 1994 | 5.61 | 25.4358 | 3.53357 | 9 |
| Dec., 1994 | 5.16848 | 26.2718 | 4.08265 | 9 |
| Jan., 1995 | 5.22581 | 26.6894 | 4.10679 | 9 |
| Feb., 1995 | 5.09909 | 25.37 | 3.97496 | 9 |
| Mar., 1995 | 5.1498 | 24.8703 | 3.82893 | 9 |
| Apr., 1995 | 5.07448 | 24.0257 | 3.73417 | 9 |
| May., 1995 | 7.04348 | 34.1422 | 3.84691 | 9 |
| Jun., 1995 | 6.96135 | 33.1123 | 3.75615 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : August 7, 2005 9:35:02 am
User : jfox

Production Data from November, 1983 to October, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | WOR m3/m3 | Num Wells |
|------------|-----------------------|-------------------------|--------------|-----------|
| Jul., 1995 | 6.75909 | 32.4393 | 3.79892 | 9 |
| Aug., 1995 | 6.74118 | 36.978 | 4.48495 | 9 |
| Sep., 1995 | 6.43019 | 35.1742 | 4.46972 | 9 |
| Oct., 1995 | 6.44165 | 36.8517 | 4.7204 | 9 |
| Nov., 1995 | 4.56544 | 28.5267 | 5.24795 | 9 |
| Dec., 1995 | 4.85341 | 23.8383 | 3.91123 | 9 |
| Jan., 1996 | 4.4129 | 21.4697 | 3.86477 | 8 |
| Feb., 1996 | 4.36897 | 20.0571 | 3.59037 | 8 |
| Mar., 1996 | 4.35628 | 20.9347 | 3.8052 | 8 |
| Apr., 1996 | 3.69231 | 20.3274 | 4.5049 | 8 |
| May., 1996 | 4.23871 | 19.6793 | 3.64231 | 8 |
| Jun., 1996 | 4.03419 | 18.5112 | 3.58814 | 8 |
| Jul., 1996 | 4.42903 | 18.0213 | 3.06846 | 8 |
| Aug., 1996 | 4.48387 | 17.8246 | 2.97482 | 8 |
| Sep., 1996 | 4.20085 | 16.9789 | 3.04133 | 8 |
| Oct., 1996 | 4.52581 | 14.702 | 2.24804 | 8 |
| Nov., 1996 | 4.16949 | 16.8357 | 3.0374 | 8 |
| Dec., 1996 | 4.10508 | 17.1171 | 3.16928 | 8 |
| Jan., 1997 | 3.99004 | 17.303 | 3.33611 | 8 |
| Feb., 1997 | 3.93543 | 16.6367 | 3.22698 | 8 |
| Mar., 1997 | 3.88387 | 16.3791 | 3.21678 | 8 |
| Apr., 1997 | 4.01667 | 17.6451 | 3.39253 | 8 |
| May., 1997 | 4.39355 | 20.9019 | 3.75698 | 8 |
| Jun., 1997 | 4.04333 | 20.8584 | 4.15829 | 8 |
| Jul., 1997 | 4.0129 | 19.1211 | 3.76447 | 8 |
| Aug., 1997 | 4.02276 | 17.8684 | 3.44139 | 8 |
| Sep., 1997 | 4.08111 | 16.9456 | 3.15176 | 8 |
| Oct., 1997 | 4.18138 | 17.8156 | 3.26026 | 8 |
| Nov., 1997 | 3.85882 | 14.8084 | 2.83711 | 8 |
| Dec., 1997 | 3.71935 | 13.3081 | 2.57762 | 8 |
| Jan., 1998 | 3.90645 | 15.0082 | 2.84145 | 8 |
| Feb., 1998 | 3.99643 | 15.5196 | 2.88293 | 8 |
| Mar., 1998 | 3.74089 | 14.4632 | 2.8658 | 8 |
| Apr., 1998 | 3.91297 | 16.1189 | 3.11891 | 8 |
| May., 1998 | 4.13388 | 18.1667 | 3.39416 | 8 |
| Jun., 1998 | 4.14237 | 18.0934 | 3.36743 | 8 |
| Jul., 1998 | 4.29594 | 17.1108 | 2.98259 | 8 |
| Aug., 1998 | 3.99892 | 15.5174 | 2.87997 | 7 |
| Sep., 1998 | 4.36425 | 15.7326 | 2.60445 | 7 |
| Oct., 1998 | 4.29355 | 15.8019 | 2.67994 | 7 |
| Nov., 1998 | 4.41333 | 16.2419 | 2.67976 | 7 |
| Dec., 1998 | 4.28387 | 16.189 | 2.77861 | 7 |
| Jan., 1999 | 3.86129 | 15.3598 | 2.97744 | 6 |
| Feb., 1999 | 3.88024 | 15.1454 | 2.90278 | 6 |
| Mar., 1999 | 3.4 | 11.9821 | 2.52372 | 5 |
| Apr., 1999 | 3.48667 | 12.2482 | 2.51243 | 5 |
| May., 1999 | 3.44899 | 12.7192 | 2.68738 | 5 |
| Jun., 1999 | 3.37667 | 12.2348 | 2.6229 | 5 |

Production Report

Group : Daly Unit #4 WF Expansion
 Well : Summary Well
 : 000000280
 Hist.Data : 11/83-10/99
 Operator :
 Field :

Date : August 7, 2005 9:34:41 am
 User : jfox
 On Prod : 02/09
 Status : Unknown
 Zone :

Production Data from November, 1983 to October, 1999

| Year | Monthly Oil m3 | Avg Daily Oil m3/d | Cum Oil m3 | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-------------------|-----------------------|---------------|---------------------|--------------|-----------|
| Nov., 1983 | 36.1 | 18.05 | 36.1 | 31 | 0.858726 | 1 |
| Dec., 1983 | 217.6 | 8.704 | 253.7 | 147.1 | 0.676011 | 1 |
| Jan., 1984 | 165 | 9.42857 | 418.7 | 403.4 | 2.44485 | 2 |
| Feb., 1984 | 254.9 | 12.4341 | 673.6 | 428 | 1.67909 | 2 |
| Mar., 1984 | 293.7 | 12.4979 | 967.3 | 412.1 | 1.40313 | 2 |
| Apr., 1984 | | | | | | |
| May., 1984 | 149.9 | 10.4581 | 1117.2 | 555.5 | 3.7058 | 3 |
| Jun., 1984 | 609.6 | 32.6571 | 1726.8 | 785.5 | 1.28855 | 6 |
| Jul., 1984 | 643.6 | 42.2033 | 2370.4 | 775.7 | 1.20525 | 7 |
| Aug., 1984 | 718.8 | 38.5933 | 3089.2 | 804.1 | 1.11867 | 8 |
| Sep., 1984 | 1039.8 | 37.4703 | 4129 | 1025 | 0.985767 | 9 |
| Oct., 1984 | 817.5 | 28.3117 | 4946.5 | 836.5 | 1.02324 | 9 |
| Nov., 1984 | 701.3 | 26.0949 | 5647.8 | 669.2 | 0.954228 | 9 |
| Dec., 1984 | 711.3 | 23.0381 | 6359.1 | 643.2 | 0.90426 | 9 |
| Jan., 1985 | 616.4 | 20.1 | 6975.5 | 610.2 | 0.989942 | 9 |
| Feb., 1985 | 630.8 | 23.655 | 7606.3 | 511.1 | 0.810241 | 9 |
| Mar., 1985 | 593.1 | 19.1323 | 8199.4 | 670.3 | 1.13016 | 9 |
| Apr., 1985 | 630.5 | 21.1933 | 8829.9 | 610 | 0.967486 | 9 |
| May., 1985 | 487.9 | 16.4461 | 9317.8 | 700.5 | 1.43575 | 9 |
| Jun., 1985 | 541.4 | 18.1983 | 9859.2 | 643.3 | 1.18822 | 9 |
| Jul., 1985 | 449.1 | 14.8668 | 10308.3 | 639.2 | 1.42329 | 9 |
| Aug., 1985 | 449.3 | 15.5602 | 10757.6 | 724.3 | 1.61206 | 9 |
| Sep., 1985 | 465.4 | 16.0483 | 11223 | 628.2 | 1.34981 | 9 |
| Oct., 1985 | 407.2 | 13.3874 | 11630.2 | 677.7 | 1.66429 | 9 |
| Nov., 1985 | 375.1 | 14.4269 | 12005.3 | 391.1 | 1.04266 | 9 |
| Dec., 1985 | 389.1 | 13.2272 | 12394.4 | 230.8 | 0.593164 | 9 |
| Jan., 1986 | 424.7 | 14.4784 | 12819.1 | 943.1 | 2.22063 | 9 |
| Feb., 1986 | 328.8 | 11.7955 | 13147.9 | 732.9 | 2.22901 | 9 |
| Mar., 1986 | 331.9 | 12.1058 | 13479.8 | 446.3 | 1.34468 | 9 |
| Apr., 1986 | 226.8 | 7.56 | 13706.6 | 328.4 | 1.44797 | 7 |
| May., 1986 | 359 | 13.4625 | 14065.6 | 478.6 | 1.33315 | 9 |
| Jun., 1986 | 311.5 | 10.7106 | 14377.1 | 565.3 | 1.81477 | 9 |
| Jul., 1986 | 304.2 | 10.1119 | 14681.3 | 459.8 | 1.51151 | 9 |
| Aug., 1986 | 297 | 9.72442 | 14978.3 | 670.7 | 2.25825 | 9 |
| Sep., 1986 | 268.5 | 8.95 | 15246.8 | 590.3 | 2.19851 | 9 |
| Oct., 1986 | 310.5 | 10.0161 | 15557.3 | 555.7 | 1.78969 | 9 |
| Nov., 1986 | 275.6 | 9.18667 | 15832.9 | 391.3 | 1.41981 | 9 |
| Dec., 1986 | 250.2 | 8.07097 | 16083.1 | 406.9 | 1.6263 | 9 |
| Jan., 1987 | 246.5 | 8.07094 | 16329.6 | 418.4 | 1.69736 | 9 |
| Feb., 1987 | 233.1 | 8.4 | 16562.7 | 349.4 | 1.49893 | 9 |
| Mar., 1987 | 279.4 | 9.0129 | 16842.1 | 460.9 | 1.64961 | 9 |
| Apr., 1987 | 247.4 | 8.24667 | 17089.5 | 514 | 2.07761 | 9 |
| May., 1987 | 243.6 | 7.94348 | 17333.1 | 708.5 | 2.90846 | 9 |
| Jun., 1987 | 345.6 | 11.6168 | 17678.7 | 621.7 | 1.7989 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : August 7, 2005 9:34:41 am
User : jfox

Production Data from November, 1983 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Avg Daily Oil m3/d | Cum Oil m3 | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-------------------|-----------------------|---------------|---------------------|--------------|-----------|
| Jul., 1987 | 329.4 | 10.7122 | 18008.1 | 607.7 | 1.84487 | 9 |
| Aug., 1987 | 310.7 | 10.0632 | 18318.8 | 514.9 | 1.65723 | 9 |
| Sep., 1987 | 300.7 | 10.0233 | 18619.5 | 534.5 | 1.77752 | 9 |
| Oct., 1987 | 287.5 | 9.27419 | 18907 | 589.5 | 2.05043 | 9 |
| Nov., 1987 | 288.4 | 9.61333 | 19195.4 | 545 | 1.88974 | 9 |
| Dec., 1987 | 262.2 | 8.45807 | 19457.6 | 443.5 | 1.69146 | 9 |
| Jan., 1988 | 248.7 | 8.02258 | 19706.3 | 392.4 | 1.5778 | 9 |
| Feb., 1988 | 203.5 | 7.01724 | 19909.8 | 423.8 | 2.08256 | 9 |
| Mar., 1988 | 234.1 | 7.80333 | 20143.9 | 474.3 | 2.02606 | 9 |
| Apr., 1988 | 247.5 | 8.25 | 20391.4 | 391.4 | 1.58141 | 9 |
| May., 1988 | 265.7 | 9.37765 | 20657.1 | 341.2 | 1.28416 | 9 |
| Jun., 1988 | 276.3 | 9.39263 | 20933.4 | 397.4 | 1.43829 | 9 |
| Jul., 1988 | 308.3 | 9.94516 | 21241.7 | 511.8 | 1.66007 | 9 |
| Aug., 1988 | 217.2 | 7.00645 | 21458.9 | 486 | 2.23757 | 9 |
| Sep., 1988 | 196.3 | 6.57071 | 21655.2 | 482.6 | 2.45848 | 9 |
| Oct., 1988 | 195.8 | 6.75172 | 21851 | 343.9 | 1.75638 | 9 |
| Nov., 1988 | 162.3 | 5.41 | 22013.3 | 249.8 | 1.53913 | 9 |
| Dec., 1988 | 157.7 | 5.24211 | 22171 | 277.6 | 1.7603 | 9 |
| Jan., 1989 | 212.8 | 6.86452 | 22383.8 | 284.9 | 1.33882 | 9 |
| Feb., 1989 | 186.8 | 6.67143 | 22570.6 | 343.5 | 1.83887 | 9 |
| Mar., 1989 | 211.2 | 6.8129 | 22781.8 | 392.9 | 1.86032 | 9 |
| Apr., 1989 | 198.1 | 6.60333 | 22979.9 | 382.1 | 1.92882 | 9 |
| May., 1989 | 208.6 | 7.11136 | 23188.5 | 281.4 | 1.34899 | 9 |
| Jun., 1989 | 194.7 | 6.56292 | 23383.2 | 381.8 | 1.96097 | 9 |
| Jul., 1989 | 208.9 | 6.76599 | 23592.1 | 435.8 | 2.08617 | 9 |
| Aug., 1989 | 196.5 | 6.33871 | 23788.6 | 628.4 | 3.19796 | 9 |
| Sep., 1989 | 180.8 | 6.02667 | 23969.4 | 661.8 | 3.6604 | 9 |
| Oct., 1989 | 176.1 | 5.70364 | 24145.5 | 470.8 | 2.67348 | 9 |
| Nov., 1989 | 164.2 | 5.47333 | 24309.7 | 434.4 | 2.64555 | 9 |
| Dec., 1989 | 169.2 | 5.45806 | 24478.9 | 457.9 | 2.70627 | 9 |
| Jan., 1990 | 173.9 | 5.63239 | 24652.8 | 470 | 2.7027 | 9 |
| Feb., 1990 | 140.8 | 5.02857 | 24793.6 | 411.1 | 2.91974 | 9 |
| Mar., 1990 | 154.8 | 5.38435 | 24948.4 | 427.7 | 2.76292 | 9 |
| Apr., 1990 | 161 | 5.50427 | 25109.4 | 380.8 | 2.36522 | 8 |
| May., 1990 | 115.7 | 3.77796 | 25225.1 | 181.5 | 1.56871 | 8 |
| Jun., 1990 | 216.5 | 7.24686 | 25441.6 | 323.9 | 1.49607 | 9 |
| Jul., 1990 | 201.5 | 6.5 | 25643.1 | 344.9 | 1.71166 | 9 |
| Aug., 1990 | 192.8 | 6.26992 | 25835.9 | 405.5 | 2.10322 | 9 |
| Sep., 1990 | 188.6 | 6.28667 | 26024.5 | 332.7 | 1.76405 | 9 |
| Oct., 1990 | 178.2 | 5.77166 | 26202.7 | 380.3 | 2.13412 | 9 |
| Nov., 1990 | 163.9 | 5.48619 | 26366.6 | 420.3 | 2.56437 | 9 |
| Dec., 1990 | 164.3 | 5.3 | 26530.9 | 479.1 | 2.91601 | 9 |
| Jan., 1991 | 176.8 | 5.70323 | 26707.7 | 489.3 | 2.76753 | 9 |
| Feb., 1991 | 135.2 | 4.94634 | 26842.9 | 420.5 | 3.11021 | 9 |
| Mar., 1991 | 158.1 | 5.23365 | 27001 | 481.2 | 3.04364 | 9 |
| Apr., 1991 | 150.7 | 5.12295 | 27151.7 | 429.9 | 2.85269 | 9 |
| May., 1991 | 134 | 4.89498 | 27285.7 | 327.8 | 2.44627 | 8 |
| Jun., 1991 | 132.7 | 4.85488 | 27418.4 | 467.1 | 3.51997 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : August 7, 2005 9:34:41 am
User : jfox

Production Data from November, 1983 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Avg Daily Oil m3/d | Cum Oil m3 | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-------------------|-----------------------|---------------|---------------------|--------------|-----------|
| Jul., 1991 | 129.2 | 4.16774 | 27547.6 | 549.6 | 4.25387 | 9 |
| Aug., 1991 | 120.7 | 4.10312 | 27668.3 | 484.5 | 4.01408 | 9 |
| Sep., 1991 | 135.5 | 4.51667 | 27803.8 | 510.5 | 3.76753 | 9 |
| Oct., 1991 | 136.5 | 4.42105 | 27940.3 | 520 | 3.80952 | 9 |
| Nov., 1991 | 133 | 4.43333 | 28073.3 | 476.8 | 3.58496 | 9 |
| Dec., 1991 | 123.6 | 4.77681 | 28196.9 | 500.5 | 4.04935 | 9 |
| Jan., 1992 | 122.9 | 4.43549 | 28319.8 | 424.7 | 3.45566 | 7 |
| Feb., 1992 | 119.6 | 4.12414 | 28439.4 | 379 | 3.1689 | 6 |
| Mar., 1992 | 131 | 4.56314 | 28570.4 | 415.4 | 3.17099 | 7 |
| Apr., 1992 | 156.6 | 8.54182 | 28727 | 594.3 | 3.79502 | 9 |
| May., 1992 | 143.1 | 7.24557 | 28870.1 | 656.6 | 4.5884 | 8 |
| Jun., 1992 | 172.1 | 9.56111 | 29042.2 | 785.9 | 4.56653 | 9 |
| Jul., 1992 | 172.3 | 9.29258 | 29214.5 | 653.4 | 3.79222 | 9 |
| Aug., 1992 | 174.3 | 9.296 | 29388.8 | 657.3 | 3.77108 | 9 |
| Sep., 1992 | 158.7 | 8.71579 | 29547.5 | 676.7 | 4.26402 | 9 |
| Oct., 1992 | 186.2 | 10.0422 | 29733.7 | 753.9 | 4.04887 | 9 |
| Nov., 1992 | 182.5 | 6.10879 | 29916.2 | 660 | 3.61644 | 9 |
| Dec., 1992 | 174.6 | 5.67805 | 30090.8 | 521.2 | 2.98511 | 8 |
| Jan., 1993 | 170.5 | 5.5 | 30261.3 | 522.2 | 3.06276 | 8 |
| Feb., 1993 | 159.7 | 5.70357 | 30421 | 480.1 | 3.00626 | 8 |
| Mar., 1993 | 167 | 5.3871 | 30588 | 447.8 | 2.68144 | 8 |
| Apr., 1993 | 151.3 | 8.36682 | 30739.3 | 765.6 | 5.06015 | 9 |
| May., 1993 | 140.4 | 7.35721 | 30879.7 | 792.4 | 5.64387 | 9 |
| Jun., 1993 | 130.3 | 7.10727 | 31010 | 815 | 6.2548 | 9 |
| Jul., 1993 | 133.6 | 4.30968 | 31143.6 | 773.3 | 5.78817 | 9 |
| Aug., 1993 | 130.1 | 4.24239 | 31273.7 | 875.1 | 6.72636 | 9 |
| Sep., 1993 | 138.6 | 4.69168 | 31412.3 | 753.9 | 5.43939 | 9 |
| Oct., 1993 | 154.7 | 4.99032 | 31567 | 769.2 | 4.9722 | 9 |
| Nov., 1993 | 157.8 | 5.26 | 31724.8 | 567.9 | 3.59886 | 9 |
| Dec., 1993 | 153 | 4.93548 | 31877.8 | 562.7 | 3.67778 | 9 |
| Jan., 1994 | 151.4 | 4.88387 | 32029.2 | 493.3 | 3.25826 | 9 |
| Feb., 1994 | 144.5 | 5.20721 | 32173.7 | 506.3 | 3.50381 | 9 |
| Mar., 1994 | 160.7 | 5.37908 | 32334.4 | 747.9 | 4.65401 | 9 |
| Apr., 1994 | 152.3 | 5.07667 | 32486.7 | 617.9 | 4.05712 | 9 |
| May., 1994 | 152.3 | 4.9129 | 32639 | 684.7 | 4.49573 | 9 |
| Jun., 1994 | 154.4 | 5.26364 | 32793.4 | 603.8 | 3.91062 | 9 |
| Jul., 1994 | 156.3 | 5.17407 | 32949.7 | 638.1 | 4.08253 | 9 |
| Aug., 1994 | 155.4 | 6.93234 | 33105.1 | 688.3 | 4.42921 | 9 |
| Sep., 1994 | 158.8 | 5.31548 | 33263.9 | 643.1 | 4.04975 | 9 |
| Oct., 1994 | 167.2 | 5.49699 | 33431.1 | 641 | 3.83373 | 9 |
| Nov., 1994 | 168.3 | 5.61 | 33599.4 | 594.7 | 3.53357 | 9 |
| Dec., 1994 | 158.5 | 5.16848 | 33757.9 | 647.1 | 4.08265 | 9 |
| Jan., 1995 | 162 | 5.22581 | 33919.9 | 665.3 | 4.10679 | 9 |
| Feb., 1995 | 139.8 | 5.09909 | 34059.7 | 555.7 | 3.97496 | 9 |
| Mar., 1995 | 159 | 5.1498 | 34218.7 | 608.8 | 3.82893 | 9 |
| Apr., 1995 | 151.6 | 5.07448 | 34370.3 | 566.1 | 3.73417 | 9 |
| May., 1995 | 162 | 7.04348 | 34532.3 | 623.2 | 3.84691 | 9 |
| Jun., 1995 | 154.6 | 6.96135 | 34686.9 | 580.7 | 3.75615 | 9 |

Production Report

Group : Daly Unit #4 WF Expansion
Well : Summary Well
: 000000280

Date : August 7, 2005 9:34:42 am
User : jfox

Production Data from November, 1983 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Avg Daily Oil m3/d | Cum Oil m3 | Monthly Water m3 | WOR m3/m3 | Num Wells |
|------------|-------------------|-----------------------|---------------|---------------------|--------------|-----------|
| Jul., 1995 | 148.7 | 6.75909 | 34835.6 | 564.9 | 3.79892 | 9 |
| Aug., 1995 | 152.8 | 6.74118 | 34988.4 | 685.3 | 4.48495 | 9 |
| Sep., 1995 | 142 | 6.43019 | 35130.4 | 634.7 | 4.46972 | 9 |
| Oct., 1995 | 149.5 | 6.44165 | 35279.9 | 705.7 | 4.7204 | 9 |
| Nov., 1995 | 134.3 | 4.56544 | 35414.2 | 704.8 | 5.24795 | 9 |
| Dec., 1995 | 136.3 | 4.85341 | 35550.5 | 533.1 | 3.91123 | 9 |
| Jan., 1996 | 136.8 | 4.4129 | 35687.3 | 528.7 | 3.86477 | 8 |
| Feb., 1996 | 126.7 | 4.36897 | 35814 | 454.9 | 3.59037 | 8 |
| Mar., 1996 | 134.5 | 4.35628 | 35948.5 | 511.8 | 3.8052 | 8 |
| Apr., 1996 | 102 | 3.69231 | 36050.5 | 459.5 | 4.5049 | 8 |
| May., 1996 | 131.4 | 4.23871 | 36181.9 | 478.6 | 3.64231 | 8 |
| Jun., 1996 | 118 | 4.03419 | 36299.9 | 423.4 | 3.58814 | 8 |
| Jul., 1996 | 137.3 | 4.42903 | 36437.2 | 421.3 | 3.06846 | 8 |
| Aug., 1996 | 139 | 4.48387 | 36576.2 | 413.5 | 2.97482 | 8 |
| Sep., 1996 | 123.4 | 4.20085 | 36699.6 | 375.3 | 3.04133 | 8 |
| Oct., 1996 | 140.3 | 4.52581 | 36839.9 | 315.4 | 2.24804 | 8 |
| Nov., 1996 | 123 | 4.16949 | 36962.9 | 373.6 | 3.0374 | 8 |
| Dec., 1996 | 121.1 | 4.10508 | 37084 | 383.8 | 3.16928 | 8 |
| Jan., 1997 | 120.2 | 3.99004 | 37204.2 | 401 | 3.33611 | 8 |
| Feb., 1997 | 109.7 | 3.93543 | 37313.9 | 354 | 3.22698 | 8 |
| Mar., 1997 | 120.4 | 3.88387 | 37434.3 | 387.3 | 3.21678 | 8 |
| Apr., 1997 | 120.5 | 4.01667 | 37554.8 | 408.8 | 3.39253 | 8 |
| May., 1997 | 136.2 | 4.39355 | 37691 | 511.7 | 3.75698 | 8 |
| Jun., 1997 | 121.3 | 4.04333 | 37812.3 | 504.4 | 4.15829 | 8 |
| Jul., 1997 | 124.4 | 4.0129 | 37936.7 | 468.3 | 3.76447 | 8 |
| Aug., 1997 | 123.7 | 4.02276 | 38060.4 | 425.7 | 3.44139 | 8 |
| Sep., 1997 | 110.7 | 4.08111 | 38171.1 | 348.9 | 3.15176 | 8 |
| Oct., 1997 | 129.1 | 4.18138 | 38300.2 | 420.9 | 3.26026 | 8 |
| Nov., 1997 | 114.8 | 3.85882 | 38415 | 325.7 | 2.83711 | 8 |
| Dec., 1997 | 115.3 | 3.71935 | 38530.3 | 297.2 | 2.57762 | 8 |
| Jan., 1998 | 121.1 | 3.90645 | 38651.4 | 344.1 | 2.84145 | 8 |
| Feb., 1998 | 111.9 | 3.99643 | 38763.3 | 322.6 | 2.88293 | 8 |
| Mar., 1998 | 115.5 | 3.74089 | 38878.8 | 331 | 2.8658 | 8 |
| Apr., 1998 | 116.9 | 3.91297 | 38995.7 | 364.6 | 3.11891 | 8 |
| May., 1998 | 126.6 | 4.13388 | 39122.3 | 429.7 | 3.39416 | 8 |
| Jun., 1998 | 122.2 | 4.14237 | 39244.5 | 411.5 | 3.36743 | 8 |
| Jul., 1998 | 132.1 | 4.29594 | 39376.6 | 394 | 2.98259 | 8 |
| Aug., 1998 | 123.3 | 3.99892 | 39499.9 | 355.1 | 2.87997 | 7 |
| Sep., 1998 | 130.2 | 4.36425 | 39630.1 | 339.1 | 2.60445 | 7 |
| Oct., 1998 | 133.1 | 4.29355 | 39763.2 | 356.7 | 2.67994 | 7 |
| Nov., 1998 | 132.4 | 4.41333 | 39895.6 | 354.8 | 2.67976 | 7 |
| Dec., 1998 | 132.8 | 4.28387 | 40028.4 | 369 | 2.77861 | 7 |
| Jan., 1999 | 119.7 | 3.86129 | 40148.1 | 356.4 | 2.97744 | 6 |
| Feb., 1999 | 108 | 3.88024 | 40256.1 | 313.5 | 2.90278 | 6 |
| Mar., 1999 | 105.4 | 3.4 | 40361.5 | 266 | 2.52372 | 5 |
| Apr., 1999 | 104.6 | 3.48667 | 40466.1 | 262.8 | 2.51243 | 5 |
| May., 1999 | 106.2 | 3.44899 | 40572.3 | 285.4 | 2.68738 | 5 |
| Jun., 1999 | 101.3 | 3.37667 | 40673.6 | 265.7 | 2.6229 | 5 |

DEC-99

DAILY UNIT NO. 4

of Wells
On Production

|||| ||||
|||| ||||
|||| ||||
|||| ||||
1

of Wells
SI.

|||| |||

of Wells
Producing $> 1 \text{ m}^3/\text{PD}$

1

CUMULATIVE PRODUCTION UNIT + PRE-UNIT

| | | |
|--------|-------------------------|------------------------------|
| OCT-99 | - 19122 m ³ | |
| NOV-99 | 522.9 m ³ | |
| DEC-99 | 533.6 m ³ | (with 3402.1 + 882.7 - 29.3) |
| | <hr/> | |
| | 192178.5 m ³ | |

DAILY UNIT #4 RECOVERY ESTIMATE

ANALYSIS PERIOD NOV/95 to JAN/99

- economic limit 0.2 m³/d/cell, use 41 wells on prod.
use 41-6 = 35 producing more than 0.2 m³/d

- analysis period excludes 1999 production when as many as 13 wells were shut-in

- monthly production rates for the 7 months of 1999 were 300.3 m³/month, compared to 574.7 m³/month for the 4th Qtr/98, Δ 12.9% drop.

Decline rate = 4.393%

USE

Rem. Rec. Res. 77191 m³. (rem recoverable reserves 31-Dec-99
77191 - 522.9 - 533.6)
=

Forecast production - JAN/00 17.8 m³/d vs ACTUAL PROD.
541.8 m³/d
(17.5 m³/d)

- using decline 4.393% & modifying
the economic limit to 7 m³/d (35 well @
0.2 m³/d/well)

Rem Rec Res. 86526 m³.

OTHER ANALYSIS

| PERIOD | TYPE | DEC | Rem Rec Res. | Eco. Limit |
|-----------------|----------------------------|--------|--------------|-----------------------|
| DEC/95 - OCT/99 | DAILY PROD VS. CURT OIL | 4.502% | 74342 | 8.2 m ³ /d |
| AUG/93 - OCT/99 | " " | 5.512 | 57217.2 | 8.2 m ³ /d |
| DEC/95 - OCT/99 | DAILY OIL VS. TIME | 5.493 | 57558 | 8.2 m ³ /d |

DALY LODGEPOLE A Pool

• DALY UNIT #3

$$\cdot B_{oi} = 1.08 \text{ Rm}^3/\text{m}^3$$

$$\cdot \text{Uff. rec } 25.4\% \text{ OOIP ('97 Progress Report)}$$

$$\bar{P}_R = 850 \text{ psi}$$

$$P_{opt} = 436 \text{ psi}$$

$$P_{oi} = 122 \text{ ft}^3/\text{bbl}$$

$$RF_{\text{primary}} = 5.1\% \text{ OOIP (1953 Reservoir Study)}$$

$$\cdot \text{Uff rec, } 31.8\% \text{ OOIP } \quad 1982 \text{ INFILL DRILLING \& INCREASED}$$

DALY UNIT NO. 3 REDUCED SPACING

DALY UNIT NO. 4 WF APPL'N JUL/86

- Daly Unit #3 reduced spacing & recovery 30 to 36% OOIP

- Daly Unit #4 waterflood & recovery 3% OOIP primary to 11% OOIP

- reduced spacing \rightarrow increase areal sweep eff. & lateral con. continuity

list of SI work - DALY unit #4

Dec/99.

work

9-34

2-25

3-25

10-25

12-25

1-35

4-1

3-2

DATE OF FINAL PROD

SEP/95

JAN/98

OCT/97

APR/98

NOV/97

AUG/98

JAN/94

DEC/95

of Months SI

51

23

26

20

25

16

71

48

Daily Unit #4 Summary Well Data 09/62-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit No. 4

Avg Daily Oil FC 1 (Rate-Time)

qi: 21.3374 m3/d, Nov, 1995

qf: 8.18342 m3/d, Feb, 2017

di(Exp): 4.39287 CTD: 191122 m3

RR: 77190.6 m3 Tot: 268312 m3

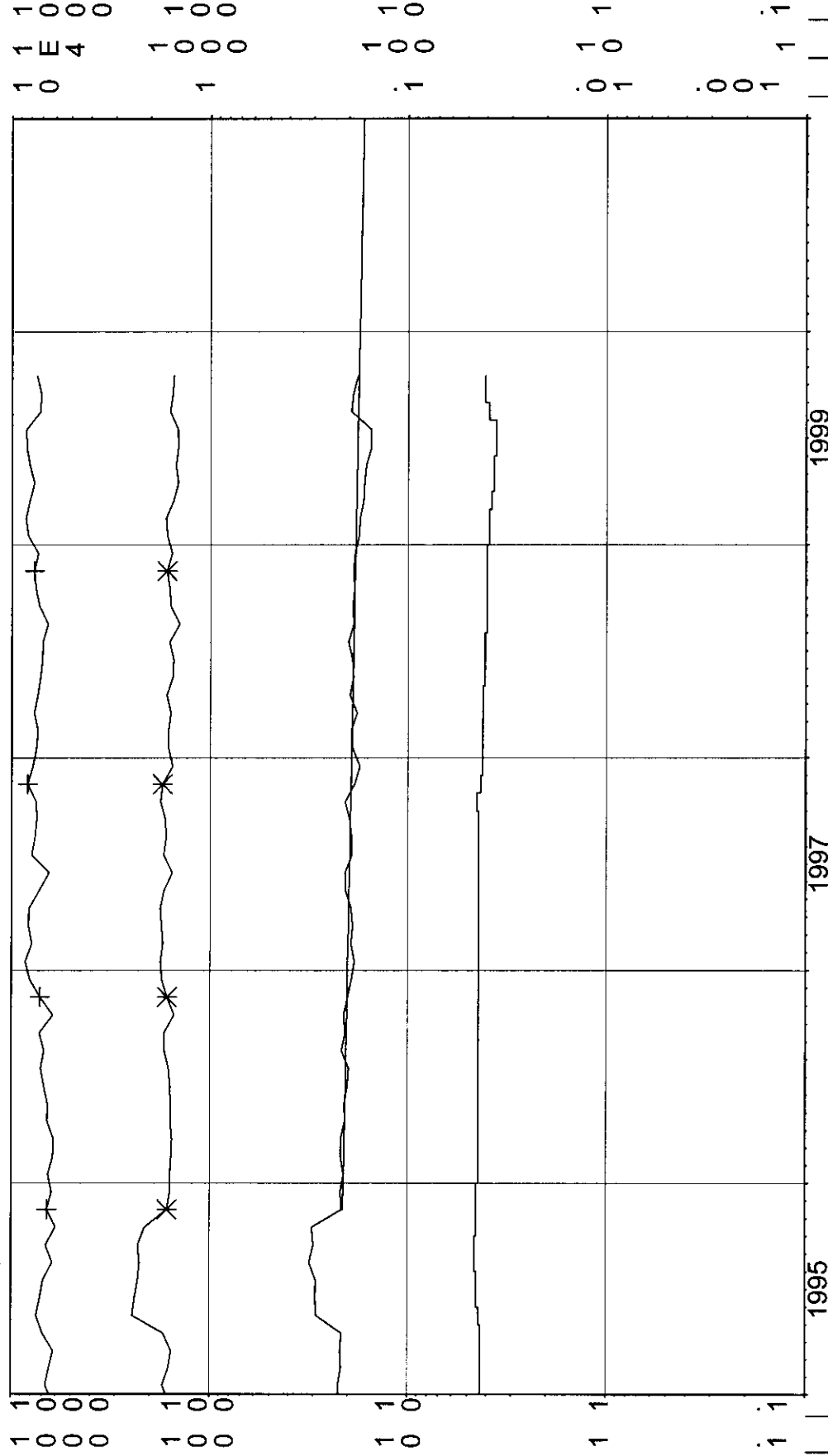
Production Cums

Oil: 191122 m3

Gas: 0 E6m3

Water: 866998 m3

Cond: 0 m3



Year

Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3

Num Wells

Avg Daily Oil FC 1 - m3/d



Daly Unit #4 Summary Well Data 09/62-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit No. 4

Avg Daily Oil FC 1 (Rate-Time)

qi: 21.2684 m3/d, Dec, 1995

qf: 8.18722 m3/d, Jul, 2016

di(Exp): 4.50156 CTD: 191122 m3

RR: 74541.7 m3 Tot: 265663 m3

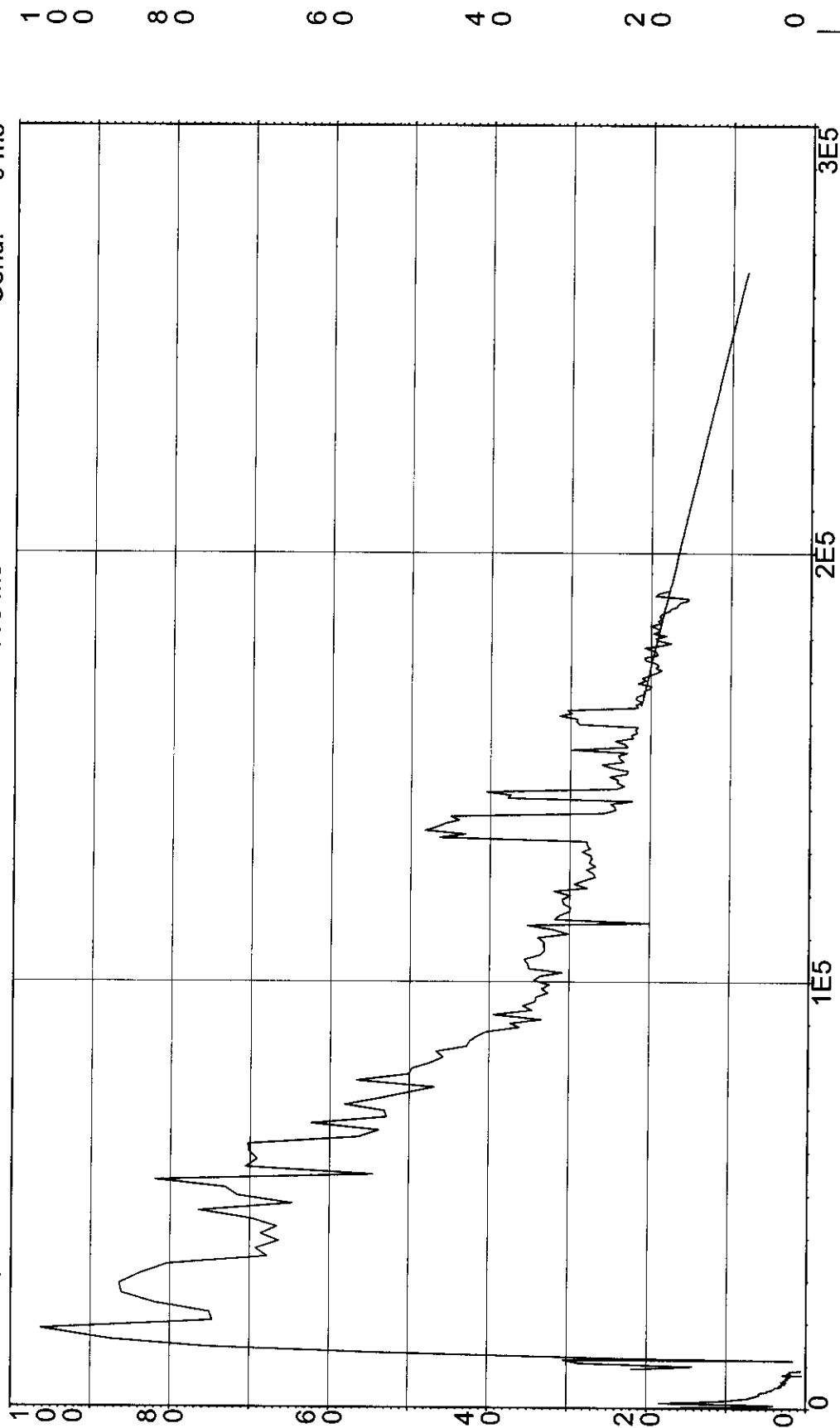
Production Cums

Oil: 191122 m3

Gas: 0 E6m3

Water: 866998 m3

Cond: 0 m3



Avg Daily Oil - m3/d

Cum Oil - m3

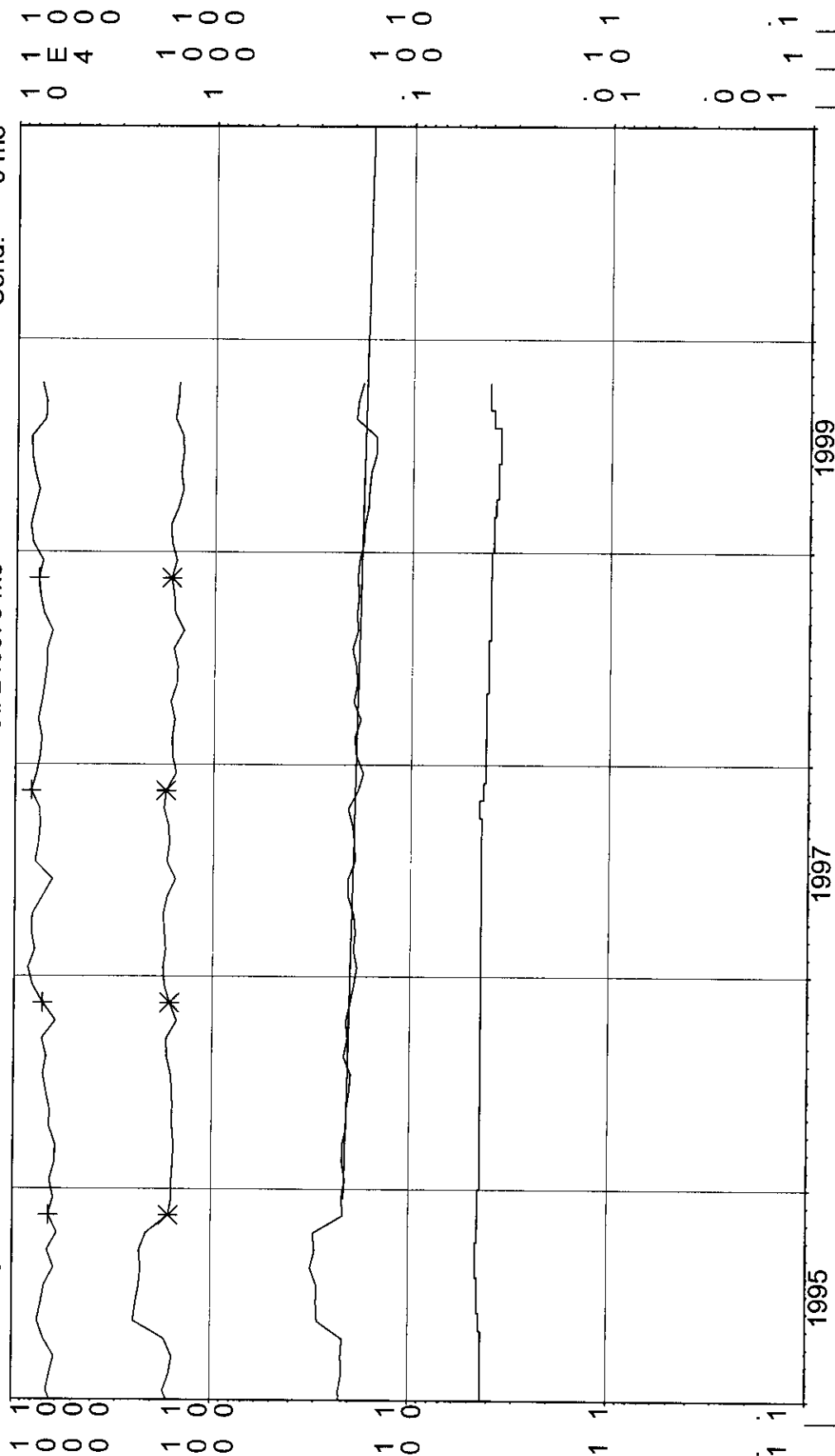


Avg Daily Oil FC 1 - m3/d

Daly Unit #4 Summary Well Data 09/62-10/99

Operator: Avg Daily Oil FC 1 (Rate-Time)
 Field: qi: 21.5119 m3/d, Dec, 1995
 Zone: qf: 8.17209 m3/d, Dec, 2012
 Type: Unknown di(Exp): 5.49299 CTD: 191122 m3
 Group: Daly Unit No. 4 RR: 57557.7 m3 Tot: 248679 m3

Production Cums
 Oil: 191122 m3
 Gas: 0 E6m3
 Water: 866998 m3
 Cond: 0 m3



Year

Avg Daily Oil - m3/d
 Avg Daily Fluid - m3/d

WOR - m3/m3
 Num Wells
 Avg Daily Oil FC 1 - m3/d



Daily Unit #4 Summary Well Data 09/62-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit No. 4

Avg Daily Oil FC 1 (Rate-Time)

qi: 21.3374 m3/d, Nov, 1995

qf: 6.99984 m3/d, Jul, 2020

di(Exp): 4.39287 CTD: 191122 m3

RR: 86525.6 m3 Tot: 277647 m3

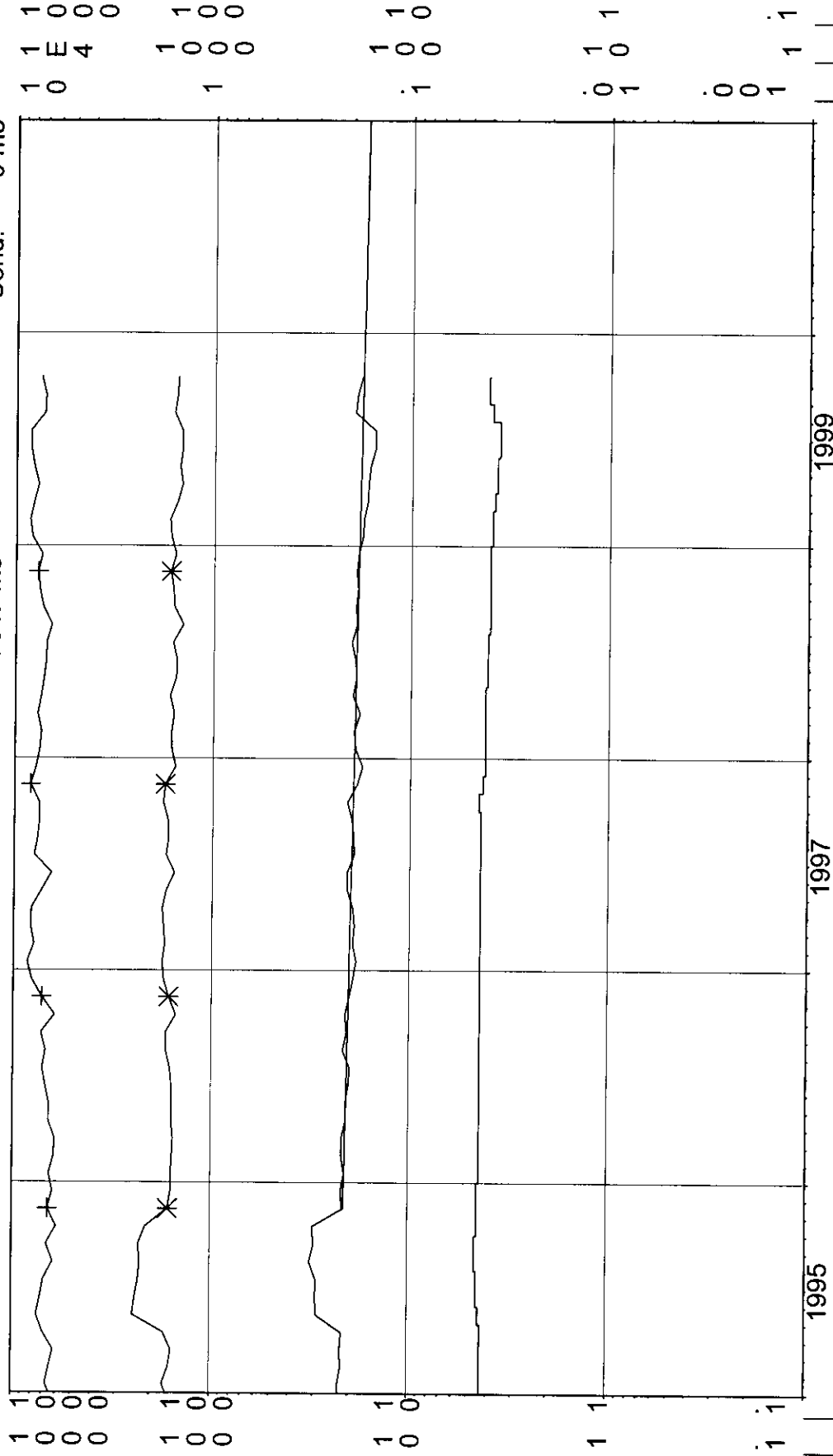
Production Cums

Oil: 191122 m3

Gas: 0 E6m3

Water: 866998 m3

Cond: 0 m3



Year

Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3

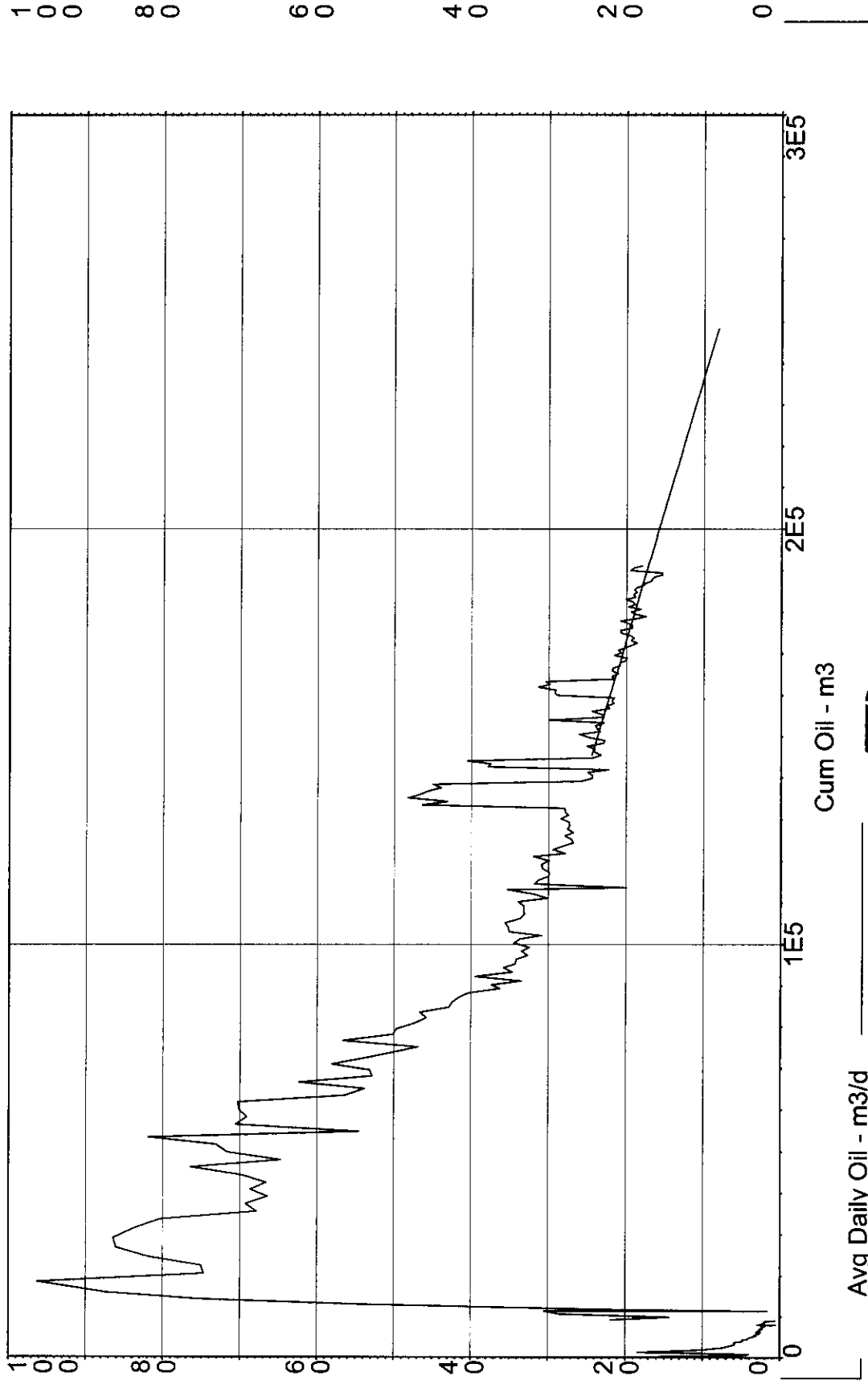
Num Wells

Avg Daily Oil FC 1 - m3/d



Daly Unit #4 Summary Well Data 09/62-10/99

| | | |
|------------------------|---------------------------------|------------------|
| Operator: | Avg Daily Oil FC 1 (Rate-Time) | Production Cums |
| Field: | qi: 24.5646 m3/d, Aug, 1993 | Oil: 191122 m3 |
| Zone: | qf: 8.18547 m3/d, Nov, 2012 | Gas: 0 E6m3 |
| Type: Unknown | di(Exp): 5.51231 CTD: 191122 m3 | Water: 866998 m3 |
| Group: Daly Unit No. 4 | RR: 57217.2 m3 Tot: 248339 m3 | Cond: 0 m3 |

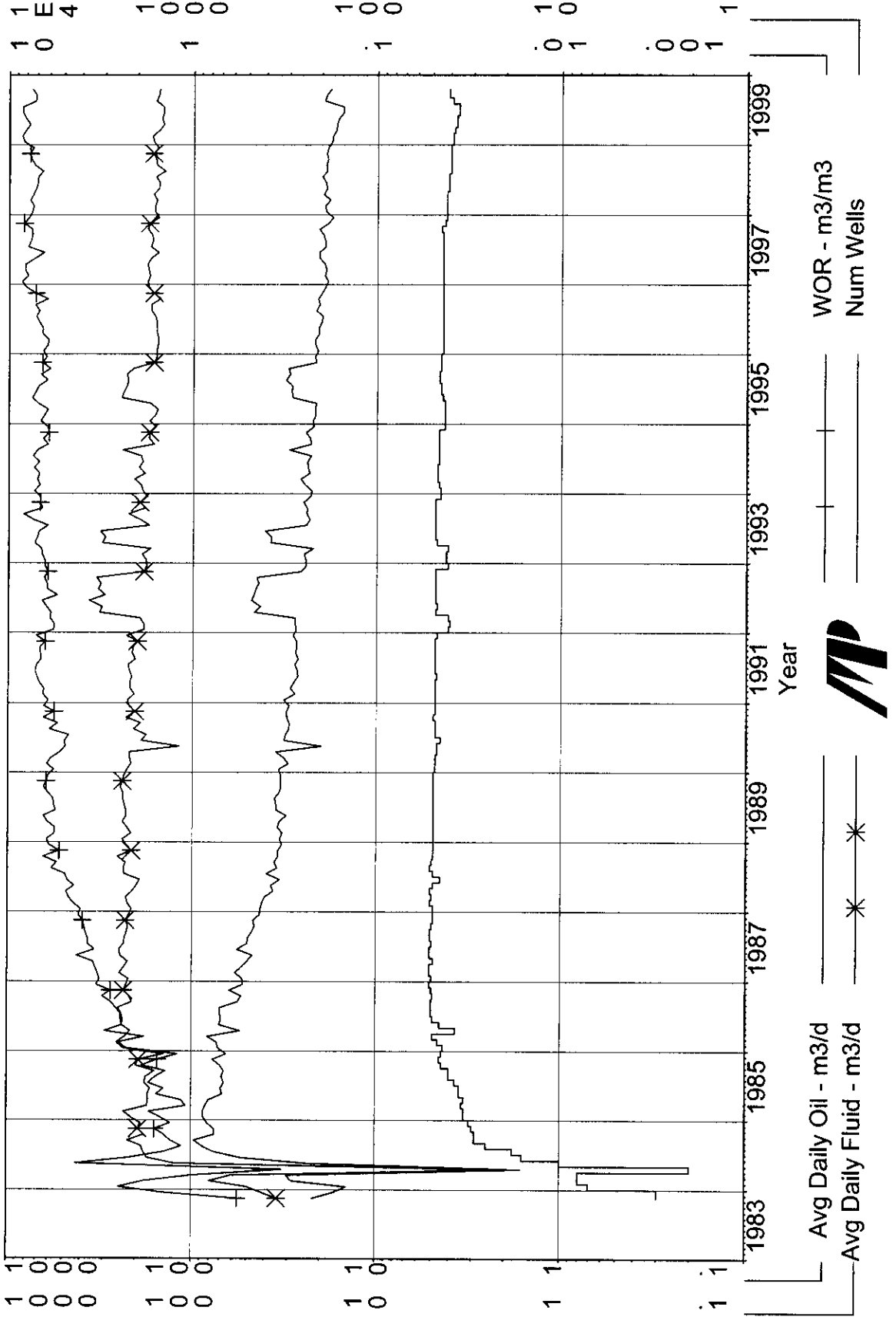


MP

Avg Daily Oil FC 1 - m3/d

Daily Unit #4 Summary Well Data 09/62-10/99

Operator: Production Cums
 Field: Oil: 191122 m3
 Zone: Gas: 0 E6m3
 Type: Unknown Water: 866998 m3
 Group: Daily Unit No. 4 Cond: 0 m3



Production Report

| | | | |
|-----------|-----------------------------|---------|------------------------------|
| Group | : Daly Unit No. 4 | Date | : August 14, 2005 9:47:49 am |
| Well | : Daly Unit #4 Summary Well | User | : jfox |
| | : 000000277 | | |
| Hist.Data | : 09/62-10/99 | On Prod | : 02/09 |
| Operator | : | Status | : Unknown |
| Field | : | Zone | : |

Production Data from January, 1995 to December, 2001

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | Cal Day Water Inj m3/d | WOR m3/m3 | Num Wells | Avg Daily Oil FC 1 m3/d |
|------------|-----------------------|-------------------------|---------------------------|--------------|-----------|----------------------------|
| Jan., 1995 | 22.4043 | 172.816 | | 6.71309 | 43 | |
| Feb., 1995 | 21.6611 | 160.907 | | 6.42793 | 43 | |
| Mar., 1995 | 21.8875 | 156.51 | | 6.15024 | 43 | |
| Apr., 1995 | 21.5594 | 171.324 | | 6.94615 | 43 | |
| May., 1995 | 28.9331 | 245.122 | | 7.47158 | 44 | |
| Jun., 1995 | 29.2639 | 238.635 | | 7.15416 | 45 | |
| Jul., 1995 | 29.1138 | 230.108 | | 6.90329 | 45 | |
| Aug., 1995 | 31.3522 | 225.542 | | 6.19337 | 46 | |
| Sep., 1995 | 29.856 | 229.558 | | 6.68841 | 46 | |
| Oct., 1995 | 30.4106 | 212.298 | | 5.98061 | 45 | |
| Nov., 1995 | 21.5462 | 164.036 | | 6.61279 | 45 | 21.2577 |
| Dec., 1995 | 21.8847 | 158.79 | | 6.25533 | 45 | 21.1783 |
| Jan., 1996 | 21.0667 | 158.764 | | 6.53581 | 44 | 21.0415 |
| Feb., 1996 | 21.8258 | 156.617 | | 6.17537 | 44 | 20.9629 |
| Mar., 1996 | 21.7957 | 155.25 | | 6.12253 | 44 | 20.8845 |
| Apr., 1996 | 20.8562 | 158.216 | | 6.5856 | 44 | 20.8065 |
| May., 1996 | 20.8908 | 158.232 | | 6.57379 | 44 | 20.7288 |
| Jun., 1996 | 20.1878 | 158.511 | | 6.85135 | 44 | 20.6513 |
| Jul., 1996 | 19.8857 | 161.579 | | 7.12492 | 44 | 20.5741 |
| Aug., 1996 | 21.5903 | 169.873 | | 6.86757 | 44 | 20.4973 |
| Sep., 1996 | 20.6937 | 170.151 | | 7.2219 | 44 | 20.4207 |
| Oct., 1996 | 21.0929 | 151.345 | | 6.17473 | 44 | 20.3444 |
| Nov., 1996 | 20.1231 | 164.474 | | 7.17298 | 44 | 20.2683 |
| Dec., 1996 | 19.275 | 175.254 | | 8.09186 | 44 | 20.1926 |
| Jan., 1997 | 18.6479 | 177.862 | | 8.53744 | 44 | 20.1723 |
| Feb., 1997 | 19.4205 | 172.953 | | 7.90527 | 44 | 20.0969 |
| Mar., 1997 | 19.0443 | 175.662 | | 8.22343 | 44 | 20.0218 |
| Apr., 1997 | 19.4081 | 178.099 | | 8.17606 | 44 | 19.947 |
| May., 1997 | 20.6727 | 170.974 | | 7.2701 | 44 | 19.8725 |
| Jun., 1997 | 20.8114 | 155.49 | | 6.47096 | 44 | 19.7982 |
| Jul., 1997 | 19.2196 | 171.546 | | 7.92518 | 44 | 19.7242 |
| Aug., 1997 | 19.3021 | 166.827 | | 7.64251 | 44 | 19.6505 |
| Sep., 1997 | 19.7802 | 168.092 | | 7.49754 | 44 | 19.5771 |
| Oct., 1997 | 20.8176 | 177.503 | | 7.52616 | 45 | 19.504 |
| Nov., 1997 | 18.6602 | 173.771 | | 8.31196 | 43 | 19.4311 |
| Dec., 1997 | 17.5272 | 154.801 | | 7.83163 | 42 | 19.3585 |
| Jan., 1998 | 19.0617 | 162.333 | | 7.51572 | 42 | 19.2861 |
| Feb., 1998 | 19.407 | 162.649 | | 7.38054 | 42 | 19.2141 |
| Mar., 1998 | 18.1538 | 158.204 | | 7.71418 | 42 | 19.1423 |
| Apr., 1998 | 19.7378 | 165.767 | | 7.39799 | 42 | 19.0708 |
| May., 1998 | 18.9154 | 154.818 | | 7.18434 | 41 | 18.9995 |
| Jun., 1998 | 19.1831 | 153.534 | | 7.00317 | 41 | 18.9285 |
| Jul., 1998 | 20.0972 | 160.504 | | 6.98598 | 41 | 18.8578 |
| Aug., 1998 | 18.885 | 143.187 | | 6.5816 | 40 | 18.7873 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

Date : August 14, 2005 9:47:49 am
User : jfox

Production Data from January, 1995 to December, 2001 (cont.)

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | Cal Day Water Inj m3/d | WOR m3/m3 | Num Wells | Avg Daily Oil FC 1 m3/d |
|------------|-----------------------|-------------------------|---------------------------|--------------|-----------|----------------------------|
| Sep., 1998 | 19.1365 | 158.499 | | 7.2821 | 40 | 18.7171 |
| Oct., 1998 | 18.6806 | 160.466 | | 7.58954 | 40 | 18.6472 |
| Nov., 1998 | 18.98 | 165.718 | | 7.73077 | 40 | 18.5775 |
| Dec., 1998 | 18.6462 | 156.387 | | 7.38666 | 40 | 18.5081 |
| Jan., 1999 | 17.7581 | 164.879 | | 8.28429 | 39 | 18.4389 |
| Feb., 1999 | 17.5916 | 167.818 | | 8.5392 | 39 | 18.37 |
| Mar., 1999 | 16.839 | 154.098 | | 8.15083 | 38 | 18.3014 |
| Apr., 1999 | 16.6967 | 145.794 | | 7.73148 | 37 | 18.233 |
| May., 1999 | 16.3592 | 149.558 | | 8.14172 | 37 | 18.1649 |
| Jun., 1999 | 15.4333 | 145.767 | | 8.44449 | 36 | 18.097 |
| Jul., 1999 | 15.4161 | 146.087 | | 8.47583 | 36 | 18.0294 |
| Aug., 1999 | 19.4904 | 160.064 | | 7.21202 | 39 | 17.962 |
| Sep., 1999 | 19.0529 | 155.193 | | 7.14491 | 41 | 17.8949 |
| Oct., 1999 | 18.0526 | 153.48 | | 7.50137 | 41 | 17.828 |
| Nov., 1999 | | | | | | 17.7614 |
| Dec., 1999 | | | | | | 17.695 |
| Jan., 2000 | | | | | | 17.5808 |
| Feb., 2000 | | | | | | 17.5151 |
| Mar., 2000 | | | | | | 17.4496 |
| Apr., 2000 | | | | | | 17.3844 |
| May., 2000 | | | | | | 17.3195 |
| Jun., 2000 | | | | | | 17.2547 |
| Jul., 2000 | | | | | | 17.1903 |
| Aug., 2000 | | | | | | 17.126 |
| Sep., 2000 | | | | | | 17.062 |
| Oct., 2000 | | | | | | 16.9983 |
| Nov., 2000 | | | | | | 16.9348 |
| Dec., 2000 | | | | | | 16.8715 |
| Jan., 2001 | | | | | | 16.8545 |
| Feb., 2001 | | | | | | 16.7915 |
| Mar., 2001 | | | | | | 16.7288 |
| Apr., 2001 | | | | | | 16.6663 |
| May., 2001 | | | | | | 16.604 |
| Jun., 2001 | | | | | | 16.542 |
| Jul., 2001 | | | | | | 16.4802 |
| Aug., 2001 | | | | | | 16.4186 |
| Sep., 2001 | | | | | | 16.3572 |
| Oct., 2001 | | | | | | 16.2961 |
| Nov., 2001 | | | | | | 16.2352 |
| Dec., 2001 | | | | | | 16.1745 |

Production Report

Group : Daly Unit No. 4
 Well : Daly Unit #4 Summary Well
 : 000000277
 Hist.Data : 09/62-10/99
 Operator :
 Field :

Date : 8/7/5 8:11:01 am
 User : jfox
 On Prod : 02/09
 Status : Unknown
 Zone :

Production Data from January, 1983 to October, 1999

| Year | Monthly Oil m3 | Monthly Water m3 | WOR m3/m3 | Monthly Fluid m3 | Num Wells | Cum Oil m3 |
|------------|-------------------|---------------------|--------------|---------------------|-----------|---------------|
| Jan., 1983 | | | | | | |
| Feb., 1983 | | | | | | |
| Mar., 1983 | | | | | | |
| Apr., 1983 | | | | | | |
| May., 1983 | | | | | | |
| Jun., 1983 | | | | | | |
| Jul., 1983 | | | | | | |
| Aug., 1983 | | | | | | |
| Sep., 1983 | | | | | | |
| Oct., 1983 | | | | | | |
| Nov., 1983 | 182.7 | 103.1 | 0.564313 | 285.88 | 3 | 9241.6 |
| Dec., 1983 | 399 | 585.3 | 1.46692 | 984.476 | 3 | 9640.6 |
| Jan., 1984 | 263.6 | 651.8 | 2.47269 | 915.516 | 7 | 9904.2 |
| Feb., 1984 | 703.8 | 1274.8 | 1.81131 | 1978.91 | 8 | 10608 |
| Mar., 1984 | 753.9 | 749 | 0.9935 | 1503.23 | 8 | 11361.9 |
| Apr., 1984 | 25.1 | 8.1 | 0.322709 | 33.2111 | 2 | 11387 |
| May., 1984 | 407.8 | 1727.4 | 4.2359 | 2135.38 | 10 | 11794.8 |
| Jun., 1984 | 1188.4 | 2597 | 2.18529 | 3785.92 | 16 | 12983.2 |
| Jul., 1984 | 1224.5 | 1722.5 | 1.4067 | 2947.54 | 18 | 14207.7 |
| Aug., 1984 | 1665.7 | 1878.7 | 1.12787 | 3545.13 | 25 | 15873.4 |
| Sep., 1984 | 2531.2 | 3279.9 | 1.29579 | 5812.21 | 29 | 18404.6 |
| Oct., 1984 | 2042.8 | 2870.7 | 1.40528 | 4914.4 | 29 | 20447.4 |
| Nov., 1984 | 1977.8 | 3129 | 1.58206 | 5107.67 | 30 | 22425.2 |
| Dec., 1984 | 2130.4 | 2767.6 | 1.2991 | 4898.94 | 31 | 24555.6 |
| Jan., 1985 | 2256.5 | 3304.1 | 1.46426 | 5561.59 | 33 | 26812.1 |
| Feb., 1985 | 2333.3 | 3954.1 | 1.69464 | 6288.43 | 33 | 29145.4 |
| Mar., 1985 | 2373.1 | 2545.8 | 1.07277 | 4919.95 | 34 | 31518.5 |
| Apr., 1985 | 2182 | 2471.1 | 1.13249 | 4654.06 | 33 | 33700.5 |
| May., 1985 | 1871.6 | 2886.9 | 1.54248 | 4759.32 | 35 | 35572.1 |
| Jun., 1985 | 1839.1 | 2595.3 | 1.41118 | 4435.21 | 35 | 37411.2 |
| Jul., 1985 | 1801.2 | 3067.2 | 1.70286 | 4869.19 | 37 | 39212.4 |
| Aug., 1985 | 1673.6 | 2630.8 | 1.57194 | 4305.14 | 40 | 40886 |
| Sep., 1985 | 1679.3 | 2324.2 | 1.38403 | 4004.24 | 40 | 42565.3 |
| Oct., 1985 | 1750.4 | 3257.5 | 1.861 | 5008.67 | 44 | 44315.7 |
| Nov., 1985 | 1971.7 | 3018.8 | 1.53106 | 4991.37 | 45 | 46287.4 |
| Dec., 1985 | 1675.6 | 1992.7 | 1.18925 | 3669.04 | 44 | 47963 |
| Jan., 1986 | 1906.8 | 4309.4 | 2.26002 | 6217.04 | 43 | 49869.8 |
| Feb., 1986 | 1834.9 | 4548.2 | 2.47872 | 6383.91 | 46 | 51704.7 |
| Mar., 1986 | 1748.4 | 3168.1 | 1.812 | 4917.27 | 49 | 53453.1 |
| Apr., 1986 | 1325.9 | 3917.6 | 2.95467 | 5244.08 | 37 | 54779 |
| May., 1986 | 1685.9 | 4015.8 | 2.38199 | 5702.44 | 45 | 56464.9 |
| Jun., 1986 | 1772.7 | 4290.8 | 2.42049 | 6064.28 | 49 | 58237.6 |
| Jul., 1986 | 1798.1 | 4364.3 | 2.42717 | 6163.19 | 50 | 60035.7 |
| Aug., 1986 | 1789.4 | 4604.7 | 2.57332 | 6394.89 | 50 | 61825.1 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

Date : 8/7/5 8:11:01 am
User : jfox

Production Data from January, 1983 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Monthly Water m3 | WOR m3/m3 | Monthly Fluid m3 | Num Wells | Cum Oil m3 |
|------------|-------------------|---------------------|--------------|---------------------|-----------|---------------|
| Sep., 1986 | 1626 | 4449.6 | 2.73653 | 6076.32 | 50 | 63451.1 |
| Oct., 1986 | 1579.7 | 4819 | 3.05058 | 6399.4 | 49 | 65030.8 |
| Nov., 1986 | 1584.5 | 4359.7 | 2.75147 | 5944.9 | 50 | 66615.3 |
| Dec., 1986 | 1477.9 | 4856.5 | 3.28608 | 6335.05 | 51 | 68093.2 |
| Jan., 1987 | 1508.5 | 4764.9 | 3.1587 | 6274.06 | 50 | 69601.7 |
| Feb., 1987 | 1373.2 | 4450.8 | 3.24119 | 5824.6 | 51 | 70974.9 |
| Mar., 1987 | 1483.3 | 4953.9 | 3.33978 | 6437.85 | 51 | 72458.2 |
| Apr., 1987 | 1378.4 | 4735 | 3.43514 | 6114.01 | 49 | 73836.6 |
| May., 1987 | 1326.5 | 5585.5 | 4.2107 | 6912.58 | 51 | 75163.1 |
| Jun., 1987 | 1546.6 | 5227.5 | 3.37999 | 6774.78 | 51 | 76709.7 |
| Jul., 1987 | 1437.1 | 5265.6 | 3.66405 | 6703.33 | 50 | 78146.8 |
| Aug., 1987 | 1400 | 5140.5 | 3.67179 | 6541.12 | 51 | 79546.8 |
| Sep., 1987 | 1315.5 | 4967.6 | 3.77621 | 6283.68 | 51 | 80862.3 |
| Oct., 1987 | 1322.2 | 5089.2 | 3.84904 | 6411.98 | 50 | 82184.5 |
| Nov., 1987 | 1275.8 | 4978.1 | 3.90194 | 6254.46 | 49 | 83460.3 |
| Dec., 1987 | 1267.7 | 5224.5 | 4.12124 | 6492.76 | 49 | 84728 |
| Jan., 1988 | 1242.4 | 4992.8 | 4.01867 | 6235.75 | 49 | 85970.4 |
| Feb., 1988 | 1071.6 | 4699.5 | 4.3855 | 5771.57 | 51 | 87042 |
| Mar., 1988 | 1147 | 5348.4 | 4.66295 | 6495.91 | 50 | 88189 |
| Apr., 1988 | 1045.3 | 5048.1 | 4.82933 | 6093.86 | 51 | 89234.3 |
| May., 1988 | 914.9 | 4004.6 | 4.37709 | 4919.9 | 49 | 90149.2 |
| Jun., 1988 | 919.3 | 4367 | 4.75035 | 5286.71 | 45 | 91068.5 |
| Jul., 1988 | 1163.8 | 5708.8 | 4.90531 | 6873.11 | 49 | 92232.3 |
| Aug., 1988 | 1032 | 5975.6 | 5.79031 | 7008.05 | 51 | 93264.3 |
| Sep., 1988 | 1030.9 | 5610.2 | 5.44204 | 6641.55 | 50 | 94295.2 |
| Oct., 1988 | 1027.4 | 6596.5 | 6.42058 | 7624.35 | 49 | 95322.6 |
| Nov., 1988 | 1004.1 | 5275.2 | 5.25366 | 6279.74 | 49 | 96326.7 |
| Dec., 1988 | 997.3 | 5968 | 5.98416 | 6965.74 | 49 | 97324 |
| Jan., 1989 | 1028.6 | 6318.9 | 6.14321 | 7347.95 | 49 | 98352.6 |
| Feb., 1989 | 909.3 | 5101.1 | 5.60992 | 6010.8 | 49 | 99261.9 |
| Mar., 1989 | 1067.7 | 5955.1 | 5.5775 | 7023.27 | 49 | 100330 |
| Apr., 1989 | 996.5 | 6093.1 | 6.1145 | 7090.04 | 49 | 101326 |
| May., 1989 | 771.8 | 4943.7 | 6.40542 | 5715.84 | 49 | 102098 |
| Jun., 1989 | 947.4 | 5239.2 | 5.53008 | 6187.02 | 49 | 103045 |
| Jul., 1989 | 1061.3 | 6001 | 5.65439 | 7062.77 | 49 | 104107 |
| Aug., 1989 | 1103.9 | 6285.8 | 5.69418 | 7390.19 | 49 | 105211 |
| Sep., 1989 | 1006.5 | 6116.7 | 6.0772 | 7123.64 | 49 | 106217 |
| Oct., 1989 | 1023.9 | 6567 | 6.41371 | 7591.35 | 49 | 107241 |
| Nov., 1989 | 994.6 | 6162.6 | 6.19606 | 7157.64 | 49 | 108236 |
| Dec., 1989 | 1019.5 | 6182.1 | 6.06386 | 7202.05 | 49 | 109255 |
| Jan., 1990 | 1033.2 | 5844.4 | 5.6566 | 6878.06 | 48 | 110288 |
| Feb., 1990 | 834.3 | 5136.9 | 6.15714 | 5971.57 | 48 | 111123 |
| Mar., 1990 | 973.1 | 5701.6 | 5.85921 | 6675.13 | 48 | 112096 |
| Apr., 1990 | 1053.6 | 5519.4 | 5.23861 | 6573.46 | 47 | 113149 |
| May., 1990 | 492.1 | 2409 | 4.89535 | 2901.32 | 47 | 113641 |
| Jun., 1990 | 876.6 | 4339.1 | 4.94992 | 5216.09 | 45 | 114518 |
| Jul., 1990 | 949.4 | 4453.1 | 4.69044 | 5402.92 | 48 | 115467 |
| Aug., 1990 | 918.7 | 5487.8 | 5.97344 | 6406.9 | 48 | 116386 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

Date : 8/7/5 8:11:01 am
User : jfox

Production Data from January, 1983 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Monthly Water m3 | WOR m3/m3 | Monthly Fluid m3 | Num Wells | Cum Oil m3 |
|------------|-------------------|---------------------|--------------|---------------------|-----------|---------------|
| Sep., 1990 | 896 | 4831 | 5.39174 | 5727.39 | 48 | 117282 |
| Oct., 1990 | 937.9 | 6030.8 | 6.43011 | 6969.11 | 49 | 118220 |
| Nov., 1990 | 926.4 | 5225.2 | 5.64033 | 6152.01 | 48 | 119146 |
| Dec., 1990 | 926.7 | 5928.3 | 6.39721 | 6855.41 | 48 | 120073 |
| Jan., 1991 | 986.5 | 5979.8 | 6.06163 | 6966.73 | 48 | 121060 |
| Feb., 1991 | 768.7 | 4970.6 | 6.46624 | 5739.64 | 48 | 121828 |
| Mar., 1991 | 907.5 | 5814.3 | 6.40694 | 6722.2 | 48 | 122736 |
| Apr., 1991 | 843 | 5718.1 | 6.78304 | 6561.47 | 48 | 123579 |
| May., 1991 | 812.6 | 5678.7 | 6.98831 | 6491.66 | 47 | 124391 |
| Jun., 1991 | 797.1 | 5697.8 | 7.14816 | 6495.25 | 48 | 125188 |
| Jul., 1991 | 854.4 | 6011.7 | 7.03617 | 6866.48 | 48 | 126043 |
| Aug., 1991 | 810.8 | 5389.7 | 6.64739 | 6200.86 | 48 | 126854 |
| Sep., 1991 | 825.7 | 5536 | 6.70462 | 6362.07 | 48 | 127679 |
| Oct., 1991 | 844.6 | 5696.3 | 6.74438 | 6541.27 | 48 | 128524 |
| Nov., 1991 | 820 | 5161 | 6.2939 | 5981.36 | 48 | 129344 |
| Dec., 1991 | 813.7 | 5744.4 | 7.0596 | 6558.46 | 47 | 130158 |
| Jan., 1992 | 834 | 4745.6 | 5.69017 | 5579.97 | 41 | 130992 |
| Feb., 1992 | 807.5 | 4550.9 | 5.63579 | 5358.76 | 40 | 131799 |
| Mar., 1992 | 854.2 | 5067.8 | 5.9328 | 5922.38 | 41 | 132653 |
| Apr., 1992 | 821.8 | 4840 | 5.88951 | 5662.16 | 48 | 133475 |
| May., 1992 | 799.2 | 4978 | 6.22873 | 5777.55 | 47 | 134274 |
| Jun., 1992 | 842.6 | 5541 | 6.57607 | 6383.97 | 48 | 135117 |
| Jul., 1992 | 855.6 | 4646.7 | 5.43093 | 5502.68 | 48 | 135973 |
| Aug., 1992 | 817.3 | 5015.6 | 6.13679 | 5833.26 | 48 | 136790 |
| Sep., 1992 | 778.4 | 4805.7 | 6.17382 | 5584.44 | 48 | 137568 |
| Oct., 1992 | 815.9 | 5221.3 | 6.39944 | 6037.56 | 48 | 138384 |
| Nov., 1992 | 769.3 | 4710.7 | 6.12336 | 5480.34 | 48 | 139153 |
| Dec., 1992 | 748.7 | 4741.5 | 6.33298 | 5490.53 | 41 | 139902 |
| Jan., 1993 | 730.4 | 4639.1 | 6.35145 | 5369.82 | 42 | 140633 |
| Feb., 1993 | 692.3 | 4546.5 | 6.56724 | 5239.1 | 42 | 141325 |
| Mar., 1993 | 688.6 | 4562.8 | 6.6262 | 5251.7 | 41 | 142013 |
| Apr., 1993 | 668.7 | 4816.4 | 7.20263 | 5485.39 | 47 | 142682 |
| May., 1993 | 685.8 | 4785.6 | 6.97813 | 5471.7 | 48 | 143368 |
| Jun., 1993 | 714.7 | 4886.6 | 6.83727 | 5601.61 | 48 | 144083 |
| Jul., 1993 | 749.4 | 4589.5 | 6.12423 | 5339.23 | 48 | 144832 |
| Aug., 1993 | 701.1 | 5137.5 | 7.32777 | 5838.91 | 48 | 145533 |
| Sep., 1993 | 708.6 | 5870 | 8.28394 | 6578.91 | 48 | 146242 |
| Oct., 1993 | 733.9 | 4830.8 | 6.58237 | 5565.02 | 48 | 146976 |
| Nov., 1993 | 726 | 4905.3 | 6.75661 | 5631.62 | 48 | 147702 |
| Dec., 1993 | 685.2 | 4614 | 6.7338 | 5299.5 | 45 | 148387 |
| Jan., 1994 | 677.9 | 4908.6 | 7.24089 | 5586.8 | 45 | 149065 |
| Feb., 1994 | 669.8 | 4537.7 | 6.77471 | 5207.8 | 46 | 149735 |
| Mar., 1994 | 769.9 | 5384 | 6.99312 | 6154.24 | 47 | 150504 |
| Apr., 1994 | 693.9 | 4729.4 | 6.81568 | 5423.61 | 47 | 151198 |
| May., 1994 | 727.3 | 5282.2 | 7.26275 | 6009.82 | 47 | 151926 |
| Jun., 1994 | 705 | 4816.3 | 6.83163 | 5521.61 | 46 | 152631 |
| Jul., 1994 | 695.4 | 5136.3 | 7.38611 | 5832.01 | 46 | 153326 |
| Aug., 1994 | 652.5 | 4575.9 | 7.01287 | 5228.69 | 46 | 153979 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

Date : 8/7/5 8:11:01 am
User : jfox

Production Data from January, 1983 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Monthly Water m3 | WOR m3/m3 | Monthly Fluid m3 | Num Wells | Cum Oil m3 |
|------------|-------------------|---------------------|--------------|---------------------|-----------|---------------|
| Sep., 1994 | 668 | 4110.7 | 6.15374 | 4778.99 | 46 | 154647 |
| Oct., 1994 | 704.2 | 4590.3 | 6.51846 | 5294.81 | 46 | 155351 |
| Nov., 1994 | 717 | 4356.3 | 6.07573 | 5073.62 | 46 | 156068 |
| Dec., 1994 | 677.3 | 4177.6 | 6.16802 | 4855.2 | 43 | 156745 |
| Jan., 1995 | 690.8 | 4637.4 | 6.71309 | 5328.5 | 43 | 157436 |
| Feb., 1995 | 602.9 | 3875.4 | 6.42793 | 4478.57 | 43 | 158039 |
| Mar., 1995 | 677.6 | 4167.4 | 6.15024 | 4845.3 | 43 | 158716 |
| Apr., 1995 | 636.9 | 4424 | 6.94615 | 5061.18 | 43 | 159353 |
| May., 1995 | 608.8 | 4548.7 | 7.47158 | 5157.77 | 44 | 159962 |
| Jun., 1995 | 618.2 | 4422.7 | 7.15416 | 5041.17 | 45 | 160580 |
| Jul., 1995 | 658.7 | 4547.2 | 6.90329 | 5206.19 | 45 | 161239 |
| Aug., 1995 | 700.2 | 4336.6 | 6.19337 | 5037.11 | 46 | 161939 |
| Sep., 1995 | 653.1 | 4368.2 | 6.68841 | 5021.59 | 46 | 162592 |
| Oct., 1995 | 670.3 | 4008.8 | 5.98061 | 4679.4 | 45 | 163263 |
| Nov., 1995 | 641 | 4238.8 | 6.61279 | 4880.08 | 45 | 163904 |
| Dec., 1995 | 661.1 | 4135.4 | 6.25533 | 4796.79 | 45 | 164565 |
| Jan., 1996 | 647.8 | 4233.9 | 6.53581 | 4881.99 | 44 | 165212 |
| Feb., 1996 | 628.4 | 3880.6 | 6.17537 | 4509.28 | 44 | 165841 |
| Mar., 1996 | 668.4 | 4092.3 | 6.12253 | 4760.99 | 44 | 166509 |
| Apr., 1996 | 605.7 | 3988.9 | 6.5856 | 4594.87 | 44 | 167115 |
| May., 1996 | 636.3 | 4182.9 | 6.57379 | 4819.48 | 44 | 167751 |
| Jun., 1996 | 594.7 | 4074.5 | 6.85135 | 4669.46 | 44 | 168346 |
| Jul., 1996 | 614.8 | 4380.4 | 7.12492 | 4995.47 | 44 | 168961 |
| Aug., 1996 | 667.5 | 4584.1 | 6.86757 | 5251.89 | 44 | 169628 |
| Sep., 1996 | 616.5 | 4452.3 | 7.2219 | 5069.07 | 44 | 170245 |
| Oct., 1996 | 653 | 4032.1 | 6.17473 | 4685.39 | 44 | 170898 |
| Nov., 1996 | 599.5 | 4300.2 | 7.17298 | 4899.96 | 44 | 171497 |
| Dec., 1996 | 591.1 | 4783.1 | 8.09186 | 5374.46 | 44 | 172088 |
| Jan., 1997 | 574.2 | 4902.2 | 8.53744 | 5476.65 | 44 | 172663 |
| Feb., 1997 | 537.3 | 4247.5 | 7.90527 | 4785.04 | 44 | 173200 |
| Mar., 1997 | 587.2 | 4828.8 | 8.22343 | 5416.26 | 44 | 173787 |
| Apr., 1997 | 578.2 | 4727.4 | 8.17606 | 5305.86 | 44 | 174365 |
| May., 1997 | 633.1 | 4602.7 | 7.2701 | 5236.08 | 44 | 174998 |
| Jun., 1997 | 609.6 | 3944.7 | 6.47096 | 4554.57 | 44 | 175608 |
| Jul., 1997 | 589.4 | 4671.1 | 7.92518 | 5260.76 | 44 | 176197 |
| Aug., 1997 | 586.3 | 4480.8 | 7.64251 | 5067.36 | 44 | 176784 |
| Sep., 1997 | 548.9 | 4115.4 | 7.49754 | 4664.54 | 44 | 177332 |
| Oct., 1997 | 590.7 | 4445.7 | 7.52616 | 5036.66 | 45 | 177923 |
| Nov., 1997 | 542.7 | 4510.9 | 8.31196 | 5053.84 | 43 | 178466 |
| Dec., 1997 | 537.5 | 4209.5 | 7.83163 | 4747.24 | 42 | 179003 |
| Jan., 1998 | 579 | 4351.6 | 7.51572 | 4930.86 | 42 | 179582 |
| Feb., 1998 | 534.5 | 3944.9 | 7.38054 | 4479.63 | 42 | 180117 |
| Mar., 1998 | 560.5 | 4323.8 | 7.71418 | 4884.55 | 42 | 180677 |
| Apr., 1998 | 587.2 | 4344.1 | 7.39799 | 4931.56 | 42 | 181265 |
| May., 1998 | 584.8 | 4201.4 | 7.18434 | 4786.46 | 41 | 181849 |
| Jun., 1998 | 568.3 | 3979.9 | 7.00317 | 4548.45 | 41 | 182418 |
| Jul., 1998 | 620.5 | 4334.8 | 6.98598 | 4955.57 | 41 | 183038 |
| Aug., 1998 | 581.5 | 3827.2 | 6.5816 | 4408.96 | 40 | 183620 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

Date : 8/7/5 8:11:02 am
User : jfox

Production Data from January, 1983 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Monthly Water m3 | WOR m3/m3 | Monthly Fluid m3 | Num Wells | Cum Oil m3 |
|------------|-------------------|---------------------|--------------|---------------------|-----------|---------------|
| Sep., 1998 | 572.5 | 4169 | 7.2821 | 4741.75 | 40 | 184192 |
| Oct., 1998 | 579.1 | 4395.1 | 7.58954 | 4974.46 | 40 | 184771 |
| Nov., 1998 | 569.4 | 4401.9 | 7.73077 | 4971.55 | 40 | 185341 |
| Dec., 1998 | 575.7 | 4252.5 | 7.38666 | 4828.45 | 40 | 185916 |
| Jan., 1999 | 550.5 | 4560.5 | 8.28429 | 5111.24 | 39 | 186467 |
| Feb., 1999 | 491.1 | 4193.6 | 8.5392 | 4684.92 | 39 | 186958 |
| Mar., 1999 | 517.8 | 4220.5 | 8.15083 | 4738.53 | 38 | 187476 |
| Apr., 1999 | 500.9 | 3872.7 | 7.73148 | 4373.82 | 37 | 187977 |
| May., 1999 | 501 | 4079 | 8.14172 | 4580.22 | 37 | 188478 |
| Jun., 1999 | 463 | 3909.8 | 8.44449 | 4373 | 36 | 188941 |
| Jul., 1999 | 477.9 | 4050.6 | 8.47583 | 4528.71 | 36 | 189419 |
| Aug., 1999 | 583.9 | 4211.1 | 7.21202 | 4795.26 | 39 | 190002 |
| Sep., 1999 | 570 | 4072.6 | 7.14491 | 4642.85 | 41 | 190572 |
| Oct., 1999 | 549.1 | 4119 | 7.50137 | 4668.34 | 41 | 191122 |

Nov/99 522.9

Dec/99 533.6

15D-27 INJECTION PATTERNS

CUM
INJECTION Dec/68 to Dec/91 = 203,233.6 m³

VOIDAGE

OIL 21446.7 - 14031.2 = 7415.5 m³ (8008.7 m³)

WATER

OOIP 15D-27 INJ. PATTERN

| WELL | AREA | ØH |
|-------|------|--------|
| 15-27 | 16.2 | 1.57 |
| 16-27 | 16.2 | 2.08 |
| 1-34 | 16.2 | 0.94 |
| 2-34 | 16.2 | 1.05 |
| | | Σ 5.64 |

$$OOIP = 10000 \times 16.2 \times 5.64 (1 - 0.3) \times 1 / 1.08 = \underline{592,200 \text{ m}^3}$$

ESTIMATE SWAYER.

$$S_w = 29.6\%$$

use $S_w = 30\%$

$$\Sigma \phi h = 48 \text{ all}$$

$$\text{Total Area} = 50 \times 16.2 = 810 \text{ ha}$$

$$OOIP = 5084 \times 10^3 \text{ m}^3$$

$$Boi = 1.08 \text{ m}^3/\text{m}^3$$

BRANCH RECOVERY ESTIMATES

ISD 27 INJ PATTERNS

WF Recovery. (ECO. UNIT 0.2 m³/o well)

DEC/95 - OCT/99 EXP
DECLINE - 6.75%

Rem Rec Res - 13523 m³
ULT. Rec. Res - 47365 m³

AUG/93 - OCT/99 EXP
DECLINE 7.03%

Rem Rec Res - 12699
ULT. Rec. Res - 46341

USE 27 NOV/95 - JAN/99 EXP
DECL. - 4.92%
(MATCHES ZARGON'S EST)

Rem Rec Res - 19476
ULT. Rec. Res - 53318
(9.0% CO₂)

DEC/95 - DEC/98 EXP
DEC - 4.81%

Rem Rec Res - 19983
ULT. Rec. Res - 53825

PRIMARY RECOVERY

MAR/87 - JAN/89 EXP
DEC 20.6%

Q_T = 10426 + 365(8.05 - 0.8)
1.206

Q_T = 23272 m³

USE 27 NOV/87 - JAN/89 EXP
DEC 14.4%

Q_T = 12027 + 365(6.04 - 0.8)
1.144

Q_T = 25309 m³
(4.3% CO₂)

JUL/87 - JAN/89 EXP
DEC 17.8%

Q_T = 11253 + 365(6.9 - 0.8)
1.118

Q_T = 23761 m³

ZARGON'S ESTIMATE 28.6 10³m³ (4.8% CO₂)

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
 Well : Production Summary Well
 : 000000278
 Hist.Data : 07/84-10/99
 Operator :
 Field :

Date : 8/7/5 9:05:13 am
 User : jfox
 On Prod : 02/09
 Status : Unknown
 Zone :

Production Data from July, 1984 to October, 1999

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | Month Water Inj m3 | WOR m3/m3 | Num Wells | Cum Oil m3 |
|------------|-----------------------|-------------------------|-----------------------|--------------|-----------|---------------|
| Jul., 1984 | 6.925 | 17.6031 | | 1.54152 | 1 | 27.7 |
| Aug., 1984 | 2.34211 | 3.8484 | | 0.642697 | 1 | 72.2 |
| Sep., 1984 | 8.53929 | 12.4502 | | 0.457549 | 1 | 311.3 |
| Oct., 1984 | 14.0903 | 20.1481 | | 0.429487 | 2 | 529.7 |
| Nov., 1984 | 17.0381 | 24.0837 | | 0.41308 | 2 | 887.5 |
| Dec., 1984 | 14.8571 | 22.7565 | | 0.53125 | 2 | 1095.5 |
| Jan., 1985 | 21.6537 | 31.4925 | | 0.453931 | 2 | 1539.4 |
| Feb., 1985 | 20.8269 | 28.463 | | 0.366205 | 2 | 2080.9 |
| Mar., 1985 | 16.4491 | 23.2072 | | 0.410415 | 2 | 2516.8 |
| Apr., 1985 | 18.4982 | 25.0608 | | 0.354325 | 2 | 3044 |
| May., 1985 | 14.0164 | 18.5734 | | 0.324678 | 2 | 3471.5 |
| Jun., 1985 | 11.8 | 15.7237 | | 0.332078 | 2 | 3790.1 |
| Jul., 1985 | 10.3379 | 13.7287 | | 0.327552 | 2 | 4089.9 |
| Aug., 1985 | 10.15 | 13.9723 | | 0.376144 | 2 | 4374.1 |
| Sep., 1985 | 14.4145 | 19.6563 | | 0.363209 | 3 | 4672 |
| Oct., 1985 | 19.0839 | 34.4471 | | 0.804598 | 4 | 5115.7 |
| Nov., 1985 | 16.2912 | 26.6107 | | 0.632996 | 4 | 5580 |
| Dec., 1985 | 14.4178 | 22.7086 | | 0.574599 | 4 | 5904.4 |
| Jan., 1986 | 14.5787 | 22.6278 | | 0.551676 | 3 | 6336.9 |
| Feb., 1986 | 17.7918 | 37.3303 | | 1.09773 | 4 | 6772.8 |
| Mar., 1986 | 17.4581 | 25.5432 | | 0.462676 | 4 | 7178.7 |
| Apr., 1986 | 14.2473 | 21.9808 | | 0.542369 | 4 | 7570.5 |
| May., 1986 | 12.2281 | 19.6583 | | 0.607191 | 4 | 7940.4 |
| Jun., 1986 | 11.4523 | 18.6177 | | 0.625236 | 4 | 8258.2 |
| Jul., 1986 | 11.362 | 19.5686 | | 0.721851 | 4 | 8601.9 |
| Aug., 1986 | 9.90968 | 16.2721 | | 0.641602 | 4 | 8909.1 |
| Sep., 1986 | 9.21017 | 14.8176 | | 0.608392 | 4 | 9180.8 |
| Oct., 1986 | 9.38182 | 15.8091 | | 0.684637 | 4 | 9464.6 |
| Nov., 1986 | 8.7 | 14.0004 | | 0.608799 | 4 | 9716.9 |
| Dec., 1986 | 9.26281 | 16.7115 | | 0.803712 | 4 | 9997.1 |
| Jan., 1987 | 8.43419 | 14.3285 | | 0.698419 | 4 | 10243.8 |
| Feb., 1987 | 7.2 | 14.4784 | | 1.01045 | 4 | 10425.6 |
| Mar., 1987 | 8.04706 | 14.743 | | 0.831663 | 4 | 10665 |
| Apr., 1987 | 7.51538 | 15.4148 | | 1.05067 | 4 | 10860.4 |
| May., 1987 | 6.17479 | 10.0968 | | 0.634731 | 4 | 11044.1 |
| Jun., 1987 | 7.21724 | 10.9515 | | 0.516961 | 4 | 11253.4 |
| Jul., 1987 | 6.94576 | 10.7895 | | 0.552953 | 4 | 11458.3 |
| Aug., 1987 | 6.69667 | 10.2263 | | 0.52663 | 4 | 11659.2 |
| Sep., 1987 | 6.16667 | 9.46605 | | 0.534595 | 4 | 11844.2 |
| Oct., 1987 | 5.88064 | 9.13162 | | 0.552386 | 4 | 12026.5 |
| Nov., 1987 | 6.04333 | 9.21933 | | 0.525097 | 4 | 12207.8 |
| Dec., 1987 | 5.42903 | 8.23787 | | 0.516934 | 4 | 12376.1 |
| Jan., 1988 | 5.64516 | 8.68958 | | 0.538857 | 4 | 12551.1 |
| Feb., 1988 | 5.92857 | 9.57047 | | 0.613855 | 4 | 12717.1 |

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
Well : Production Summary Well
: 000000278

Date : 8/7/5 9:05:13 am
User : jfox

Production Data from July, 1984 to October, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | Month Water Inj m3 | WOR m3/m3 | Num Wells | Cum Oil m3 |
|------------|-----------------------|-------------------------|---|--------------|-----------|---------------|
| Mar., 1988 | 5.84138 | 9.46119 | | 0.619244 | 4 | 12886.5 |
| Apr., 1988 | 5 | 7.62554 | | 0.524667 | 4 | 13036.5 |
| May., 1988 | 5.30769 | 7.59721 | | 0.430918 | 4 | 13140 |
| Jun., 1988 | 5.23111 | 7.74453 | | 0.480034 | 4 | 13257.7 |
| Jul., 1988 | 5.32581 | 8.58622 | | 0.61175 | 4 | 13422.8 |
| Aug., 1988 | 5.07213 | 8.53994 | | 0.683258 | 4 | 13577.5 |
| Sep., 1988 | 4.91333 | 8.47216 | | 0.723881 | 4 | 13724.9 |
| Oct., 1988 | 4.80968 | 8.95051 | | 0.860496 | 4 | 13874 |
| Nov., 1988 | 5.24 | 8.12897 | | 0.550891 | 4 | 14031.2 |
| Dec., 1988 | 5.02903 | 8.1377 | | 0.617704 | 4 | 14187.1 |
| Jan., 1989 | 4.90323 | 8.08926 | | 0.649342 | 4 | 14339.1 |
| Feb., 1989 | 4.81786 | 7.65569 | | 0.588584 | 4 | 14474 |
| Mar., 1989 | 6.45161 | 9.55445 | | 0.4805 | 4 | 14674 |
| Apr., 1989 | 6.30333 | 9.58278 | | 0.519831 | 4 | 14863.1 |
| May., 1989 | 4.6129 | 7.09235 | | 0.537063 | 4 | 14934.6 |
| Jun., 1989 | 6.80741 | 9.95856 | | 0.462459 | 4 | 15118.4 |
| Jul., 1989 | 7.84194 | 12.468 | | 0.589469 | 4 | 15361.5 |
| Aug., 1989 | 9.53771 | 14.4632 | — Production peak 2 months later @ 1.9# pre-WF prod rate | 0.515985 | 4 | 15652.4 |
| Sep., 1989 | 9.00667 | 14.0973 | | 0.564767 | 4 | 15922.6 |
| Oct., 1989 | 8.63871 | 12.6103 | | 0.459298 | 4 | 16190.4 |
| Nov., 1989 | 7.83667 | 11.5168 | | 0.469162 | 4 | 16425.5 |
| Dec., 1989 | 7.88387 | 11.6648 | | 0.479133 | 4 | 16669.9 |
| Jan., 1990 | 8.13226 | 11.9907 | | 0.474018 | 4 | 16922 |
| Feb., 1990 | 7.28572 | 11.0425 | | 0.515196 | 4 | 17126 |
| Mar., 1990 | 6.70569 | 9.71027 | | 0.447624 | 4 | 17332.2 |
| Apr., 1990 | 8.45333 | 11.1337 | | 0.31664 | 4 | 17585.8 |
| May., 1990 | 5.8875 | 6.76509 | | 0.14862 | 4 | 17632.9 |
| Jun., 1990 | 8.07231 | 9.39125 | | 0.16295 | 3 | 17807.8 |
| Jul., 1990 | 7.76 | 9.36008 | | 0.205756 | 4 | 18040.6 |
| Aug., 1990 | 7.34839 | 9.27098 | | 0.261194 | 4 | 18268.4 |
| Sep., 1990 | 7.38667 | 10.8799 | | 0.472473 | 4 | 18490 |
| Oct., 1990 | 7.37419 | 11.4807 | | 0.55643 | 4 | 18718.6 |
| Nov., 1990 | 7.54667 | 11.7633 | | 0.558304 | 4 | 18945 |
| Dec., 1990 | 7.0871 | 12.1193 | | 0.709604 | 4 | 19164.7 |
| Jan., 1991 | 7.56748 | 12.7025 | | 0.678126 | 4 | 19397.4 |
| Feb., 1991 | 6.64286 | 11.5744 | | 0.741935 | 4 | 19583.4 |
| Mar., 1991 | 6.99032 | 12.0515 | | 0.723581 | 4 | 19800.1 |
| Apr., 1991 | 6.37333 | 8.58281 | | 0.346234 | 4 | 19991.3 |
| May., 1991 | 5.65484 | 8.3283 | | 0.472333 | 4 | 20166.6 |
| Jun., 1991 | 5.71333 | 8.39918 | | 0.469662 | 4 | 20338 |
| Jul., 1991 | 6.06452 | 8.81557 | | 0.453192 | 4 | 20526 |
| Aug., 1991 | 6.11228 | 9.91497 | | 0.621699 | 4 | 20700.2 |
| Sep., 1991 | 6.23 | 10.4761 | | 0.681113 | 4 | 20887.1 |
| Oct., 1991 | 6.10323 | 10.3059 | | 0.688161 | 4 | 21076.3 |
| Nov., 1991 | 6.11333 | 10.0827 | | 0.648855 | 4 | 21259.7 |
| Dec., 1991 | 6.03226 | 10.3704 | | 0.718717 | 4 | 21446.7 |
| Jan., 1992 | 6.21936 | 9.66403 | INJECTION SUSPENDED | 0.553423 | 4 | 21639.5 |
| Feb., 1992 | 6.35862 | 9.84073 | | 0.54718 | 4 | 21823.9 |

← INJECTION
COMMENCED

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
Well : Production Summary Well
: 000000278

Date : 8/7/5 9:05:13 am
User : jfox

Production Data from July, 1984 to October, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | Month Water Inj m3 | WOR m3/m3 | Num Wells | Cum Oil m3 |
|------------|-----------------------|-------------------------|-----------------------|--------------|-----------|---------------|
| Mar., 1992 | 6.15161 | 9.80594 | | 0.593603 | 4 | 22014.6 |
| Apr., 1992 | 9.21067 | 14.6387 | | 0.588882 | 4 | 22187.3 |
| May., 1992 | 8.10127 | 13.0264 | | 0.6075 | 4 | 22347.3 |
| Jun., 1992 | 7.92329 | 13.3679 | | 0.686722 | 4 | 22491.9 |
| Jul., 1992 | 7.75897 | 12.506 | | 0.611368 | 4 | 22643.2 |
| Aug., 1992 | 7.25128 | 12.5622 | INJECTION | 0.731966 | 4 | 22784.6 |
| Sep., 1992 | 7.44 | 12.0246 | Recommend | 0.615771 | 4 | 22924.1 |
| Oct., 1992 | 7.65128 | 12.4393 | <50% of | 0.625335 | 4 | 23073.3 |
| Nov., 1992 | 4.68174 | 7.50815 | Initial rate | 0.603269 | 4 | 23207.9 |
| Dec., 1992 | 4.85902 | 7.77591 | | 0.599865 | 4 | 23356.1 |
| Jan., 1993 | 4.79032 | 7.61179 | | 0.588552 | 4 | 23504.6 |
| Feb., 1993 | 5.08571 | 8.18438 | | 0.608848 | 4 | 23647 |
| Mar., 1993 | 4.37742 | 7.31161 | | 0.66986 | 4 | 23782.7 |
| Apr., 1993 | 6.96338 | 13.0566 | | 0.874595 | 4 | 23906.3 |
| May., 1993 | 6.57534 | 15.9865 | | 1.43083 | 4 | 24026.3 |
| Jun., 1993 | 8.17297 | 17.4306 | production - | 1.13228 | 4 | 24177.5 |
| Jul., 1993 | 5.90645 | 9.44776 | peaked 10 | 0.599126 | 4 | 24360.6 |
| Aug., 1993 | 5.65246 | 9.19265 | months later | 0.62587 | 4 | 24533 |
| Sep., 1993 | 5.30333 | 10.0323 | at 1/2 * | 0.891263 | 4 | 24692.1 |
| Oct., 1993 | 5.18374 | 8.71773 | pre-inj rate | 0.681305 | 4 | 24851.5 |
| Nov., 1993 | 4.91333 | 9.02216 | | 0.835821 | 4 | 24998.9 |
| Dec., 1993 | 4.67009 | 8.59009 | | 0.838946 | 4 | 25135.5 |
| Jan., 1994 | 4.68276 | 9.02275 | | 0.926362 | 4 | 25271.3 |
| Feb., 1994 | 5.08571 | 9.40938 | | 0.849719 | 4 | 25413.7 |
| Mar., 1994 | 5.56 | 9.96912 | | 0.792566 | 4 | 25580.5 |
| Apr., 1994 | 4.90756 | 8.70468 | | 0.773288 | 4 | 25726.5 |
| May., 1994 | 4.76452 | 12.5569 | | 1.63507 | 4 | 25874.2 |
| Jun., 1994 | 4.76923 | 12.4089 | | 1.60143 | 4 | 26013.7 |
| Jul., 1994 | 4.49106 | 12.3402 | | 1.74728 | 4 | 26151.8 |
| Aug., 1994 | 5.59565 | 13.8372 | | 1.47242 | 4 | 26280.5 |
| Sep., 1994 | 4.45714 | 10.5868 | | 1.37481 | 4 | 26413.1 |
| Oct., 1994 | 4.4595 | 11.5259 | | 1.58414 | 4 | 26548 |
| Nov., 1994 | 4.94667 | 11.7822 | | 1.3814 | 4 | 26696.4 |
| Dec., 1994 | 4.51613 | 10.7859 | | 1.38786 | 4 | 26836.4 |
| Jan., 1995 | 4.67419 | 11.6666 | | 1.49551 | 4 | 26981.3 |
| Feb., 1995 | 4.59273 | 10.9257 | | 1.37846 | 4 | 27107.6 |
| Mar., 1995 | 4.5 | 10.7375 | | 1.38566 | 4 | 27247.1 |
| Apr., 1995 | 4.41008 | 11.6087 | | 1.63186 | 4 | 27378.3 |
| May., 1995 | 6.25846 | 17.6028 | | 1.81219 | 4 | 27480 |
| Jun., 1995 | 5.95 | 16.0748 | | 1.70121 | 4 | 27587.1 |
| Jul., 1995 | 5.42609 | 14.6893 | | 1.70673 | 4 | 27711.9 |
| Aug., 1995 | 6.36405 | 14.8343 | | 1.33051 | 4 | 27853.5 |
| Sep., 1995 | 5.78222 | 14.8159 | | 1.56188 | 4 | 27983.6 |
| Oct., 1995 | 6.33192 | 15.0028 | | 1.36895 | 4 | 28132.4 |
| Nov., 1995 | 4.50333 | 10.882 | | 1.41599 | 4 | 28267.5 |
| Dec., 1995 | 4.45246 | 10.7921 | | 1.42342 | 4 | 28403.3 |
| Jan., 1996 | 4.13333 | 10.9457 | | 1.64771 | 4 | 28521.1 |
| Feb., 1996 | 4.61724 | 11.2089 | | 1.42718 | 4 | 28655 |

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
Well : Production Summary Well
: 000000278

Date : 8/7/5 9:05:13 am
User : jfox

Production Data from July, 1984 to October, 1999 (cont.)

| Year | Avg Daily Oil m3/d | Avg Daily Fluid m3/d | Month Water Inj m3 | WOR m3/m3 | Num Wells | Cum Oil m3 |
|------------|-----------------------|-------------------------|-----------------------|--------------|-----------|-------------------|
| Mar., 1996 | 4.65484 | 11.3537 | | 1.43867 | 4 | 28799.3 |
| Apr., 1996 | 4.62333 | 11.3587 | | 1.45638 | 4 | 28938 |
| May., 1996 | 4.37377 | 11.1396 | | 1.54648 | 4 | 29071.4 |
| Jun., 1996 | 4.44561 | 11.237 | | 1.52723 | 4 | 29198.1 |
| Jul., 1996 | 3.66129 | 10.4339 | | 1.84934 | 4 | 29311.6 |
| Aug., 1996 | 4.22258 | 9.88573 | | 1.34072 | 4 | 29442.5 |
| Sep., 1996 | 4.15333 | 9.78516 | | 1.35554 | 4 | 29567.1 |
| Oct., 1996 | 4.15161 | 9.18892 | | 1.2129 | 4 | 29695.8 |
| Nov., 1996 | 4.2084 | 9.63547 | | 1.28914 | 4 | 29821 |
| Dec., 1996 | 3.98699 | 9.82615 | | 1.46411 | 4 | 29943.6 |
| Jan., 1997 | 3.77419 | 9.75973 | | 1.58547 | 4 | 30060.6 |
| Feb., 1997 | 4.28214 | 10.5912 | | 1.47289 | 4 | 30180.5 |
| Mar., 1997 | 4.10968 | 10.2857 | | 1.50235 | 4 | 30307.9 |
| Apr., 1997 | 4.10667 | 10.0618 | | 1.44968 | 4 | 30431.1 |
| May., 1997 | 4.14839 | 9.35344 | | 1.25428 | 4 | 30559.7 |
| Jun., 1997 | 4.50667 | 11.2087 | | 1.48669 | 4 | 30694.9 |
| Jul., 1997 | 3.48099 | 9.88253 | | 1.83856 | 4 | 30800.2 |
| Aug., 1997 | 3.87667 | 10.1517 | | 1.61823 | 4 | 30916.5 |
| Sep., 1997 | 3.93793 | 10.35 | | 1.62785 | 4 | 31030.7 |
| Oct., 1997 | 3.93871 | 10.4372 | | 1.64947 | 4 | 31152.8 |
| Nov., 1997 | 4.14828 | 10.726 | | 1.5852 | 4 | 31273.1 |
| Dec., 1997 | 3.75161 | 10.1339 | | 1.70077 | 4 | 31389.4 |
| Jan., 1998 | 4.20968 | 10.7986 | | 1.56475 | 4 | 31519.9 |
| Feb., 1998 | 4.21071 | 10.934 | | 1.59627 | 4 | 31637.8 |
| Mar., 1998 | 4.05806 | 10.6502 | | 1.62401 | 4 | 31763.6 |
| Apr., 1998 | 4.3 | 11.6652 | | 1.7124 | 4 | 31892.6 |
| May., 1998 | 3.65806 | 10.4661 | | 1.86067 | 4 | 32006 |
| Jun., 1998 | 3.75932 | 10.6322 | | 1.82777 | 4 | 32116.9 |
| Jul., 1998 | 4.09677 | 11.2792 | | 1.75276 | 4 | 32243.9 |
| Aug., 1998 | 3.90645 | 10.5791 | | 1.70768 | 4 | 32365 |
| Sep., 1998 | 3.92881 | 11.1712 | | 1.84297 | 4 | 32480.9 |
| Oct., 1998 | 3.69677 | 11.1823 | | 2.02443 | 4 | 32595.5 |
| Nov., 1998 | 3.66333 | 11.3616 | | 2.101 | 4 | 32705.4 |
| Dec., 1998 | 3.69032 | 11.05 | | 1.99388 | 4 | 32819.8 |
| Jan., 1999 | 3.55484 | 11.3145 | | 2.1824 | 4 | 32930 |
| Feb., 1999 | 3.44505 | 11.5114 | | 2.341 | 4 | 33025.6 |
| Mar., 1999 | 3.37 | 10.6482 | | 2.15925 | 4 | 33126.7 |
| Apr., 1999 | 3.91667 | 10.4417 | | 1.66553 | 4 | 33244.2 |
| May., 1999 | 3.62857 | 10.5016 | | 1.8937 | 4 | 33345.8 |
| Jun., 1999 | 2.66667 | 8.39784 | | 2.14875 | 3 | 33425.8 - exclude |
| Jul., 1999 | 2.68387 | 8.52376 | | 2.17548 | 3 | 33509 - exclude |
| Aug., 1999 | 3.71525 | 10.6118 | | 1.85584 | 4 | 33618.6 |
| Sep., 1999 | 3.67667 | 11.0783 | | 2.01269 | 4 | 33728.9 |
| Oct., 1999 | 3.65161 | 11.7661 | | 2.22173 | 4 | 33842.1 |

MINORLY PROD. WTR
Nov 99
Dec 99
Jan 00

Review Decline

Nov/95 to Oct/99 - exclud. total.

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
Well : Production Summary Well
 : 000000278
Hist.Data : 07/84-10/99
Operator :
Field :

Date : 8/17/95 3:40:59 am
User : jfox
On Prod : 02/09
Status : Unknown
Zone :

Production Data from July, 1984 to October, 1999

| Year | Monthly Oil m3 | Monthly Water m3 | Month Water Inj m3 | Cum Oil m3 | Cum Water m3 | Cum Water Inj m3 |
|------------|-------------------|---------------------|-----------------------|---------------|-----------------|---------------------|
| Jul., 1984 | 27.7 | 42.7 | | 27.7 | 42.7 | |
| Aug., 1984 | 44.5 | 28.6 | | 72.2 | 71.3 | |
| Sep., 1984 | 239.1 | 109.4 | | 311.3 | 180.7 | |
| Oct., 1984 | 218.4 | 93.8 | | 529.7 | 274.5 | |
| Nov., 1984 | 357.8 | 147.8 | | 887.5 | 422.3 | |
| Dec., 1984 | 208 | 110.5 | | 1095.5 | 532.8 | |
| Jan., 1985 | 443.9 | 201.5 | | 1539.4 | 734.3 | |
| Feb., 1985 | 541.5 | 198.3 | | 2080.9 | 932.6 | |
| Mar., 1985 | 435.9 | 178.9 | | 2516.8 | 1111.5 | |
| Apr., 1985 | 527.2 | 186.8 | | 3044 | 1298.3 | |
| May., 1985 | 427.5 | 138.8 | | 3471.5 | 1437.1 | |
| Jun., 1985 | 318.6 | 105.8 | | 3790.1 | 1542.9 | |
| Jul., 1985 | 299.8 | 98.2 | | 4089.9 | 1641.1 | |
| Aug., 1985 | 284.2 | 106.9 | | 4374.1 | 1748 | |
| Sep., 1985 | 297.9 | 108.2 | | 4672 | 1856.2 | |
| Oct., 1985 | 443.7 | 357 | | 5115.7 | 2213.2 | |
| Nov., 1985 | 464.3 | 293.9 | | 5580 | 2507.1 | |
| Dec., 1985 | 324.4 | 186.4 | | 5904.4 | 2693.5 | |
| Jan., 1986 | 432.5 | 238.6 | | 6336.9 | 2932.1 | |
| Feb., 1986 | 435.9 | 478.5 | | 6772.8 | 3410.6 | |
| Mar., 1986 | 405.9 | 187.8 | | 7178.7 | 3598.4 | |
| Apr., 1986 | 391.8 | 212.5 | | 7570.5 | 3810.9 | |
| May., 1986 | 369.9 | 224.6 | | 7940.4 | 4035.5 | |
| Jun., 1986 | 317.8 | 198.7 | | 8258.2 | 4234.2 | |
| Jul., 1986 | 343.7 | 248.1 | | 8601.9 | 4482.3 | |
| Aug., 1986 | 307.2 | 197.1 | | 8909.1 | 4679.4 | |
| Sep., 1986 | 271.7 | 165.3 | | 9180.8 | 4844.7 | |
| Oct., 1986 | 283.8 | 194.3 | | 9464.6 | 5039 | |
| Nov., 1986 | 252.3 | 153.6 | | 9716.9 | 5192.6 | |
| Dec., 1986 | 280.2 | 225.2 | | 9997.1 | 5417.8 | |
| Jan., 1987 | 246.7 | 172.3 | | 10243.8 | 5590.1 | |
| Feb., 1987 | 181.8 | 183.7 | | 10425.6 | 5773.8 | |
| Mar., 1987 | 239.4 | 199.1 | | 10665 | 5972.9 | |
| Apr., 1987 | 195.4 | 205.3 | | 10860.4 | 6178.2 | |
| May., 1987 | 183.7 | 116.6 | | 11044.1 | 6294.8 | |
| Jun., 1987 | 209.3 | 108.2 | | 11253.4 | 6403 | |
| Jul., 1987 | 204.9 | 113.3 | | 11458.3 | 6516.3 | |
| Aug., 1987 | 200.9 | 105.8 | | 11659.2 | 6622.1 | |
| Sep., 1987 | 185 | 98.9 | | 11844.2 | 6721 | |
| Oct., 1987 | 182.3 | 100.7 | | 12026.5 | 6821.7 | |
| Nov., 1987 | 181.3 | 95.2 | | 12207.8 | 6916.9 | |
| Dec., 1987 | 168.3 | 87 | | 12376.1 | 7003.9 | |
| Jan., 1988 | 175 | 94.3 | | 12551.1 | 7098.2 | |
| Feb., 1988 | 166 | 101.9 | | 12717.1 | 7200.1 | |

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
Well : Production Summary Well
: 000000278

Date : 8/17/95 3:40:59 am
User : jfox

Production Data from July, 1984 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Monthly Water m3 | Month Water Inj m3 | Cum Oil m3 | Cum Water m3 | Cum Water Inj m3 |
|------------|-------------------|---------------------|-----------------------|---------------|-----------------|---------------------|
| Mar., 1988 | 169.4 | 104.9 | | 12886.5 | 7305 | |
| Apr., 1988 | 150 | 78.7 | | 13036.5 | 7383.7 | |
| May., 1988 | 103.5 | 44.6 | | 13140 | 7428.3 | |
| Jun., 1988 | 117.7 | 56.5 | | 13257.7 | 7484.8 | |
| Jul., 1988 | 165.1 | 101 | | 13422.8 | 7585.8 | |
| Aug., 1988 | 154.7 | 105.7 | | 13577.5 | 7691.5 | |
| Sep., 1988 | 147.4 | 106.7 | | 13724.9 | 7798.2 | |
| Oct., 1988 | 149.1 | 128.3 | | 13874 | 7926.5 | |
| Nov., 1988 | 157.2 | 86.6 | | 14031.2 | 8013.1 | |
| Dec., 1988 | 155.9 | 96.3 | INJ COMPLETED | 14187.1 | 8109.4 | |
| Jan., 1989 | 152 | 98.7 | | 14339.1 | 8208.1 | |
| Feb., 1989 | 134.9 | 79.4 | | 14474 | 8287.5 | |
| Mar., 1989 | 200 | 96.1 | | 14674 | 8383.6 | |
| Apr., 1989 | 189.1 | 98.3 | | 14863.1 | 8481.9 | |
| May., 1989 | 71.5 | 38.4 | | 14934.6 | 8520.3 | |
| Jun., 1989 | 183.8 | 85 | | 15118.4 | 8605.3 | |
| Jul., 1989 | 243.1 | 143.3 | | 15361.5 | 8748.6 | |
| Aug., 1989 | 290.9 | 150.1 | | 15652.4 | 8898.7 | |
| Sep., 1989 | 270.2 | 152.6 | | 15922.6 | 9051.3 | |
| Oct., 1989 | 267.8 | 123 | | 16190.4 | 9174.3 | |
| Nov., 1989 | 235.1 | 110.3 | | 16425.5 | 9284.6 | |
| Dec., 1989 | 244.4 | 117.1 | | 16669.9 | 9401.7 | |
| Jan., 1990 | 252.1 | 119.5 | | 16922 | 9521.2 | |
| Feb., 1990 | 204 | 105.1 | | 17126 | 9626.3 | |
| Mar., 1990 | 206.2 | 92.3 | | 17332.2 | 9718.6 | |
| Apr., 1990 | 253.6 | 80.3 | | 17585.8 | 9798.9 | |
| May., 1990 | 47.1 | 7 | | 17632.9 | 9805.9 | |
| Jun., 1990 | 174.9 | 28.5 | | 17807.8 | 9834.4 | |
| Jul., 1990 | 232.8 | 47.9 | | 18040.6 | 9882.3 | |
| Aug., 1990 | 227.8 | 59.5 | | 18268.4 | 9941.8 | |
| Sep., 1990 | 221.6 | 104.7 | | 18490 | 10046.5 | |
| Oct., 1990 | 228.6 | 127.2 | | 18718.6 | 10173.7 | |
| Nov., 1990 | 226.4 | 126.4 | | 18945 | 10300.1 | |
| Dec., 1990 | 219.7 | 155.9 | | 19164.7 | 10456 | |
| Jan., 1991 | 232.7 | 157.8 | | 19397.4 | 10613.8 | |
| Feb., 1991 | 186 | 138 | | 19583.4 | 10751.8 | |
| Mar., 1991 | 216.7 | 156.8 | | 19800.1 | 10908.6 | |
| Apr., 1991 | 191.2 | 66.2 | | 19991.3 | 10974.8 | |
| May., 1991 | 175.3 | 82.8 | | 20166.6 | 11057.6 | |
| Jun., 1991 | 171.4 | 80.5 | | 20338 | 11138.1 | |
| Jul., 1991 | 188 | 85.2 | | 20526 | 11223.3 | |
| Aug., 1991 | 174.2 | 108.3 | | 20700.2 | 11331.6 | |
| Sep., 1991 | 186.9 | 127.3 | | 20887.1 | 11458.9 | |
| Oct., 1991 | 189.2 | 130.2 | | 21076.3 | 11589.1 | |
| Nov., 1991 | 183.4 | 119 | | 21259.7 | 11708.1 | |
| Dec., 1991 | 187 | 134.4 | | 21446.7 | 11842.5 | |
| Jan., 1992 | 192.8 | 106.7 | INJ SUSPENDED | 21639.5 | 11949.2 | |
| Feb., 1992 | 184.4 | 100.9 | | 21823.9 | 12050.1 | |

VOIDAGE DEC/89 to JAN/92
OIL - 7415.5
WTR - 3829.4

VOIDAGE
7415.5 * 1.08 + 3829.4
= 11838 AM³
WTR INJ = 203233.6

VRP = $\frac{203233.6}{11838} = 17.2$

Cum VRP
 $\frac{203233.6}{35005} = 5.8$

OUT OF ZONE
INJECTION (?)

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
Well : Production Summary Well
: 000000278

Date : 8/17/95 3:40:59 am
User : jfox

Production Data from July, 1984 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Monthly Water m3 | Month Water Inj m3 | Cum Oil m3 | Cum Water m3 | Cum Water Inj m3 |
|------------|-------------------|---------------------|-----------------------|---------------|-----------------|---------------------|
| Mar., 1992 | 190.7 | 113.2 | | 22014.6 | 12163.3 | |
| Apr., 1992 | 172.7 | 101.7 | | 22187.3 | 12265 | |
| May., 1992 | 160 | 97.2 | | 22347.3 | 12362.2 | |
| Jun., 1992 | 144.6 | 99.3 | | 22491.9 | 12461.5 | |
| Jul., 1992 | 151.3 | 92.5 | | 22643.2 | 12554 | |
| Aug., 1992 | 141.4 | 103.5 | | 22784.6 | 12657.5 | |
| Sep., 1992 | 139.5 | 85.9 | | 22924.1 | 12743.4 | |
| Oct., 1992 | 149.2 | 93.3 | | 23073.3 | 12836.7 | |
| Nov., 1992 | 134.6 | 81.2 | | 23207.9 | 12917.9 | |
| Dec., 1992 | 148.2 | 88.9 | | 23356.1 | 13006.8 | |
| Jan., 1993 | 148.5 | 87.4 | | 23504.6 | 13094.2 | |
| Feb., 1993 | 142.4 | 86.7 | | 23647 | 13180.9 | |
| Mar., 1993 | 135.7 | 90.9 | | 23782.7 | 13271.8 | |
| Apr., 1993 | 123.6 | 108.1 | | 23906.3 | 13379.9 | |
| May., 1993 | 120 | 171.7 | | 24026.3 | 13551.6 | |
| Jun., 1993 | 151.2 | 171.2 | | 24177.5 | 13722.8 | |
| Jul., 1993 | 183.1 | 109.7 | | 24360.6 | 13832.5 | |
| Aug., 1993 | 172.4 | 107.9 | | 24533 | 13940.4 | |
| Sep., 1993 | 159.1 | 141.8 | | 24692.1 | 14082.2 | |
| Oct., 1993 | 159.4 | 108.6 | | 24851.5 | 14190.8 | |
| Nov., 1993 | 147.4 | 123.2 | | 24998.9 | 14314 | |
| Dec., 1993 | 136.6 | 114.6 | | 25135.5 | 14428.6 | |
| Jan., 1994 | 135.8 | 125.8 | | 25271.3 | 14554.4 | |
| Feb., 1994 | 142.4 | 121 | | 25413.7 | 14675.4 | |
| Mar., 1994 | 166.8 | 132.2 | | 25580.5 | 14807.6 | |
| Apr., 1994 | 146 | 112.9 | | 25726.5 | 14920.5 | |
| May., 1994 | 147.7 | 241.5 | | 25874.2 | 15162 | |
| Jun., 1994 | 139.5 | 223.4 | | 26013.7 | 15385.4 | |
| Jul., 1994 | 138.1 | 241.3 | | 26151.8 | 15626.7 | |
| Aug., 1994 | 128.7 | 189.5 | | 26280.5 | 15816.2 | |
| Sep., 1994 | 132.6 | 182.3 | | 26413.1 | 15998.5 | |
| Oct., 1994 | 134.9 | 213.7 | | 26548 | 16212.2 | |
| Nov., 1994 | 148.4 | 205 | | 26696.4 | 16417.2 | |
| Dec., 1994 | 140 | 194.3 | | 26836.4 | 16611.5 | |
| Jan., 1995 | 144.9 | 216.7 | | 26981.3 | 16828.2 | |
| Feb., 1995 | 126.3 | 174.1 | | 27107.6 | 17002.3 | |
| Mar., 1995 | 139.5 | 193.3 | | 27247.1 | 17195.6 | |
| Apr., 1995 | 131.2 | 214.1 | | 27378.3 | 17409.7 | |
| May., 1995 | 101.7 | 184.3 | | 27480 | 17594 | |
| Jun., 1995 | 107.1 | 182.2 | | 27587.1 | 17776.2 | |
| Jul., 1995 | 124.8 | 213 | | 27711.9 | 17989.2 | |
| Aug., 1995 | 141.6 | 188.4 | | 27853.5 | 18177.6 | |
| Sep., 1995 | 130.1 | 203.2 | | 27983.6 | 18380.8 | |
| Oct., 1995 | 148.8 | 203.7 | | 28132.4 | 18584.5 | |
| Nov., 1995 | 135.1 | 191.3 | | 28267.5 | 18775.8 | |
| Dec., 1995 | 135.8 | 193.3 | | 28403.3 | 18969.1 | |
| Jan., 1996 | 117.8 | 194.1 | | 28521.1 | 19163.2 | |
| Feb., 1996 | 133.9 | 191.1 | | 28655 | 19354.3 | |

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern
Well : Production Summary Well
: 000000278

Date : 8/17/93 3:40:59 am
User : jfox

Production Data from July, 1984 to October, 1999 (cont.)

| Year | Monthly Oil m3 | Monthly Water m3 | Month Water Inj m3 | Cum Oil m3 | Cum Water m3 | Cum Water Inj m3 |
|------------|-------------------|---------------------|-----------------------|---------------|-----------------|---------------------|
| Mar., 1996 | 144.3 | 207.6 | | 28799.3 | 19561.9 | |
| Apr., 1996 | 138.7 | 202 | | 28938 | 19763.9 | |
| May., 1996 | 133.4 | 206.3 | | 29071.4 | 19970.2 | |
| Jun., 1996 | 126.7 | 193.5 | | 29198.1 | 20163.7 | |
| Jul., 1996 | 113.5 | 209.9 | | 29311.6 | 20373.6 | |
| Aug., 1996 | 130.9 | 175.5 | | 29442.5 | 20549.1 | |
| Sep., 1996 | 124.6 | 168.9 | | 29567.1 | 20718 | |
| Oct., 1996 | 128.7 | 156.1 | | 29695.8 | 20874.1 | |
| Nov., 1996 | 125.2 | 161.4 | | 29821 | 21035.5 | |
| Dec., 1996 | 122.6 | 179.5 | | 29943.6 | 21215 | |
| Jan., 1997 | 117 | 185.5 | | 30060.6 | 21400.5 | |
| Feb., 1997 | 119.9 | 176.6 | | 30180.5 | 21577.1 | |
| Mar., 1997 | 127.4 | 191.4 | | 30307.9 | 21768.5 | |
| Apr., 1997 | 123.2 | 178.6 | | 30431.1 | 21947.1 | |
| May., 1997 | 128.6 | 161.3 | | 30559.7 | 22108.4 | |
| Jun., 1997 | 135.2 | 201 | | 30694.9 | 22309.4 | |
| Jul., 1997 | 105.3 | 193.6 | | 30800.2 | 22503 | |
| Aug., 1997 | 116.3 | 188.2 | | 30916.5 | 22691.2 | |
| Sep., 1997 | 114.2 | 185.9 | | 31030.7 | 22877.1 | |
| Oct., 1997 | 122.1 | 201.4 | | 31152.8 | 23078.5 | |
| Nov., 1997 | 120.3 | 190.7 | | 31273.1 | 23269.2 | |
| Dec., 1997 | 116.3 | 197.8 | | 31389.4 | 23467 | |
| Jan., 1998 | 130.5 | 204.2 | | 31519.9 | 23671.2 | |
| Feb., 1998 | 117.9 | 188.2 | | 31637.8 | 23859.4 | |
| Mar., 1998 | 125.8 | 204.3 | | 31763.6 | 24063.7 | |
| Apr., 1998 | 129 | 220.9 | | 31892.6 | 24284.6 | |
| May., 1998 | 113.4 | 211 | | 32006 | 24495.6 | |
| Jun., 1998 | 110.9 | 202.7 | | 32116.9 | 24698.3 | |
| Jul., 1998 | 127 | 222.6 | | 32243.9 | 24920.9 | |
| Aug., 1998 | 121.1 | 206.8 | | 32365 | 25127.7 | |
| Sep., 1998 | 115.9 | 213.6 | | 32480.9 | 25341.3 | |
| Oct., 1998 | 114.6 | 232 | | 32595.5 | 25573.3 | |
| Nov., 1998 | 109.9 | 230.9 | | 32705.4 | 25804.2 | |
| Dec., 1998 | 114.4 | 228.1 | | 32819.8 | 26032.3 | |
| Jan., 1999 | 110.2 | 240.5 | | 32930 | 26272.8 | |
| Feb., 1999 | 95.6 | 223.8 | | 33025.6 | 26496.6 | |
| Mar., 1999 | 101.1 | 218.3 | | 33126.7 | 26714.9 | |
| Apr., 1999 | 117.5 | 195.7 | | 33244.2 | 26910.6 | |
| May., 1999 | 101.6 | 192.4 | | 33345.8 | 27103 | |
| Jun., 1999 | 80 | 171.9 | | 33425.8 | 27274.9 | |
| Jul., 1999 | 83.2 | 181 | | 33509 | 27455.9 | |
| Aug., 1999 | 109.6 | 203.4 | | 33618.6 | 27659.3 | |
| Sep., 1999 | 110.3 | 222 | | 33728.9 | 27881.3 | |
| Oct., 1999 | 113.2 | 251.5 | | 33842.1 | 28132.8 | |

current VRL
Jan - Aug 1999

26553.3
1999 Jan + 1627 = 16.7

Production Report

| | | | |
|-----------|---|---------|-----------------------------|
| Group | : Daly Unit #4 15D-27 Inj Pattern | Date | : August 7, 2005 8:46:26 am |
| Well | : Zargon Daly Unit No. 4 WIW 15D-27-09-28W1 | User | : jfox |
| | : 02/15-27-009-28W1/0 | | |
| Hist.Data | : 01/88-10/99 | On Prod | : 01/00 |
| Operator | : | Status | : Unknown |
| Field | : 1 | Zone | : 59A |

Production Data from January, 1988 to October, 1999

| Year | Avg Day Water Inj m3/d | Month Water Inj m3 |
|------------|---------------------------|-----------------------|
| Jan., 1988 | | |
| Feb., 1988 | | |
| Mar., 1988 | | |
| Apr., 1988 | | |
| May., 1988 | | |
| Jun., 1988 | | |
| Jul., 1988 | | |
| Aug., 1988 | | |
| Sep., 1988 | | |
| Oct., 1988 | | |
| Nov., 1988 | | |
| Dec., 1988 | | 5062.5 |
| Jan., 1989 | | 6414.8 |
| Feb., 1989 | | 5242 |
| Mar., 1989 | | 6104.3 |
| Apr., 1989 | | 6242 |
| May., 1989 | | 635 |
| Jun., 1989 | | 5368 |
| Jul., 1989 | | 6175 |
| Aug., 1989 | | 6429 |
| Sep., 1989 | | 6209 |
| Oct., 1989 | | 6522 |
| Nov., 1989 | | 6267 |
| Dec., 1989 | | 6277 |
| Jan., 1990 | | 5953 |
| Feb., 1990 | | 5260 |
| Mar., 1990 | | 5812 |
| Apr., 1990 | | 5606 |
| May., 1990 | | 2514 |
| Jun., 1990 | | 4445 |
| Jul., 1990 | | 4543 |
| Aug., 1990 | | 5605 |
| Sep., 1990 | | 4918 |
| Oct., 1990 | | 6138 |
| Nov., 1990 | | 5253 |
| Dec., 1990 | | 6015 |
| Jan., 1991 | | 6091 |
| Feb., 1991 | | 5077 |
| Mar., 1991 | | 5935 |
| Apr., 1991 | | 5812 |
| May., 1991 | | 5761 |
| Jun., 1991 | | 5796 |
| Jul., 1991 | | 6114 |
| Aug., 1991 | | 5496 |

66610.6

62319.

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern Date : August 7, 2005 8:46:26 am
Well : Zargon Daly Unit No. 4 WIW 15D-27-09-28W1 User : jfox
: 02/15-27-009-28W1/0

Production Data from January, 1988 to October, 1999 (cont.)

| Year | Avg Day Water Inj m3/d | Month Water Inj m3 |
|------------|---------------------------|-----------------------|
| Sep., 1991 | | 5635 |
| Oct., 1991 | | 5745 |
| Nov., 1991 | | 5260 |
| Dec., 1991 | | 5507 |
| Jan., 1992 | | |
| Feb., 1992 | | |
| Mar., 1992 | | |
| Apr., 1992 | | |
| May., 1992 | | |
| Jun., 1992 | | |
| Jul., 1992 | | |
| Aug., 1992 | | 2029 |
| Sep., 1992 | | 2273 |
| Oct., 1992 | | 2815 |
| Nov., 1992 | | 2785 |
| Dec., 1992 | | 2820 |
| Jan., 1993 | | 2704 |
| Feb., 1993 | | 2765 |
| Mar., 1993 | | 2783 |
| Apr., 1993 | | 2955 |
| May., 1993 | | 2955 |
| Jun., 1993 | | 2955 |
| Jul., 1993 | | 2955 |
| Aug., 1993 | | 2357 |
| Sep., 1993 | | 2420 |
| Oct., 1993 | | 2471 |
| Nov., 1993 | | 2490 |
| Dec., 1993 | | 2347 |
| Jan., 1994 | | 2460 |
| Feb., 1994 | | 2016 |
| Mar., 1994 | | 2284 |
| Apr., 1994 | | 1934 |
| May., 1994 | | 2114 |
| Jun., 1994 | | 2211 |
| Jul., 1994 | | 2682 |
| Aug., 1994 | | 2299 |
| Sep., 1994 | | 2894.4 |
| Oct., 1994 | | 2426.8 |
| Nov., 1994 | | 3177 |
| Dec., 1994 | | 1322.8 |
| Jan., 1995 | | 3441.7 |
| Feb., 1995 | | 2834.2 |
| Mar., 1995 | | 3066.8 |
| Apr., 1995 | | 3387.9 |
| May., 1995 | | 3367.8 |
| Jun., 1995 | | 3234.8 |
| Jul., 1995 | | 3371.7 |
| Aug., 1995 | | 3058.3 |

74244 / 203233.6

Production Report

Group : Daly Unit #4 15D-27 Inj Pattern Date : August 7, 2005 8:46:26 am
Well : Zargon Daly Unit No. 4 WIW 15D-27-09-28W1 User : jfox
: 02/15-27-009-28W1/0

Production Data from January, 1988 to October, 1999 (cont.)

| Year | Avg Day Water Inj m3/d | Month Water Inj m3 |
|------------|---------------------------|-----------------------|
| Sep., 1995 | | 3185.3 |
| Oct., 1995 | | 2726.1 |
| Nov., 1995 | | 3007.5 |
| Dec., 1995 | | 3155.6 |
| Jan., 1996 | | 3244.1 |
| Feb., 1996 | | 3034.7 |
| Mar., 1996 | | 3136.6 |
| Apr., 1996 | | 3113.9 |
| May., 1996 | | 3246.4 |
| Jun., 1996 | | 3181.4 |
| Jul., 1996 | | 3439.8 |
| Aug., 1996 | | 3557.6 |
| Sep., 1996 | | 3494.9 |
| Oct., 1996 | | 3199.9 |
| Nov., 1996 | | 3326.2 |
| Dec., 1996 | | 3774.4 |
| Jan., 1997 | | 3857.9 |
| Feb., 1997 | | 3332.1 |
| Mar., 1997 | | 3828.5 |
| Apr., 1997 | | 3669.6 |
| May., 1997 | | 3297.3 |
| Jun., 1997 | | 2653 |
| Jul., 1997 | | 3363.1 |
| Aug., 1997 | | 3322 |
| Sep., 1997 | | 3169.3 |
| Oct., 1997 | | 3375.4 |
| Nov., 1997 | | 3268.6 |
| Dec., 1997 | | 3312.2 |
| Jan., 1998 | | 3452 |
| Feb., 1998 | | 3153 |
| Mar., 1998 | | 3499.1 |
| Apr., 1998 | | 3407.4 |
| May., 1998 | | 3230.3 |
| Jun., 1998 | | 3043.9 |
| Jul., 1998 | | 3442.2 |
| Aug., 1998 | | 3015.3 |
| Sep., 1998 | | 3351.4 |
| Oct., 1998 | | 3560.7 |
| Nov., 1998 | | 3564.1 |
| Dec., 1998 | | 3370.6 |
| Jan., 1999 | | 3703.2 |
| Feb., 1999 | | 3434.9 |
| Mar., 1999 | | 3440.2 |
| Apr., 1999 | | 3093.2 |
| May., 1999 | | 3236.8 |
| Jun., 1999 | | 3107.3 |
| Jul., 1999 | | 3251.2 |
| Aug., 1999 | | 3286.5 |

Summary Well Data 07/84-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit #4 15D-27 Inj Pattern

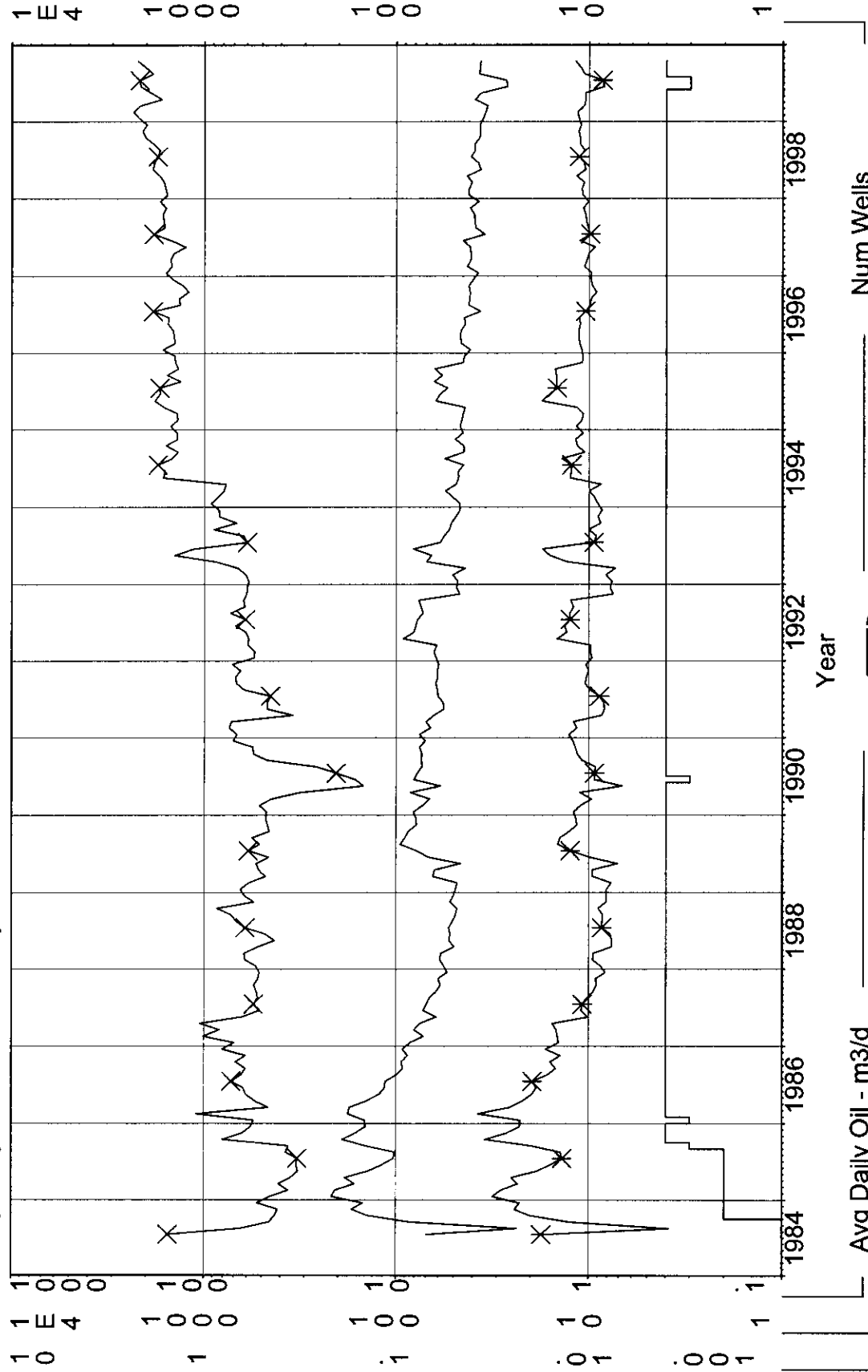
Production Cums

Oil: 33842.1 m3

Gas: 0 E6m3

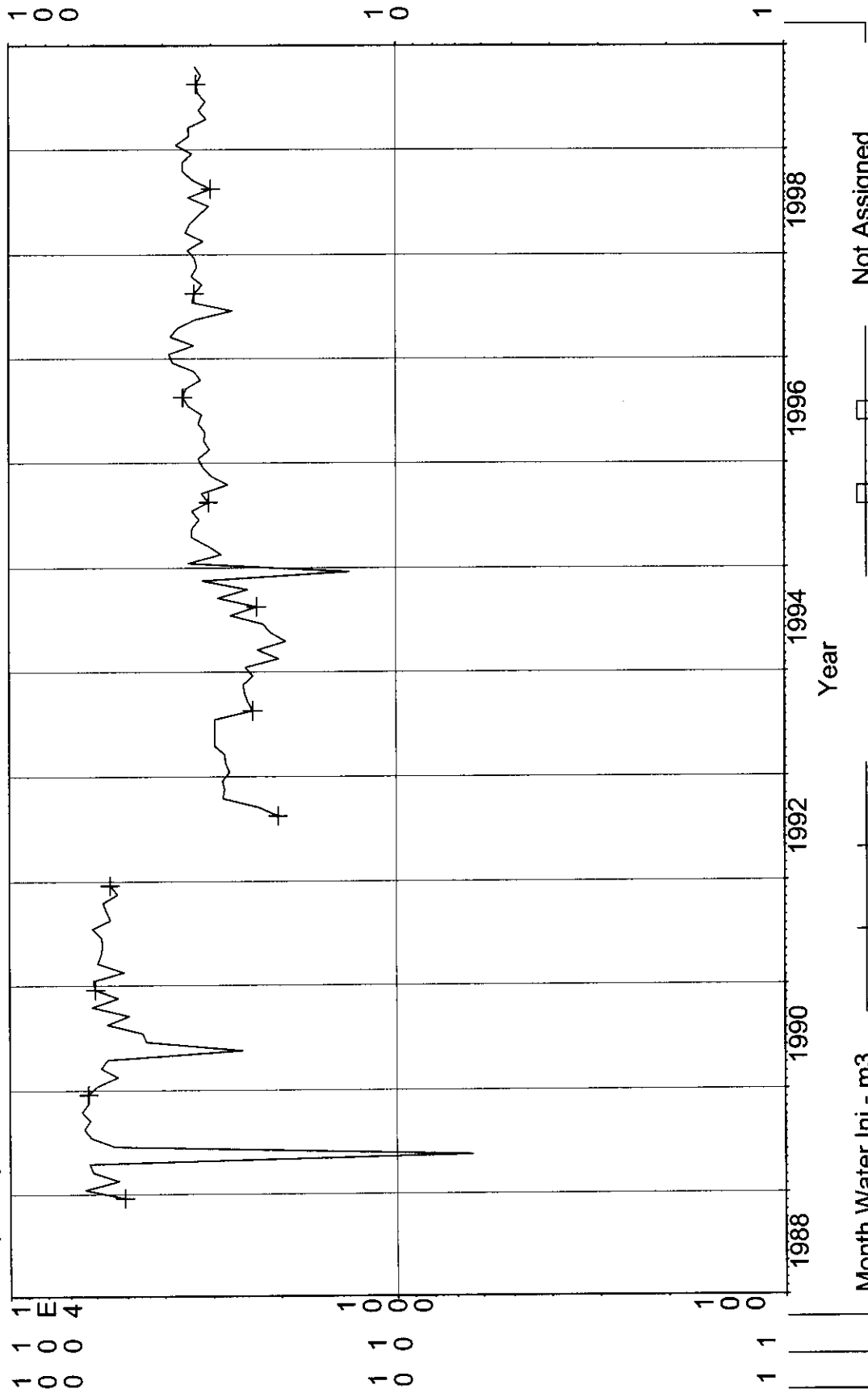
Water: 28132.8 m3

Cond: 0 m3



Zargon Daly Unit No. 4 WIW 15D-27-09-28W1 (02/15-27-009-28W1/0) Data 01/88-10/99

Operator: Production Cums
 Field: 1 Oil: 0 m3
 Zone: 59A Gas: 0 E6m3
 Type: Unknown Water: 0 m3
 Group: Daly Unit #4 15D-27 Inj Pattern Cond: 0 m3



Month Water Inj - m3

Not Assigned

Not Assigned



Not Assigned

Production Summary Well Data 07/84-10/99

Operator:
 Field:
 Zone:
 Type: Unknown
 Group: Daly Unit #4 15D-27 Inj Pattern RR: 19475.5 m3 Tot: 53317.6 m3

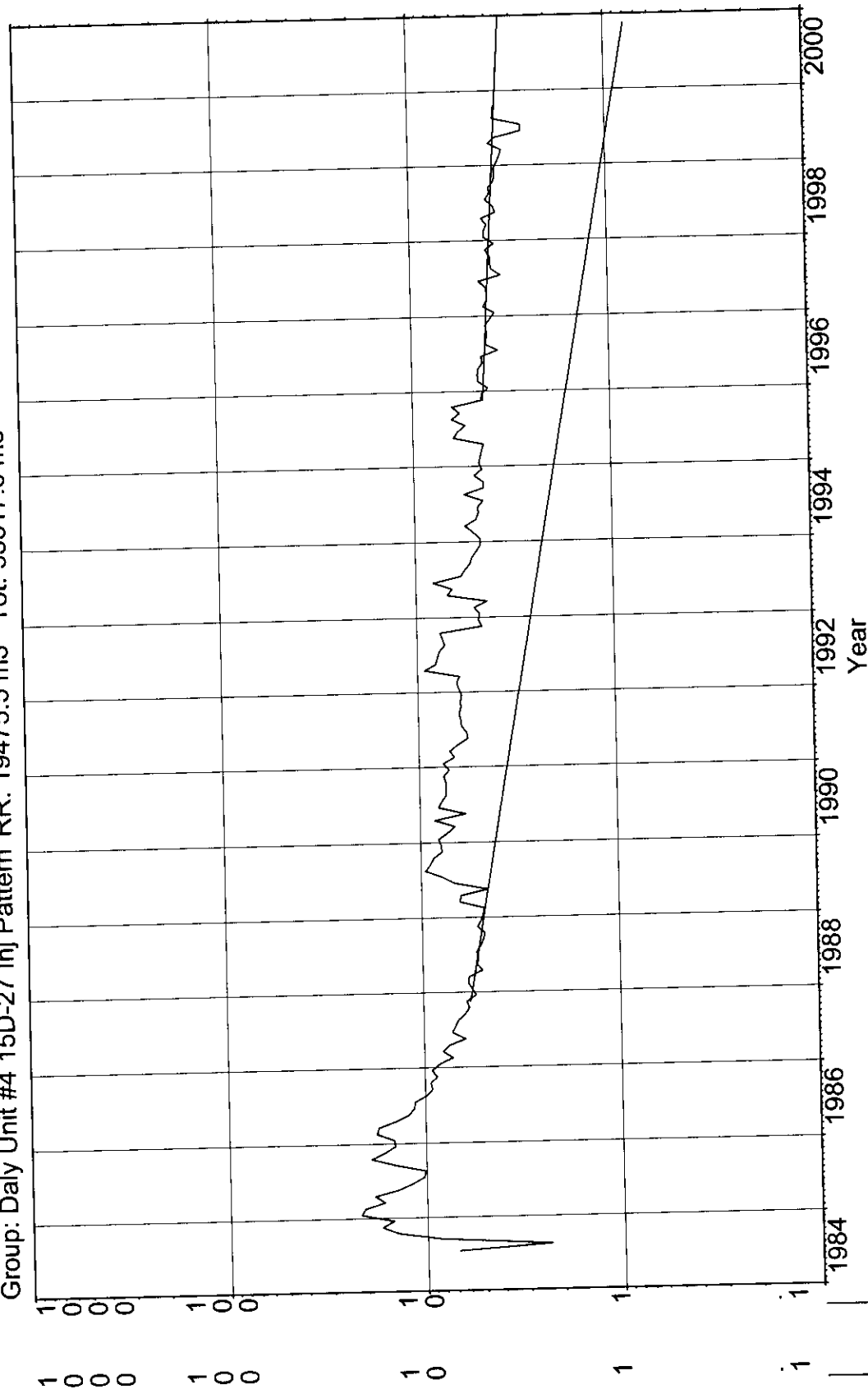
Avg Daily Oil FC 1 (Rate-Time)

qi: 4.4274 m3/d, Nov, 1995

qf: 0.797231 m3/d, Oct, 2029

di(Exp): 4.91741 CTD: 33842.1 m3

Production Cums
 Oil: 33842.1 m3
 Gas: 0 E6m3
 Water: 28132.8 m3
 Cond: 0 m3



Avg Daily Oil - m3/d



Avg Daily Oil FC 1 - m3/d

Avg Daily Oil FC 2 - m3/d

Production Summary Well Data 07/84-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit #4 15D-27 Inj Pattern RR: 19475.5 m3 Tot: 53317.6 m3

Production Cums

Oil: 33842.1 m3

Gas: 0 E6m3

Water: 28132.8 m3

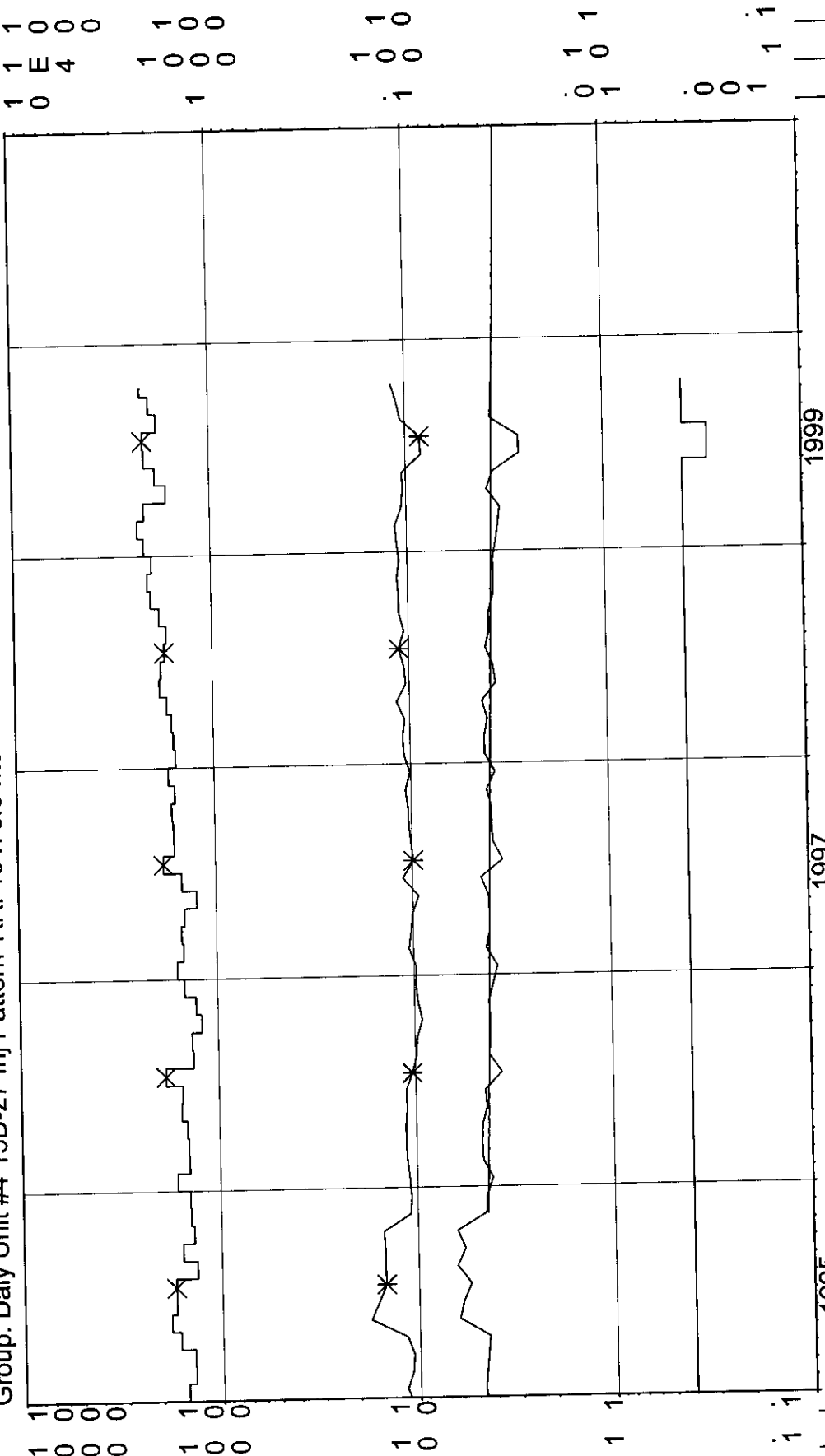
Cond: 0 m3

Avg Daily Oil FC 1 (Rate-Time)

qi: 4.4274 m3/d, Nov, 1995

qf: 0.797231 m3/d, Oct, 2029

di(Exp): 4.91741 CTD: 33842.1 m3



Year

Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3

Num Wells

Avg Daily Oil FC 1 - m3/d



Production Summary Well Data 07/84-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Dally Unit #4 15D-27 Inj Pattern RR: 19475.5 m3 Tot: 53317.6 m3

Production Cums

Oil: 33842.1 m3

Gas: 0 E6m3

Water: 28132.8 m3

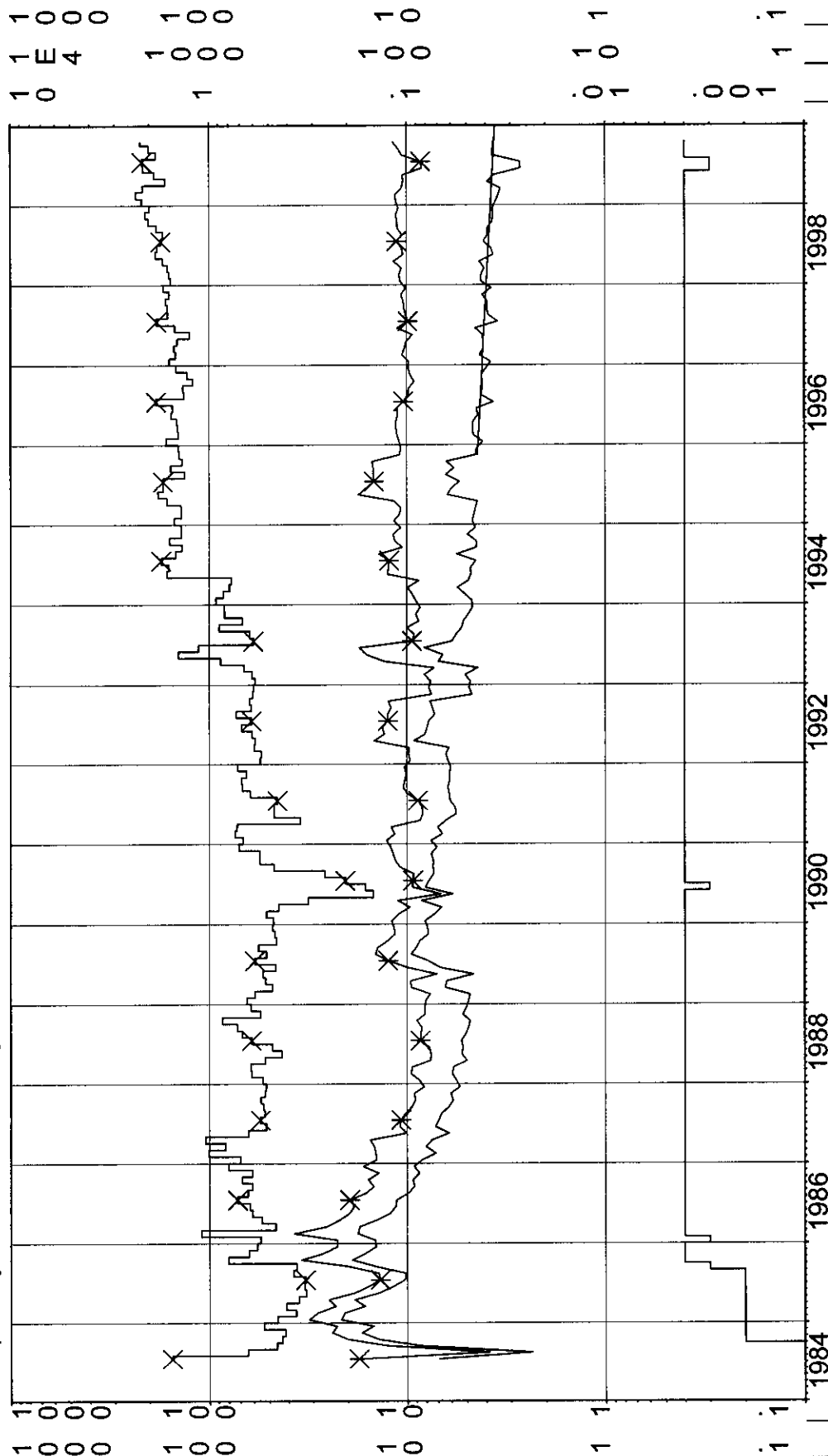
Cond: 0 m3

Avg Daily Oil FC 1 (Rate-Time)

qi: 4.4274 m3/d, Nov, 1995

qf: 0.797231 m3/d, Oct, 2029

di(Exp): 4.91741 CTD: 33842.1 m3



Year

Avg Daily Oil - m3/d

Avg Daily Fluid - m3/d

WOR - m3/m3

Num Wells

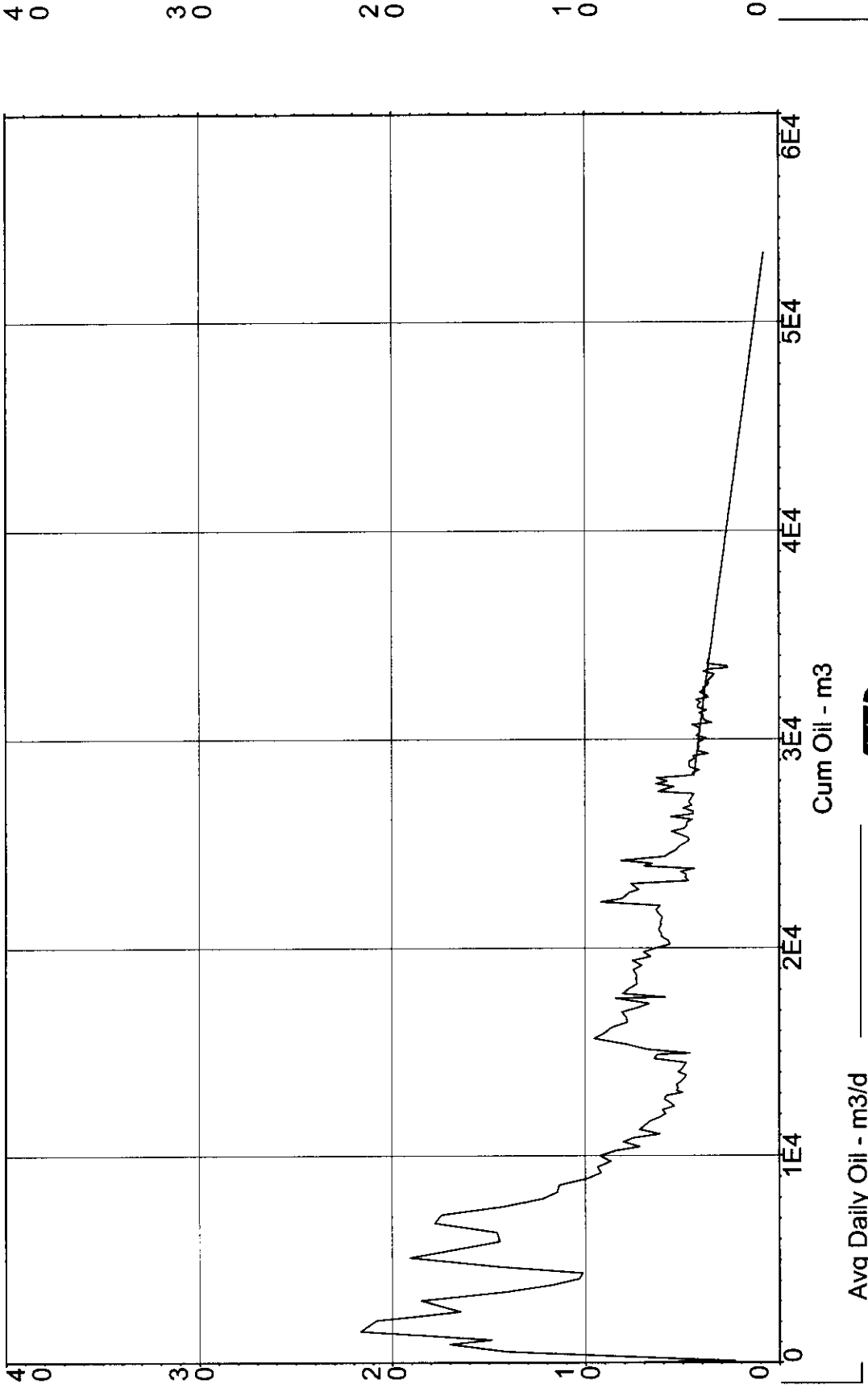
Avg Daily Oil FC 1 - m3/d



Production Summary Well Data 07/84-10/99

Operator: Avg Daily Oil FC 1 (Rate-Time)
Field: qi: 4.4274 m3/d, Nov, 1995
Zone: qf: 0.797231 m3/d, Oct, 2029
Type: Unknown di(Exp): 4.91741 CTD: 33842.1 m3
Group: Daly Unit #4 15D-27 Inj Pattern RR: 19475.5 m3 Tot: 53317.6 m3

Production Cums
Oil: 33842.1 m3
Gas: 0 E6m3
Water: 28132.8 m3
Cond: 0 m3



Avg Daily Oil - m3/d

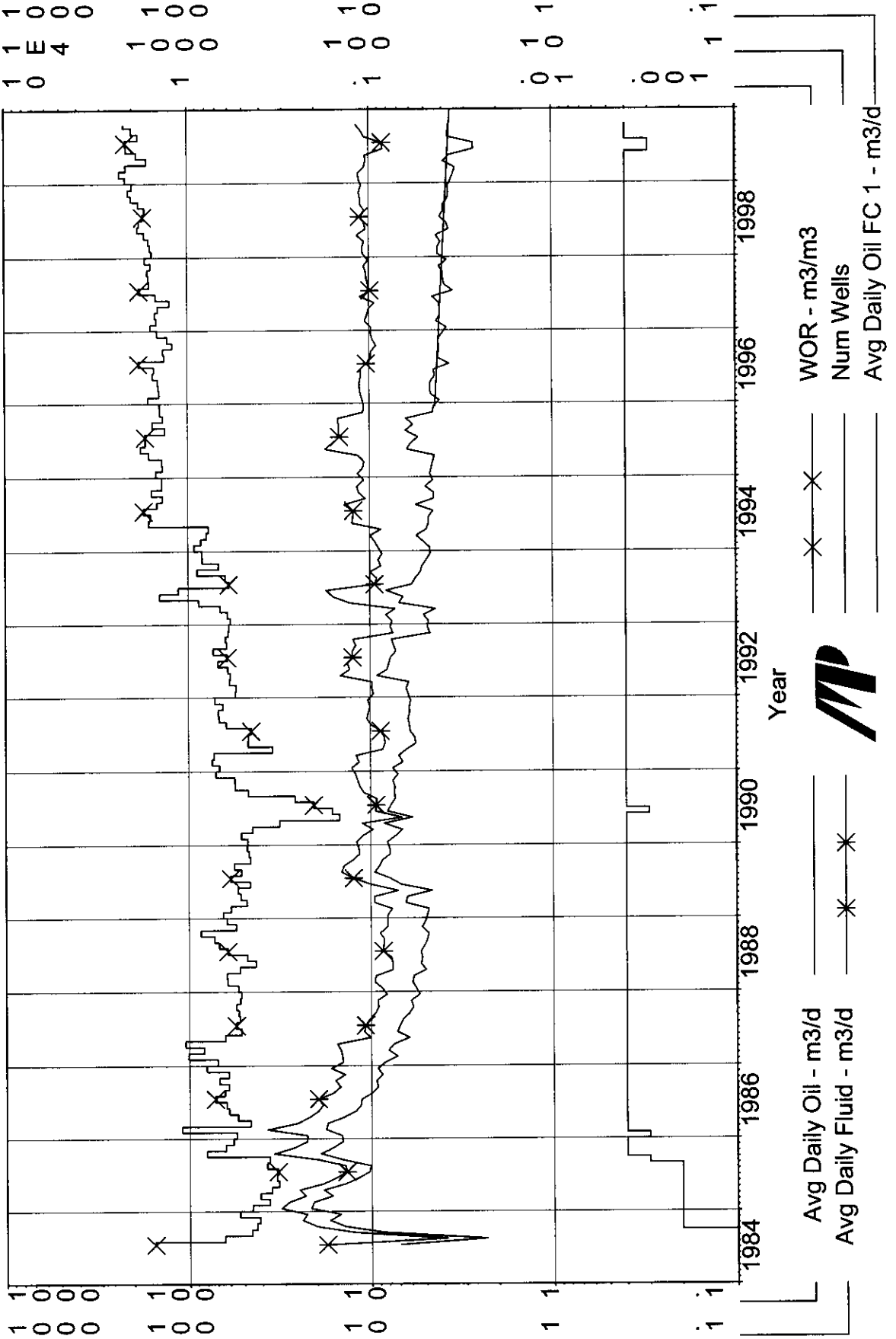
MP

Avg Daily Oil FC 1 - m3/d

Production Summary Well Data 07/84-10/99

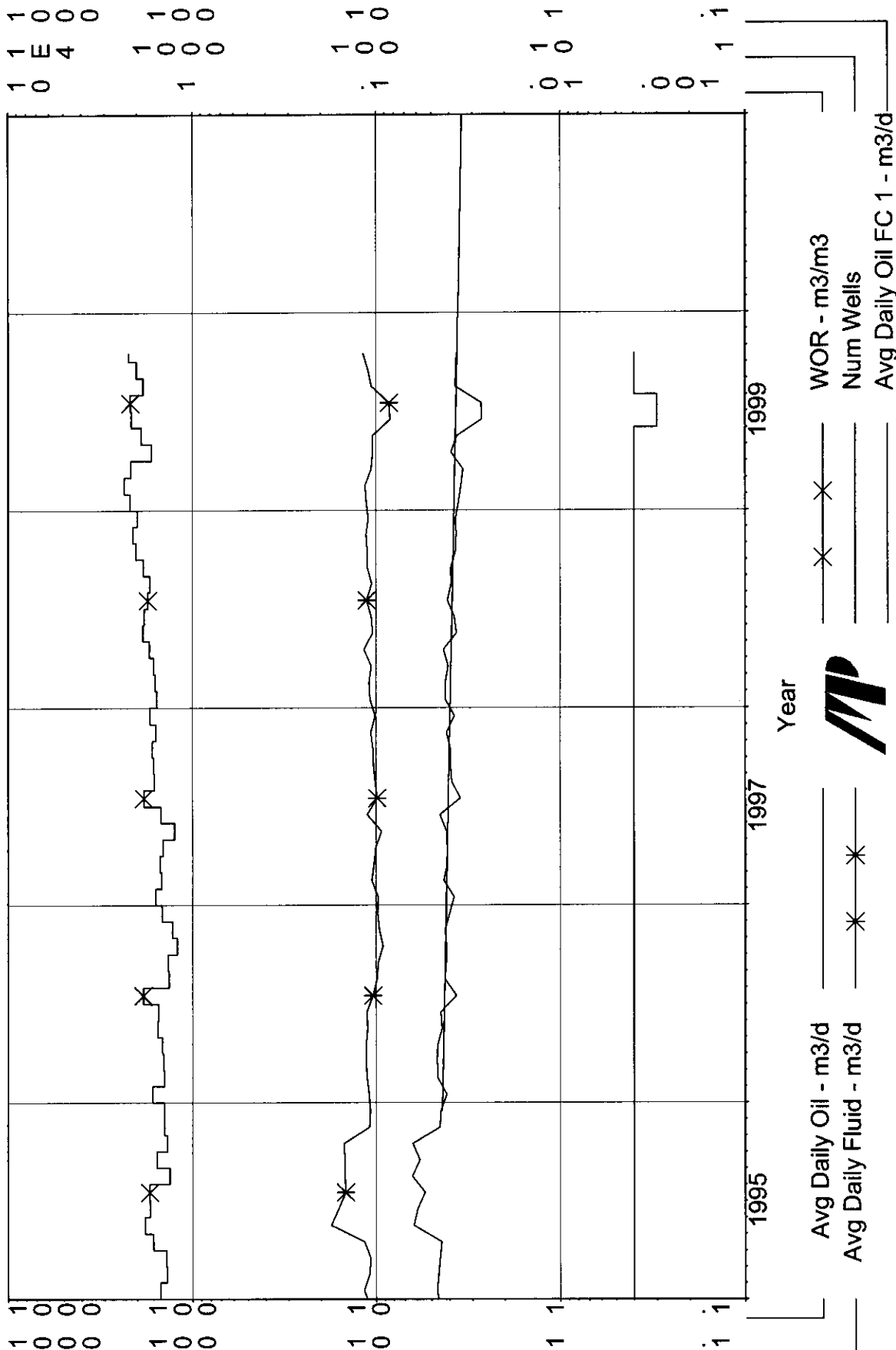
Operator: **Avg Daily Oil FC 1 (Rate-Time)**
Field: **qi: 4.39834 m3/d, Dec, 1995**
Zone: **qf: 0.796855 m3/d, Jul, 2030**
Type: Unknown **di(Exp): 4.80837 CTD: 33842.1 m3**
Group: Daly Unit #4 15D-27 Inj Pattern RR: 19982.6 m3 Tot: 53824.7 m3

Production Cums
Oil: 33842.1 m3
Gas: 0 E6m3
Water: 28132.8 m3
Cond: 0 m3



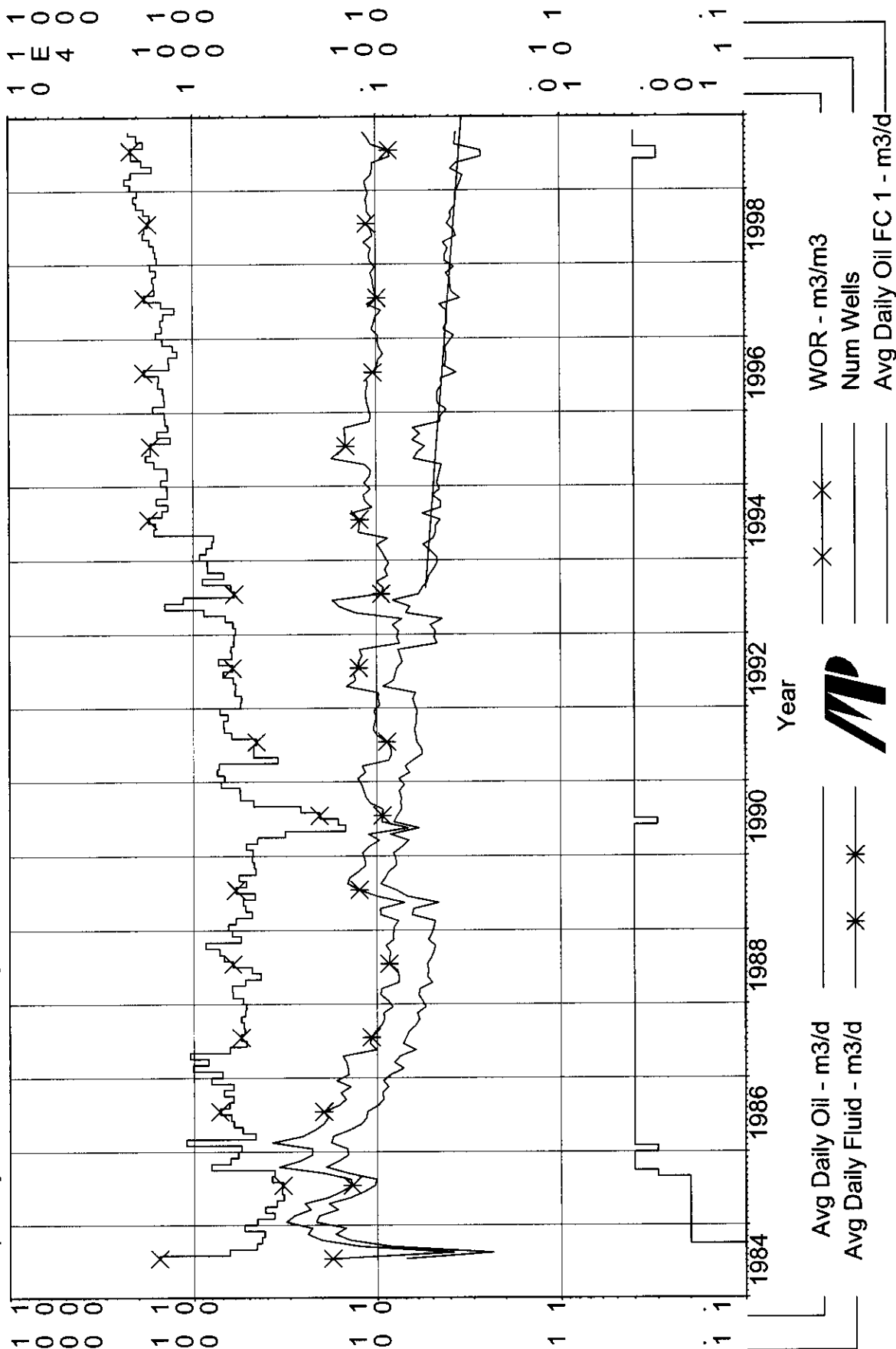
Production Summary Well Data 07/84-10/99

Operator: Production Cums
 Field: Oil: 33842.1 m3
 Zone: Gas: 0 E6m3
 Type: Unknown Water: 28132.8 m3
 Group: Daly Unit #4 15D-27 Inj Pattern RR: 19982.6 m3 Tot: 53824.7 m3 Cond: 0 m3



Production Summary Well Data 07/84-10/99

Operator: **Field:** **Zone:** **Type:** **Group:** **Production Cums**
 Avg Daily Oil FC 1 (Rate-Time) Oil: 33842.1 m3
 qi: 5.43068 m3/d, Aug, 1993 Gas: 0 E6m3
 qf: 0.796167 m3/d, Nov, 2019 Water: 28132.8 m3
 di(Exp): 7.03173 CTD: 33842.1 m3 Cond: 0 m3
 Dally Unit #4 15D-27 Inj Pattern RR: 12698.7 m3 Tot: 46540.8 m3



Production Summary Well Data 07/84-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daily Unit #4 15D-27 Inj Pattern RR: 13522.5 m3 Tot: 47364.6 m3

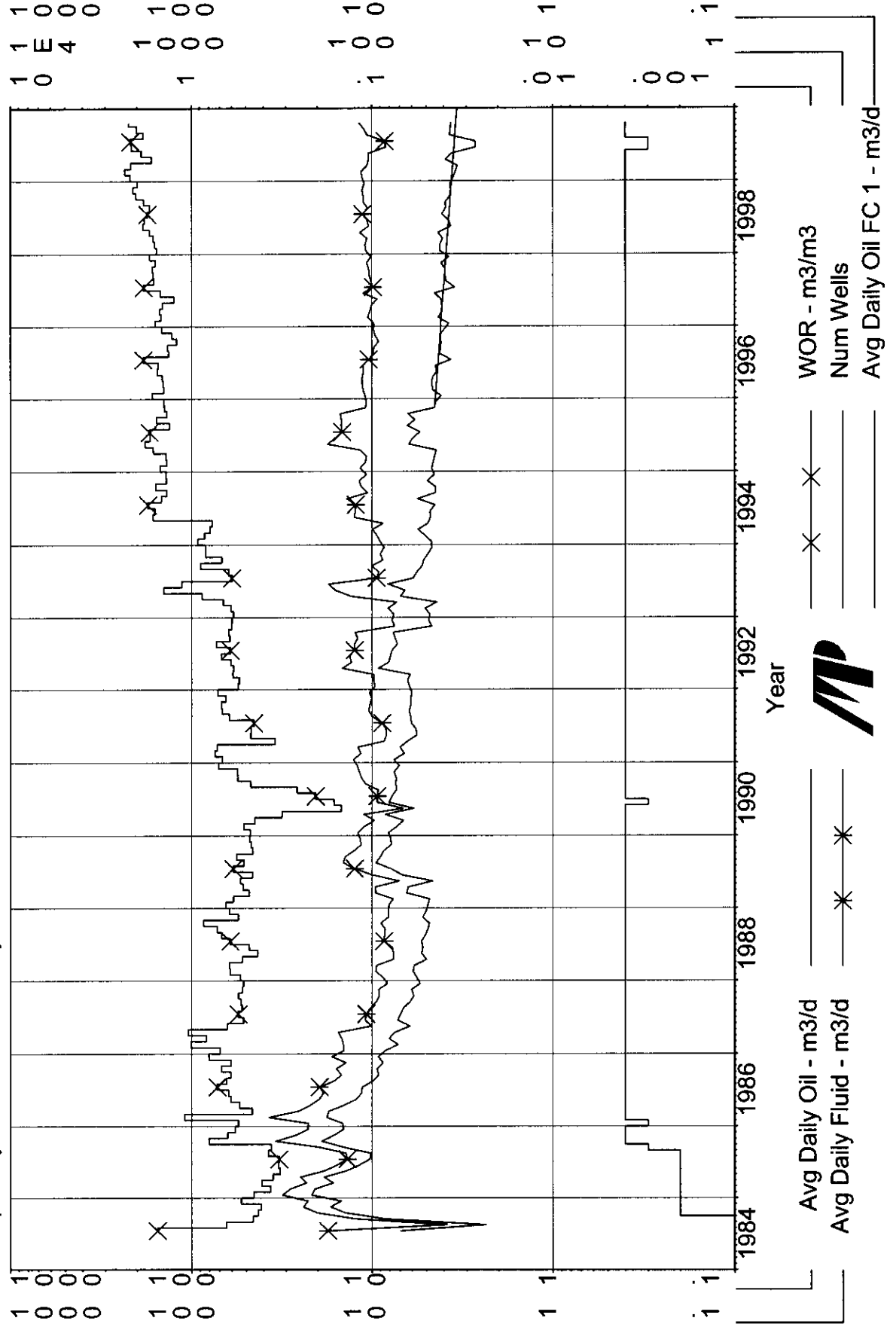
Production Cums

Oil: 33842.1 m3

Gas: 0 E6m3

Water: 28132.8 m3

Cond: 0 m3



Primary

Production Summary Well Data 07/84-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit #4 15D-27 Inj Pattern RR: 264.297 m3 Tot: 34106.4 m3

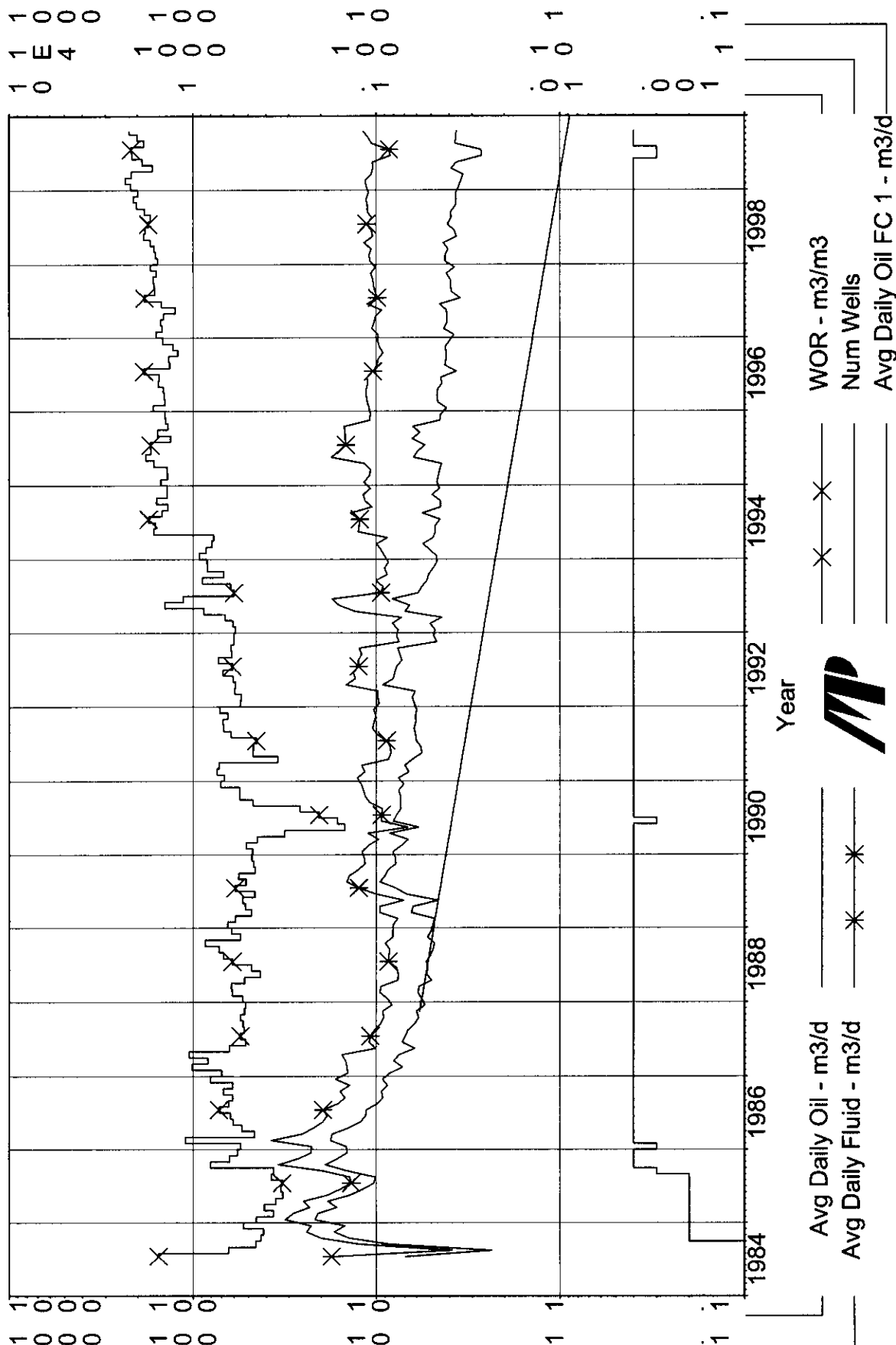
Production Cums

Oil: 33842.1 m3

Gas: 0 E6m3

Water: 28132.8 m3

Cond: 0 m3



Production Summary Well Data 07/84-10/99

Production Cums

Avg Daily Oil FC 1 (Rate-Time)

qi: 6.50805 m3/d, Jul, 1987

qf: 0.787483 m3/d, Mar, 1998

qf: 0.787483 m3/d, Mar, 1998

di(Exp): 17.8366 CTD: 33842.1 m3

di(Exp): 17.8366 CTD: 33842.1 m3

RR: 0 m3 Tot: 33842.1 m3

RR: 0 m3 Tot: 33842.1 m3

1000
1E4
10

100
5000
1

10
-00
.1

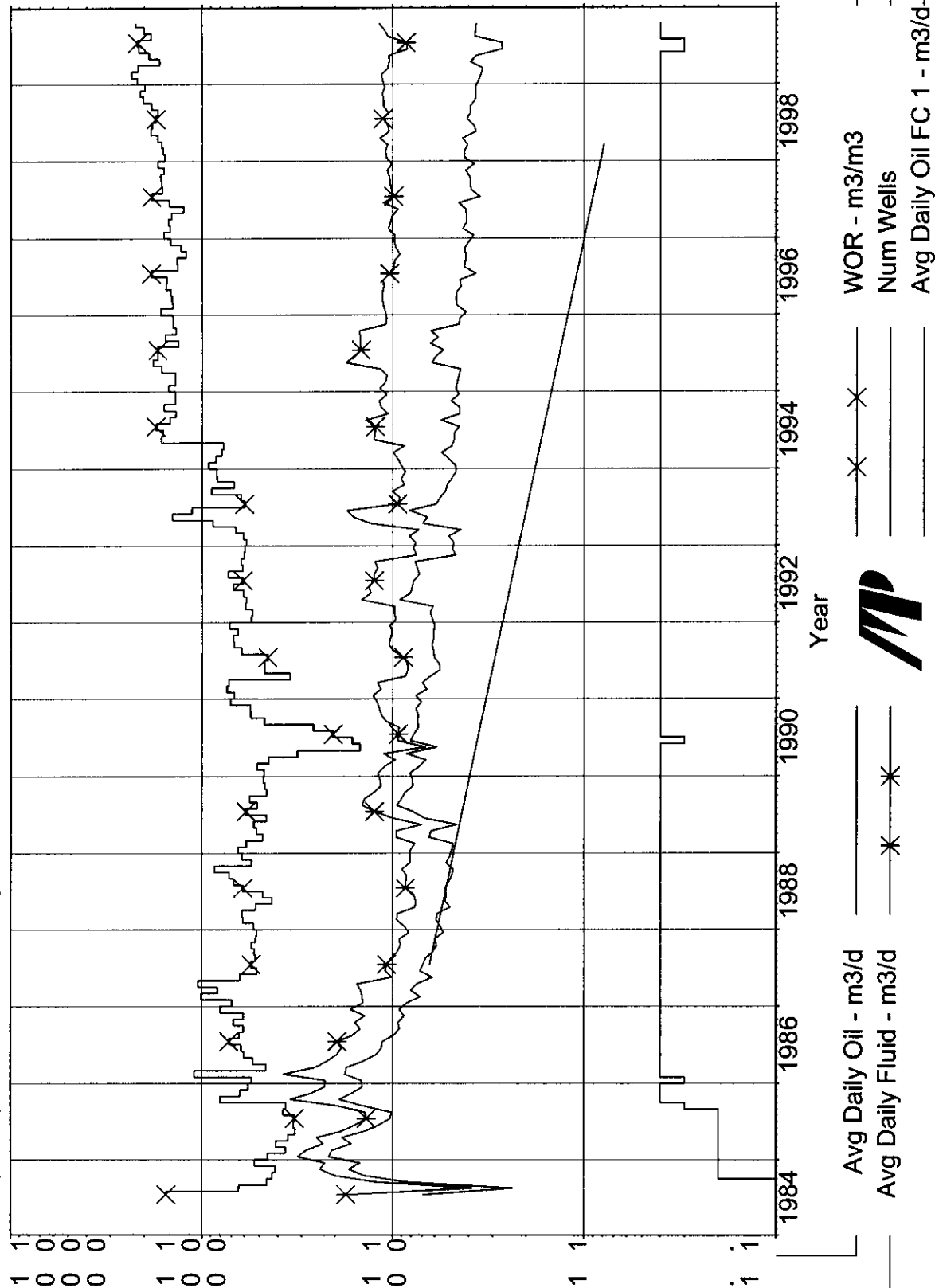
100

1
1
1

WOR - m3/m3

Num Wells

Avg Daily Oil FC 1 - m3/d-



21-10-97

Production Summary Well Data 07/84-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit #4 15D-27 Inj Pattern

Avg Daily Oil FC 1 (Rate-Time)

qi: 7.29306 m3/d, Mar, 1987

qf: 0.798235 m3/d, Sep, 1996

di(Exp): 20.5911 CTD: 33842.1 m3

RR: 0 m3 Tot: 33842.1 m3

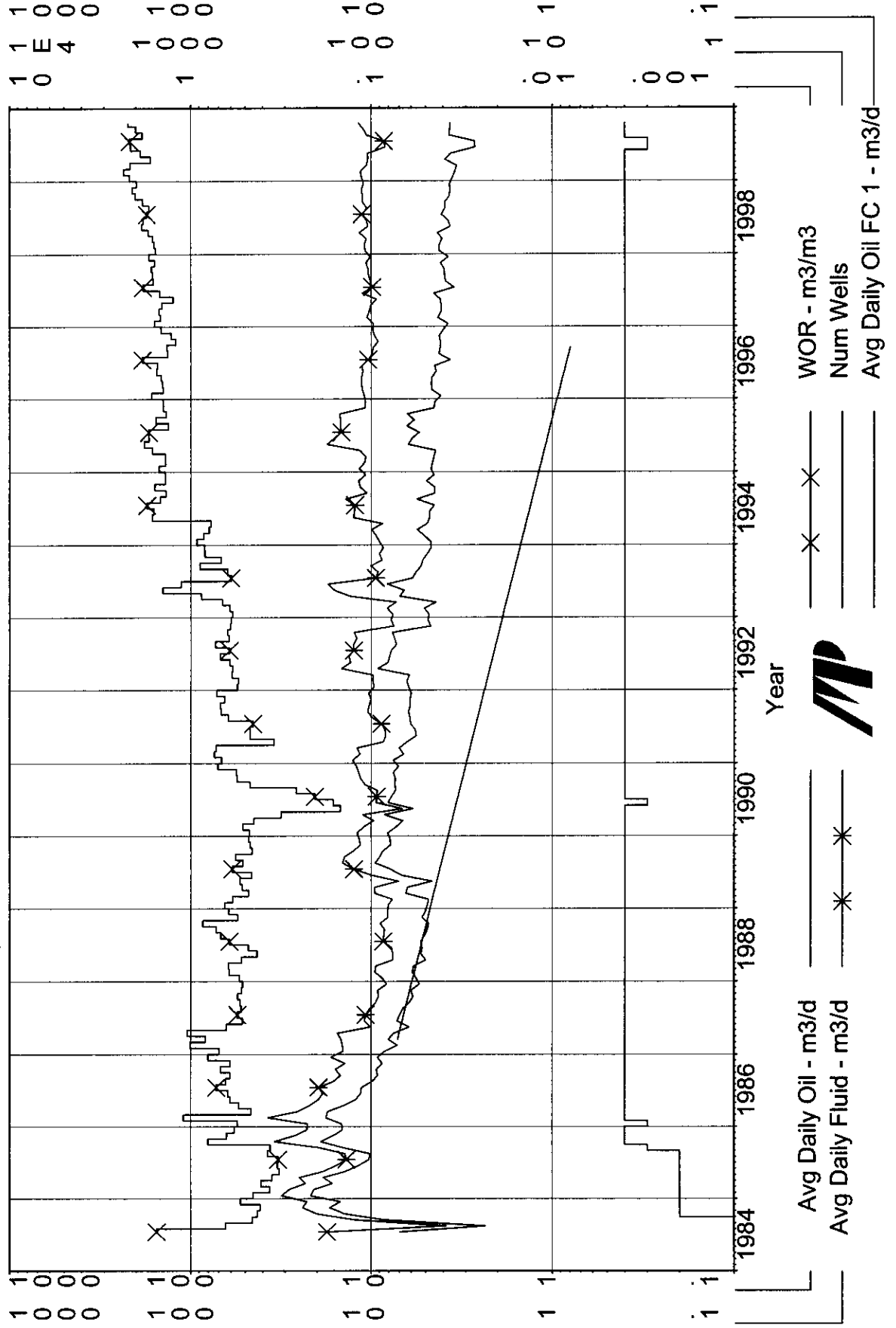
Production Cums

Oil: 33842.1 m3

Gas: 0 E6m3

Water: 28132.8 m3

Cond: 0 m3



7-35-9-28 INS

PATTEN

9-Sept

16 ha

| well | ϕh |
|-------|----------|
| 1-35 | 0.75 |
| 2-35 | 1.05 |
| 3-35 | 1.32 |
| 6-35 | 0.62 |
| 7-35 | 0.77 |
| 8-35 | 0.78 |
| 9-35 | 0.88 |
| 10-35 | 0.84 |
| 11-35 | 0.46 |

Σ 7.47

$$OIP = 10000 \times 16.2 \times 7.47 \times (1 - 0.3) \times 1 / 1.08$$

$$= 784350 \text{ m}^3$$

Zargou's ult. rec. est.
 342000 m³
 (4.4 / 00.0)

- representative of primary recovery conditions

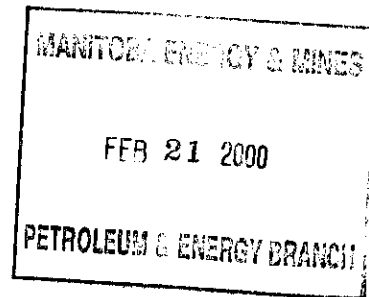
- reduced & la spacing increase create sweep eff & lateral flow continuity

ZARGON

O I L & G A S L T D.

February 14, 2000

Manitoba Energy and Mines
Petroleum and Energy Branch
360, 1395 Ellice Avenue
Winnipeg, Manitoba
R3G 2P3



ATTENTION: Mr. John Fox, P. Eng.

Dear Mr. Fox:

**Re: APPLICATION TO MODIFY WATERFLOOD PROJECT P.M. 53
INFILL WATER INJECTION WELL PILOT PROJECT
DALY UNIT NO. 4**

Pursuant to Section 117 of the Manitoba Oil and Gas Act, Zargon Oil and Gas Ltd., as Operator of the subject Unit, and on behalf of the Unit interest owners, requests MEM approval to modify the existing waterflood scheme by the implementation of an Infill Water Injection Well Pilot Project.

The pilot project will entail the drilling of four new water injection wells on an 8 ha. spacing. Please find enclosed five copies of our application for your files.

If you have any questions, please contact the undersigned at (403) 261-7321.

Yours very truly,

ZARGON OIL & GAS LTD.

J. Yves Gauthier, P. Eng.
Manager, Exploitation

JYG/ip
Encls.

cc: Working Interest Owners – Daly Unit No. 4
(see attached addressee list)

DALY UNIT NO. 4

ADDRESSEE LIST

Zargon Oil & Gas Ltd.

2850, 605 – 5th Avenue S.W.
Calgary, Alberta
T2P 3H5

ATTENTION: Dan Roulston

Cypress Energy Inc.

2700, 500 – 4th Avenue S.W.
Calgary, Alberta
T2P 2V6

ATTENTION: Production Manager

Palliser Energy Corp.

1000, 521 – 3rd Avenue S.W.
Calgary, Alberta
T2P 3T3

ATTENTION: Production Manager

**Thunderbird 1983 Exploration and
Development Program (Limited Partnership)**

2850, 605 – 5th Avenue S.W.
Calgary, Alberta
T2P 3H5

ATTENTION: Dan Roulston

Application to Modify Waterflood Project P.M. 53

Pilot Project to Drill Four Water Injection Wells on 8 Ha. Spacing

Daly Unit No. 4

February, 2000

Introduction

In January 1987, the MEM issued Manitoba Regulation 29/87, Order No. PM 53 to conduct a pressure maintenance scheme by waterflooding the Daly Lodgepole A Pool.

The project was initiated in the fall of 1988 when well 15D-27-9-28 WPM was drilled as a new water injector and well 7C-35-9-28 WPM was converted from a water disposal well to water injection status.

Zargon, as Operator and on behalf of the Unit Working Interest owners, is proposing a pilot project to increase water injection volumes by drilling four new Lodgepole water injection wells on 8 hectare spacing, to improve the flood recovery efficiency. Two wells will be drilled immediately and the remaining two wells would be drilled within two years following a performance evaluation of the new waterflood patterns.

Background

Figure 1 presents a map outlining the Unit boundaries for the Daly Unit #4 and adjacent Daly Unit #3. Table 1 lists the current working interest owners of Daly Unit #4.

Figure 2 presents a production history graph of the unit. Three wells were drilled, completed and placed on stream in December 1962 and shut in in July 1970 after producing 9000 m³ of oil (56.8 MSTB). Beginning in January, 1984 and continuing until January 1987, 52 additional wells were drilled, completed and placed on stream. The wells produced under primary recovery mechanism until January 1987 when unitization was approved and the waterflood project was initiated. Injection volumes prior to January 1987, indicated on Figure 2, consisted of water disposal into a deeper formation.

Currently, the Unit comprises 40 oil producers, 2 water injectors, 14 shut in wells and one water source well. The Unit is producing 20.5 m³/d of oil (129 BOPD), 135 m³/d of water (850 BWPD), and injecting approximately 135 m³/d (850 BWPD). Cumulative oil production to December 1999 is approximately 192.6 E3m³ (1211.3 MSTB) and 875 E3m³ (5,502 MSTB) of water. Cumulative water injection at December 1999 is 825 E3m³ (5188 MSTB).

Previous Application

The original application for approval was submitted in June 1980 by Chevron Canada Resources Limited, a prior Operator.

Performance Review and Waterflood Recovery Estimates

The initial waterflood project consisted of two injection wells at 15D-27-9-28 WPM and 7-35-9-28 WPM. The waterflood recovery estimate for each of the two patterns is forecasted on the basis of flood performance over the past ten years. The ultimate and remaining recoverable oil reserves are estimated by decline analysis to an economic limit of 0.2 m³/d/w. Figure 3 identifies the existing waterflood patterns as well as the four proposed injector locations.

A review of pattern performance identifies the following observations:

15D-27-9-28 WPM Pattern

- Inverted 5 spot on 8 hectare spacing – this is the proposed pattern for the pilot project.
- Injection began in the fall of 1988, at an initial rate exceeding 190 m³/d of water (1200 BWPD) and the rate was sustained for 3 years. (Figure 4a)
- The oil rate increased from 4.8 m³/d (30 BOPD) to a peak of 9.4 m³/d (59 BOPD) within 1 year of injection.
- In January 1992, injection ceased for six months, then resumed at a reduced rate of 80-100 m³/d (500-600 BWPD). This change in injection volumes resulted in a rapid drop in the pattern oil rate from 6.4 m³/d (40 BOPD) to 4.8 m³/d (30 BOPD). Since 1995, the continued injection rate of 110 m³/d has resulted in a pattern oil decline rate of approximately 4.7%/year.
- Figure 4b presents an oil rate vs. cumulative production plot which demonstrates the forecasted pattern recovery under primary and waterflood conditions. Zargon estimates that oil recovery under continued primary recovery mechanism would yield 28.6 E3m³ (180 MSTB) to an economic limit of 0.2 m³/d/well. Pattern recovery under waterflood conditions is estimated at 53.3 E3m³ oil (335 MSTB); this represents an 86% increase, or 24.7 E3m³ (155 MSTB), of recoverable oil reserves over the primary recovery forecast.

7-35-9-28 WPM Pattern

- Inverted 9 spot on 16 hectare spacing.
- Injection began in 1992 at a rate of 160 m³/d (1000 BWPD) and quickly declined to the current injection rate of 30 m³/d (180 BWPD). (Figure 5a)

- Pattern performance indicates poor waterflood response. The 4 m³/d (19.25 BOPD) pattern oil rate prior to commencement of injection quickly increased to 5 m³/d (31 BOPD), then returned to a constant 3 m³/d for the last 6 years despite a reduction in injection volumes. The graph indicates the pattern oil rate had already increased from 3 to 4 m³/d prior to starting injection at 7-35. Zargon believes that injection at 7-35 is providing a measure of pressure maintenance to the offsetting wells, however, the 16 ha. spacing is too large for pattern productivity increases to be realized. It is difficult to differentiate recovery predictions under primary and waterflood conditions.
- Figure 5b presents the oil rate vs. cumulative production plot under current conditions. Zargon estimates pattern recovery will yield 34.2 E3m³ (215 MSTB) which is representative of primary recovery conditions.
- The observation of this 16 ha. pattern supports the need for a tighter waterflood pattern as it is uneconomic to conduct a waterflood on this spacing.

Project Description

From the results observed at both patterns, Zargon is proposing to add four injectors on a 8 ha. pattern. The proposed locations as identified in Figure 3 are:

02/9C-35-9-28 WPM

02/11D-35-9-28 WPM

02/14D-35-9-28 WPM (cased, December 1999)

02/16D-35-9-28 WPM (cased, December 1999)

a) Water Injection Wells

In November 1999, Zargon drilled wells at 2/14D-35-9-28 W1M and 2/16C-35-9-28 W1M as proposed water injectors. The wells are currently cased and waiting on completion, tie-in and pilot project approval from MEM. These two locations were selected for the following reasons:

- i) reservoir quality: performance history indicates that this area of the unit exhibits the best porosity and permeability values,
- ii) correlative rights: these four proposed locations are all surrounded by unit producers. Therefore, correlative rights, drainage concerns etc. should not be an issue with offsetting mineral or royalty owners,
- iii) proximity to existing waterflood at Daly Unit #3: Zargon believes the northern portion of Daly Unit #4 is benefiting from Unit #3 injection and that the earliest production response will occur in areas of highest reservoir pressure,
- iv) high mobile oil saturation: Zargon selected these locations to create waterflood patterns as high up the oil column as possible to permit the

greatest sweep efficiencies by flooding the reservoir with the highest mobile oil saturation.

The injectors are assumed to have a sustained injectivity up to 80-120 m³/d/well. The rate is estimated by analogy to the Unit 4 injectors, 15D-27 and 7-35-9-28 WIM, which averaged 132 m³/d and 63 m³/d respectively during their first five years of injection.

The wellhead injection pressure shall be limited to a maximum of 9,000 kPa as presented in Board Order No. P.M. 53.

Figure 6 is a schematic of a typical proposed water injection well configuration. The water injectors will be drilled directionally from a pad at the 15-35 well location. The estimated cost to drill and complete each injector is \$280,300.

- b) The water source for the proposed injectors will continue to be the same as that currently obtained for the Unit. Produced water will be diverted from current overinjection in the existing patterns to maintain the withdrawals from the new patterns.

c) **Water Injection Lines**

It is proposed that new fibreglass water injection lines will be installed from the 7-35 battery to the 11-35 wellsite along the existing pipeline right-of-ways. Figure 7 presents the survey plan with plan details of the 7-35 battery location and 15-35 wellsite locations.

d) **Corrosion Protection**

The casing/tubing annulus will be circulated to inhibited (0.5%) fresh water during the completion.

e) **Surface Conditions and Concerns by Offsetting Owners**

Figure 8 presents a survey plat of the 15-35-9-28 WPM wellsite and illustrates the surface and bottomhole locations of the four proposed injectors on an expanded surface lease. As discussed earlier, since all proposed bottomhole locations are surrounded by unit oil producers, Zargon believes there should not be any correlative rights issues with offsetting mineral or royalty owners. This section is included in the July 18, 1986 report entitled "Impact Assessment of Reduced Spacing Units in the Daly Field" or commonly referred to as "The Berrien Report". Zargon believes that it is meeting all surface location criteria set out in the report since each well will be drilled from an existing surface lease

expanded by only 0.61 ha to accommodate the four new surface locations . The surface owner was contacted and consulted prior to the surveying and eventual drilling of the first two injection wells. No objection was received.

Conclusion

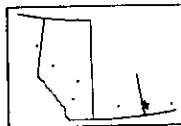
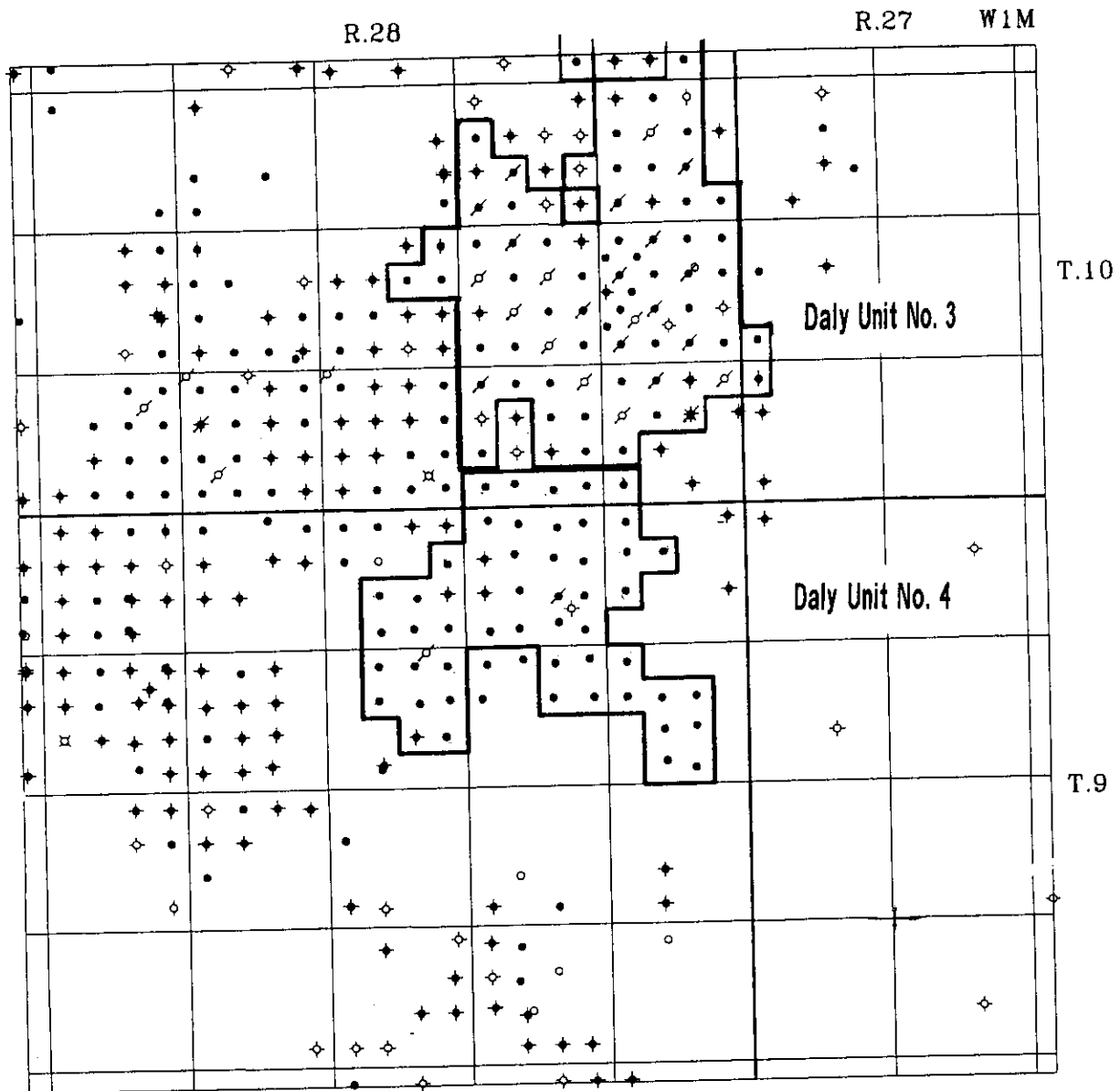
Zargon is proposing a pilot project to modify the existing waterflood at Daly Unit #4. The pilot project entails the drilling of four new water injection wells on 20 ha spacing. It is estimated that each pattern will recover an additional 12.5 E3m³ over primary recoverable reserves.

Table 1

Daly Unit #4

Working Interest Owners

| | |
|--|---------|
| Zargon Oil & Gas Ltd. | 64.43% |
| Cypress Energy Inc. | 18.51% |
| Palliser Energy Corp. | 7.11% |
| Thunderbird 1983 Exploration and Development Program (Zargon owns 86% and manages this partnership) | 9.95% |
| | <hr/> |
| | 100.00% |



Manitoba Units

DALY UNIT NO. 4
BOARD ORDER NO. PM53

Figure No. 1

SCALE: 1:80,000

DATE: July 1, 1997

SOURCE: s962918/xd3

DRAWING: XD3

Group: Daly Unit 4 - Feb. 2000
Total Wells: 56

Primary: OIL
Last On: Oct-1999

Field:
Pool:
Unit:
Oper:
Source Date: n/a

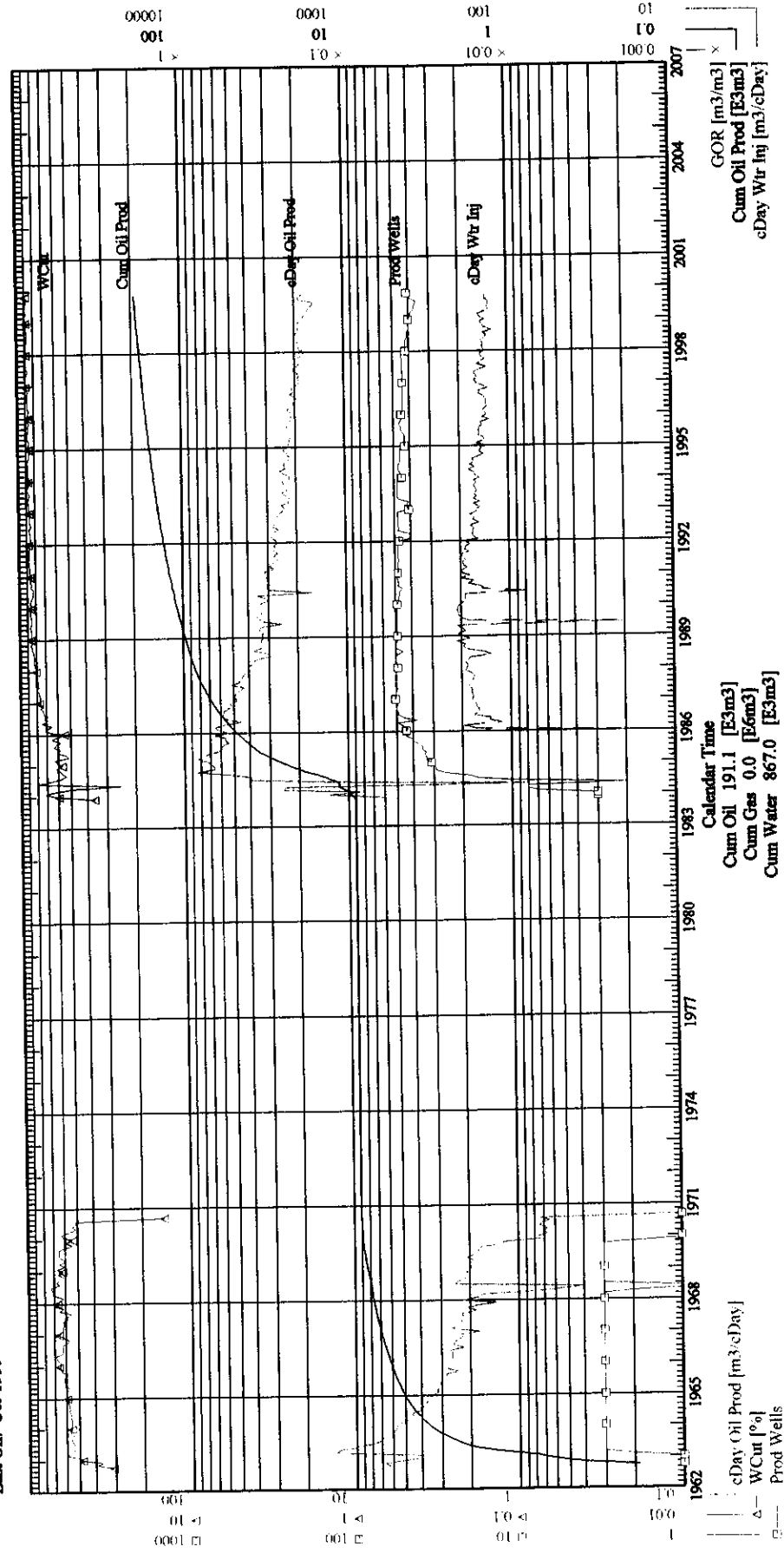
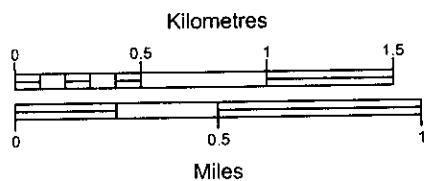
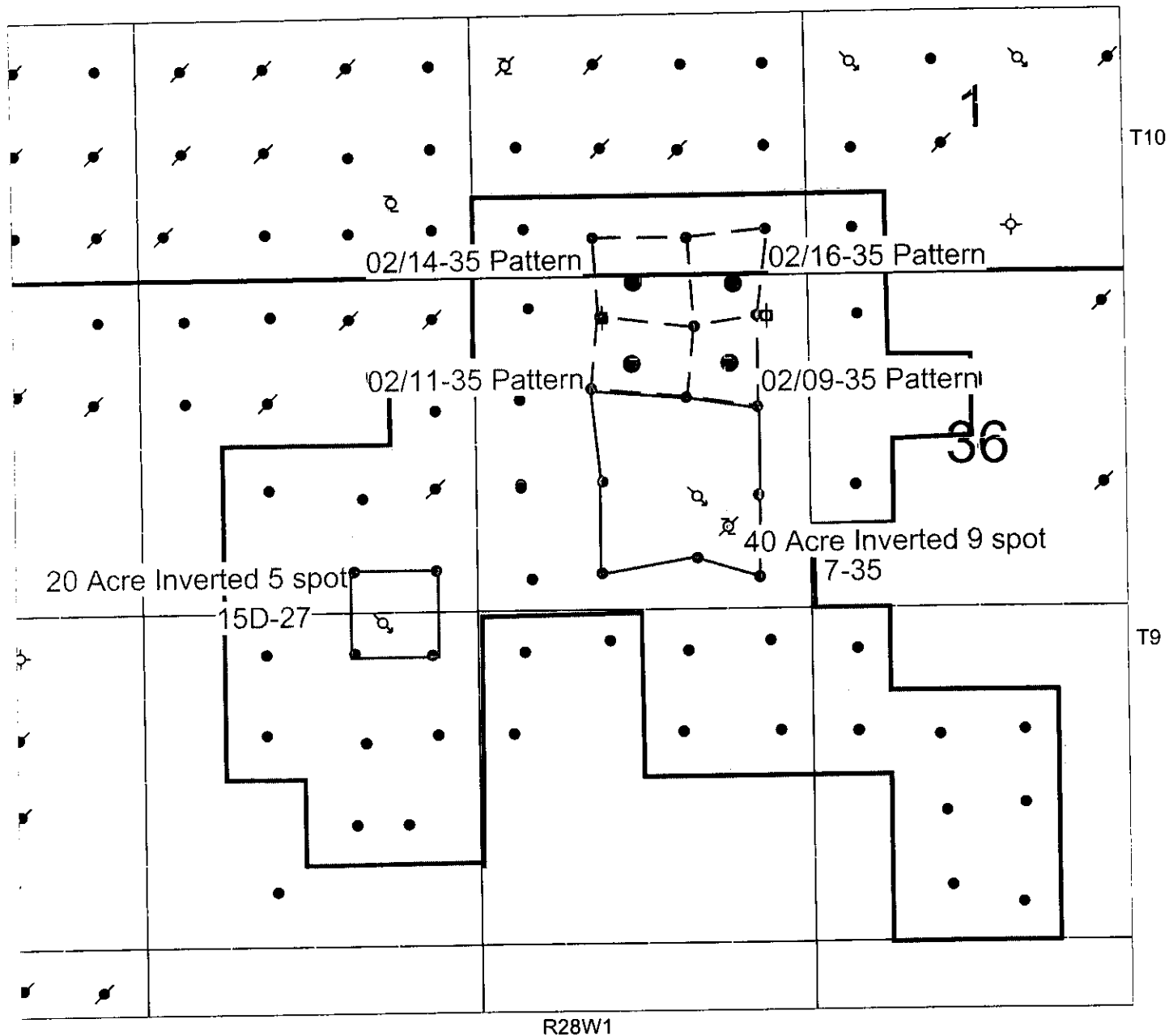



Figure 2



WELL SYMBOLS

| | | | | |
|-------|-------|-------|-------|-------|
| ● OIL | ↗ AO | ⊕ D&A | ⊙ WI | ⊗ AWD |
| ⊙ WD | ↘ AWI | ⊙ STN | ⊙ PTN | ⊙ J&A |
| □ SL | | | | |

● Proposed Injection Well

| | | | |
|--|-----------------|------------------------|--|
| Zargon Oil & Gas Ltd. | | | |
| Daly Unit No. 4 | | | |
| Existing & Proposed WF Patterns | | | |
| Figure 3 | | | |
| Licensed to : Zargon Oil & Gas Ltd. | | | |
|  <small>geoLOGIC systems ltd.</small> <small>(403) 283-1882</small> <small>www.geologic.com</small> | By : | Date : 2000/02/11 | |
| | Scale = 1:30000 | Project : daly unit #4 | |

Group: 15D-27 Inv 5 spot
Total Wells: 5

Primary: OIL
Last On: Oct-1999

Field:
Pool:
Unit:
Oper:
Source Date: n/a

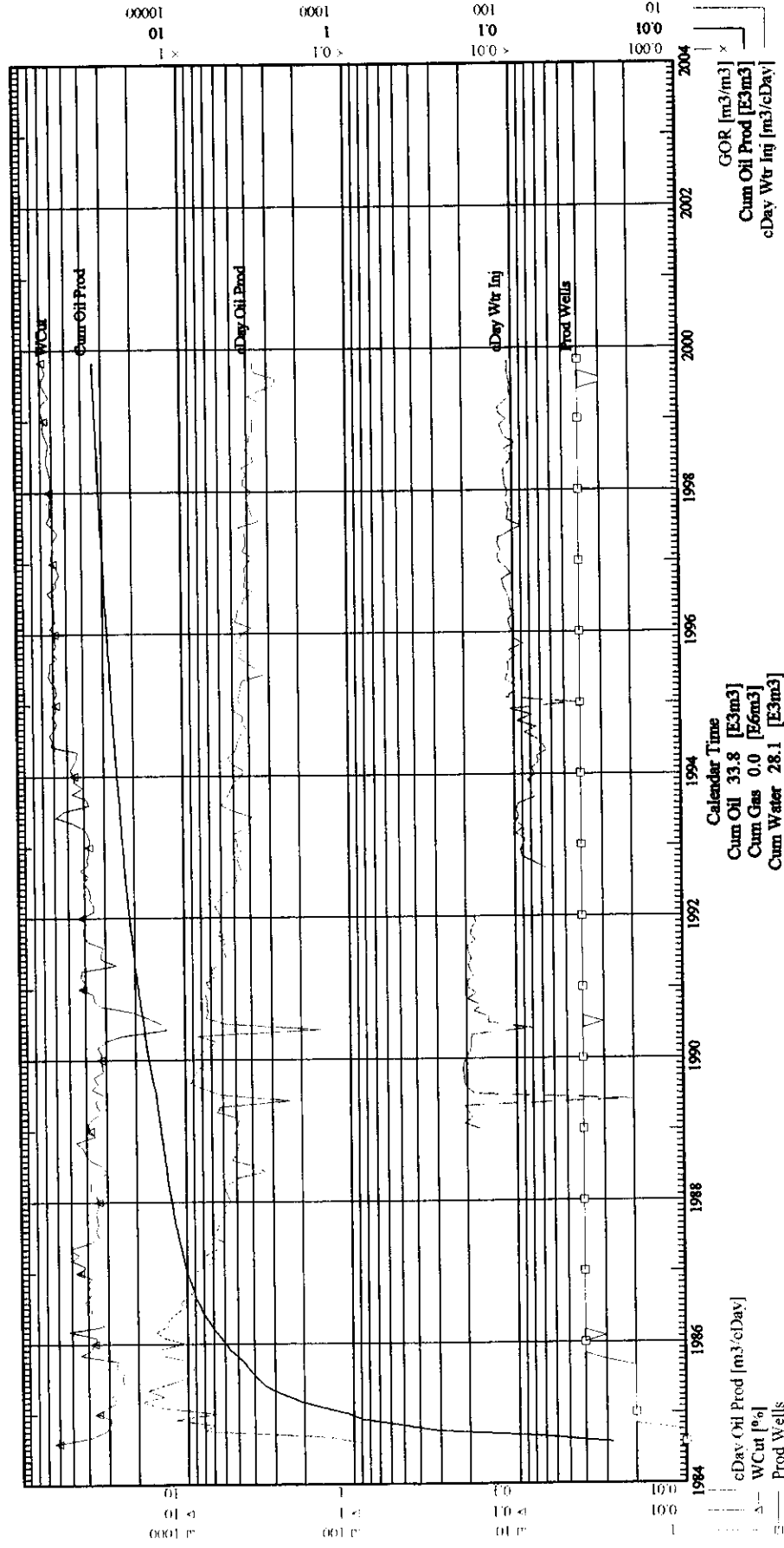


Figure 4a

Group: 15D-27 Inv 5 spot
Total Wells: 5

Primary: OIL
Last On: Oct-1999

Field:
Pool:
Unit:
Oper:
Source Date: n/a

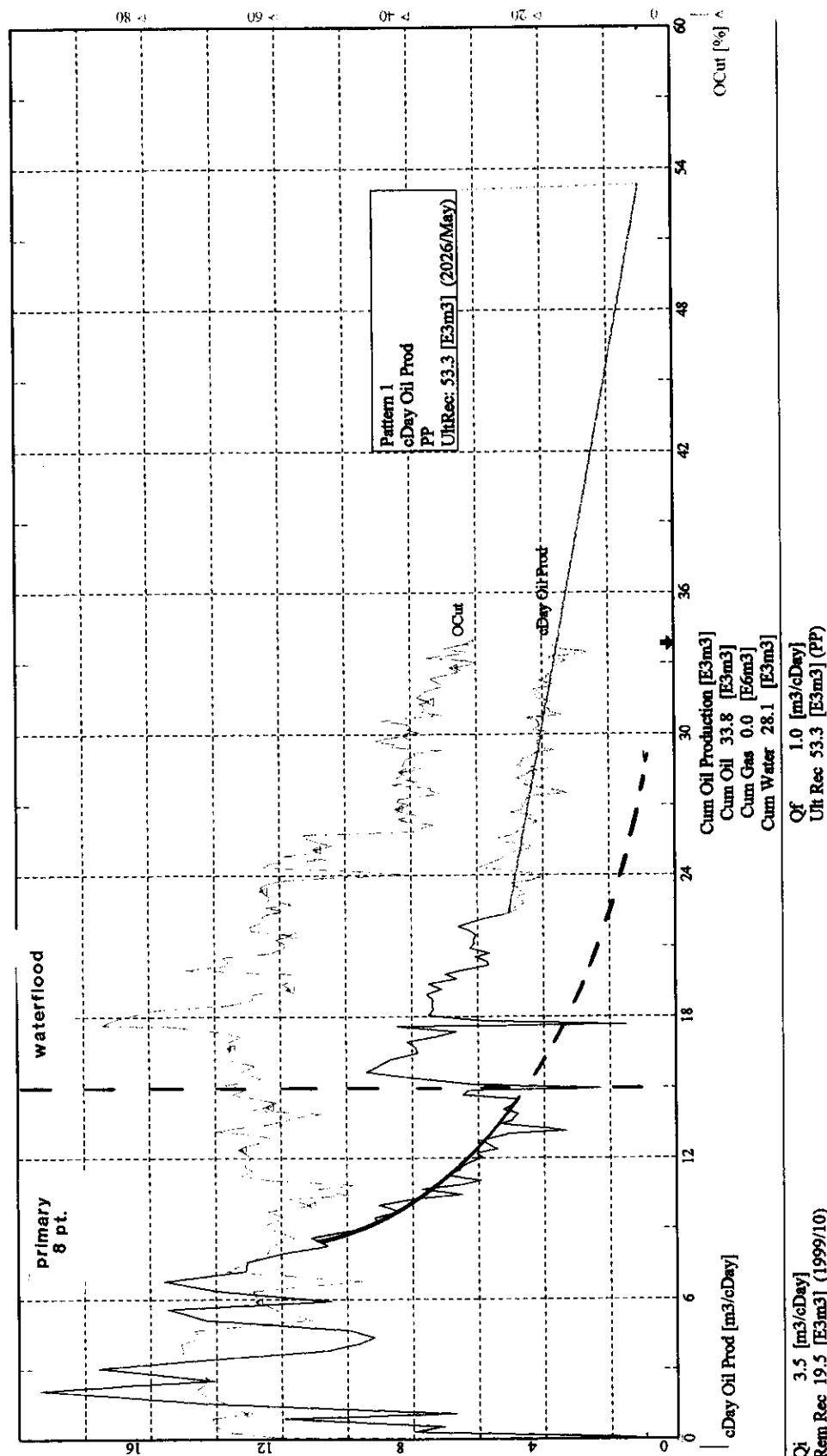


Figure 4b

Group: 7-35 Inv 9 spot

Total Wells: 9

Primary: OIL

Last On: Oct-1999

Field:
Pool:
Unit: 4
Oper:
Source Date: n/a

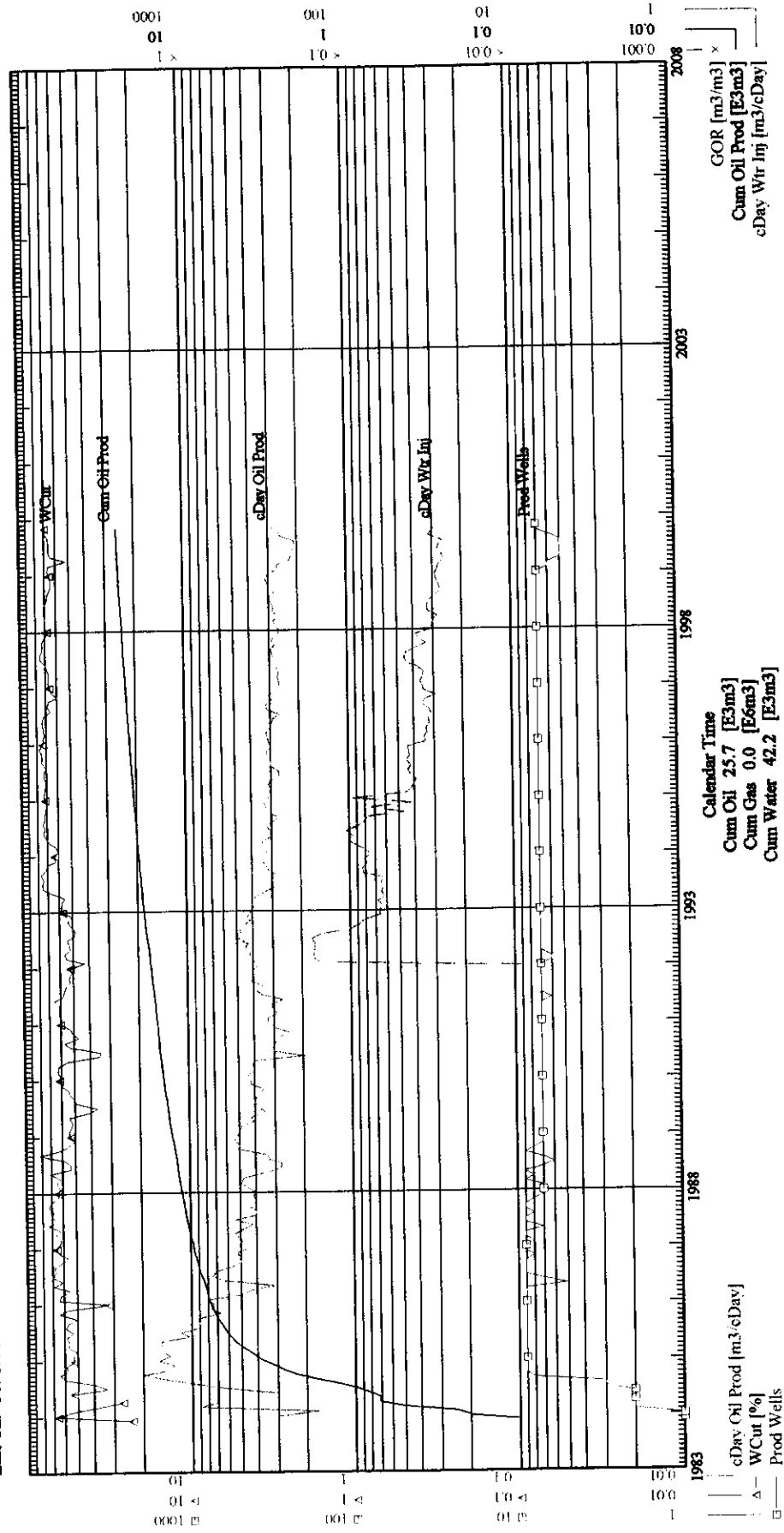
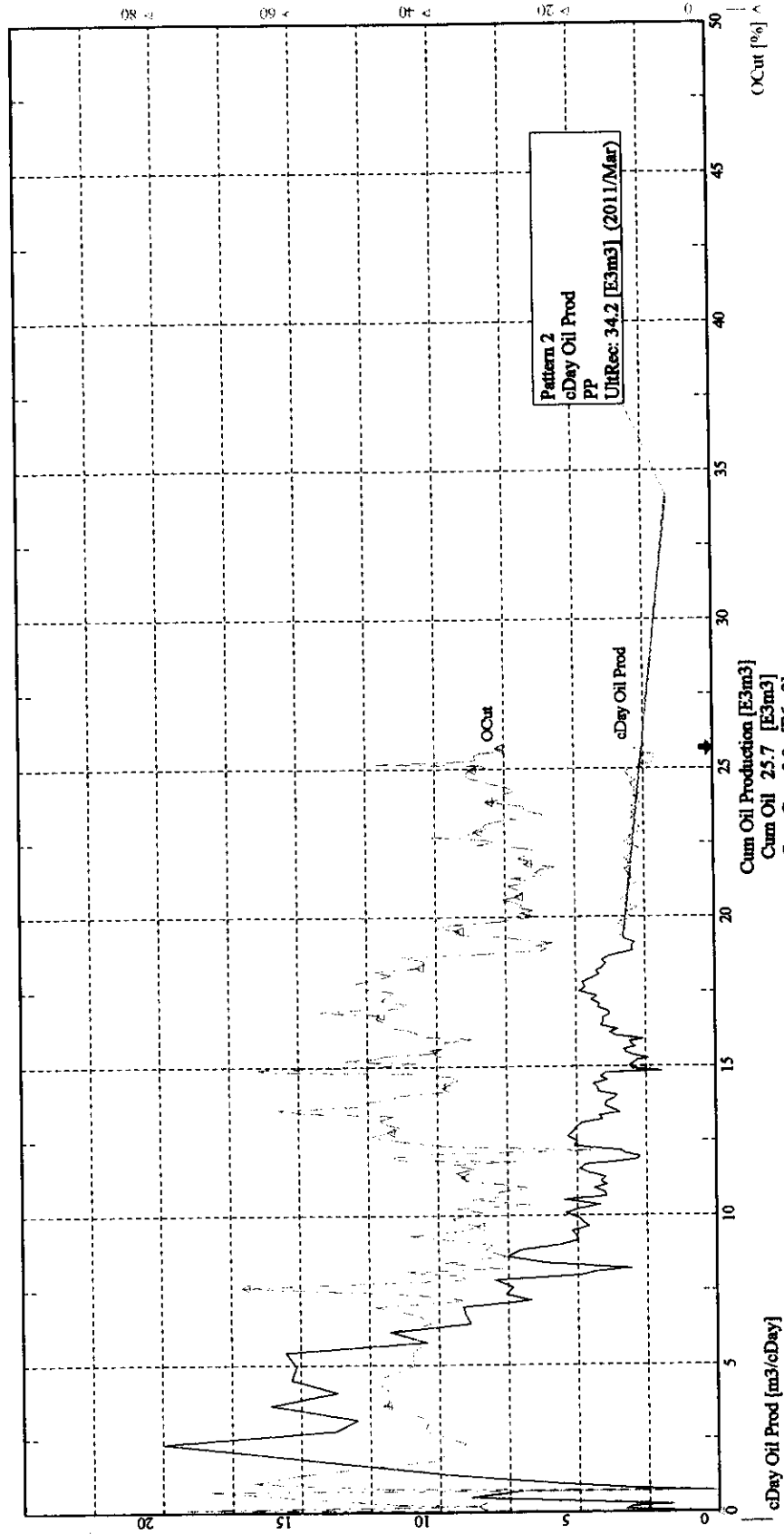


Figure 5a

Group: 7-35 Inv 9 spot
Total Wells: 9

Primary: OIL
Last On: Oct-1999

Field:
Pool:
Unit: 4
Oper:
Source Date: n/a



Serv 100.0%
Exp 4.033%/Yr

Cum Oil Production [E3m3]
Cum Oil 25.7 [E3m3]
Cum Gas 0.0 [E6m3]
Cum Water 42.2 [E3m3]
Qf 1.6 [m3/cDay]
Uti Rec 34.2 [E3m3] (PP)

Qi 2.6 [m3/cDay]
Rem Rec 8.5 [E3m3] (1999/10)

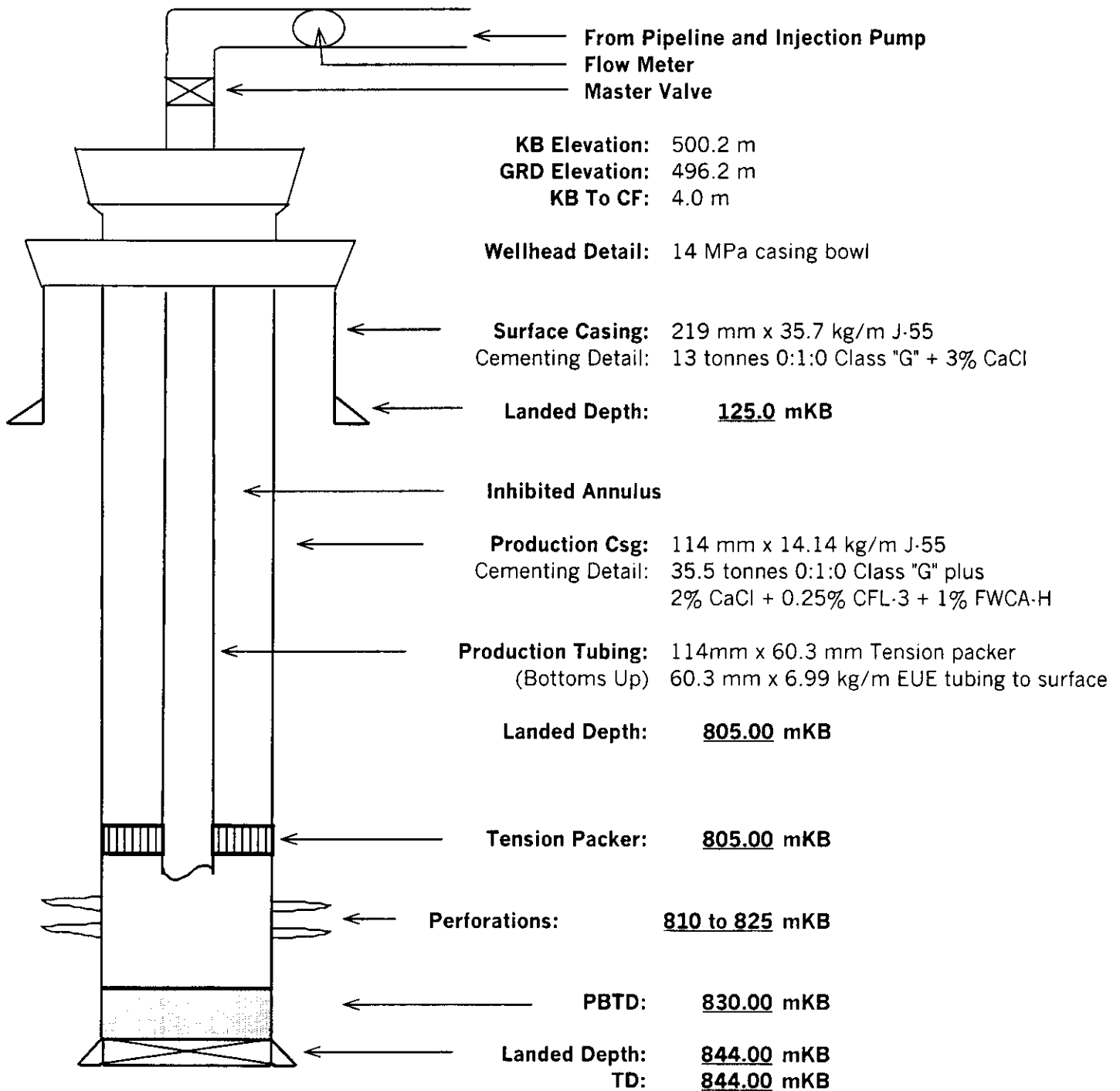
Figure 5b

Application to Modify Waterflood Project

TYPE WELLBORE SCHEMATIC

Daly Unit #4: Four Injection Well Pilot Project

Note: Four wells to be directionally drilled from pad at 15-35-9-28 W1M



Note: As this is a type well, all depths are estimated.

Figure 6

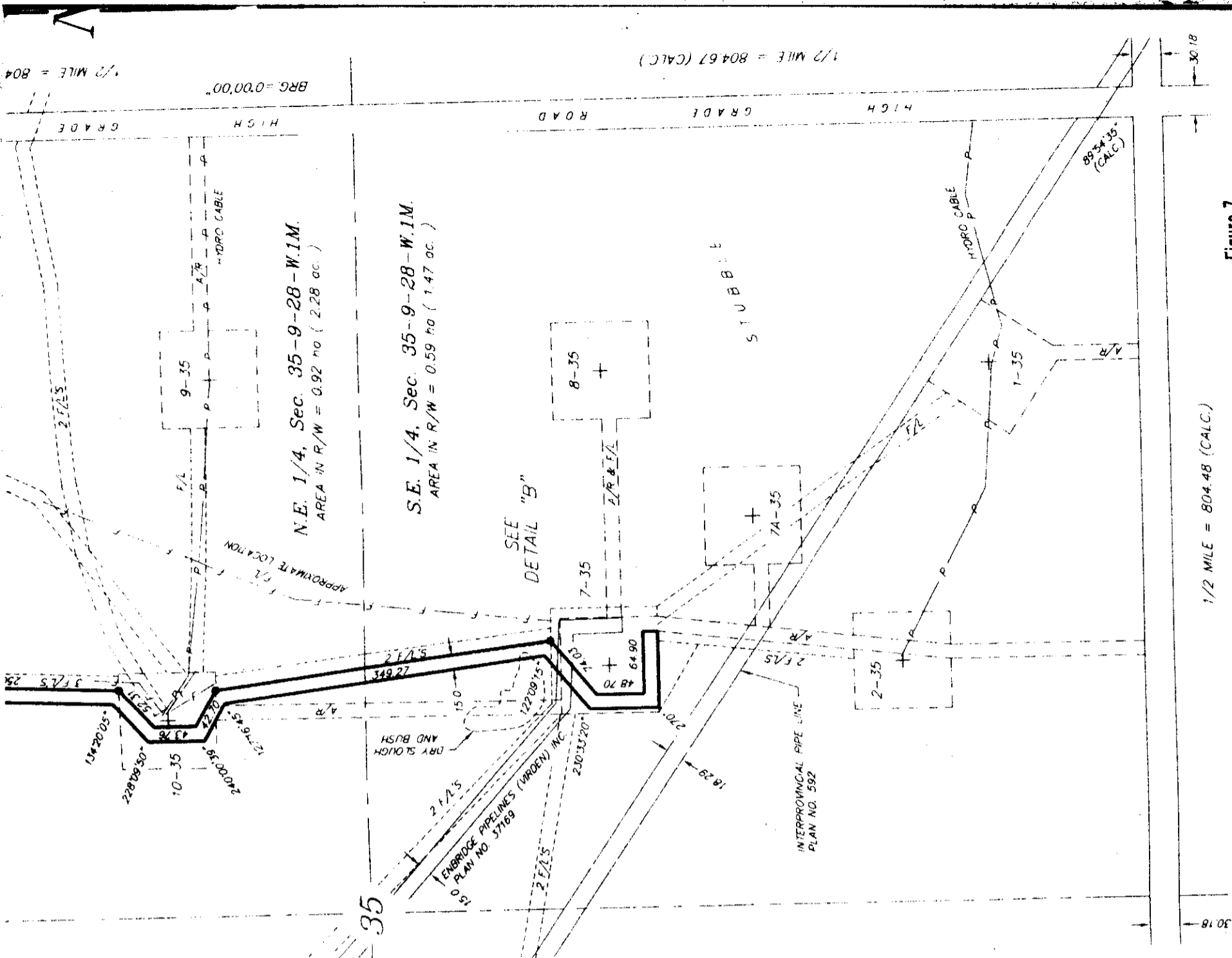
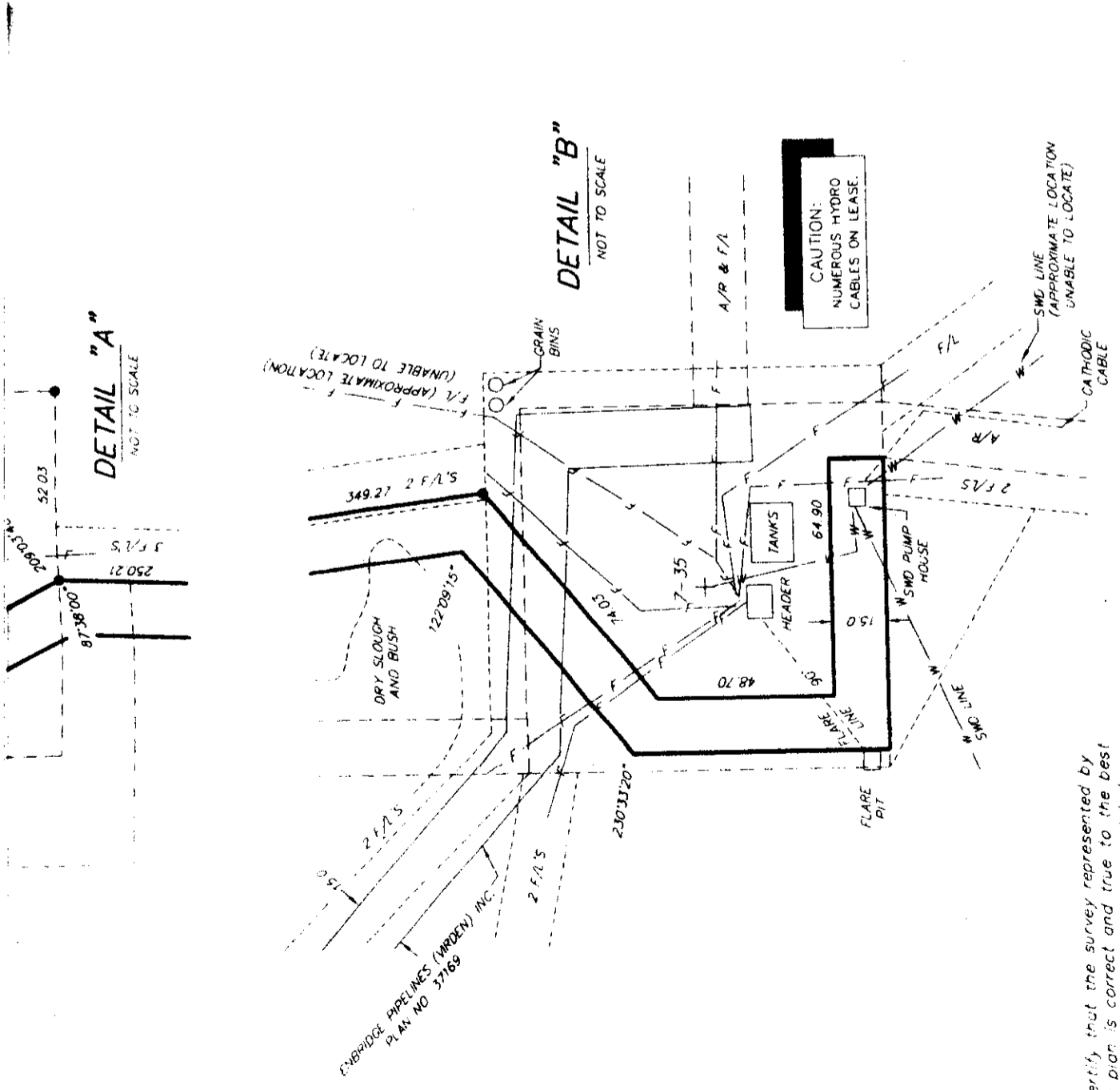


Figure 7

1/2 MILE = 804.48 (CALC.)



NOTE:
All underground installations should be located by the respective authorities prior to construction.

- Portion referred to shown thus
- Survey monuments found are shown thus
- Iron spikes 30cm planted are shown thus
- Fir posts 5.0cm x 5.0cm x 38.1cm planted are shown thus

Certify that the survey represented by this plan is correct and true to the best of my knowledge and was completed on the 28th day of October, A.D. 1999.

David J. Quirk
Manitoba Land Surveyor
Witness
[Signature]

OPERATOR:
ZARGON OIL & GAS LTD.

David J. Quirk, MLS
Manitoba Land Surveyor
110 King Street
Estevan, Saskatchewan
S4A 0Z5
Phone (306)634-2636
Fax (306)634-3164

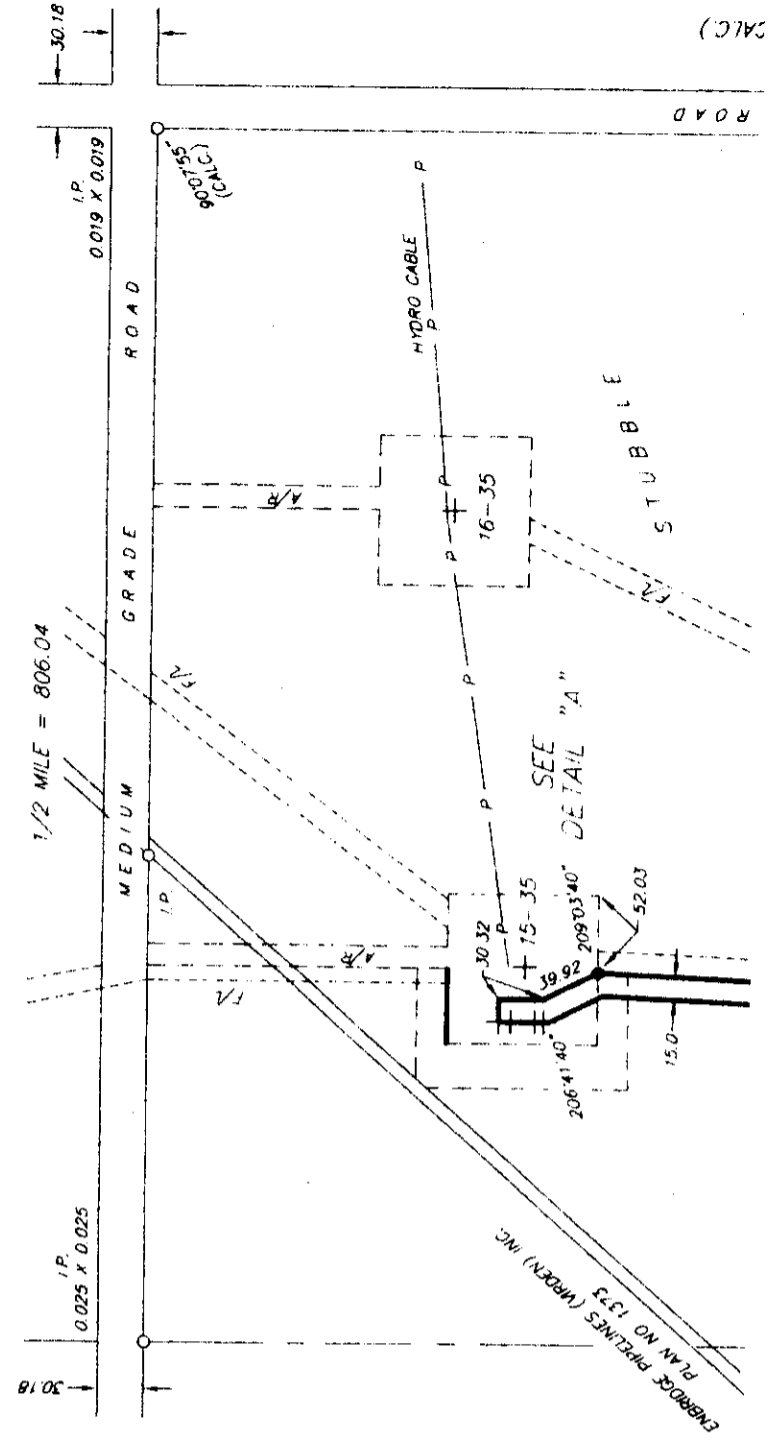
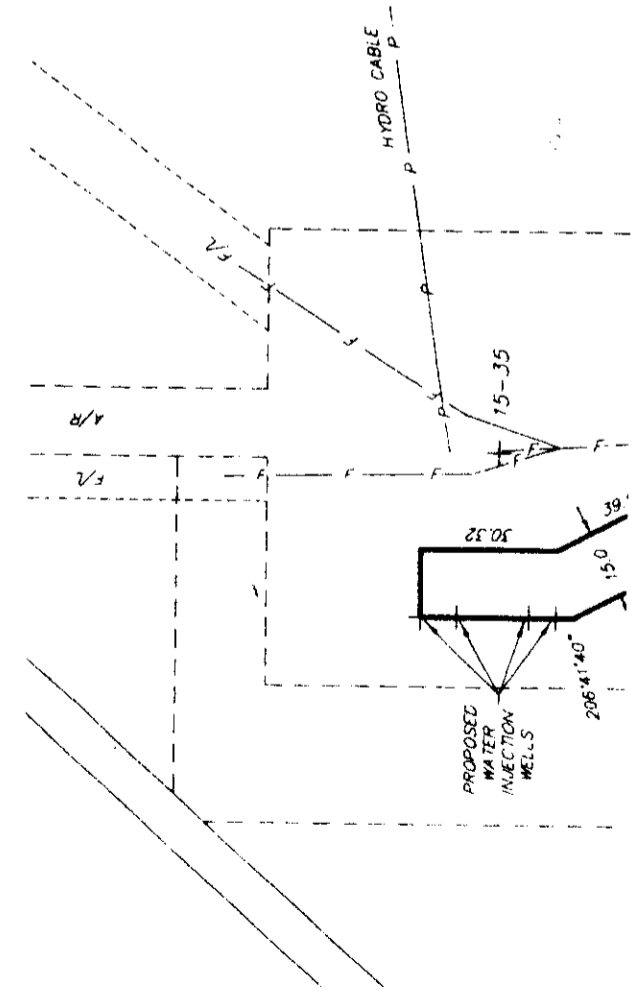
File No. SM-0016-99

REVISIONS:

ZARGON OIL & GAS LTD.

INJECTION LINE RIGHTS OF WAY
 E. 1/2, Sec. 35, Twp. 9, Rge. 28, W.1M.

Scale: 1:5000



(CALC)

10-35-9-28

11-35-9-28

14-35-9-28

16-35-9-28

Well Site and Access Road
Directionally Drilled From

L.S. 15, Sec. 35, Twp. 9, Rge. 28, W.1M.

Scale: 1:5000

I certify that the survey represented by
this plan is correct and true to the best
of my knowledge and was completed on
the 29th day of October, A.D. 1999.

David J. Quirk
Manitoba Land Surveyor
Jim Ricks
Witness

OPERATOR:




ZARGON OIL & GAS LTD.

SM-0016-99

AREAS: Well Site: 0.61 ha (1.51 ac.)

NOTE:

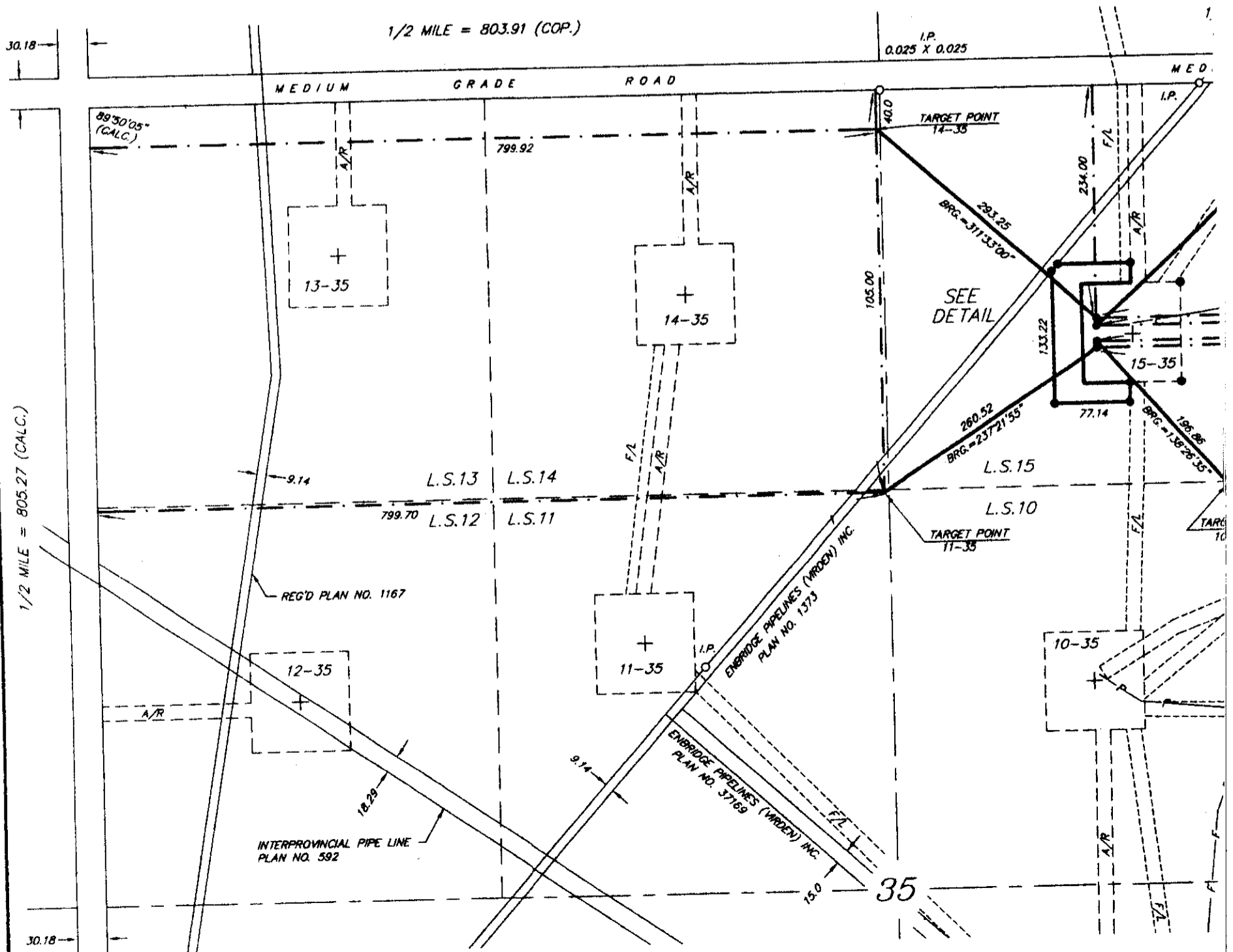
All underground installations should be located by the
respective authorities prior to construction.
There are no surface improvements within 75m of Well
location except as shown.

Portion referred to shown thus 
Survey monuments found are shown thus 
Survey monuments planted are shown thus 

David J. Quirk, MLS

Manitoba Land Surveyor
110 King Street
Estevan, Saskatchewan
S4A 2A7

Phone (306)634-2636
Fax (306)634-3164



REVISIONS:

FILE NO.:

0-35

ELEVATION: 495.84 Ground

CO-ORDINATES:

SURFACE POINT: 258.00 S. of N. Bdry.
590.59 W. of E. Bdry.
TARGET POINT: 405.00 S. of N. Bdry.
460.00 W. of E. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
10-35
TARGET POINT: 147.27 S. & 130.63 E.
N.E. Cor. Sec. 35: 256.63 N. & 590.59 E.

14-35

ELEVATION: 496.30 Ground

CO-ORDINATES:

SURFACE POINT: 234.00 S. of N. Bdry.
590.54 W. of E. Bdry.
TARGET POINT: 40.00 S. of N. Bdry.
799.92 E. of W. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
14-35
TARGET POINT: 194.50 N. & 219.46 W.
N.E. Cor. Sec. 35: 232.64 N. & 590.54 E.

11-35

ELEVATION: 495.88 Ground

CO-ORDINATES:

SURFACE POINT: 264.00 S. of N. Bdry.
590.61 W. of E. Bdry.
TARGET POINT: 405.00 S. of N. Bdry.
799.70 E. of W. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
11-35
TARGET POINT: 140.49 S. & 219.39 W.
N.E. Cor. Sec. 35: 262.64 N. & 590.61 E.

16-35

ELEVATION: 496.13 Ground

CO-ORDINATES:

SURFACE POINT: 242.00 S. of N. Bdry.
590.55 W. of E. Bdry.
TARGET POINT: 58.00 S. of N. Bdry.
387.00 W. of E. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
16-35
TARGET POINT: 183.53 N. & 203.55 E.
N.E. Cor. Sec. 35: 240.64 N. & 590.55 E.

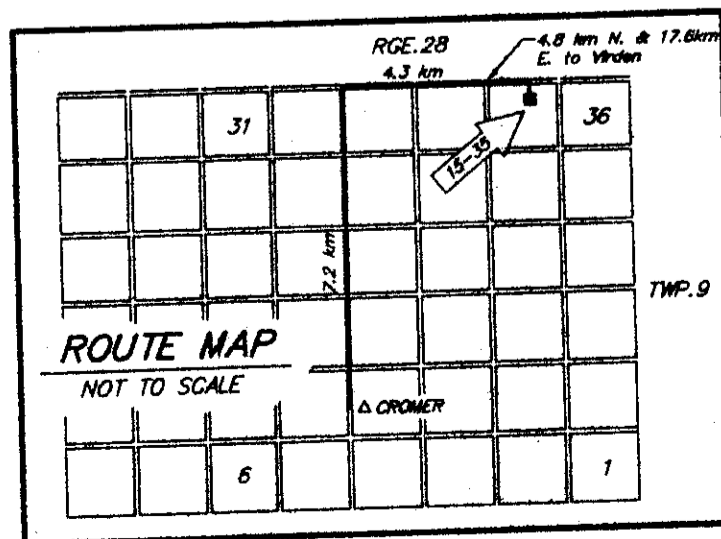
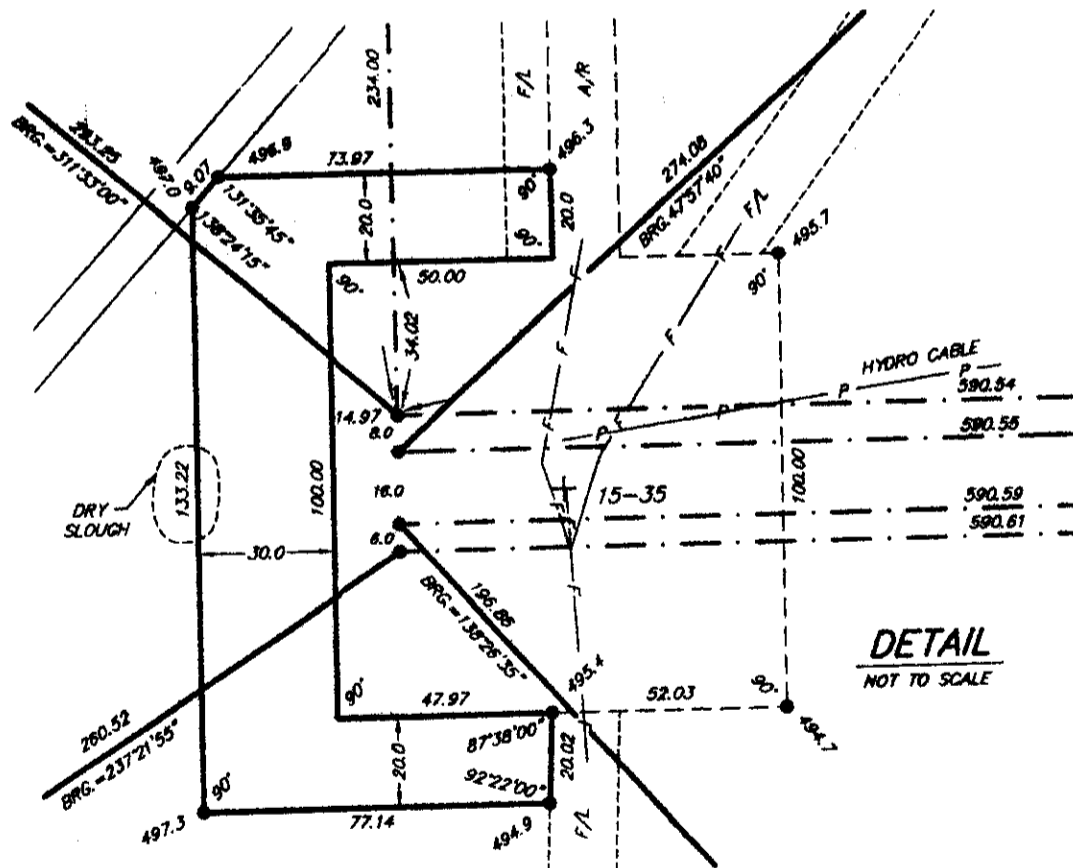
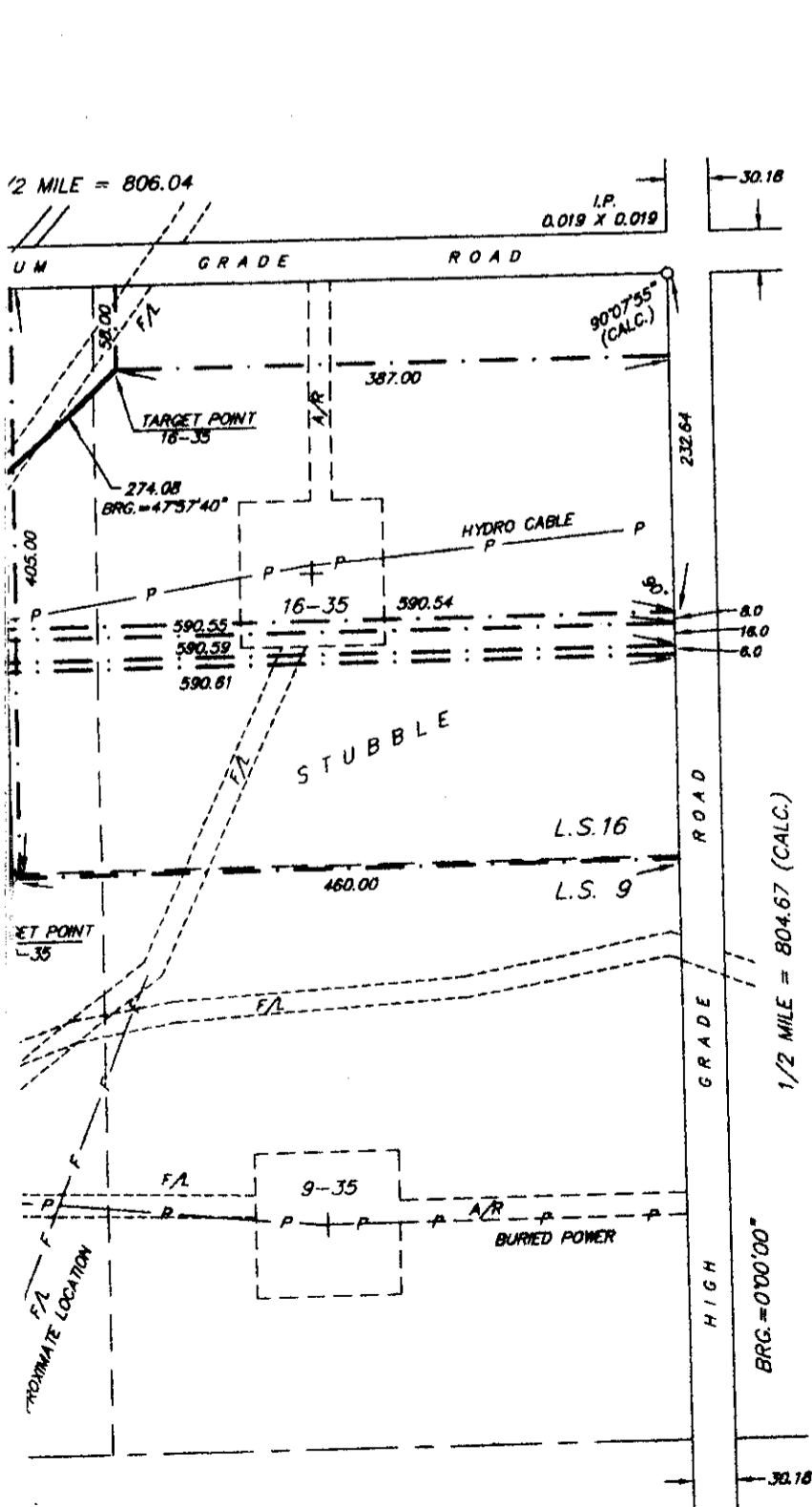


Figure 8

ZARGON

O I L & G A S L T D.

February 14, 2000

Manitoba Energy and Mines
Petroleum and Energy Branch
360, 1395 Ellice Avenue
Winnipeg, Manitoba
R3G 2P3

ATTENTION: Mr. John Fox, P. Eng.

Dear Mr. Fox:

**Re: APPLICATION TO MODIFY WATERFLOOD PROJECT P.M. 53
INFILL WATER INJECTION WELL PILOT PROJECT
DALY UNIT NO. 4**

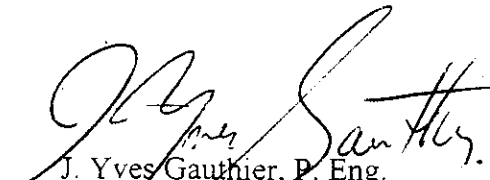
Pursuant to Section 117 of the Manitoba Oil and Gas Act, Zargon Oil and Gas Ltd., as Operator of the subject Unit, and on behalf of the Unit interest owners, requests MEM approval to modify the existing waterflood scheme by the implementation of an Infill Water Injection Well Pilot Project.

The pilot project will entail the drilling of four new water injection wells on an 8 ha. spacing. Please find enclosed five copies of our application for your files.

If you have any questions, please contact the undersigned at (403) 261-7321.

Yours very truly,

ZARGON OIL & GAS LTD.



J. Yves Gauthier, P. Eng.
Manager, Exploitation

JYG/ip
Encls.

cc: Working Interest Owners – Daly Unit No. 4
(see attached addressee list)

DALY UNIT NO. 4

ADDRESSEE LIST

Zargon Oil & Gas Ltd.

2850, 605 – 5th Avenue S.W.
Calgary, Alberta
T2P 3H5

ATTENTION: Dan Roulston

Cypress Energy Inc.

2700, 500 – 4th Avenue S.W.
Calgary, Alberta
T2P 2V6

ATTENTION: Production Manager

Palliser Energy Corp.

1000, 521 – 3rd Avenue S.W.
Calgary, Alberta
T2P 3T3

ATTENTION: Production Manager

**Thunderbird 1983 Exploration and
Development Program (Limited Partnership)**

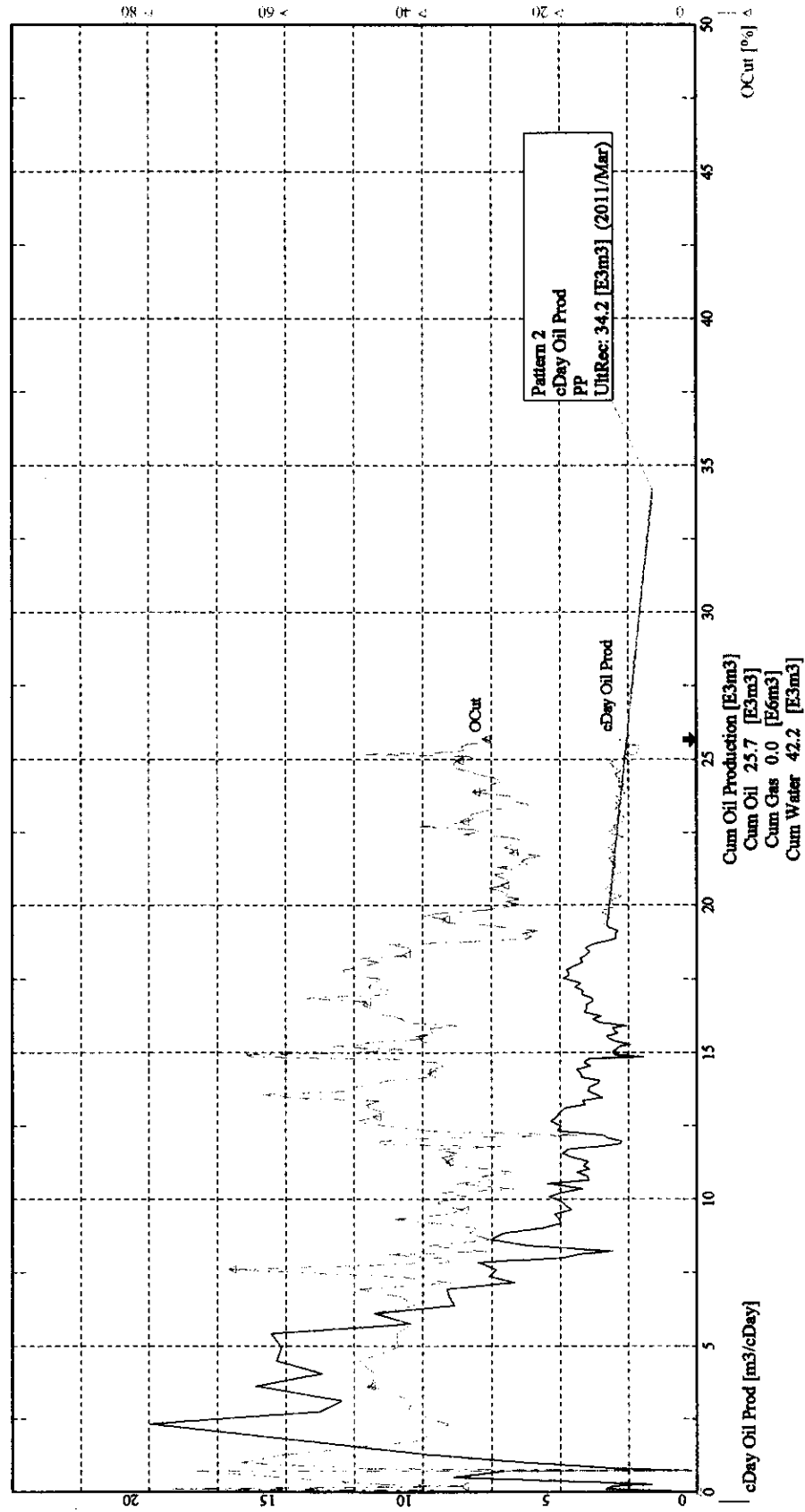
2850, 605 – 5th Avenue S.W.
Calgary, Alberta
T2P 3H5

ATTENTION: Dan Roulston

Group: 7-35 Inv 9 spot
Total Wells: 9

Primary: OIL
Last On: Oct-1999

Field:
Pool:
Unit: 4
Oper:
Source Date: n/a



| | | | | | |
|---------|----------------------|---------|------------------|------|-----------|
| Qi | 2.6 [m3/cDay] | Qf | 1.6 [m3/cDay] | Serv | 100.0% |
| Rem Rec | 8.5 [E3m3] (1999/10) | Utr Rec | 34.2 [E3m3] (PP) | Exp | 4.033%/Yr |

Figure 5b

Group: 15D-27 Inv 5 spot
Total Wells: 5

Primary: OIL
Last On: Oct-1999

Field:
Pool:
Unit:
Oper:
Source Date: n/a

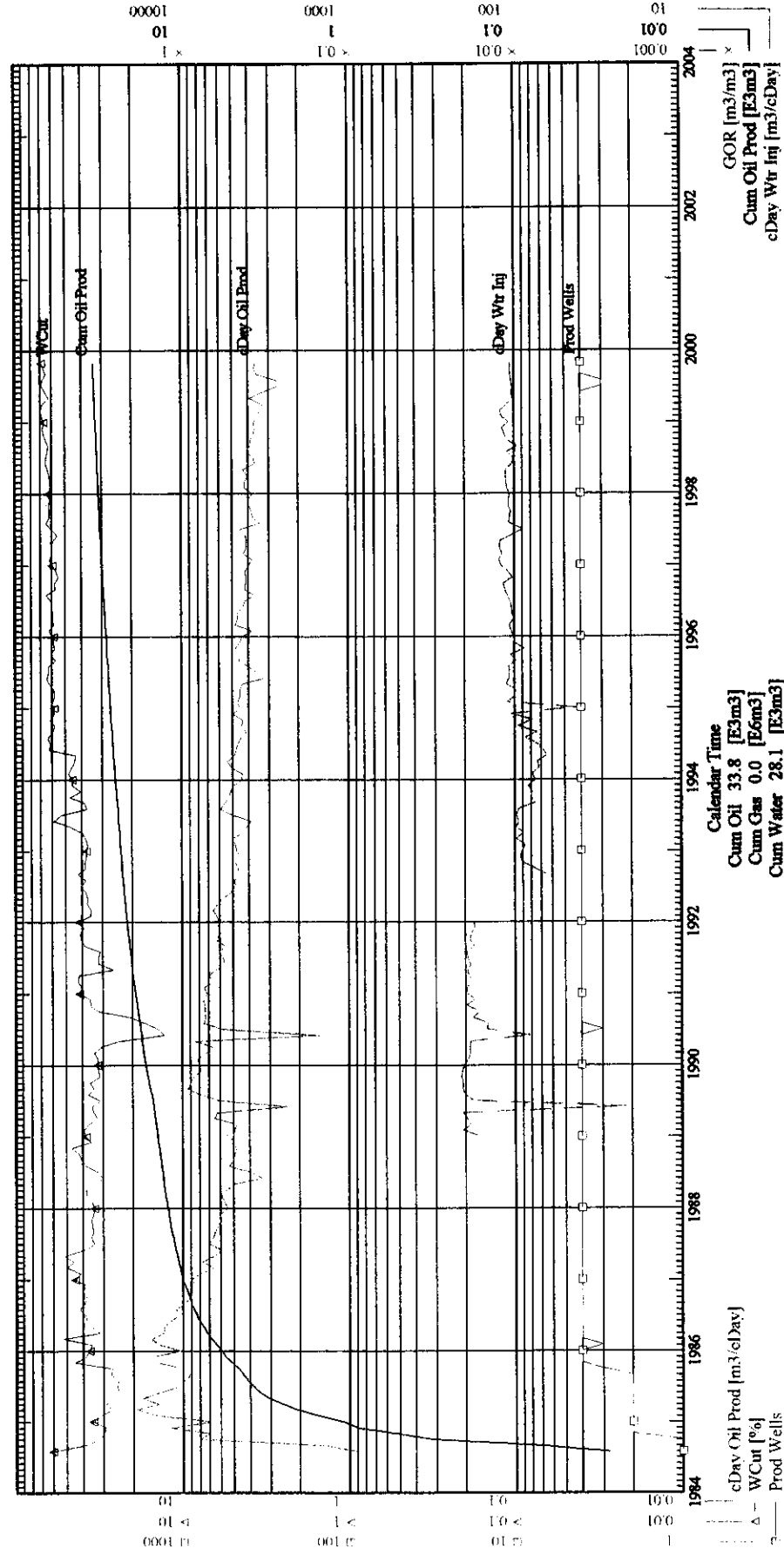


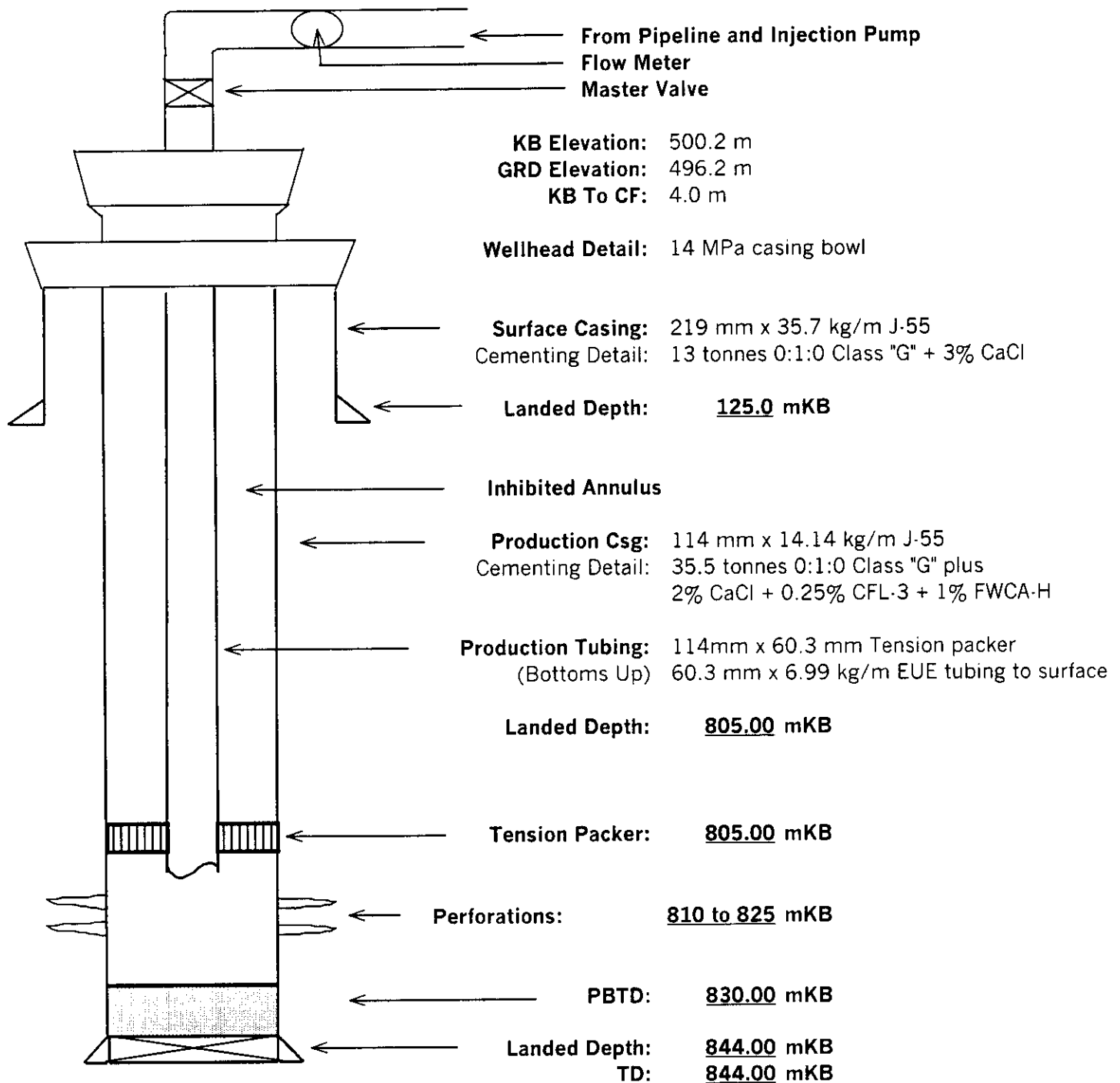
Figure 4a

Application to Modify Waterflood Project

TYPE WELLBORE SCHEMATIC

Daly Unit #4: Four Injection Well Pilot Project

Note: Four wells to be directionally drilled from pad at 15-35-9-28 W1M



Note: As this is a type well, all depths are estimated.

Figure 6

Table 1

Daly Unit #4

Working Interest Owners

| | |
|--|---------|
| Zargon Oil & Gas Ltd. | 64.43% |
| Cypress Energy Inc. | 18.51% |
| Palliser Energy Corp. | 7.11% |
| Thunderbird 1983 Exploration and Development Program (Zargon owns 86% and manages this partnership) | 9.95% |
| | 100.00% |

Group: **Daly Unit 4 - Feb. 2000**
 Total Wells: 56

Primary: OIL
 Last On: Oct-1999

Field:
 Pool:
 Unit:
 Oper:
 Source Date: n/a

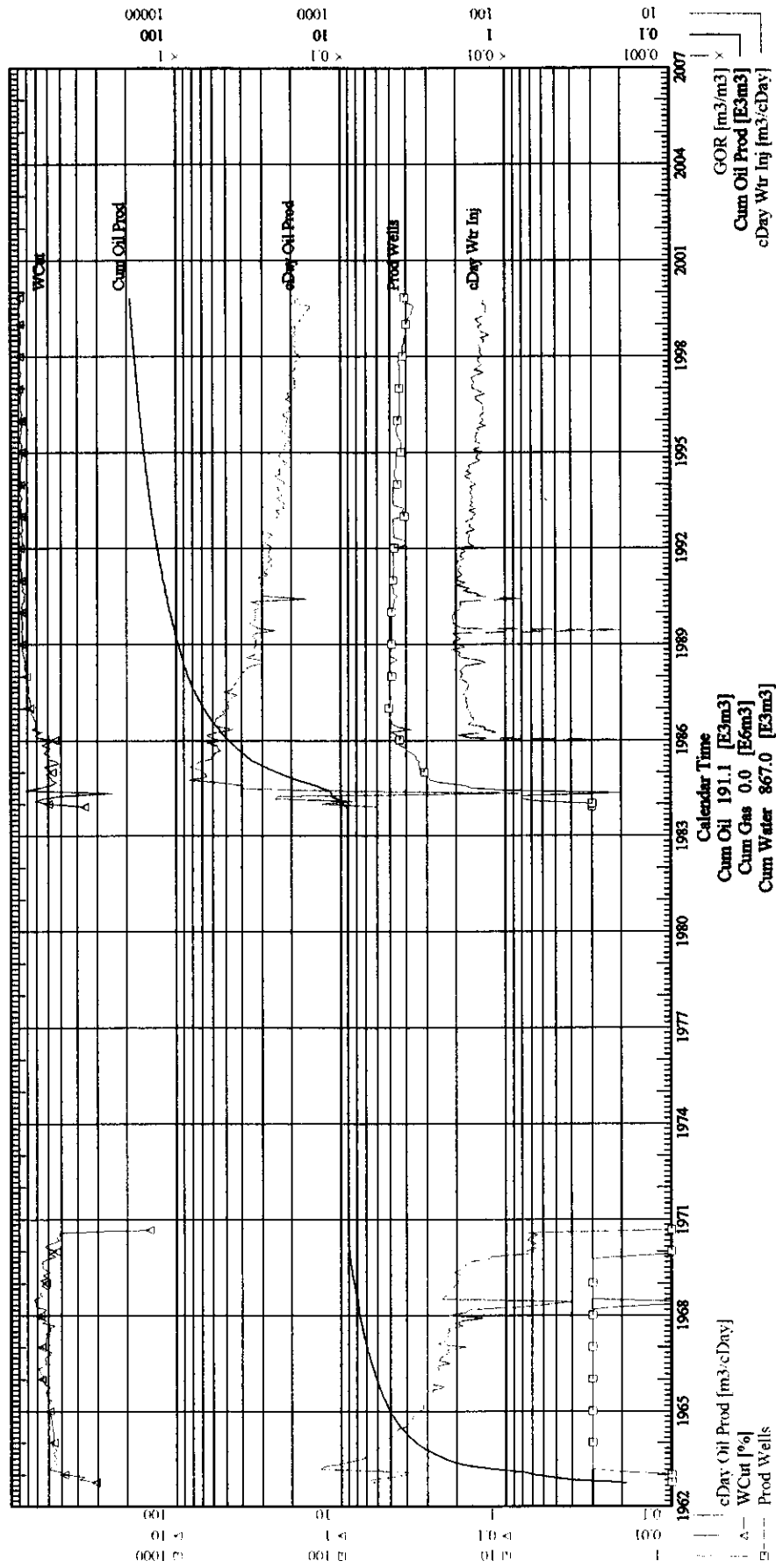
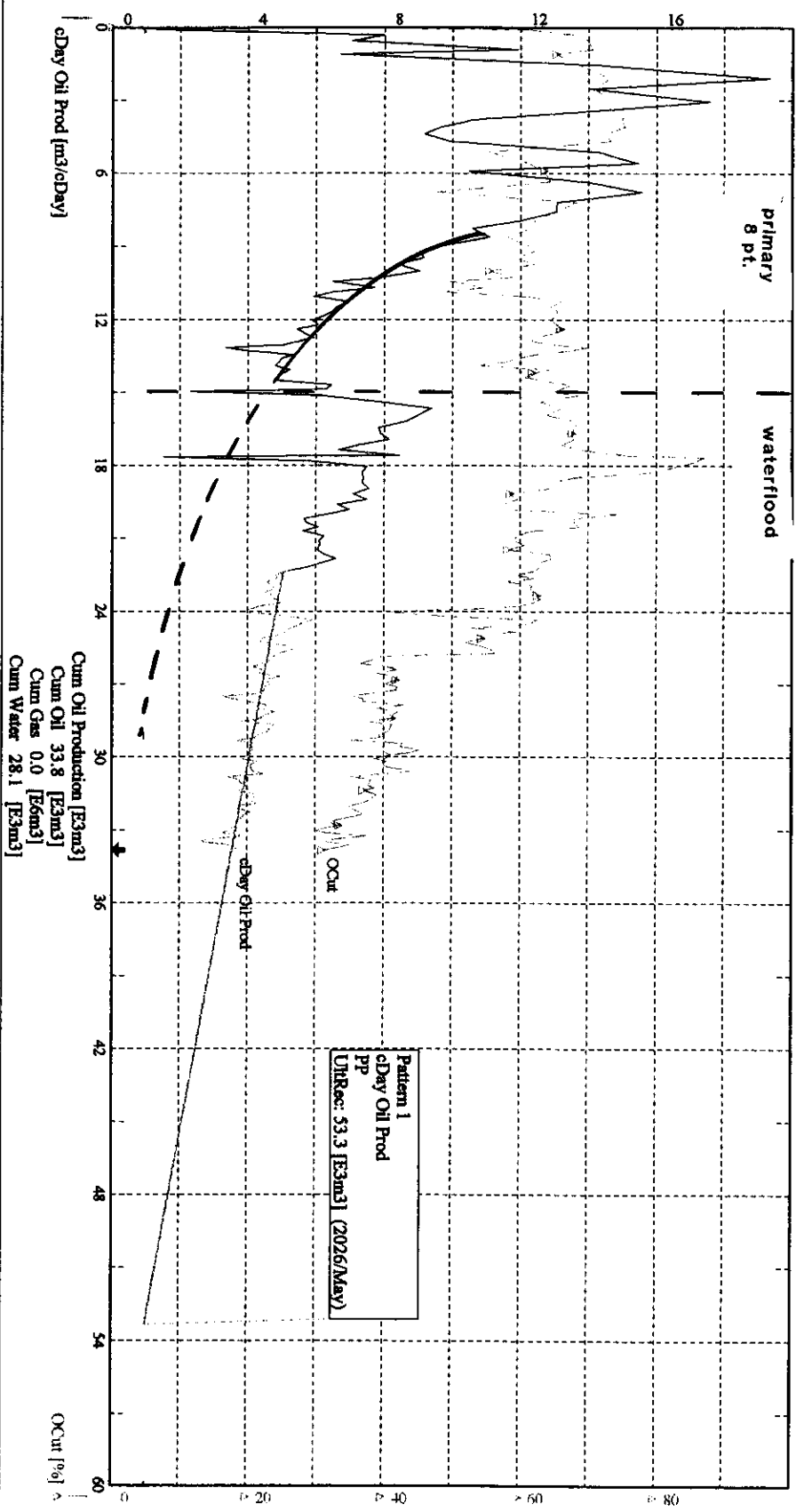


Figure 2

Group: **ISD-27 Inv 5 spot**
 Total Wells: **5**

Primary: **OIL**
 Last On: **Oct-1999**

Field:
 Pool:
 Unit:
 Oper:
 Source Date: **n/a**



Oil **3.5 [m3/eDay]**
 Rem Rec **19.5 [E3m3] (1999/10)**

Oil **1.0 [m3/eDay]**
 Utr Rec **53.3 [E3m3] (PP)**

DECPRO v3.11 Evaluation
 Petro-Soft Systems Ltd.

Figure 4b

Group: 7-35 Inv 9 spot
Total Wells: 9

Primary: OIL
Last On: Oct-1999

Field:
Pool:
Unit: 4
Oper:
Source Date: n/a

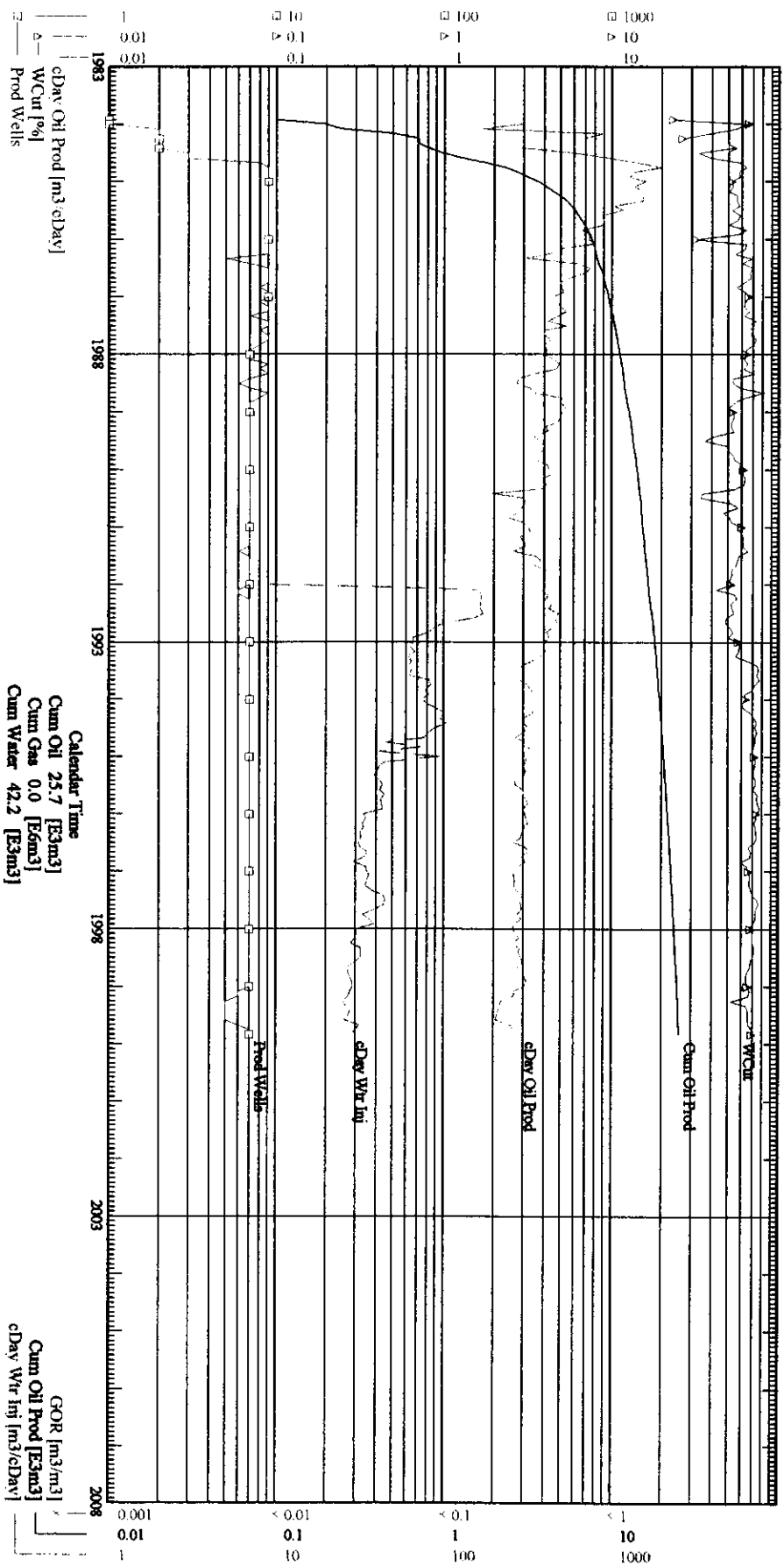


Figure 5a

Application to Modify Waterflood Project P.M. 53

Pilot Project to Drill Four Water Injection Wells on 8 Ha. Spacing

Daly Unit No. 4

February, 2000

Introduction

In January 1987, the MEM issued Manitoba Regulation 29/87, Order No. PM 53 to conduct a pressure maintenance scheme by waterflooding the Daly Lodgepole A Pool.

The project was initiated in the fall of 1988 when well 15D-27-9-28 WPM was drilled as a new water injector and well 7C-35-9-28 WPM was converted from a water disposal well to water injection status.

Zargon, as Operator and on behalf of the Unit Working Interest owners, is proposing a pilot project to increase water injection volumes by drilling four new Lodgepole water injection wells on 8 hectare spacing, to improve the flood recovery efficiency. Two wells will be drilled immediately and the remaining two wells would be drilled within two years following a performance evaluation of the new waterflood patterns.

Background

Figure 1 presents a map outlining the Unit boundaries for the Daly Unit #4 and adjacent Daly Unit #3. Table 1 lists the current working interest owners of Daly Unit #4.

Figure 2 presents a production history graph of the unit. Three wells were drilled, completed and placed on stream in December 1962 and shut in in July 1970 after producing 9000 m³ of oil (56.8 MSTB). Beginning in January, 1984 and continuing until January 1987, 52 additional wells were drilled, completed and placed on stream. The wells produced under primary recovery mechanism until January 1987 when unitization was approved and the waterflood project was initiated. Injection volumes prior to January 1987, indicated on Figure 2, consisted of water disposal into a deeper formation.

Currently, the Unit comprises 40 oil producers, 2 water injectors, 14 shut in wells and one water source well. The Unit is producing 20.5 m³/d of oil (129 BOPD), 135 m³/d of water (850 BWPD), and injecting approximately 135 m³/d (850 BWPD). Cumulative oil production to December 1999 is approximately 192.6 E3m³ (1211.3 MSTB) and 875 E3m³ (5.502 MSTB) of water. Cumulative water injection at December 1999 is 825 E3m³ (5188 MSTB).

Previous Application

The original application for approval was submitted in June 1980 by Chevron Canada Resources Limited, a prior Operator.

Performance Review and Waterflood Recovery Estimates

The initial waterflood project consisted of two injection wells at 15D-27-9-28 WPM and 7-35-9-28 WPM. The waterflood recovery estimate for each of the two patterns is forecasted on the basis of flood performance over the past ten years. The ultimate and remaining recoverable oil reserves are estimated by decline analysis to an economic limit of 0.2 m³/d/w. Figure 3 identifies the existing waterflood patterns as well as the four proposed injector locations.

A review of pattern performance identifies the following observations:

15D-27-9-28 WPM Pattern

- Inverted 5 spot on 8 hectare spacing – this is the proposed pattern for the pilot project.
- Injection began in the fall of 1988, at an initial rate exceeding 190 m³/d of water (1200 BWPd) and the rate was sustained for 3 years. (Figure 4a)
- The oil rate increased from 4.8 m³/d (30 BOPD) to a peak of 9.4 m³/d (59 BOPD) within 1 year of injection.
- In January 1992, injection ceased for six months, then resumed at a reduced rate of 80-100 m³/d (500-600 BWPd). This change in injection volumes resulted in a rapid drop in the pattern oil rate from 6.4 m³/d (40 BOPD) to 4.8 m³/d (30 BOPD). Since 1995, the continued injection rate of 110 m³/d has resulted in a pattern oil decline rate of approximately 4.7%/year.
- Figure 4b presents an oil rate vs. cumulative production plot which demonstrates the forecasted pattern recovery under primary and waterflood conditions. Zargon estimates that oil recovery under continued primary recovery mechanism would yield 28.6 E3m³ (180 MSTB) to an economic limit of 0.2 m³/d/well. Pattern recovery under waterflood conditions is estimated at 53.3 E3m³ oil (335 MSTB); this represents an 86% increase, or 24.7 E3m³ (155 MSTB), of recoverable oil reserves over the primary recovery forecast.

7-35-9-28 WPM Pattern

- Inverted 9 spot on 16 hectare spacing.
- Injection began in 1992 at a rate of 160 m³/d (1000 BWPd) and quickly declined to the current injection rate of 30 m³/d (180 BWPd). (Figure 5a)

- Pattern performance indicates poor waterflood response. The 4 m³/d (19.25 BOPD) pattern oil rate prior to commencement of injection quickly increased to 5 m³/d (31 BOPD), then returned to a constant 3 m³/d for the last 6 years despite a reduction in injection volumes. The graph indicates the pattern oil rate had already increased from 3 to 4 m³/d prior to starting injection at 7-35. Zargon believes that injection at 7-35 is providing a measure of pressure maintenance to the offsetting wells, however, the 16 ha. spacing is too large for pattern productivity increases to be realized. It is difficult to differentiate recovery predictions under primary and waterflood conditions.
- Figure 5b presents the oil rate vs. cumulative production plot under current conditions. Zargon estimates pattern recovery will yield 34.2 E3m³ (215 MSTB) which is representative of primary recovery conditions.
- The observation of this 16 ha. pattern supports the need for a tighter waterflood pattern as it is uneconomic to conduct a waterflood on this spacing.

Project Description

From the results observed at both patterns, Zargon is proposing to add four injectors on a 8 ha. pattern. The proposed locations as identified in Figure 3 are:

02/9C-35-9-28 WPM
 02/11D-35-9-28 WPM
 02/14D-35-9-28 WPM (cased, December 1999)
 02/16D-35-9-28 WPM (cased, December 1999)

a) Water Injection Wells

In November 1999, Zargon drilled wells at 2/14D-35-9-28 W1M and 2/16C-35-9-28 W1M as proposed water injectors. The wells are currently cased and waiting on completion, tie-in and pilot project approval from MEM. These two locations were selected for the following reasons:

- i) reservoir quality: performance history indicates that this area of the unit exhibits the best porosity and permeability values, —
- ii) correlative rights: these four proposed locations are all surrounded by unit producers. Therefore, correlative rights, drainage concerns etc. should not be an issue with offsetting mineral or royalty owners,
- iii) proximity to existing waterflood at Daly Unit #3: Zargon believes the northern portion of Daly Unit #4 is benefiting from Unit #3 injection and that the earliest production response will occur in areas of highest reservoir pressure,
- iv) high mobile oil saturation: Zargon selected these locations to create waterflood patterns as high up the oil column as possible to permit the

greatest sweep efficiencies by flooding the reservoir with the highest mobile oil saturation.

The injectors are assumed to have a sustained injectivity up to 80-120 m³/d/well. The rate is estimated by analogy to the Unit 4 injectors, 15D-27 and 7-35-9-28 W1M, which averaged 132 m³/d and 63 m³/d respectively during their first five years of injection.

The wellhead injection pressure shall be limited to a maximum of 9,000 kPa as presented in Board Order No. P.M. 53.

Figure 6 is a schematic of a typical proposed water injection well configuration.

The water injectors will be drilled directionally from a pad at the 15-35 well location. The estimated cost to drill and complete each injector is \$280,300.

- b) The water source for the proposed injectors will continue to be the same as that currently obtained for the Unit. Produced water will be diverted from current overinjection in the existing patterns to maintain the withdrawals from the new patterns.

- c) **Water Injection Lines**

It is proposed that new fibreglass water injection lines will be installed from the 7-35 battery to the 11-35 wellsite along the existing pipeline right-of-ways. Figure 7 presents the survey plan with plan details of the 7-35 battery location and 15-35 wellsite locations.

- d) **Corrosion Protection**

The casing/tubing annulus will be circulated to inhibited (0.5%) fresh water during the completion.

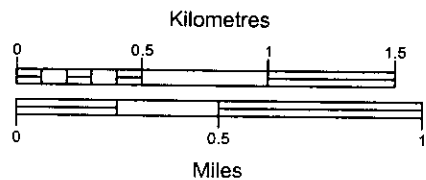
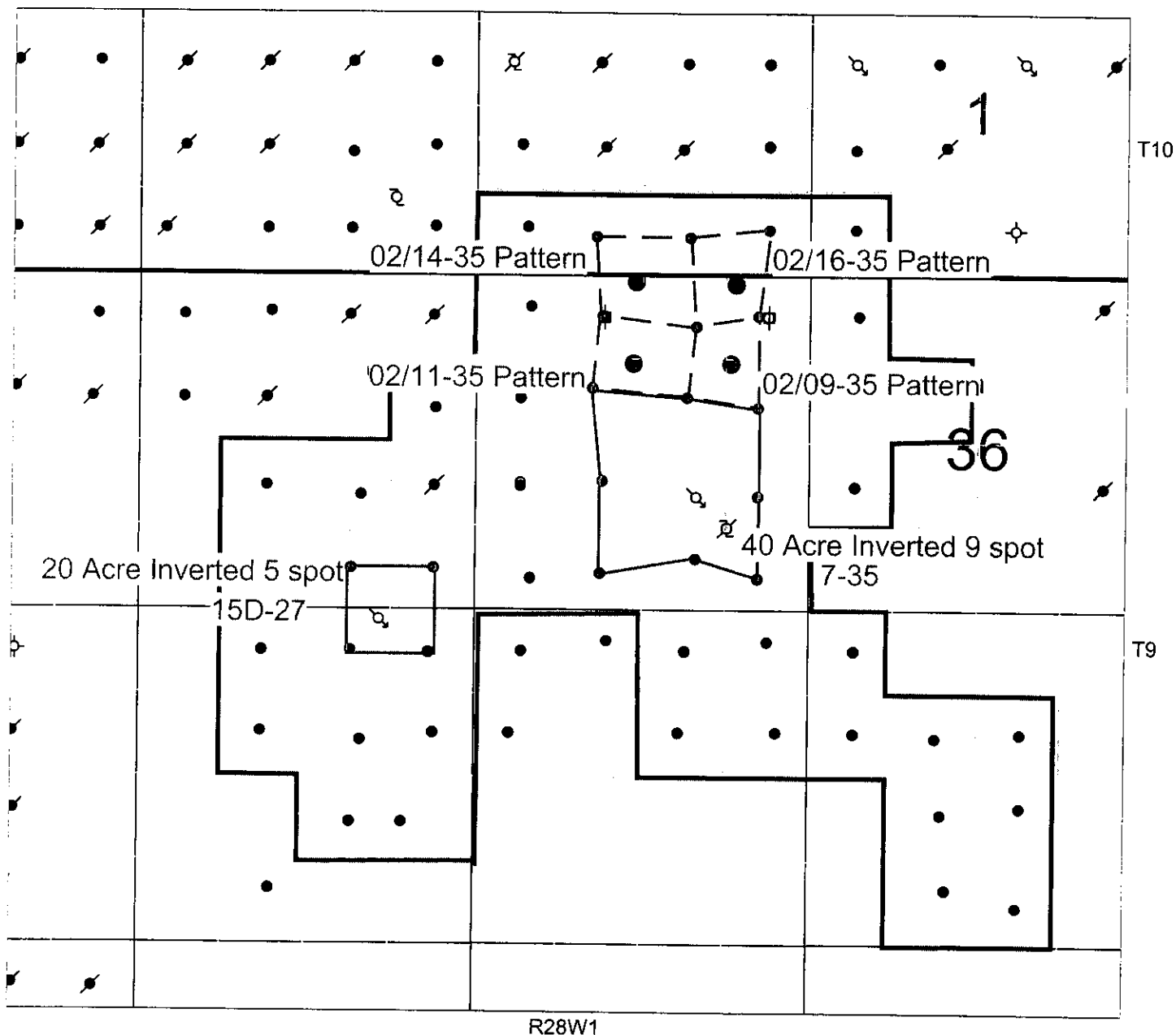
- e) **Surface Conditions and Concerns by Offsetting Owners**

Figure 8 presents a survey plat of the 15-35-9-28 WPM wellsite and illustrates the surface and bottomhole locations of the four proposed injectors on an expanded surface lease. As discussed earlier, since all proposed bottomhole locations are surrounded by unit oil producers, Zargon believes there should not be any correlative rights issues with offsetting mineral or royalty owners. This section is included in the July 18, 1986 report entitled "Impact Assessment of Reduced Spacing Units in the Daly Field" or commonly referred to as "The Berrien Report". Zargon believes that it is meeting all surface location criteria set out in the report since each well will be drilled from an existing surface lease

expanded by only 0.61 ha to accommodate the four new surface locations . The surface owner was contacted and consulted prior to the surveying and eventual drilling of the first two injection wells. No objection was received.

Conclusion

Zargon is proposing a pilot project to modify the existing waterflood at Daly Unit #4. The pilot project entails the drilling of four new water injection wells on 20 ha spacing. It is estimated that each pattern will recover an additional 12.5 E3m³ over primary recoverable reserves.

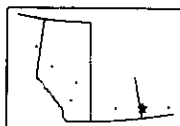
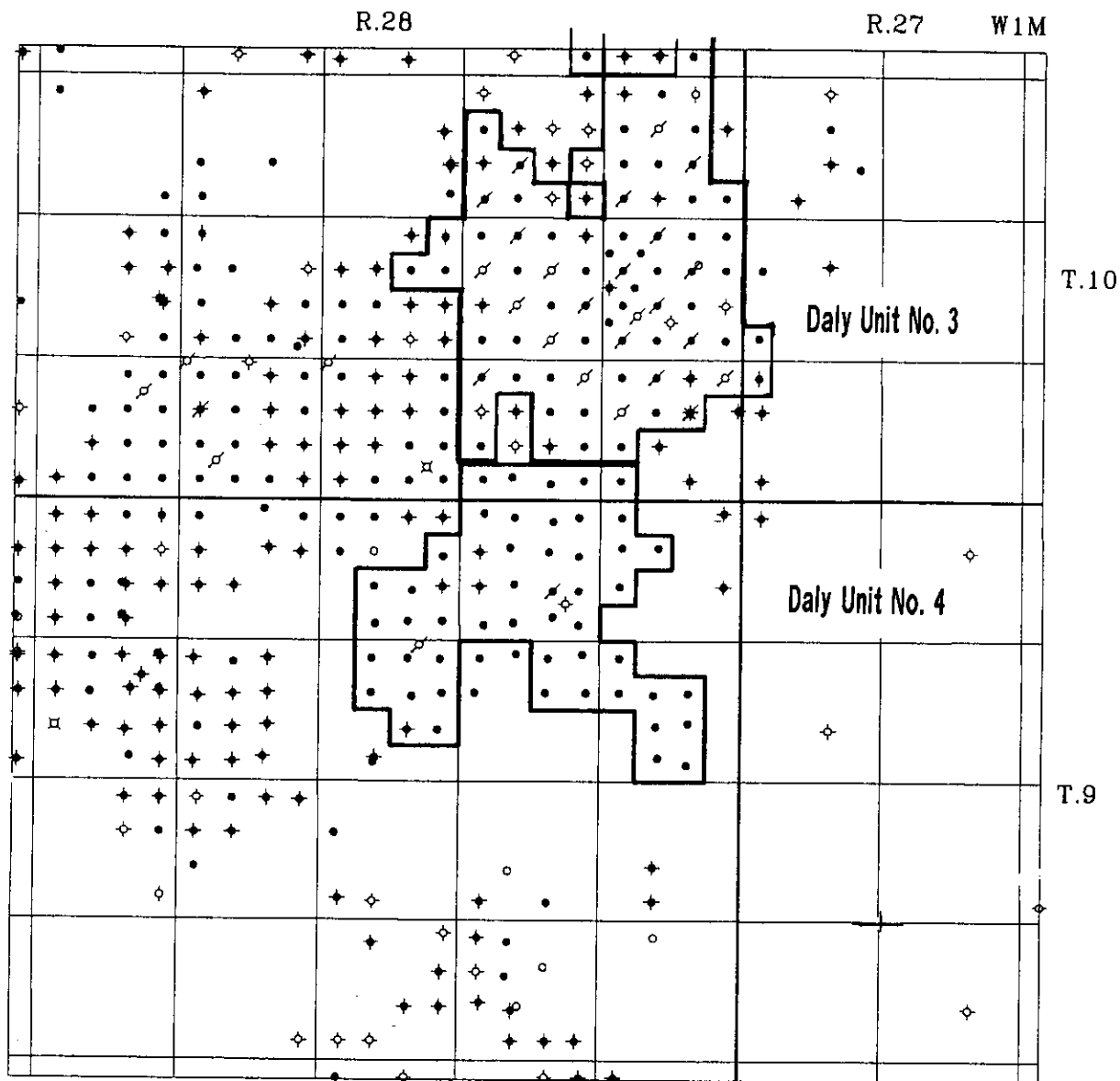


● Proposed Injection Well

WELL SYMBOLS

| | | | | |
|-------|-------|-------|-------|-------|
| ● OIL | ⚡ AO | ⊕ D&A | ⚡ WI | ⚡ AWD |
| ⊖ WD | ⚡ AWI | ⊕ STN | ⊕ PTN | ⊕ J&A |
| □ SL | | | | |

| | | | |
|--|-----------------|------------------------|--|
| Zargon Oil & Gas Ltd. | | | |
| Daly Unit No. 4 | | | |
| Existing & Proposed WF Patterns | | | |
| Figure 3 | | | |
| Licensed to : Zargon Oil & Gas Ltd. | | | |
| <small>gEOLOGIC systems ltd.</small> <small>(403) 282-1982</small> <small>www.geologic.com</small> | By : | Date : 2000/02/11 | |
| | Scale = 1:30000 | Project : daly unit #4 | |



Manitoba Units

DALY UNIT NO. 4
BOARD ORDER NO. PM53

Figure No. 1

| | |
|---------------------|--------------------|
| SCALE: 1:80,000 | DATE: July 1, 1997 |
| SOURCE: s962918/xd3 | DRAWING: XD3 |

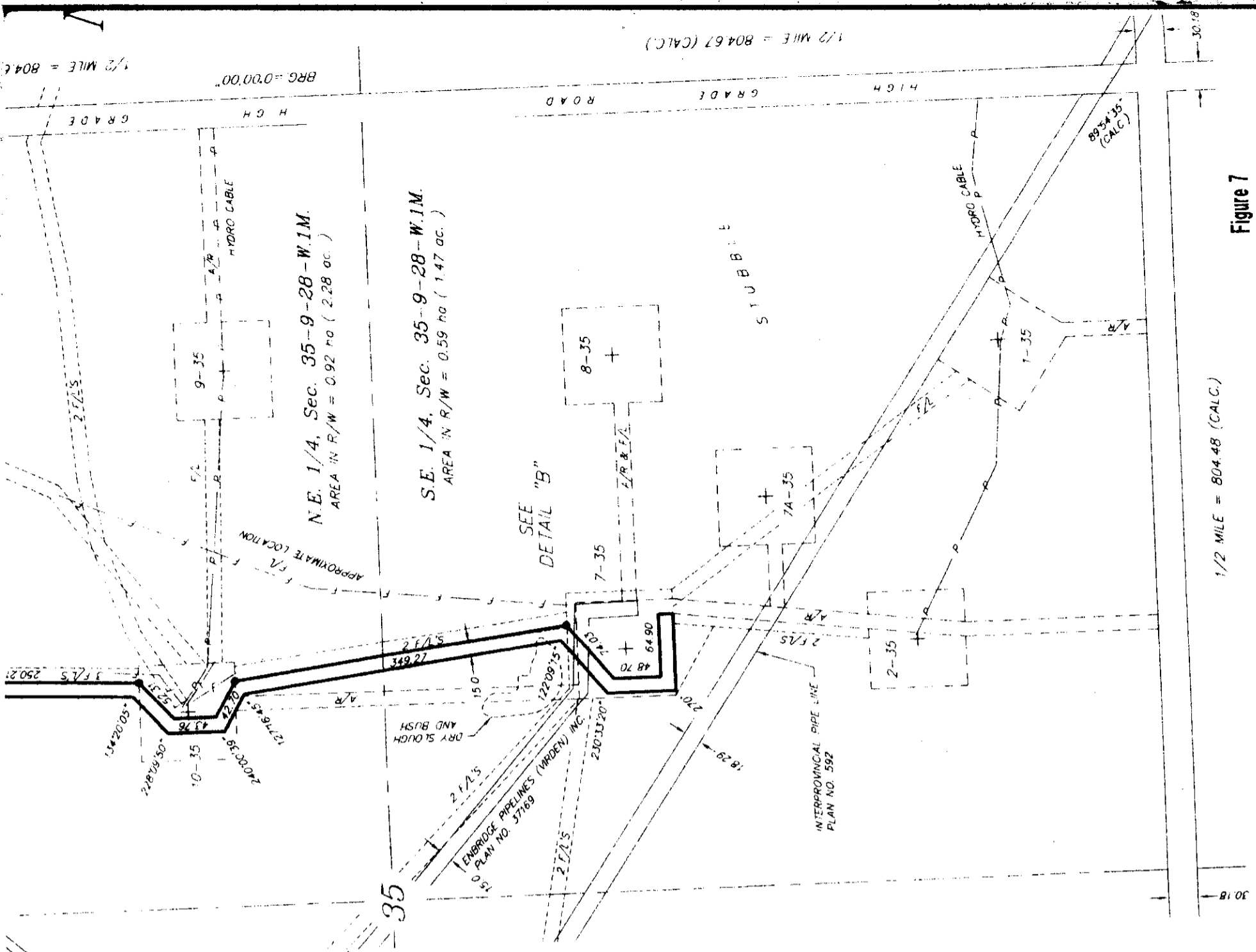
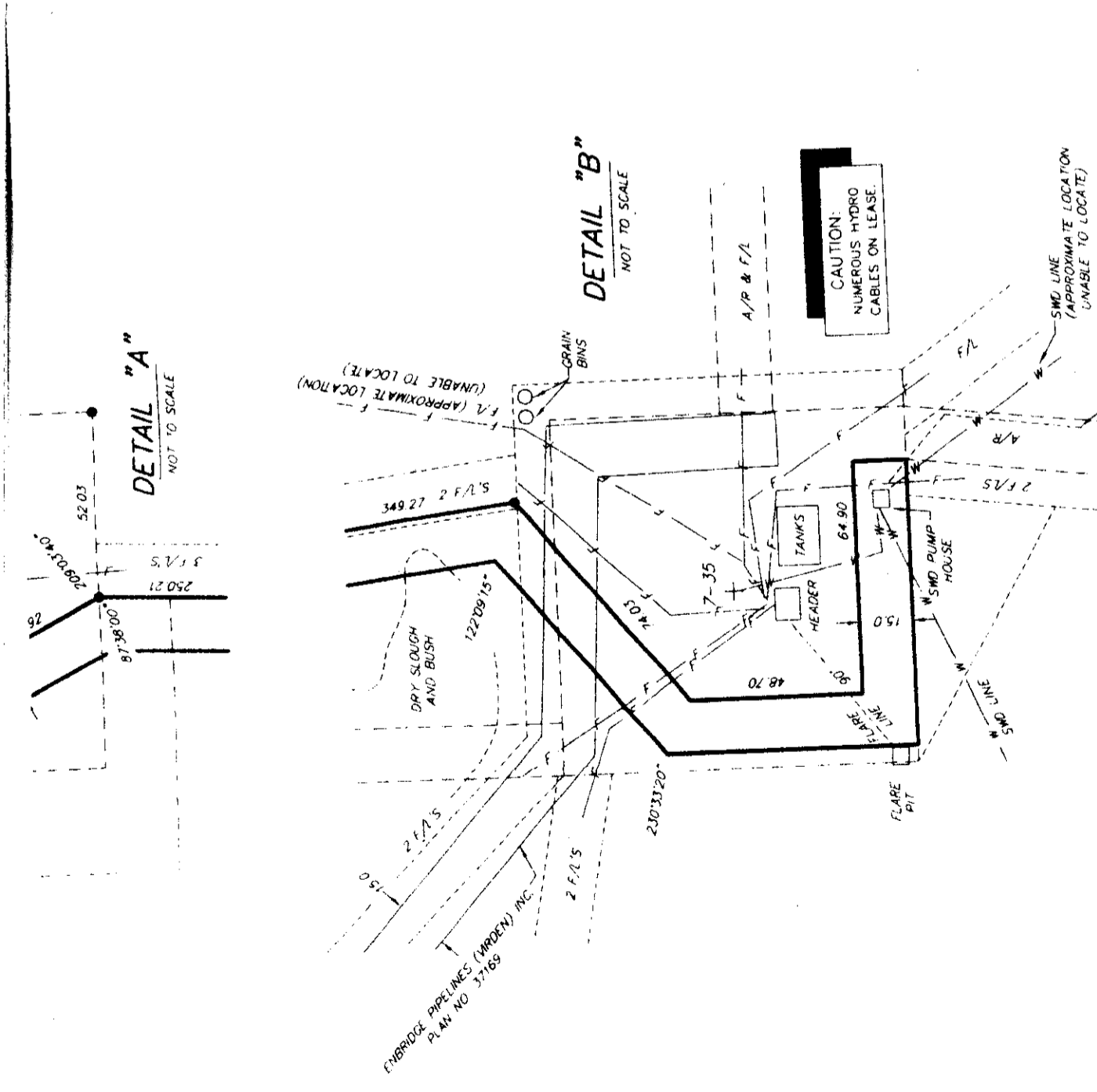


Figure 7



NOTE:
All underground installations should be located by the respective authorities prior to construction.
Portion referred to shown thus —
Survey monuments found are shown thus —
iron spikes 30cm planted are shown thus —
Fir posts 5.0cm x 5.0cm x 38.1cm planted are shown thus —

I certify that the survey represented by this plan is correct and true to the best of my knowledge and was completed on the 28th day of October, A.D. 1999.

David J. Quirk
Manitoba Land Surveyor
Witness

OPERATOR:
ZARGON OIL & GAS LTD.

David J. Quirk, MLS
Manitoba Land Surveyor
110 King Street
Estevan, Saskatchewan
S4A 0Z5
Phone (306)634-2636
Fax (306)634-3164

File No. SM-0016-99

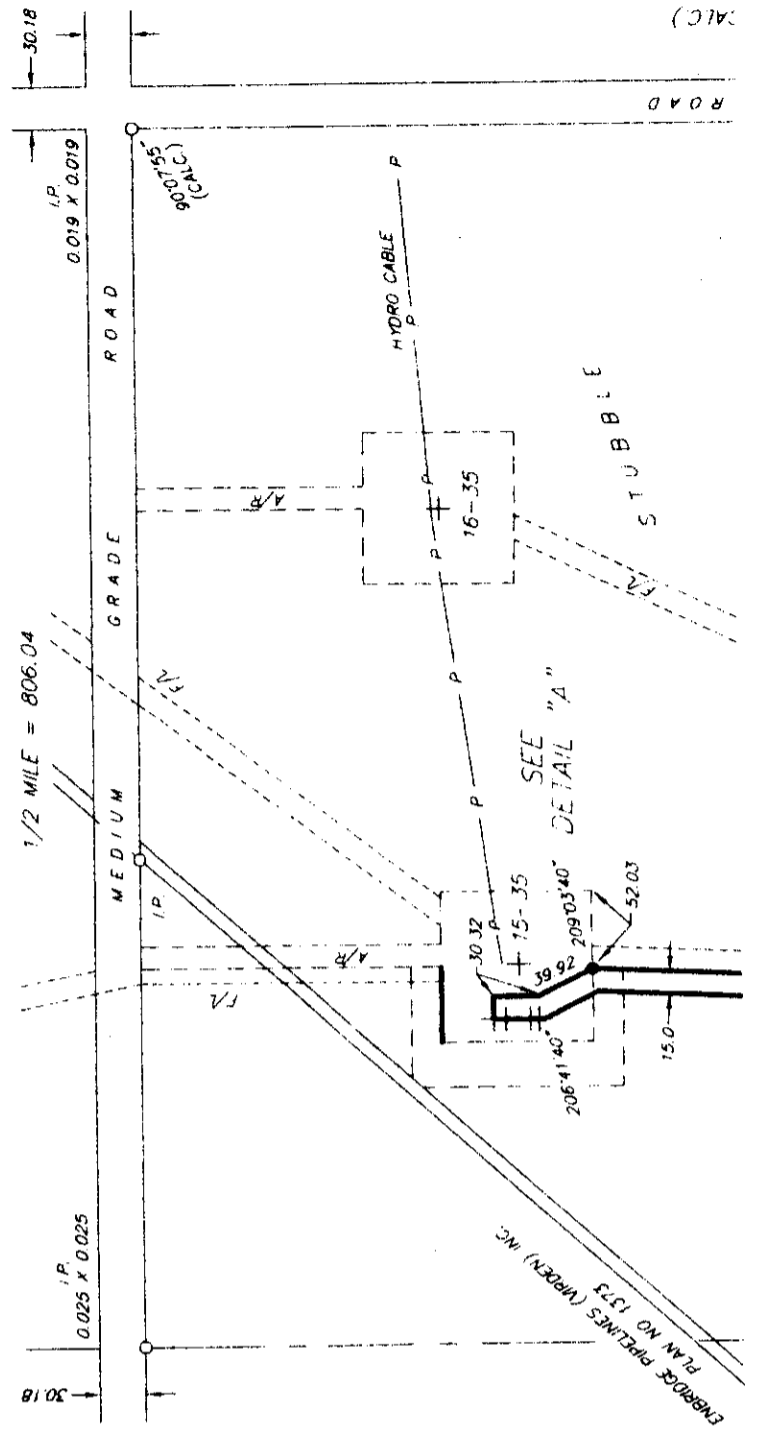
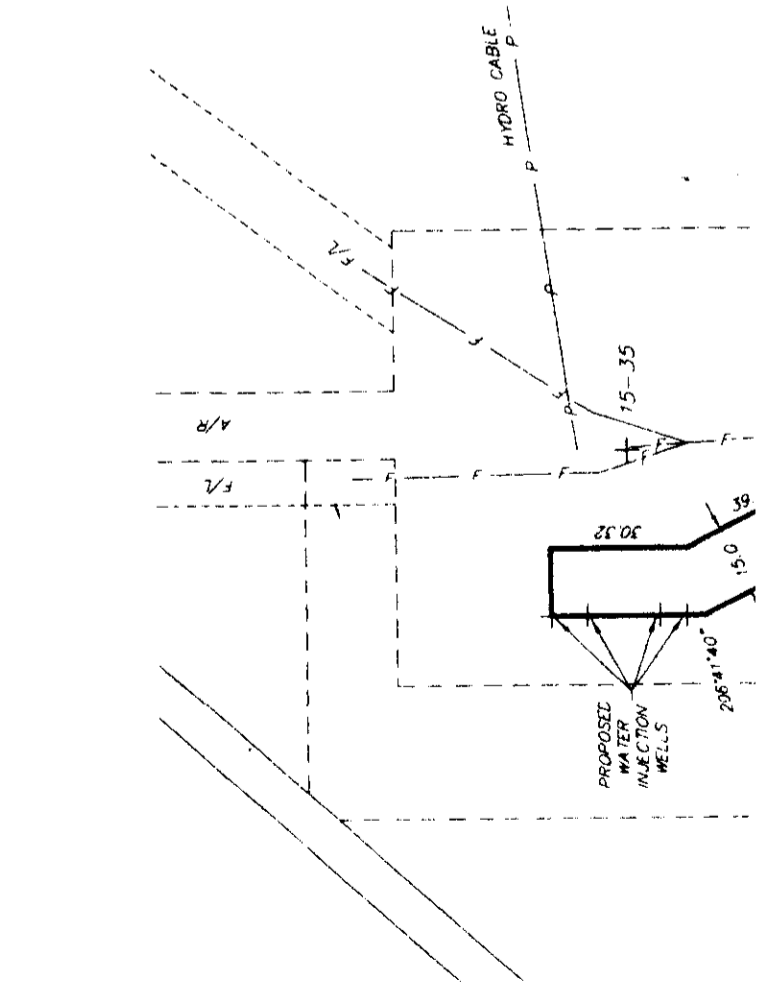
REVISIONS:

ZARGON OIL & GAS LTD.

INJECTION LINE RIGHTS OF WAY

E. 1/2, Sec. 35, Twp. 9, Rge. 28, W.1M.

Scale: 1:5000



ZARGON DALY UNIT NO. 4 DIR WIW

10-35-9-28

11-35-9-28

14-35-9-28

16-35-9-28

Well Site and Access Road

Directionally Drilled From

L.S. 15, Sec. 35, Twp. 9, Rge. 28, W.1M.

Scale: 1:5000

I certify that the survey represented by this plan is correct and true to the best of my knowledge and was completed on the 29th day of October, A.D. 1999.

David Quirk
Manitoba Land Surveyor
Jim Riecke
Witness

OPERATOR:




ZARGON OIL & GAS LTD.

SM-0016-99

AREAS: Well Site: 0.61 ha (1.51 ac.)

NOTE:

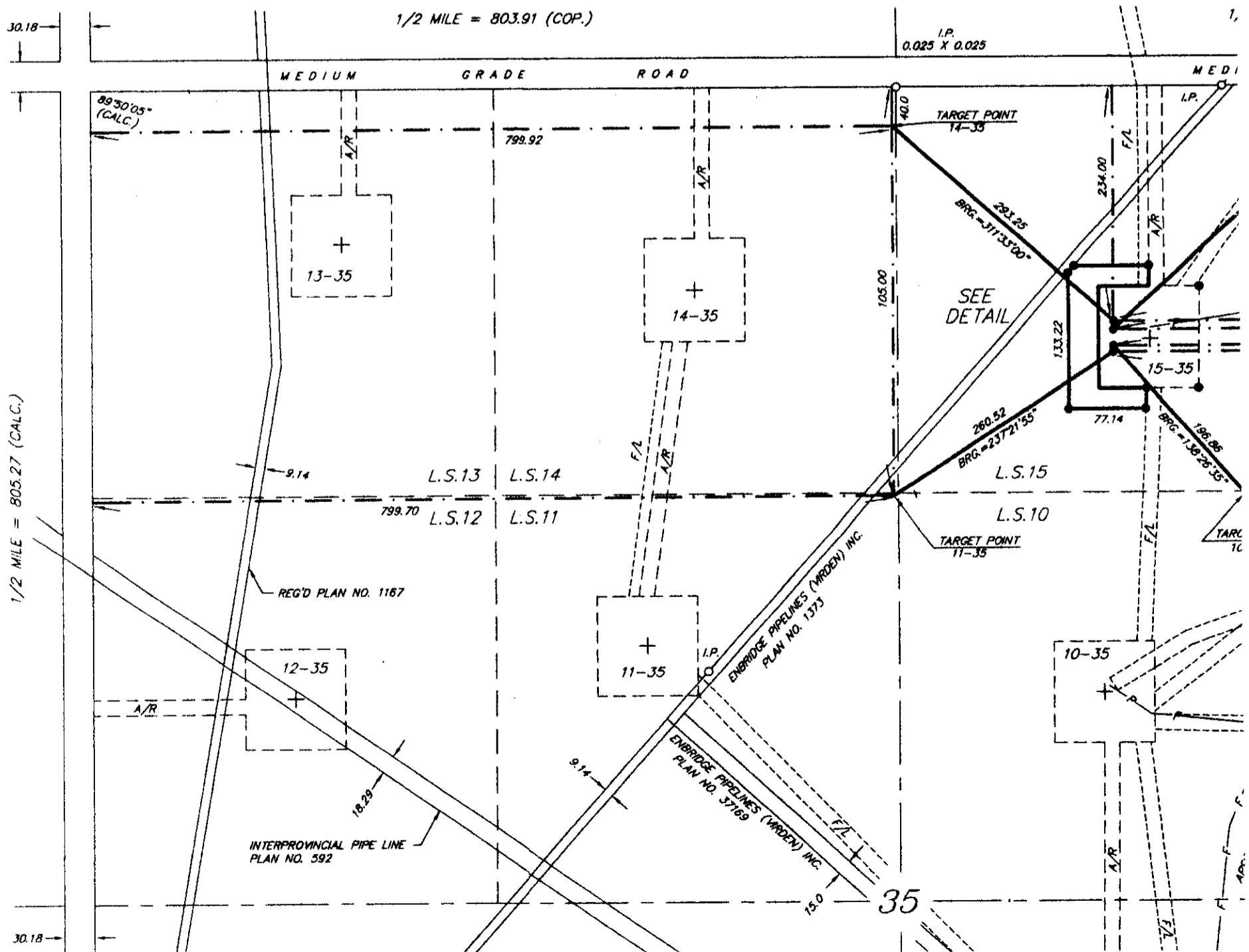
All underground installations should be located by the respective authorities prior to construction.
There are no surface improvements within 75m of Well location except as shown.

Portion referred to shown thus 
Survey monuments found are shown thus 
Survey monuments planted are shown thus 

David J. Quirk, MLS

Manitoba Land Surveyor
110 King Street
Estevan, Saskatchewan
S4A 2A7

Phone (306)634-2636
Fax (306)634-3164



REVISIONS:

FILE NO.:

14-35

ELEVATION: 495.84 Ground

CO-ORDINATES:

SURFACE POINT: 258.00 S. of N. Bdry.
590.59 W. of E. Bdry.
TARGET POINT: 405.00 S. of N. Bdry.
460.00 W. of E. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
10-35
TARGET POINT: 147.27 S. & 130.63 E.
N.E. Cor. Sec. 35: 256.63 N. & 590.59 E.

16-35

ELEVATION: 495.88 Ground

CO-ORDINATES:

SURFACE POINT: 264.00 S. of N. Bdry.
590.61 W. of E. Bdry.
TARGET POINT: 405.00 S. of N. Bdry.
799.70 E. of W. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
11-35
TARGET POINT: 140.49 S. & 219.39 W.
N.E. Cor. Sec. 35: 262.64 N. & 590.61 E.

14-35

ELEVATION: 496.30 Ground

CO-ORDINATES:

SURFACE POINT: 234.00 S. of N. Bdry.
590.54 W. of E. Bdry.
TARGET POINT: 40.00 S. of N. Bdry.
799.92 E. of W. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
14-35
TARGET POINT: 194.50 N. & 219.46 W.
N.E. Cor. Sec. 35: 232.64 N. & 590.54 E.

16-35

ELEVATION: 496.13 Ground

CO-ORDINATES:

SURFACE POINT: 242.00 S. of N. Bdry.
590.55 W. of E. Bdry.
TARGET POINT: 58.00 S. of N. Bdry.
387.00 W. of E. Bdry. } Sec. 35

RECTANGULAR CO-ORDINATES:

15-35
SURFACE POINT: 0.00 N. & 0.00 E.
16-35
TARGET POINT: 183.53 N. & 203.55 E.
N.E. Cor. Sec. 35: 240.64 N. & 590.55 E.

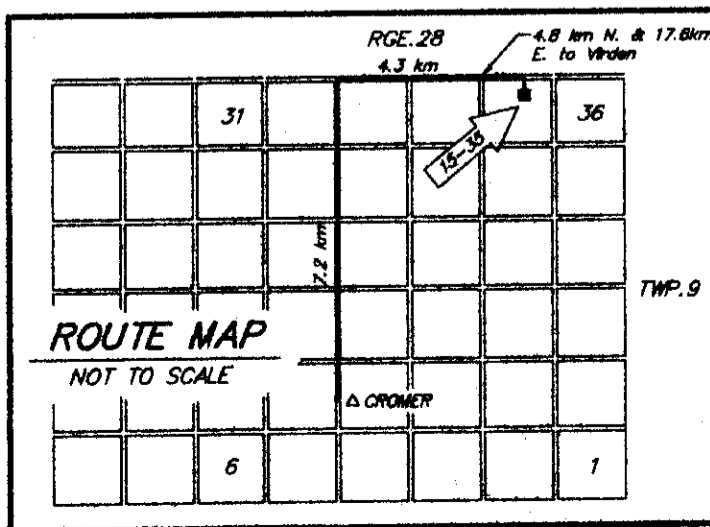
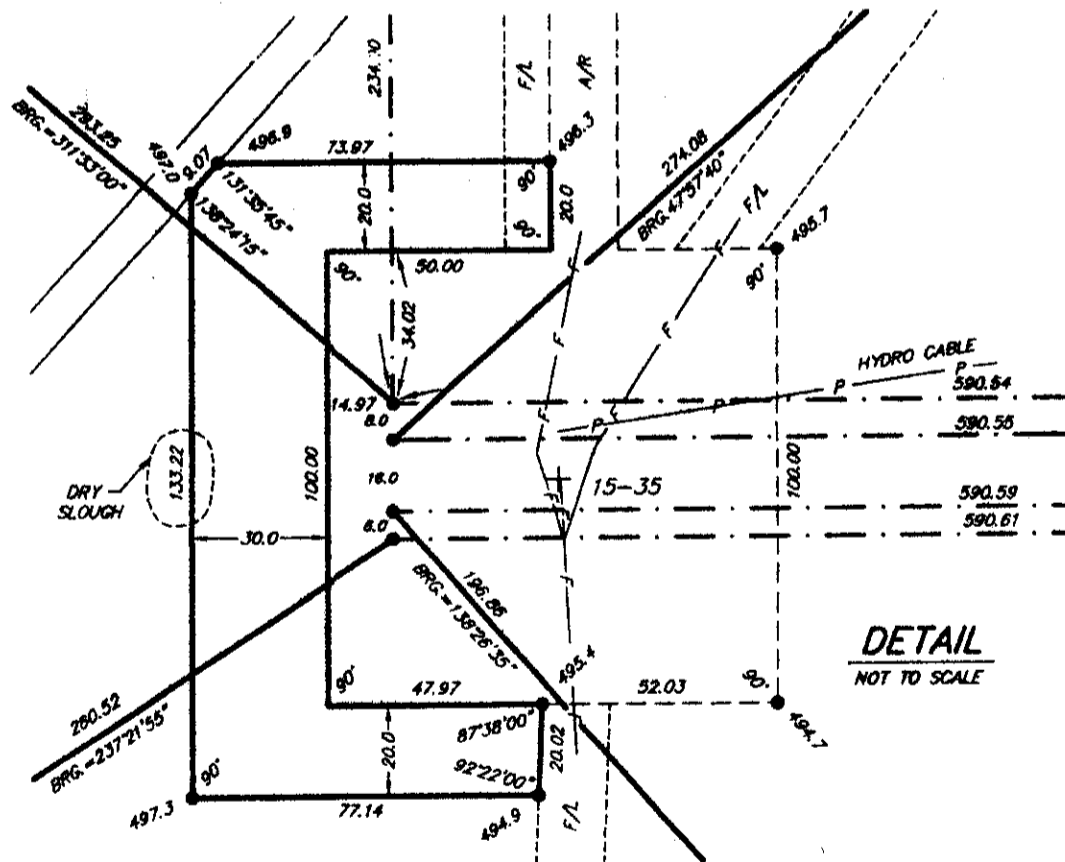
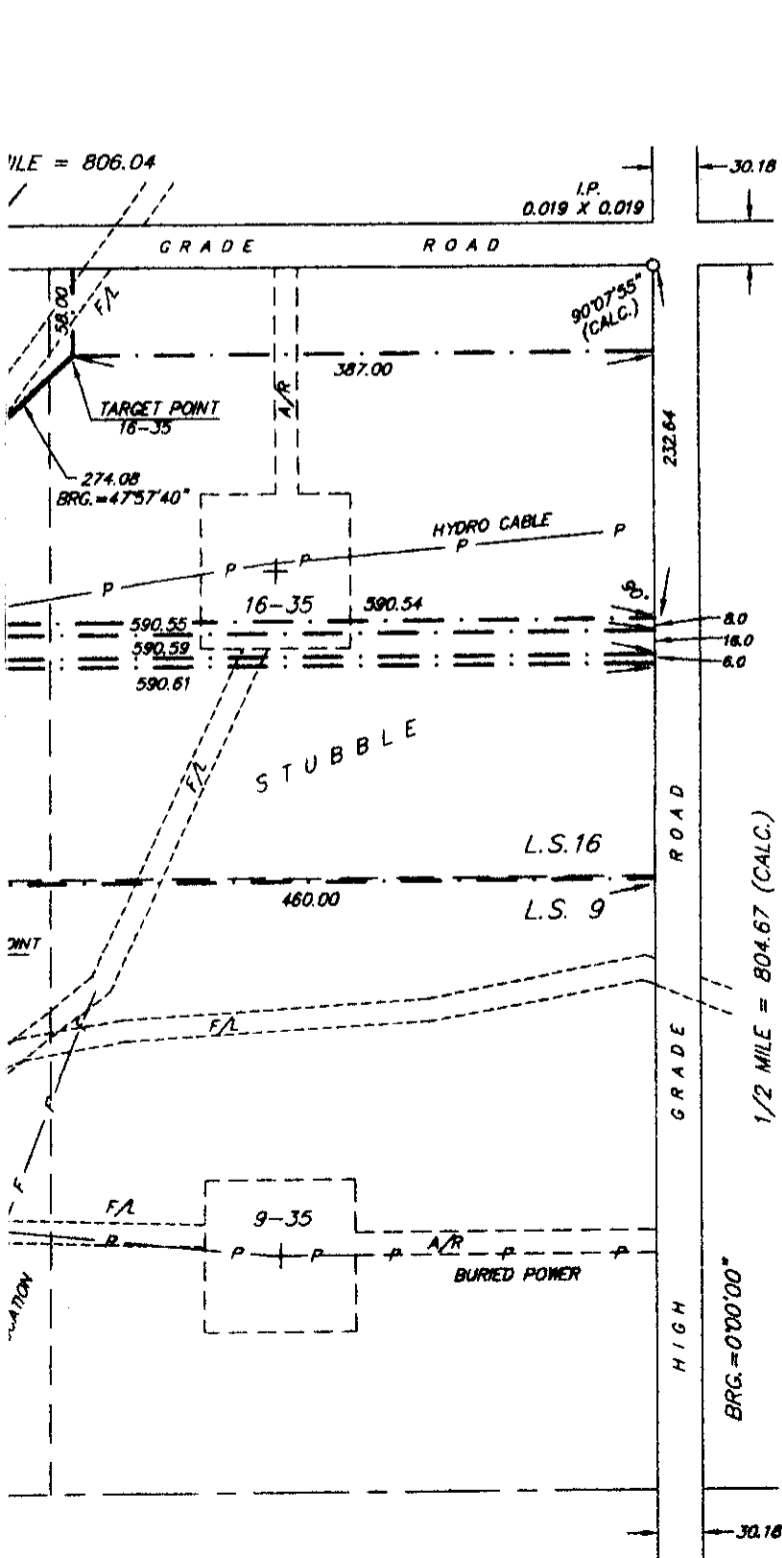


Figure 8

*** TX REPORT ***

TRANSMISSION OK

TX/RX NO 1310
DEPT. ACCESS CODE 6577
CONNECTION TEL 914032653026
SUBADDRESS
CONNECTION ID
ST. TIME 10/05 15:18
USAGE T 01'08
PGS. 4
RESULT OK

FAX

Date 05-OCT-99

Number of pages including cover sheet 5

TO: Y265 GAUTHIER
BARON OIL & GAS

FROM: John Fox, P.Eng.
Manitoba Energy & Mines
Petroleum & Energy Branch
360, 1395 Ellice Avenue
Winnipeg MB R3G 2P3

Phone

Fax Phone 403 265-3026

Phone 945-6574

Fax Phone 945-0586

e-mail jfox@em.gov.mb.ca

CC:

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

AS WE DISCUSSED FROM A CORRELATIVE RIGHTS PERSPECTIVE
THE PROPOSED INJECTORS ARE WELL WITHIN THE UNIT
AND NOTIFICATION OF OFFSET MINERAL OWNERS IS
NOT REQUIRED. THE PROPOSED INJECTORS ARE HOWEVER ON
REDUCED 8 HA SPACING. THE BOARD ORDER NO. PMS3 PARTIALLY
ADDRESSES REDUCED SPACING BY REQUIRING NEW WELLS
TO BE LOCATED IN ACCORDANCE WITH THE ATTACHED
CONDITIONS.

- ZARGON DALY UNIT No. 4
- DRILL 4 INJECTORS TO CREATE (4) 5-SPOT INJECTION PATTERNS WITHIN THE UNIT.
- PROPOSED INJECTORS ARE SEPARATED FROM THE UNIT BOUNDARY BY AT LEAST ONE ROW OF PRODUCER & THE WATERFLOOD APPLICATION WILL NOT HAVE TO BE ADVERTISED
- THE BRANCH WILL APPROVE THE WELLS LICENCES AT THIS TIME AND ZARGON CAN SUBMIT APPLICATIONS TO CONVERT THE WELLS TO INJECTION AFTER DRILLING → OPTION TO INCLUDE A STANDARD CONVERSION PROGRAM WITH LICENCE APPLIN
- THIS ^{WOULD} ~~YEAR~~ ALLOW FOR THE WELLS TO BE PRODUCED FOR AN INTERIM PERIOD PRIOR ~~OF~~ TO CONVERSION
- TRANSFER OF HOV - USE OF HOV TO APPLY TO PRODUCTION FROM PRODUCERS WITHIN INJECTION PATTERN 500 m³ plays with well
- ISSUE OF DETERMINATION OF OIL VOLUME FOR QUALIFICATION FOR 3RD TIER - consistent
- ISSUE OF REDUCED SPACING - 8 ha & IMPACT ON AGRICULTURAL OPERATIONS - LANDOWNER APPROVAL IN THE FORM OF A SURFACE LEASE SEE 35-9-28 (H.T. HAYHURST)

ISSUES

- 1/ WEBSITE SELECTION CRITERIA FROM OIL & NATURAL GAS CONSERVATION BOARD HEARING - 87 - JAN 163
- 2/ STATUS OF ORIGINAL INJECTORS
15D-27-9-28
1C-36-9-28
- 3/ CONTINUED APPLICABILITY OF PTI RULES OUTLINED IN PTI BOARD ORDER NO. PT53.
- 4/ EVENTUALLY EXPANSION OF WATERFLOOD.
- 5/ PROPOSED INJECTION PRESSURE
ORIGINALLY 10000 KPa, 9000 KPa APPROVED
- 6/ CHEVRON'S PRIMARY RECOVERY ESTIMATE - 27,001 P
- 7/ CHEVRON WF APRIL (31-MAR-86)
001P - 5084 103 (volumetric)
original proposal pilot WF with 4 injectors
- see 27 2
9B-27, 16B-27, 16C-27 & 16C-27
& 1C-35
see 27 001P 1821 103m³
Primary Recovery 27, 001P
SECONDARY RECOVERY 117, 001P

Conditions of Reduced Spacing Approval

Heather Please
re-type & e-mail
to me


1. The proposed wellsites and other facilities shall be located and installed in accordance with the Placement Criteria provided in Exhibit No. 45AB entitled "Impact Minimization of Reducing Spacing Units in the Daly Field" by R.A. Berrien Associates (Rural) Ltd. (hereinafter referred to as "the Berrien Report").
2. Notwithstanding Condition No. 1, the following specific criteria shall be utilized in locating and installing new facilities:
 - a) Electric power will be installed underground.
 - b) Wherever practicable in conjunction with new facilities, existing power lines will be installed underground and access roads will be modified or relocated to lessen their impact on agricultural operations.
 - c) All facilities located within 200 metres of any aircraft runway will be appropriately marked or painted so as to be clearly visible from the air.
 - d) Wherever practicable, facilities will be located so as to take full advantage of any existing obstacles and thereby minimize the impact of the facility on agricultural operations.

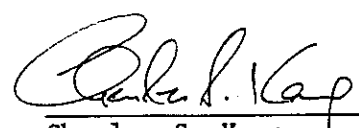
- e) If in the opinion of the landowner and the ~~Executive~~ Director of the Petroleum Division, the proposed location of a wellsite would result in a significant impact on agricultural operations, the wellsite shall be relocated to a suitable surface location to be determined as indicated below, and the proposed well drilled directionally if necessary.
 - f) Wherever practicable, lease access will be through use of non built-up trails instead of built-up roads.
3. Prior to commencement of surveying for construction of any new facilities related to these approvals, ^{the Unit Operator} ~~Chevron~~ shall submit to the Winnipeg Office of the Petroleum Division complete details of location and type of planned facility. Such details should employ and be accompanied by the appropriate Section map or maps from the Berrien Report. Any departure from the recommendations of the Berrien Report shall be clearly noted and justified.
4. The proposed facility site shall be jointly inspected by the landowner and an authorized representative of the Petroleum Division.
5. If the landowner indicates his general agreement with the location of the proposed facility, the ~~Executive~~ Director of the Petroleum Division ^{the Unit Operator} will notify ~~Chevron~~ that an application may be submitted for a drilling license or for approval to construct the proposed facility.

6. If the landowner and the representative of the Petroleum ~~Division~~ ^{and Energy Branch} are of the opinion that agricultural impacts can be significantly reduced by relocation of the proposed facility, the ~~Executive~~ ^{the Unit Operator} Director of the Petroleum ~~Division~~ will request ~~Chevron~~ to consider the recommended relocation.

7. If ~~Chevron~~ declines to relocate a proposed facility to alleviate concerns expressed by the landowner and the representative of the Petroleum ~~Division~~ ^{and Energy Branch}, the ~~Executive~~ ^{the Unit Operator} Director of the Petroleum ~~Division~~ shall determine if the degree of impact caused by the facility is acceptable. If the degree of impact is deemed to be acceptable, the ~~Executive~~ ^{the Unit Operator} Director shall notify ~~Chevron~~ to make application for approval of the facility. If the degree of impact is deemed to be unacceptable, the ~~Executive~~ ^{the Unit Operator} Director shall inform ~~Chevron~~ that he is not prepared to approve the facility unless it is relocated to a suitable location.

8. Upon application for approval of a surface facility which is proposed to be located less than fifty metres from a government road allowance, ~~Chevron~~ ^{the Unit Operator} shall submit, in support of the application, written evidence ^{and Government Service} that the Rural Municipality or the Department of Highways, as the case may be, concurs with the proposed location of the facility.


Wm. McDonald
Deputy Chairman


Charles S. Kang
Chairman

Manitoba Regulation 29/87

*Being
The Oil and Natural Gas Conservation
Board*

Order No. PM 53

*An Order Pertaining to Pressure
Maintenance by Water Flooding*

Daly Lodgepole A Pool

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

(Filed January 27, 1987)

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

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

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

AND WHEREAS, Chevron Canada Resources Limited is the Unit Operator of the proposed Daly Unit No. 4 (the "Unit Area") in the Daly Lodgepole A Pool ("the Pool").

AND WHEREAS, the Unit Operator has made application, dated March 31, 1986, for approval of a project to conduct pressure maintenance by waterflooding in the Unit Area.

AND WHEREAS, as a result of publication of a Notice, the Board received numerous objections and interventions to the application.

Règlement du Manitoba 29/87

*Ordonnance n° MP 53 de la Commission de
gestion du pétrole et du gaz naturel
concernant le maintien de la pression par
injection d'eau dans le gisement Lodgepole
A (Daly), prise aux termes de la Loi sur les
mines, chapitre M160 de la Codification
permanente des lois du Manitoba tel que
modifié*

(Déposé le 27 janvier 1987)

Attendu que l'alinéa 62(9)d) de la Loi sur les mines, chapitre M160 de la Codification permanente des lois du Manitoba, prévoit ce qui suit :

"62(9) Sans limiter la portée du paragraphe (8), la Commission peut, par ordonnance sujette à l'approbation du ministre :

- [. . .]
d) exiger la recompression, le recyclage ou le maintien de la pression de tout ou partie de gisement lorsqu'il est économique de ce faire et, à cette fin, exiger l'introduction ou l'injection de gaz, d'air, d'eau ou de toute autre substance dans tout ou partie du gisement;"

Attendu que Chevron Canada Resources Limited est l'exploitant de la zone envisagée n° 1 (Daly), ci-après "la zone", du gisement Lodgepole A (Daly), ci-après "le gisement";

Attendu que la Commission a reçu une demande d'approbation de l'exploitant, datée du 31 mars 1986, relative à l'injection d'eau dans la zone;

Attendu que la Commission a reçu de multiples objections et intervention à l'égard de la demande présentée, après publication de l'avis y relatif;

AND WHEREAS, the Board, application at a public hearing, den, Manitoba on August 7, 19

AND WHEREAS, the Board, implementation of the project significant increase in the reco oil from the Unit Area.

NOW THEREFORE, the B that:

1. The Unit Operator shall pressure maintenance c the injection of water i underlying the Unit Area
2. The selection of any i within the Unit Area st to the conditions of app in the Board's decision January 16, 1987 con aforementioned applica

3. The pressure maintenanc shall be in accordance subject to, the following

Pressure Maintenance R

- 1(1) Water shall be injected in through the wells:

Chevron Daly WIW 151 (WPM)
Chevron Daly WIW 10 (WPM)

and such other wells in the as the Board may approve

- (2) After the commencement tion, the Unit Operator s ject to any remedial work to be performed on t referred to in subclause (clause, endeavour to main tinuous injection.

du Manitoba 29/87

*MP 53 de la Commission de
étrole et du gaz naturel
maintien de la pression par
dans le gisement Lodgepole
aux termes de la Loi sur les
e M160 de la Codification
s lois du Manitoba tel que
modifié*

(Déposé le 27 janvier 1987)

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ou de toute autre substance
dans tout ou partie du gise-
ment;"

Chevron Canada Resources
exploitant de la zone envisagée
après "la zone", du gisement
(Daly), ci-après "le gise-

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approbation de l'exploitant,
mars 1986, relative à l'injection
zone;

la Commission a reçu de multi-
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sentée, après publication de

AND WHEREAS, the Board considered the
application at a public hearing held in Vir-
den, Manitoba on August 7, 1986.

AND WHEREAS, the Board considers that
implementation of the project will result in a
significant increase in the recovery of crude
oil from the Unit Area.

NOW THEREFORE, the Board orders
that:

1. The Unit Operator shall conduct
pressure maintenance operations by
the injection of water into the Pool
underlying the Unit Area.
2. The selection of any new wellsite
within the Unit Area shall conform
to the conditions of approval set out
in the Board's decision report dated
January 16, 1987 concerning the
aforementioned application.
3. The pressure maintenance operation
shall be in accordance with, and
subject to, the following rules:

Pressure Maintenance Rules

- 1(1) Water shall be injected into the Pool
through the wells:

Chevron Daly WIW 15D-27-9-28
(WPM)
Chevron Daly WIW 1C-35-9-28
(WPM)

and such other wells in the Unit Area
as the Board may approve.

- 1(2) After the commencement of injec-
tion, the Unit Operator shall, sub-
ject to any remedial work required
to be performed on the wells
referred to in subclause (1) of this
clause, endeavour to maintain con-
tinuous injection.

Attendu que la Commission a entendu la
demande lors d'une audience publique tenue
à Virden, au Manitoba, le 7 août 1986;

Attendu que la Commission juge que la mise
à effet de l'injection d'eau permettra
d'accroître de façon significative la
récupération de pétrole brut dans la zone;

La Commission ordonne :

1. Le maintien de la pression par
l'exploitant au moyen d'injection
d'eau dans le gisement situé sous la
zone.
2. L'obligation de respecter les condi-
tions d'approbation énoncées au
rapport de décision de la Commis-
sion du 16 janvier 1987 concer-
nant ladite demande lors du choix de
tout nouvel emplacement de puits
dans la zone.
3. Le maintien de la pression confor-
mément aux règles ci-après énon-
cées :

Règles relatives au maintien de la pression

- 1(1) L'eau doit être injectée dans le gise-
ment par les puits suivants :

Chevron Daly PIE 15D-27-9-28
(OMP)
Chevron Daly PIE 1C-35-9-28
(OMP)

Elle l'est également par les autres
puits situés dans la zone que la
Commission approuve.

- 1(2) L'exploitant doit assurer une injec-
tion constante, une fois celle-ci
commencée, sauf les travaux de ré-
paration requis à l'égard des puits
visés au paragraphe (1).

- (3) Notwithstanding the provisions of subclause (2), the Board may, upon application by the Unit Operator, approve the suspension of water injection into any well or wells, provided that the Board is satisfied that pressure maintenance operations in the Unit Area will not be adversely affected.
- (4) The completion of the wells referred to in subclause (1) will be as prescribed by the Executive Director of the Petroleum Division.
- 2 The Unit Operator, upon the request of the Board, shall satisfy the Board as to the source, suitability and method of treatment of the water to be injected.
- 3(1) Prior to initiating water injection, and at least once each year thereafter, unless otherwise authorized by the Board, the Unit Operator shall carry out a survey program to determine the reservoir pressure in the Unit Area.
- (2) The Unit Operator shall submit the details of the surveys described in subclause (1) of this clause to the Petroleum Division, including a list of the wells to be surveyed, the measurement technique to be used, and the intended shut-in periods for each well, and approval shall be obtained from the Executive Director of the Petroleum Division before the program is carried out. Within 30 days of the completion date of the surveys, a report shall be submitted to the Petroleum Division including:
- (a) the static reservoir pressure data obtained from the survey, corrected to a common datum;
 - (b) an isobaric map of the Pool within the Unit Area based on the data obtained; and

- 1(3) Malgré les dispositions du paragraphe (2), la Commission peut, à la requête de l'exploitant, suspendre l'injection d'eau dans un ou plusieurs puits si elle est d'avis que les opérations de maintien de la pression dans la zone n'auront pas à en souffrir.
- 1(4) Le complètement des travaux relatifs aux puits visés au paragraphe (1) se fera conformément aux instructions du directeur général de la Division du pétrole.
- 2 L'exploitant doit indiquer à la Commission, à la demande de celle-ci, la provenance, l'adéquation ainsi que la méthode de traitement de l'eau injectée.
- 3(1) Avant de commencer l'injection d'eau, l'exploitant doit mettre à effet un programme de relevé de la pression souterraine qui permette de déterminer la pression du réservoir de la zone. Il le fait ensuite au moins une fois par an, sauf autorisation contraire de la Commission.
- 3(2) L'exploitant transmet les résultats des relevés visés au paragraphe (1) à la Division du pétrole, accompagnés de la liste des puits à relever, de la technique de mesure envisagée ainsi que des périodes de fermeture prévues à l'égard de chaque puit. Le programme ne peut être entrepris sans l'autorisation du directeur de la Direction du pétrole. Rapport doit être fait à la Division du pétrole dans les 30 jours de l'achèvement des relevés. Il donne notamment :
- a) les données relatives à la pression statique du réservoir obtenues lors du relevé et ramenées à un même niveau;
 - b) une carte isobarique de la partie de gisement située dans la zone, dressée à partir des données recueillies;

- (c) a discussion of the results and production within the
- (3) The Board may, at the request of the Unit Operator, approve the suspension of water injection into any well or wells, provided that the Board is satisfied that pressure maintenance operations in the Unit Area will not be adversely affected.
- 4 The Unit Operator shall report to the Board the completion of the wells referred to in subclause (1) of this clause.
- 5 The maximum wellhead pressure of the water which water is injected into the Unit Area shall not exceed the maximum or minimum pressure prescribed by the Board, from time to time, and the maximum or minimum pressure shall be injected into the Unit Area.
- 6(1) The Unit Operator shall submit the details of the surveys described in subclause (1) of this clause to the Petroleum Division, including a list of the wells to be surveyed, the measurement technique to be used, and the intended shut-in periods for each well, and approval shall be obtained from the Executive Director of the Petroleum Division before the program is carried out. Within 30 days of the completion date of the surveys, a report shall be submitted to the Petroleum Division including:
- (a) a tabulation of total water and total gas production;
 - (b) a tabulation of the production of the producing wells and the total production of the wells which were active during the preceding month.

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nues lors du relevé et
nées à un même niveau;
carte isobarique de la
ie de gisement située dans
one, dressée à partir des
nées recueillies;

(c) a discussion of the survey
results and pressure distribu-
tion within the Pool.

(3) The Board may, at any time, require
the Unit Operator to carry out such
additional reservoir pressure sur-
veys as it deems necessary.

4 The Unit Operator shall immedi-
ately report to the Board any indica-
tion of channelling or break-
through of injected water to pro-
ducing wells or any indication of
other detrimental effects that may
be attributable to the pressure main-
tenance operations.

5 The maximum wellhead pressure at
which water is injected into the wells
referred to in subclause (1) of clause
1 hereof shall not exceed 9 000 kPa
or such other maximum pressure as
the Board may prescribe. The Board
may, from time to time, prescribe a
maximum or minimum rate at which
water shall be injected into any well
in the Unit Area.

6(1) The Unit Operator shall, not later
than the last day of each month, file
with the Petroleum Division, a
report of the quantity, source and
pressure of water injected during the
preceding month into each well
referred to in clause 1 hereof.

(2) The Unit Operator shall, not later
than the last day of each month, file
with the Petroleum Division a sum-
mary report of production and
injection operations during the pre-
ceding month. This report shall
include:

(a) a tabulation of total oil, total
water and total gas produced;

(b) a tabulation of the number of
producing wells and injection
wells which were active;

c) une analyse des résultats du
relevé et de la répartition de la
pression dans le gisement.

3(3) La Commission peut à tout moment
exiger de l'exploitant des relevés
supplémentaires relatifs à la pres-
sion du réservoir, selon ce qu'elle
juge à-propos.

4 L'exploitant doit immédiatement
signaler à la Commission tout indice
d'infiltration d'eau injectée dans les
puits producteurs ou d'effets préju-
diciables qui peuvent être attribués
aux opérations de maintien de la
pression.

5 La pression de tête de puits ma-
ximale à laquelle l'eau est injectée
dans les puits visés au paragraphe
1(1) est de 9 000 kPa, ou celle pre-
scrite par la Commission. Celle-ci
peut fixer les débits maximal et mi-
nimal auxquels l'eau doit être
injectée dans l'un ou l'autre des
puits situés dans la zone.

6(1) L'exploitant doit remettre à la Divi-
sion du pétrole, au plus tard le
dernier jour de chaque mois, un
rapport énonçant la quantité, la
provenance et la pression de l'eau
injectée dans chacun des puits visés à
l'article 1 au cours du mois précé-
dant.

6(2) L'exploitant doit remettre à la Divi-
sion du pétrole, au plus tard le
dernier jour de chaque mois, un
rapport sommaire de la production
et de l'injection au cours du mois
précédant. Le rapport donne :

a) une table de la production
totale de pétrole, d'eau et de
gaz;

b) une table des puits pro-
ducteurs et des puits d'in-
jection en activité;

- (c) the results of any production tests conducted in the Unit including volumes of oil, gas and water produced during the test;
- (d) a summary of any remedial operations carried out on any well in the Unit Area.

7 The Unit Operator, shall, within 60 days of the end of each calendar year, file with the Petroleum Division a report of the pressure maintenance program, setting out graphically such interpretive information necessary to evaluate the efficacy of the waterflood.

Oil and Natural Gas Order No. PM 53, made and passed this 22nd day of January, 1987, at the City of Winnipeg, in the Province of Manitoba, by the Oil and Natural Gas Conservation Board.

"Charles S. Kang"

Charles S. Kang,
Chairman
The Oil and Natural Gas
Conservation Board

"Wm. McDonald"

Wm. McDonald,
Deputy Chairman
The Oil and Natural Gas
Conservation Board

Approved:

"W. Parasiuk"

W. Parasiuk,
Minister
Department of Energy and Mines

The Queen's Printer for
the Province of Manitoba

- c) les résultats des évaluations de production menées dans la zone, y compris les volumes de pétrole, de gaz et d'eau produits pendant l'évaluation;
- d) un résumé des opérations correctives menées à l'égard de l'un ou l'autre des puits situés dans la zone.

7 L'exploitant doit remettre à la Division du pétrole, dans les 60 jours de la fin de chaque année civile, un rapport relatif au programme de maintien de la pression qui indique graphiquement les données nécessaires à l'évaluation de l'efficacité de l'injection d'eau.

Ordonnance n° MP53 prise par la Commission de gestion du pétrole et du gaz naturel en la ville de Winnipeg, province du Manitoba, ce 22^e jour d janvier 1987.

Pour la Commission de gestion
du pétrole et du gaz naturel,
le président,

"Charles S. Kang"

Charles S. Kang

le vice-président,

"William McDonald"

William McDonald

Approuvée par le ministre
de l'Énergie et des Mines,

"W. Parasiuk"

W. Parasiuk

L'Imprimeur de la
Reine du Manitoba

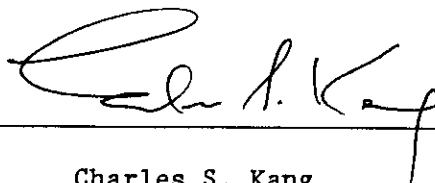
THE REGULATIONS ACT

CERTIFICATE

I, Charles S. Kang, Chairman of The Oil and Natural Gas Conservation Board, hereby certify that the attached regulation is the original Order:--

- (a) entitled The Oil and Natural Gas Conservation Board Order No. PM 53;
- (b) made pursuant to The Mines Act;
- (c) by The Oil and Natural Gas Conservation Board;
- (d) on the *22* day of *January* A.D. 1987;
- (e) approved by the Honourable the Minister of Energy and Mines on the *22* day of *January* A.D. 1987; and
- (f) which regulation comes into force on the day of filing with the Registrar of Regulations.

DATED this *22* day of *January* A.D 1987



Charles S. Kang
Chairman
The Oil and Natural Gas
Conservation Board

Being

The Oil and Natural Gas Conservation Board

Order No. PM 53

An Order Pertaining to Pressure Maintenance by Water Flooding

Daly Lodgepole A Pool

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

(Filed:)

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

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

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

AND WHEREAS, Chevron Canada Resources Limited is the Unit Operator of the proposed Daly Unit No. 4 (the "Unit Area") in the Daly Lodgepole A Pool ("the Pool").

AND WHEREAS, the Unit Operator has made application, dated March 31, 1986, for approval of a project to conduct pressure maintenance by waterflooding in the Unit Area.

AND WHEREAS, as a result of publication of a Notice, the Board received numerous objections and interventions to the application.

AND WHEREAS, the Board considered the application at a public hearing held in Virden, Manitoba on August 7, 1986.

AND WHEREAS, the Board considers that implementation of the project will result in a significant increase in the recovery of crude oil from the Unit Area.

NOW THEREFORE, the Board orders that:

1. The Unit Operator shall conduct pressure maintenance operations by the injection of water into the Pool underlying the Unit Area.
2. The selection of any new wellsite within the Unit Area shall conform to the conditions of approval set out in the Board's decision report dated January 16, 1987 concerning the aforementioned application.
3. The pressure maintenance operation shall be in accordance with, and subject to, the following rules:

PRESSURE MAINTENANCE RULES

- 1(1) Water shall be injected into the Pool through the wells:

Chevron Daly WIW 15D-27-9-28 (WPM)
Chevron Daly WIW 1G-35-9-28 (WPM)

and such other wells in the Unit Area as the Board may approve.
- (2) After the commencement of injection, the Unit Operator shall, subject to any remedial work required to be performed on the wells referred to in subclause (1) of this clause, endeavour to maintain continuous injection.
- (3) Notwithstanding the provisions of subclause (2), the Board may, upon application by the Unit Operator, approve the suspension of water injection into any well or wells, provided that the Board is satisfied that pressure maintenance operations in the Unit Area will not be adversely affected.
- (4) The completion of the wells referred to in subclause (1) will be as prescribed by the Executive Director of the Petroleum Division.
2. The Unit Operator, upon the the request of the Board, shall satisfy the Board as to the source, suitability and method of treatment of the water to be injected.
- 3(1) Prior to initiating water injection, and at least once each year thereafter, unless otherwise authorized by the Board, the Unit Operator shall carry out a survey program to determine the reservoir pressure in the Unit Area.
- (2) The Unit Operator shall submit the details of the surveys described in subclause (1) of this clause to the Petroleum Division, including a list of the wells to be surveyed, the measurement technique to be used, and the intended shut-in periods for each well, and approval shall be obtained from the Executive Director of the Petroleum Division before the program is carried out. Within 30 days of the completion date of the surveys, a report shall be submitted to the Petroleum Division including:

- (a) the static reservoir pressure data obtained from the survey, corrected to a common datum;
 - (b) an isobaric map of the Pool within the Unit Area based on the data obtained; and
 - (c) a discussion of the survey results and pressure distribution within the Pool.
- (3) The Board may, at any time, require the Unit Operator to carry out such additional reservoir pressure surveys as it deems necessary.
4. The Unit Operator shall immediately report to the Board any indication of channelling or break-through of injected water to producing wells or any indication of other detrimental effects that may be attributable to the pressure maintenance operations.
5. The maximum wellhead pressure at which water is injected into the wells referred to in subclause (1) of clause 1 hereof shall not exceed 9 000 kPa or such other maximum pressure as the Board may prescribe. The Board may, from time to time, prescribe a maximum or minimum rate at which water shall be injected into any well in the Unit Area.
- 6(1) The Unit Operator shall, not later than the last day of each month, file with the Petroleum Division, a report of the quantity, source and pressure of water injected during the preceding month into each well referred to in clause 1 hereof.
- (2) The Unit Operator shall, not later than the last day of each month, file with the Petroleum Division a summary report of production and injection operations during the preceding month. This report shall include:
- (a) a tabulation of total oil, total water and total gas produced;
 - (b) a tabulation of the number of producing wells and injection wells which were active;
 - (c) the results of any production tests conducted in the Unit including volumes of oil, gas and water produced during the test;
 - (d) a summary of any remedial operations carried out on any well in the Unit Area.
7. The Unit Operator, shall, within 60 days of the end of each calendar year, file with the Petroleum Division a report of the pressure maintenance program, setting out graphically such interpretive information necessary to evaluate the efficacy of the waterflood.

OIL AND NATURAL GAS ORDER NO. PM 53,
MADE AND PASSED THIS 22 DAY OF
JANUARY A.D., 1987, AT THE CITY OF
WINNIPEG, IN THE PROVINCE OF MANITOBA,
BY THE OIL AND NATURAL GAS CONSERVATION BOARD

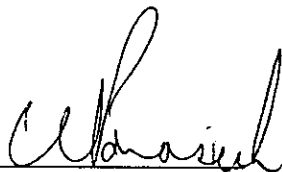


Charles S. Kang, Chairman
The Oil and Natural Gas
Conservation Board



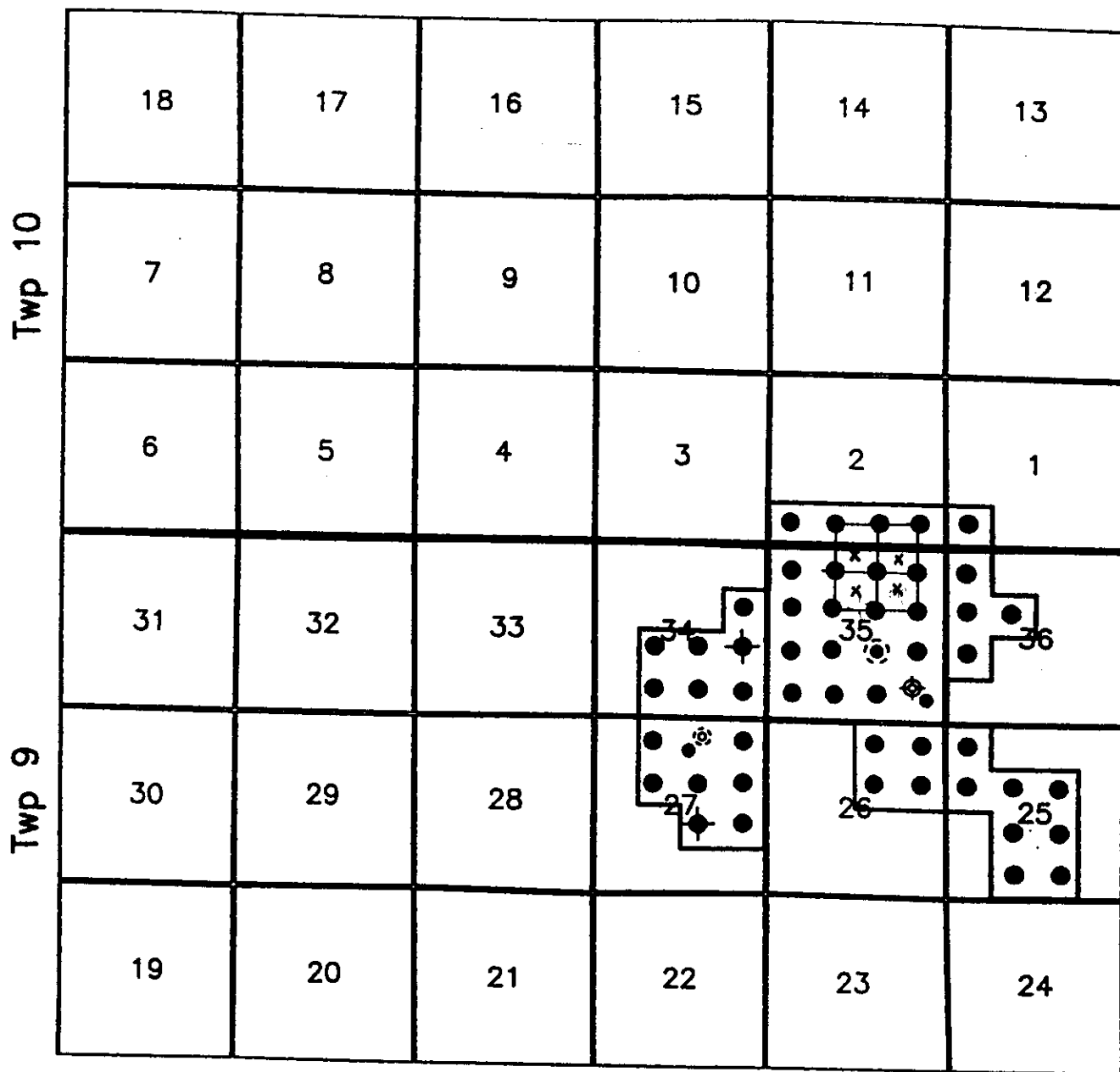
Wm. McDonald, Deputy Chairman
The Oil and Natural Gas
Conservation Board

Approved:



Minister
Department of Energy and Mines

DALY UNIT No. 4



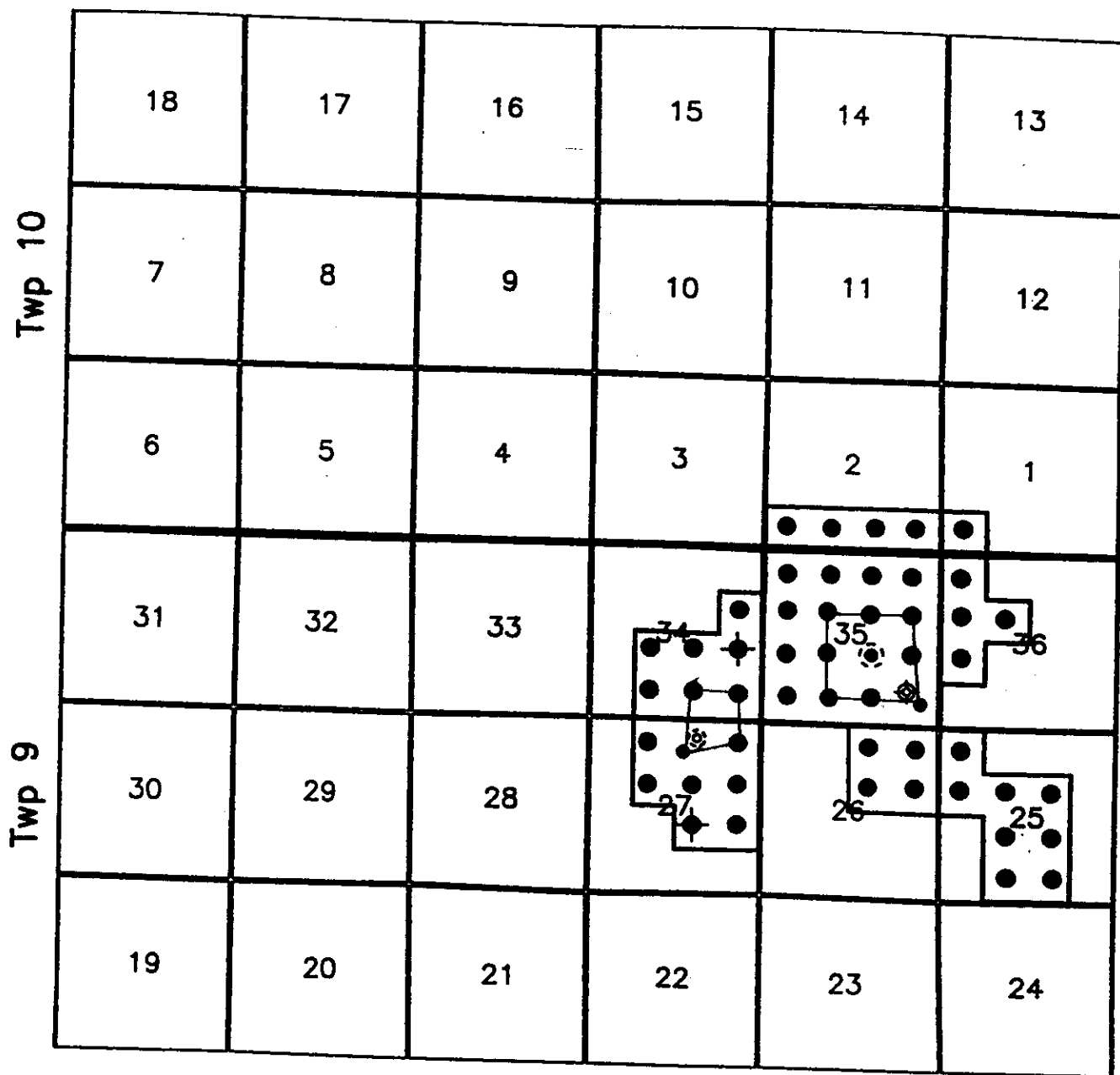
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PROPOSED
INDUCTION PATTERNS

FIELD: DALY

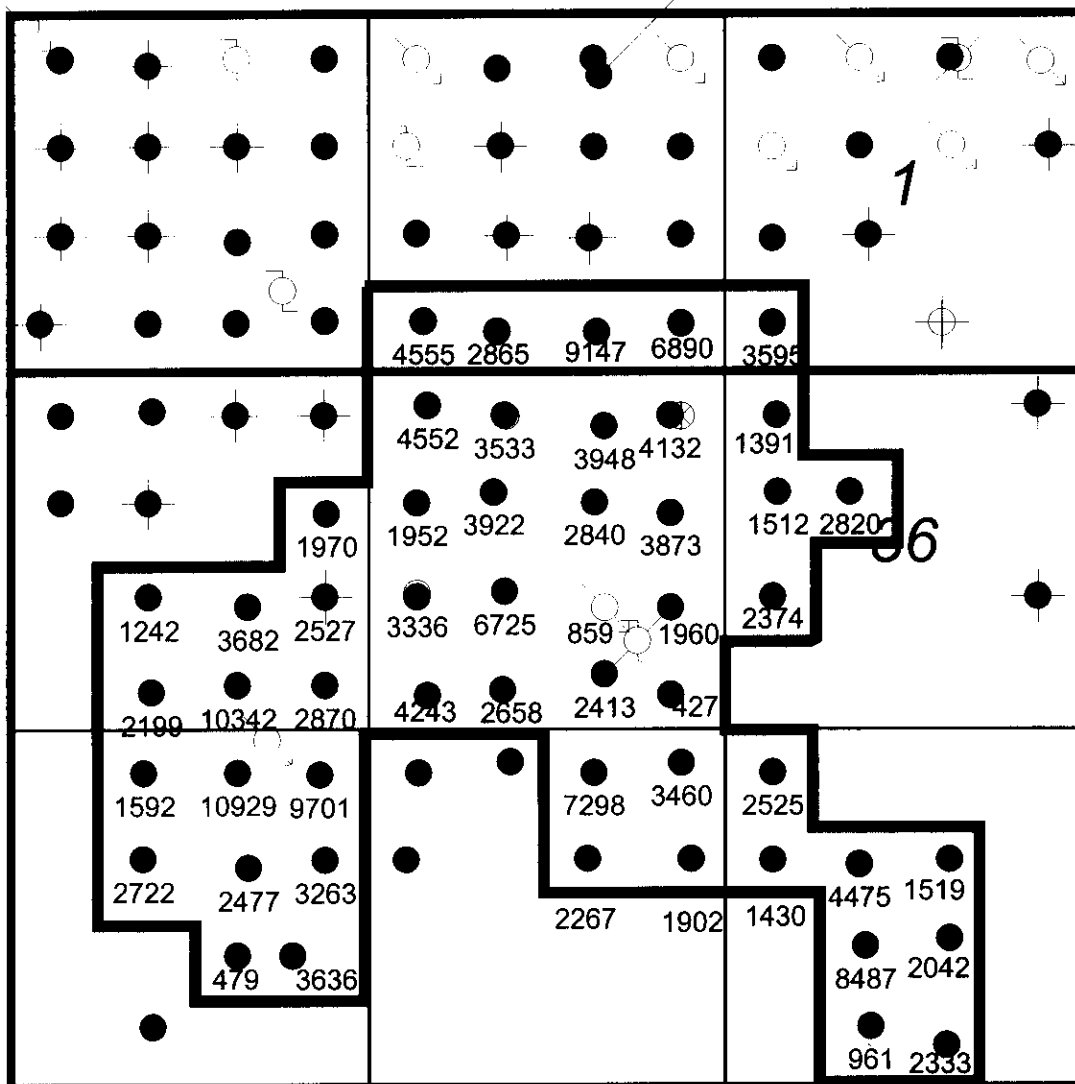
POOL: LODGEPOLE A

DALY UNIT No. 4



FIELD: DALY

POOL: LODGEPOLE A



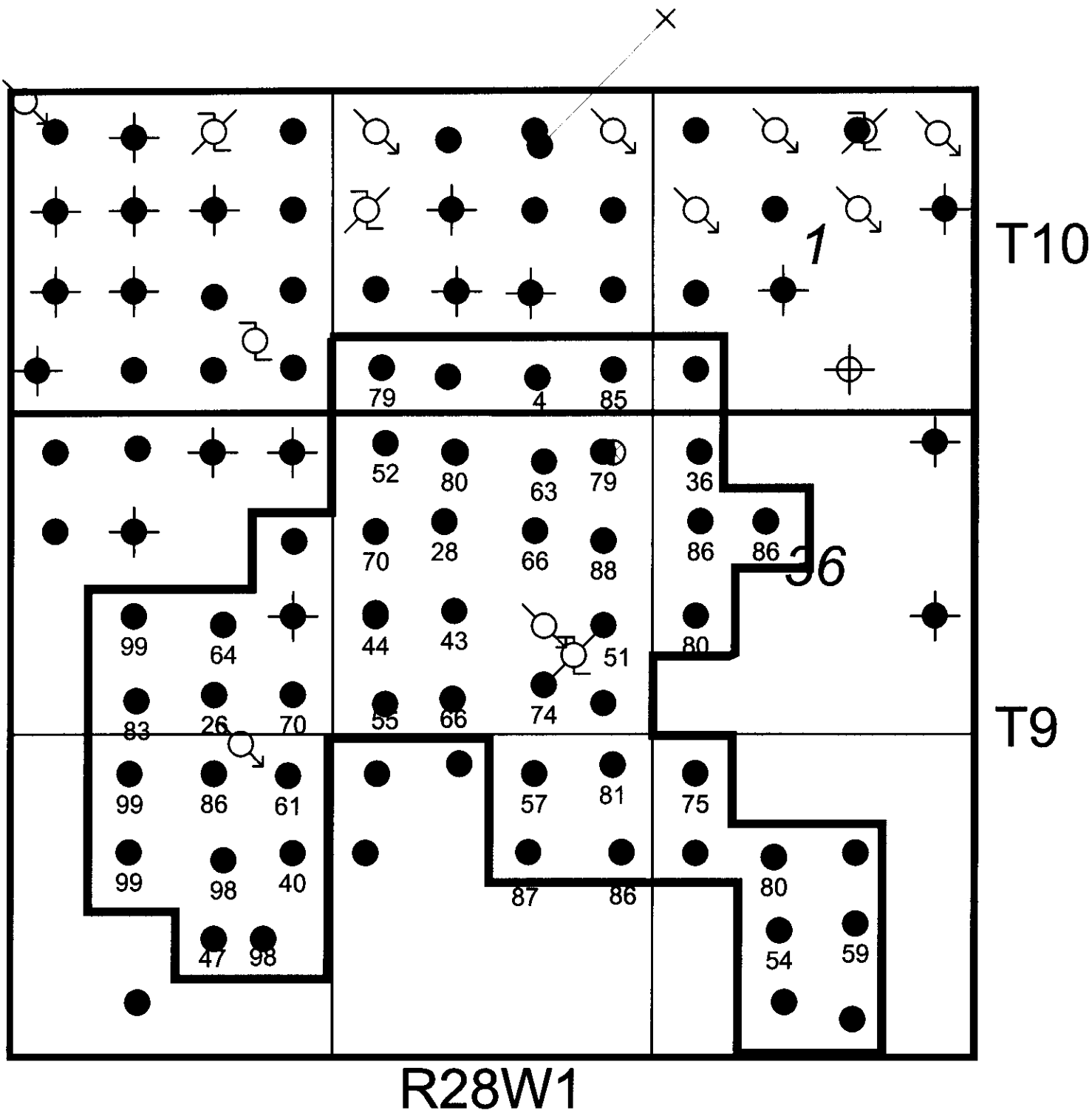
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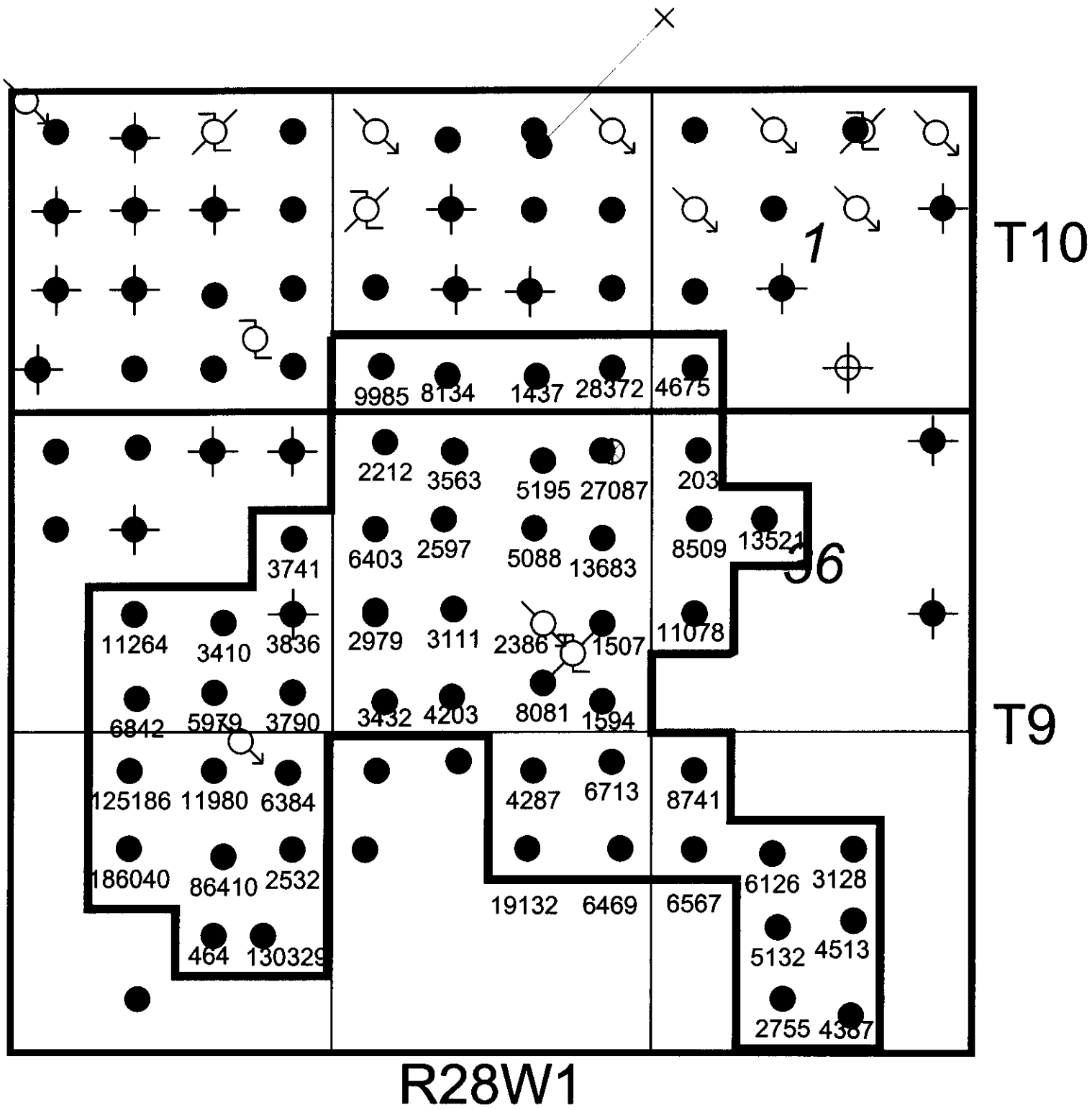
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WATER CUT



CUMULATIVE WATER.

MONTHLY TAX STATEMENT

December, 1998

OLD = 1 NEW = 2 INCENTIVE = 3 HOLIDAY = 4 MIX = 5 N/O = 6

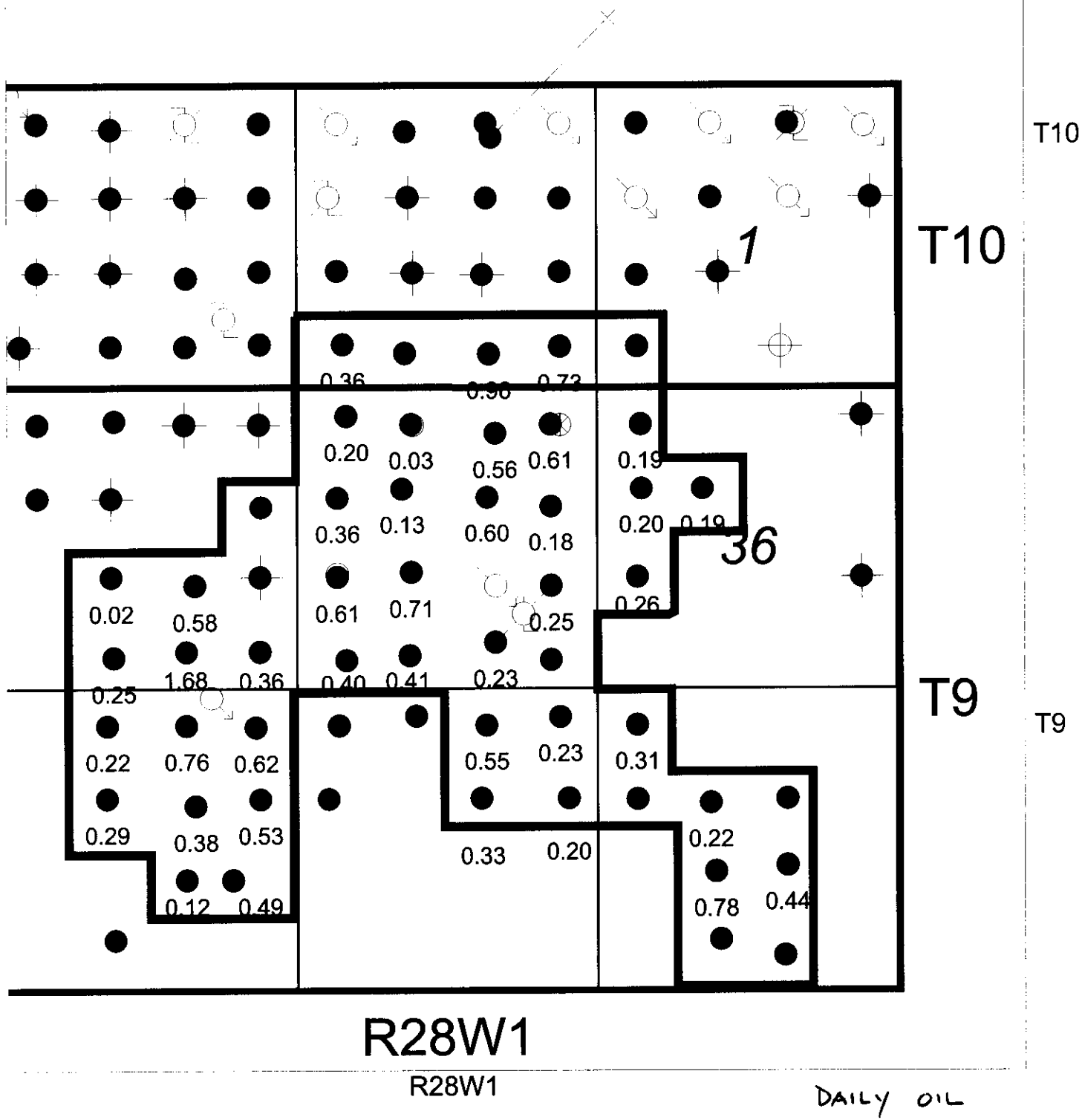
ZARGON OIL & GAS LTD.

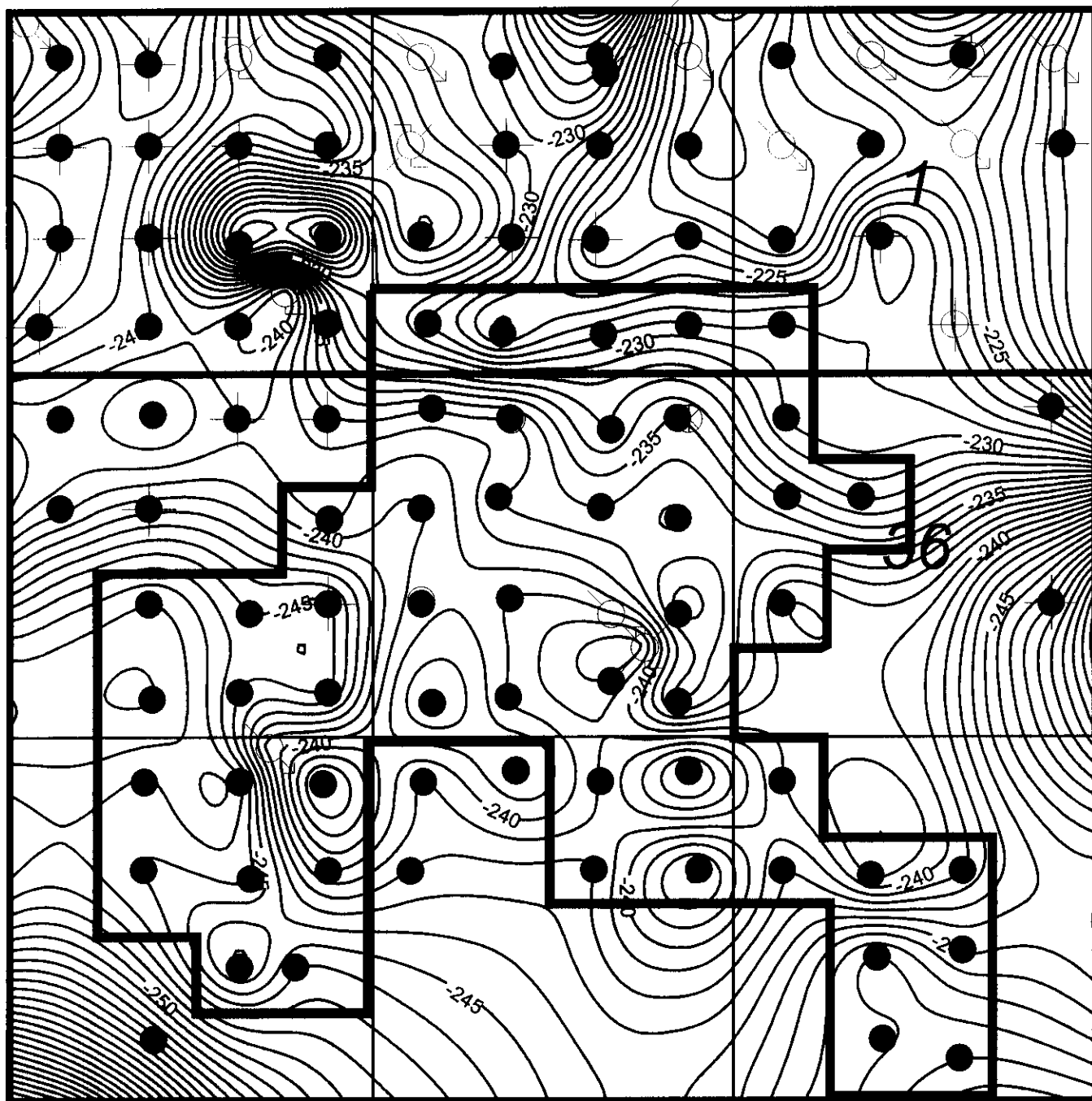
| Location | Stat | Tract Part | Well Prod | Freehold Interest | Working Factor | Unit Name | Tax Rate % | Price \$/m3 | Tax Value |
|-----------|------|---------------|--------------|----------------------|-------------------|--------------|---------------|----------------|--------------|
| TOTAL | | | | | | | | | \$1,950.92 |
| DALY #4 | | | | | | | | | |
| 02250928 | 2 | 1.3374 | 7.7 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 03250928 | 2 | 1.1680 | 6.7 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 06250928 | 2 | 4.0389 | 23.3 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 07250928 | 2 | 2.2537 | 13.0 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 10250928 | 2 | 2.3706 | 13.6 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 11250928 | 2 | 1.8817 | 10.8 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 12250928 | 2 | 1.1367 | 6.5 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 13250928 | 2 | 1.3559 | 7.8 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 09260928 | 2 | 1.5831 | 9.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 10260928 | 2 | 0.7633 | 4.4 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 15260928 | 2 | 3.1364 | 18.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 16260928 | 2 | 1.5516 | 8.9 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 07270928 | 2 | 0.7106 | 4.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 08270928 | 2 | 1.3118 | 7.6 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 09270928 | 2 | 2.6160 | 15.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 10270928 | 2 | 0.9003 | 5.2 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 11270928 | 2 | 2.3579 | 13.6 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 14270928 | 2 | 1.0621 | 6.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 15D270928 | 2 | 4.4339 | 25.5 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 16D270928 | 2 | 3.8545 | 22.2 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 01340928 | 2 | 1.9595 | 11.3 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 02340928 | 2 | 3.1721 | 18.3 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 03340928 | 2 | 1.4284 | 8.2 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 06340928 | 2 | 1.4069 | 8.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 07340928 | 2 | 4.0155 | 23.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 08340928 | 1 | 0.9585 | 5.5 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 09340928 | 2 | 1.5346 | 8.8 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 01350928 | 2 | 1.3025 | 7.5 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 02350928 | 2 | 1.5115 | 8.7 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 03350928 | 2 | 1.8059 | 10.4 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 04350928 | 2 | 1.9967 | 11.5 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 05350928 | 2 | 1.4578 | 8.4 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 06350928 | 2 | 2.6398 | 15.2 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 07350928 | 2 | 0.9247 | 5.3 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 08350928 | 2 | 1.4059 | 8.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 09350928 | 2 | 1.4571 | 8.4 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 10350928 | 2 | 1.6650 | 9.6 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 11350928 | 2 | 1.3520 | 7.8 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 12350928 | 2 | 0.6360 | 3.7 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 13350928 | 2 | 1.7474 | 10.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 14350928 | 2 | 1.7175 | 9.9 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 15350928 | 2 | 2.3622 | 13.6 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 16350928 | 2 | 1.7928 | 10.3 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 05360928 | 2 | 0.7998 | 4.6 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 04011028 | 2 | 2.2665 | 13.0 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 01021028 | 2 | 3.0975 | 17.8 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |

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|-------------|---|---------|------|---------|---------|-------|------|-------|------------|
| 02021028 | 2 | 4.4347 | 25.5 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 03021028 | 2 | 2.1108 | 12.2 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| 04021028 | 2 | 1.5796 | 9.1 | 1.00000 | 1.00000 | DALY4 | 0.00 | 94.84 | 0.00 |
| TOTAL | | 94.3636 | | | | | | | \$0.00 |
| | | | | | | | | | |
| GRAND TOTAL | | | | | | | | | \$1,950.92 |

| MONTHLY ROYALTY STATEMENT | | | | | | | | | |
|---------------------------|------|---|--------------|-------------------|-------------------|--------------|-------------------|----------------|------------------|
| December, 1998 | | | | | | | | | |
| | | OLD = 1 NEW = 2 INCENTIVE = 3 HOLIDAY = 4 MIX = 5 N/O = 6 | | | | | | | |
| ZARGON OIL & GAS LTD. | | | | | | | | | |
| Location | Stat | Tract Part | Well Prod | Crown Interest | Working Factor | Unit Name | Royalty Volume | Price \$/m3 | Royalty Value |
| TOTAL | | | 3.1 | | | | | | \$0.00 |
| DALY #4 | | | | | | | | | |
| 11360928 | 2 | 1.4468 | 8.3 | 1.000000 | 1.000000 | DALY4 | 0.14 | 95.58 | 13.38 |
| 12360928 | 2 | 2.4447 | 14.1 | 1.000000 | 1.000000 | DALY4 | 0.41 | 95.58 | 39.19 |
| 13360928 | 2 | 1.7449 | 10.0 | 1.000000 | 1.000000 | DALY4 | 0.21 | 95.58 | 20.07 |
| TOTAL | | 5.6364 | 32.4 | | | | | | \$72.64 |





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| Location | Lic. No | Well Name | Company | UWI | Field/Pool | Unit | Completion | Current Status | Status History | Status Date |
|---------------|---------|------------------------|---------|-----------------------|------------|------|------------|----------------|----------------|-------------|
| 02-23-09-28 | 4064 | Cromer Unit No. 1 COM | Tundra | 100.02-23-009-28W1.00 | 1 59B | 0 | COM | COMINGLED | | 27-Jul-1992 |
| 03-23-09-28 | 4387 | Tundra Daly | Tundra | | | | | | COOP | 28-Mar-1988 |
| 04-23-09-28 | 989 | Chevron King Daly | Chevron | 100.02-23-009-28W1.02 | 1 60I | 1 | COM | COMINGLED | COOP | 27-Jul-1992 |
| RE04-23-09-28 | 4502 | Cromer Unit No. 1 COM | Tundra | 100.04-23-009-28W1.00 | 1 59B | 0 | COM | COMINGLED | COOP | 10-Sep-1970 |
| 06-23-09-28 | 4645 | Cromer Unit No. 1 COM | Tundra | 100.06-23-009-28W1.00 | 1 59B | 0 | COM | COMINGLED | COOP | 24-Oct-1955 |
| 03-24-09-28 | 637 | Chevron Daly | Chevron | 100.03-24-009-28W1.00 | 1 59B | 0 | ABD | | COOP | 08-Sep-1957 |
| 05-24-09-28 | 1005 | Cleary Jopko | Cleary | | | | | | COOP | 21-Dec-1954 |
| 06-24-09-28 | 1006 | Fosca Jopko Daly | Fosca | 100.06-24-009-28W1.00 | 1 | 0 | ABD | | | 15-May-1956 |
| 02-25-09-28 | 3681 | Zargon Daly Unit No. 4 | Chevron | 100.02-25-009-28W1.00 | 1 59A | 4 | COOP | | | 13-Dec-1985 |

| Location | Lic. No | Well Name | Company | UWI | Field/Pool | Unit | Completion | Current Status | Status History | Status Date |
|---------------|---------|-------------------------|--------------|-----------------------|------------|------|------------|----------------|----------------|----------------------------|
| 03-25-09-28 ✓ | 3632 | Zargon Daily Unit No. 4 | Chevron | 100.03-25-009-28W1.00 | 1 59A | 4 | | COOP | | 13-Sep-1985 |
| 06-25-09-28 ✓ | 3443 | Zargon Daily Unit No. 4 | Chevron | 100.06-25-009-28W1.00 | 1 59A | 4 | | COOP | | 25-Dec-1984 |
| 07-25-09-28 ✓ | 3633 | Zargon Daily Unit No. 4 | Chevron | 100.07-25-009-28W1.00 | 1 59A | 4 | | COOP | | 27-Aug-1985 |
| 10-25-09-28 ✓ | 3733 | Zargon Daily Unit No. 4 | Chevron | 100.10-25-009-28W1.00 | 1 59A | 4 | | COOP | | 14-Feb-1986 |
| 11-25-09-28 ✓ | 3275 | Zargon Daily Unit No. 4 | Chevron | 100.11-25-009-28W1.00 | 1 59A | 4 | | COOP | | 03-Jun-1984 |
| 12-25-09-28 ✓ | 3648 | Zargon Daily Unit No. 4 | Chevron | 100.12-25-009-28W1.00 | 1 59A | 4 | | COOP | | 03-Nov-1985 |
| 13-25-09-28 ✓ | 3281 | Zargon Daily Unit No. 4 | Chevron | 100.13-25-009-28W1.00 | 1 59A | 4 | | WIW | COOP | 12-Aug-1984 30-May-1984 |
| 09-26-09-28 ✓ | 3363 | Zargon Daily Unit No. 4 | Chevron | 100.09-26-009-28W1.00 | 1 59A | 4 | | COOP | | 10-Sep-1984 |
| 10-26-09-28 ✓ | 3588 | Zargon Daily Unit No. 4 | Chevron | 100.10-26-009-28W1.00 | 1 59A | 4 | | COOP | | 02-Aug-1985 |
| 12-26-09-28 | 3795 | Zargon Daily | Zargon | 100.12-26-009-28W1.00 | 1 59A | 0 | | COOP | | 07-Aug-1986 |
| 13-26-09-28 | 3796 | Zargon Daily COM | Zargon | 100.13-26-009-28W1.00 | 1 59A | 0 | COM | COMINGLED | COOP | 29-Dec-1986 25-Jul-1986 |
| | | | | 100.13-26-009-28W1.02 | 1 60Q | 0 | COM | COMINGLED | COOP | 28-Dec-1995 28-Dec-1995 |
| 14-26-09-28 | 3797 | Zargon Daily | Zargon | 100.14-26-009-28W1.00 | 1 59A | 0 | | COOP | | 09-Jul-1986 |
| 15-26-09-28 ✓ | 3369 | Zargon Daily Unit No. 4 | Chevron | 100.15-26-009-28W1.00 | 1 59A | 4 | | COOP | | 24-Aug-1984 |
| 16-26-09-28 ✓ | 3224 | Zargon Daily Unit No. 4 | Chevron | 100.16-26-009-28W1.00 | 1 59A | 4 | | COOP | | 27-Jan-1984 |
| 03-27-09-28 | 3264 | Resman Jorex Daily | Resman O & G | 100.03-27-009-28W1.00 | 1 59A | 0 | | ABD | COOP | 25-Jun-1988 29-Aug-1984 |

| Location | Lic. No | Well Name | Company | UWI | Field/Pool | Unit | Completion | Current Status | Status History | Status Date |
|-------------|---------|-------------------------|--------------|-----------------------|------------|------|------------|----------------|----------------|-------------|
| 06-33-09-28 | 398 | B.A. Union Ritchie Daly | British | 100.05-33-009-28W1.00 | 1 59A | 0 | | ABD | | 15-Sep-1957 |
| 09-33-09-28 | 3653 | Tundra et al Daly | Tundra | 100.09-33-009-28W1.00 | 1 59A | 0 | | ABD | COOP | 08-Mar-1954 |
| 10-33-09-28 | 3638 | Tundra et al Daly | Tundra | 100.10-33-009-28W1.00 | 1 59A | 0 | | ABD | COOP | 23-Oct-1989 |
| 12-33-09-28 | 375 | Chevron Daly | Chevron | 100.12-33-009-28W1.00 | 1 59A | 0 | | ABD | COOP | 05-Oct-1985 |
| 13-33-09-28 | 364 | Daly Unit No. 1 | Chevron | 100.13-33-009-28W1.00 | 1 59A | 1 | | COOP | | 23-Oct-1989 |
| 15-33-09-28 | 3572 | Kiwi Mustang Daly | Kiwi | 100.15-33-009-28W1.00 | 1 59A | 0 | | COOP | | 05-Oct-1985 |
| 16-33-09-28 | 314 | Kiwi Mustang Daly | Kiwi | 100.16-33-009-28W1.00 | 1 59A | 0 | | COOP | | 23-Oct-1989 |
| 01-34-09-28 | 3624 | Zargon Daly Unit No. 4 | Chevron | 100.01-34-009-28W1.00 | 1 59A | 4 | | COOP | | 21-Jan-1986 |
| 02-34-09-28 | 3625 | Zargon Daly Unit No. 4 | Chevron | 100.02-34-009-28W1.00 | 1 59A | 4 | | COOP | | 13-Jun-1960 |
| 03-34-09-28 | 3873 | Zargon Daly Unit No. 4 | Chevron | 100.03-34-009-28W1.00 | 1 59A | 4 | | COOP | | 15-Mar-1954 |
| 06-34-09-28 | 3895 | Zargon Daly Unit No. 4 | Chevron | 100.06-34-009-28W1.00 | 1 59A | 4 | | COOP | | 18-Jan-1954 |
| 07-34-09-28 | 3788 | Zargon Daly Unit No. 4 | Chevron | 100.07-34-009-28W1.00 | 1 59A | 4 | | COOP | | 26-Jun-1985 |
| 08-34-09-28 | 1866 | Consolidated Daly | Consolidated | 100.08-34-009-28W1.00 | 1 59A | 4 | | ABD | COOP | 24-Oct-1959 |
| 09-34-09-28 | 3601 | Zargon Daly Unit No. 4 | Chevron | 100.09-34-009-28W1.00 | 1 59A | 4 | | COOP | | 25-Oct-1985 |

Pre-unit

| Location | Lic. No | Well Name | Company | UWI | Field/Pool | Unit | Completion | Current Status | Status History | Status Date |
|--------------|---------|--------------------------|--------------|-----------------------|------------|------|------------|----------------|------------------------|---|
| 11-34-09-28 | 3785 | Kiwi-Daly | Kiwi | 100.11-34-009-28W1.00 | 1 59A | 0 | | ABD P | RESUMED ABD COOP | 30-Apr-1998 13-Nov-1995 15-Sep-1995 09-Feb-1986 07-Nov-1995 |
| 12-34-09-28 | 3615 | Kiwi Daly | Kiwi | 100.11-34-009-28W1.02 | 1 | 0 | | ABD D | | 18-Oct-1985 |
| 13-34-09-28 | 261 | Kiwi Daly | Kiwi | 100.12-34-009-28W1.00 | 1 59A | 0 | | COOP | | 01-Aug-1953 |
| 14-34-09-28 | 362 | Kiwi Daly | Kiwi | 100.13-34-009-28W1.00 | 1 59A | 0 | | COOP | | 14-Feb-1954 |
| 15-34-09-28 | 494 | Basco Daly | Basco | 100.14-34-009-28W1.00 | 1 59A | 0 | | COOP | | 29-Apr-1968 |
| | | | | 100.15-34-009-28W1.00 | 1 59A | 0 | | ABD | COOP | 29-Aug-1954 |
| 16-34-09-28 | 1071 | Basco-Daly | Basco | 100.16-34-009-28W1.00 | 1 59A | 0 | | ABD | COOP | 26-Sep-1987 12-Feb-1956 |
| 01-35-09-28 | 3303 | Zargon Daly Unit No. 4 | Chevron | 100.01-35-009-28W1.00 | 1 59A | 4 | | COOP | | 08-Aug-1984 |
| 01C-35-09-28 | 3711 | Res Jorex et al Daly SWD | Resman O & G | 102.01-35-009-28W1.00 | 1 59A | 4 | | ABD | SWD | 11-Jun-1992 20-Dec-1985 |
| 02-35-09-28 | 3304 | Zargon Daly Unit No. 4 | Chevron | 100.02-35-009-28W1.00 | 1 59A | 4 | | COOP | | 04-Aug-1984 |
| 03-35-09-28 | 3305 | Zargon Daly Unit No. 4 | Chevron | 100.03-35-009-28W1.00 | 1 59A | 4 | | COOP | | 25-Aug-1984 |
| 04-35-09-28 | 3306 | Zargon Daly Unit No. 4 | Chevron | 100.04-35-009-28W1.00 | 1 59A | 4 | | COOP | | 21-Jul-1984 |
| 05-35-09-28 | 1855 | Consolidated East Daly | Sheehan | 100.05-35-009-28W1.00 | 1 59A | 4 | | ABD | COOP | 10-Oct-1970 03-Sep-1962 |

PRE-UNIT

[illegible]

Manitoba Energy Ltd Mines, Petroleum Branch

| Location | Lic. No | Well Name | Company | UWI | Field/Pool | Unit | Completion | Current Status | Status History | Status Date |
|------------------------|-----------------|---------------------------------|-------------------|----------------------------------|------------------|--------------|------------|----------------|-----------------|------------------------|
| 12-36-09-28 ✓ | 3789 | Zargon Daly Unit No. 4 Prov. | Chevron | 100.12-36-009-28W1.00 | 1 59A | 4 | | COOP | | 06-Feb-1986 |
| 13-36-09-28 ✓ | 3201 | Zargon Daly Unit No. 4 Prov. | Chevron | 100.13-36-009-28W1.00 | 1 59A | 4 | | COOP | | 13-Jan-1984 |
| 16-36-09-28 | 3447 | Resmen et al Daly | Resmen | 100.16-36-009-28W1.00 | 1 59A | 0 | | ABD | COOP | 16-Jun-1987 |
| 03-02-09-29 | 1454 | Peacock South Ebor Prov. | Peacock | 100.03-02-009-29W1.00 | 99 | 0 | | ABD | | 22-Jun-1957 |
| 12-05-09-29 | 3858 | Tundra Enron Daly | Tundra | 100.12-05-009-29W1.00 | 1 59R | 0 | | ABD | COOP | 30-Sep-1987 |
| | | | | 100.12-05-009-29W1.02 | 1 60E | 0 | | ABD | COOP | 24-Mar-1986 |
| | | | | | | | | | | 30-May-1988 |
| | | | | | | | | | | 28-Oct-1987 |
| 14-05-09-29 | 4767 | Northrock Daly | Northrock | | | | | | | |
| 16-06-09-29 | 4380 | Tundra Daly Prov. | Tundra | 100.16-06-009-29W1.00 | 1 60 | 0 | | ABD | | 30-Jul-1994 |
| 01-08-09-29 | 843 | Dome HB West Ebor | Dome | 100.01-08-009-29W1.00 | 1 | 0 | | ABD | | 21-Jun-1955 |
| 12-09-09-29 | 788 | Dome et al Cdn Superior W. Ebor | Dome | | | | | | | |
| 13-09-09-29 | 700 | Dome West Ebor | Dome | 100.13-09-009-29W1.00 | 1 59D | 0 | | ABD | COOP | 15-Aug-1958 |
| | | | | | | | | | | 06-Apr-1955 |
| 11-12-09-29 | 471 | Madison South Ebor | Madison | 100.11-12-009-29W1.00 | 1 | 0 | | ABD | COOP | 25-Sep-1954 |
| | | | | | | | | | | 01-Aug-1954 |
| 15-12-09-29 | 3965 | Tundra Daly Prov. | Tundra | 100.15-12-009-29W1.00 | 1 59S | 0 | | ABD | COOP | 02-Aug-1994 |
| | | | | | | | | | | 21-Sep-1987 |
| 04-13-09-29 | 1977 | Garvey Ebor | Garvey | 100.04-13-009-29W1.00 | 1 | 0 | | ABD | | 29-Jul-1994 |

[illegible]

| Location | Lic. No | Well Name | Company | UWI | Field/Pool | Unit | Completion | Current Status | Status History | Status Date |
|---------------|---------|-------------------------|---------|-----------------------|------------|------|------------|----------------|----------------|-------------|
| 08-01-10-28 | 2725 | Chevron Daily | Chevron | | | | | | | |
| 09-01-10-28 | 3430 | Chevron Daily | Chevron | 100.09-01-010-28W1.00 | 1 59A | 0 | ABD | | | 18-Jul-1989 |
| A10-01-10-28 | 169 | Chevron Daily WIW | Chevron | 100.10-01-010-28W1.00 | 1 59A | 3 | WIW | COOP | | 30-Nov-1984 |
| 11-01-10-28 | 1801 | Chevron Daily | Chevron | 100.11-01-010-28W1.00 | 1 59A | 3 | COOP | COOP | | 25-Nov-1965 |
| 12-01-10-28 | 323 | Chevron Daily WIW | Chevron | 100.12-01-010-28W1.00 | 1 59A | 3 | WIW | | | 09-Aug-1952 |
| 13-01-10-28 | 191 | Chevron Daily | Chevron | 100.13-01-010-28W1.00 | 1 59A | 3 | COOP | COOP | | 26-Nov-1960 |
| 14-01-10-28 | 176 | Chevron Daily WIW | Chevron | 100.14-01-010-28W1.00 | 1 59A | 3 | WIW | | | 23-Jun-1973 |
| 15-01-10-28 | 153 | Chevron Daily | Chevron | 100.15-01-010-28W1.00 | 1 59A | 3 | COOP | COOP | | 01-Nov-1953 |
| 15-01-10-28 | 563 | Chevron Daily SWD | Chevron | 102.15-01-010-28W1.00 | 1 19 | 0 | ABD | | | 19-Dec-1952 |
| 16-01-10-28 | 270 | Chevron Daily WIW | Chevron | 100.16-01-010-28W1.00 | 1 59A | 3 | WIW | | | 19-Jun-1953 |
| 01-02-10-28 ✓ | 3286 | Zargon Daily Unit No. 4 | Chevron | 100.01-02-010-28W1.00 | 1 59A | 4 | COOP | | | 01-Jul-1952 |
| 02-02-10-28 ✓ | 3325 | Zargon Daily Unit No. 4 | Chevron | 100.02-02-010-28W1.00 | 1 59A | 4 | COOP | | | 01-Apr-1952 |
| 03-02-10-28 ✓ | 3287 | Zargon Daily Unit No. 4 | Chevron | 100.03-02-010-28W1.00 | 1 59A | 4 | COOP | | | 19-Sep-1970 |
| 04-02-10-28 ✓ | 3326 | Zargon Daily Unit No. 4 | Chevron | 100.04-02-010-28W1.00 | 1 59A | 4 | COOP | | | 01-Dec-1954 |
| 05-02-10-28 | 536 | Chevron Hasket-Daly | Chevron | 100.05-02-010-28W1.00 | 1 59A | 3 | COOP | | | 14-Jul-1955 |
| | | | | | | | | | | 02-Jun-1984 |
| | | | | | | | | | | 23-Jul-1984 |
| | | | | | | | | | | 28-May-1984 |
| | | | | | | | | | | 24-Sep-1984 |
| | | | | | | | | | | 11-Nov-1994 |

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ESTIMATION OF ULTIMATE OIL RECOVERY AND RESERVOIR LIFE

With 30 years of production history available for both units, enough reservoir performance data exist to utilize two graphical techniques. The first technique involves plotting log of water-oil ratio (WOR) vs. cumulative oil production (N_p) and can be used to estimate ultimate oil recovery. The second technique, requiring a plot of log WOR vs. time (t), can give an estimate of reservoir life. Both of these plots tend to have linear trends which can be extrapolated out to an economically terminal WOR (WOR_t). At the WOR_t , both ultimate recovery and reservoir life can be estimated.

B. STRAIGHT LINE EQUATIONS

The analytical methods used with both of these plots are outlined below:

1. Log WOR Vs. N_p

A linear trend on a log WOR vs. N_p plot can be described by the following straight line equation:

$$\log WOR = m N_p + b \quad (1)$$

The slope of the straight line, m , is defined as:

$$m = \frac{\Delta \log WOR}{\Delta N_p} \quad (2)$$

The vertical axis intercept of the straight line, b , is determined from the plot.

Once the equation is determined, the ultimate oil recovery (N_{pt}) at WOR_t can be calculated by manipulation of equation 1.

$$N_{pt} = \frac{\log WOR_t - b}{m} \quad (3)$$

WOR Vs. T

Using the same reasoning used above, the straight line equation for log WOR vs. t plot is defined as:

$$\log \text{WOR} = m t + b \quad (4)$$

$$m = \frac{\Delta \log \text{WOR}}{\Delta t} \quad (5)$$

The reservoir life (t_t) can be expressed as:

$$t_t = \frac{\log \text{WOR}_t - b}{m} \quad (6)$$

C. CALCULATIONS

The economically terminal WOR (WOR_t) is assumed to be 30.

1. Daly Unit No. 1

From Figure 1, "Daly Unit No. 1: Log WOR Vs. Cumulative Production," and Figure 2, "Daly Unit No. 1: Production Plot Summary," the following calculations can be made.

Ultimate Oil Recovery (Figure 1)

- i) Slope (m) of straight line trend (red line drawn on plot) from equation 2.

$$m = 2.50 \times 10^{-6}$$

- ii) Vertical axis intercept (b)

$$b = \log (0.12) = -0.92$$

- iii) Ultimate oil recovery (N_{pt}), from equation 3.

$$\begin{aligned} N_{pt} &= \frac{\log \text{WOR}_t - b}{m} = \frac{\log (30) + 0.92}{2.50 \times 10^{-6}} \\ &= 9.59 \times 10^5 \text{ STM}^3 = 6.03 \times 10^6 \text{ STB} \end{aligned}$$

Reservoir Life (Figure 2)

Slope (m) of straight line trend (red line drawn on plot), from equation 5.

$$m = 4.56 \times 10^{-2}$$

ii) Vertical axis intercept (b)

$$b = \log (0.30) = -0.52$$

iii) Reservoir life (t_t), from equation 6.

$$t_t = \frac{\log \text{WOR}_t - b}{m} = \frac{\log (30) + 0.52}{4.56 \times 10^{-2}} = 43.8 \text{ years}$$

iv) The year in which the unit would cease to be economically productive can be easily calculated.

$$\text{Year of abandonment} = Y_a = 1952 + 43.8 = 1995.8.$$

2. Daly Unit No. 3

From Figure 3, "Daly Unit No. 3: Log WOR Vs. Cumulative Production Summary," and Figure 4, "Daly Unit No. 3: Production Plot Summary," the same calculations can be made as with Daly Unit No. 1 above.

Ultimate Oil Recovery (Figure 3)

$$i) m = 8.57 \times 10^{-7}$$

$$ii) b = \log (0.20) = -0.70$$

$$iii) N_{pt} = \frac{\log \text{WOR}_t - b}{m} = \frac{\log (30) + 0.70}{8.67 \times 10^{-7}} = 2.51 \times 10^6 = 15.8 \times 10^6 \text{ STB}$$

Reservoir Life (Figure 4)

$$i) m = 1.9 \times 10^{-2}$$

$$ii) b = \log (0.4) = -0.40$$

$$iii) t_t = \frac{\log \text{WOR}_t - b}{m} = \frac{\log (30) + 0.40}{1.9 \times 10^{-2}} = 98.8 \text{ years}$$

$$iv) Y_a = 1951 + t_t = 1951 + 98.8 = 2049.8$$

The above ultimate oil recovery and reservoir life numbers are compared in Appendix C.

Daly Unit #4 Summary Well Data 09/62-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit No. 4

WOR FC 1 (Rate-Time)

qi: 0.456495 m3/m3, Nov, 1962

qf: 10.0054 m3/m3, Jan, 2016

di(Lin): -39.2825 CTD: 1.20323e+06 m3

RR: 1666.98 m3 Tot: 1.2049e+06 m3

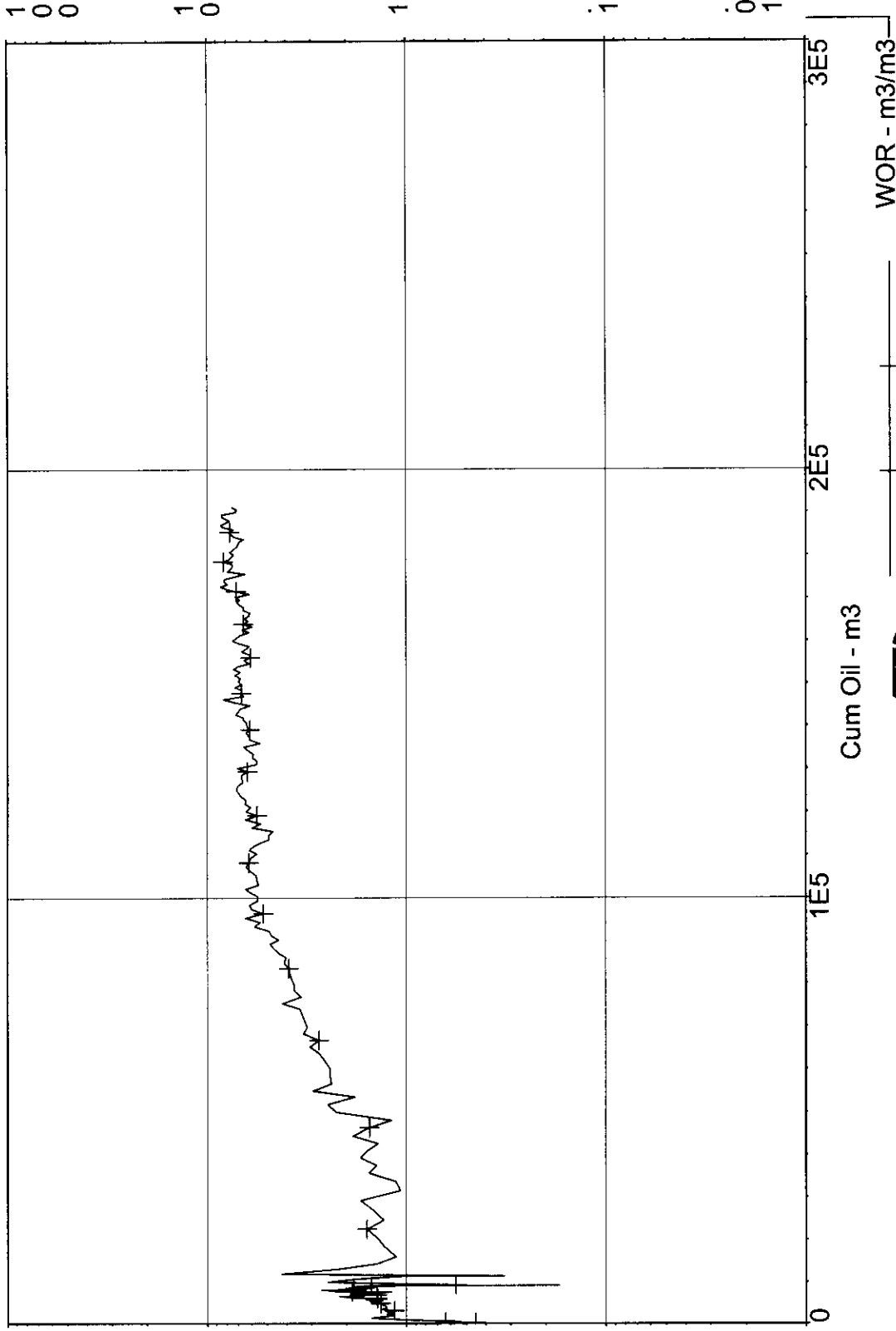
Production Cums

Oil: 191122 m3

Gas: 0 E6m3

Water: 866998 m3

Cond: 0 m3



MP

Daly Unit #4 Summary Well Data 09/62-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit No. 4

WOR FC 1 (Rate-Time)

qi: 5.64637 m3/m3, Sep, 1988

qf: 17.7459 m3/m3, Mar, 2052

di(Lin): -3.3702 CTD: 1.20323e+06 m3

RR: 8025.16 m3 Tot: 1.21126e+06 m3

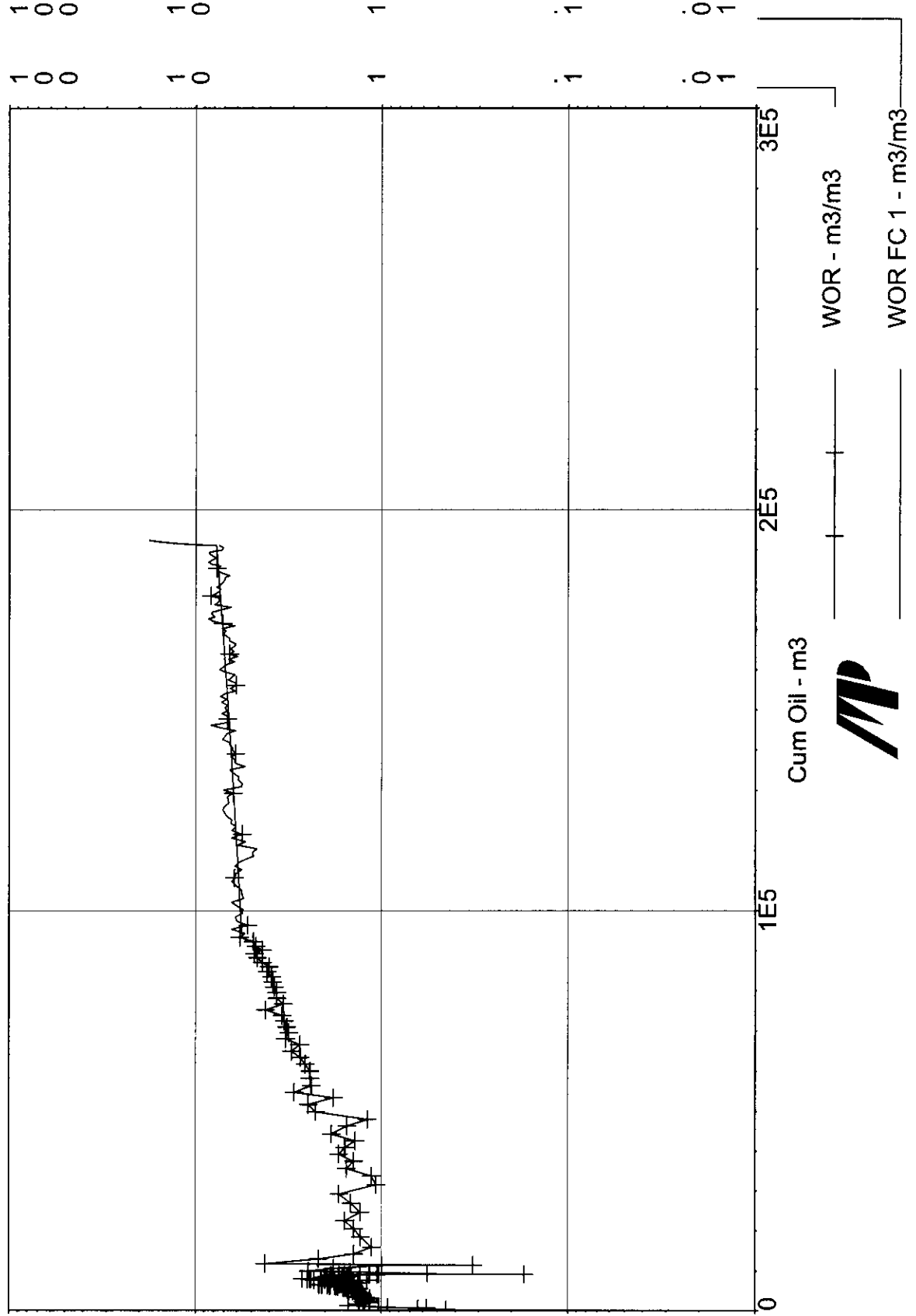
Production Cums

Oil: 191122 m3

Gas: 0 E6m3

Water: 866998 m3

Cond: 0 m3



Production Report

| | | | |
|-----------|-----------------------------|---------|----------------------|
| Group | : Daly Unit No. 4 | Date | : 8/14/5 10:19:34 am |
| Well | : Daly Unit #4 Summary Well | User | : jfox |
| | : 000000277 | | |
| Hist.Data | : 09/62-10/99 | On Prod | : 02/09 |
| Operator | : | Status | : Unknown |
| Field | : | Zone | : |

Production Data from January, 1999 to December, 2005

| Year | Cum Oil m3 | Avg Daily Oil m3/d | WOR m3/m3 | WOR FC 1 m3/m3 |
|------------|---------------|-----------------------|--------------|-------------------|
| Jan., 1999 | 186467 | 17.7581 | 8.28429 | 7.62861 |
| Feb., 1999 | 186958 | 17.5916 | 8.5392 | 7.64447 |
| Mar., 1999 | 187476 | 16.839 | 8.15083 | 7.66032 |
| Apr., 1999 | 187977 | 16.6967 | 7.73148 | 7.67618 |
| May., 1999 | 188478 | 16.3592 | 8.14172 | 7.69204 |
| Jun., 1999 | 188941 | 15.4333 | 8.44449 | 7.7079 |
| Jul., 1999 | 189419 | 15.4161 | 8.47583 | 7.72376 |
| Aug., 1999 | 190002 | 19.4904 | 7.21202 | 7.73961 |
| Sep., 1999 | 190572 | 19.0529 | 7.14491 | 7.75547 |
| Oct., 1999 | 191122 | 18.0526 | 7.50137 | 7.77133 |
| Nov., 1999 | | | | 7.78719 |
| Dec., 1999 | | | | 7.80304 |
| Jan., 2000 | | | | 7.8189 |
| Feb., 2000 | | | | 7.83476 |
| Mar., 2000 | | | | 7.85062 |
| Apr., 2000 | | | | 7.86648 |
| May., 2000 | | | | 7.88233 |
| Jun., 2000 | | | | 7.89819 |
| Jul., 2000 | | | | 7.91405 |
| Aug., 2000 | | | | 7.92991 |
| Sep., 2000 | | | | 7.94577 |
| Oct., 2000 | | | | 7.96162 |
| Nov., 2000 | | | | 7.97748 |
| Dec., 2000 | | | | 7.99334 |
| Jan., 2001 | | | | 8.0092 |
| Feb., 2001 | | | | 8.02505 |
| Mar., 2001 | | | | 8.04091 |
| Apr., 2001 | | | | 8.05677 |
| May., 2001 | | | | 8.07263 |
| Jun., 2001 | | | | 8.08848 |
| Jul., 2001 | | | | 8.10434 |
| Aug., 2001 | | | | 8.1202 |
| Sep., 2001 | | | | 8.13606 |
| Oct., 2001 | | | | 8.15192 |
| Nov., 2001 | | | | 8.16777 |
| Dec., 2001 | | | | 8.18363 |
| Jan., 2002 | | | | 8.19949 |
| Feb., 2002 | | | | 8.21535 |
| Mar., 2002 | | | | 8.23121 |
| Apr., 2002 | | | | 8.24706 |
| May., 2002 | | | | 8.26292 |
| Jun., 2002 | | | | 8.27878 |
| Jul., 2002 | | | | 8.29464 |
| Aug., 2002 | | | | 8.3105 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

Date : 8/14/5 10:19:34 am
User : jfox

Production Data from January, 1999 to December, 2005 (cont.)

| Year | Cum Oil m3 | Avg Daily Oil m3/d | WOR m3/m3 | WOR FC 1 m3/m3 |
|------------|---------------|-----------------------|--------------|-------------------|
| Sep., 2002 | | | | 8.32635 |
| Oct., 2002 | | | | 8.34221 |
| Nov., 2002 | | | | 8.35807 |
| Dec., 2002 | | | | 8.37393 |
| Jan., 2003 | | | | 8.38978 |
| Feb., 2003 | | | | 8.40564 |
| Mar., 2003 | | | | 8.4215 |
| Apr., 2003 | | | | 8.43736 |
| May., 2003 | | | | 8.45322 |
| Jun., 2003 | | | | 8.46907 |
| Jul., 2003 | | | | 8.48493 |
| Aug., 2003 | | | | 8.50079 |
| Sep., 2003 | | | | 8.51665 |
| Oct., 2003 | | | | 8.5325 |
| Nov., 2003 | | | | 8.54836 |
| Dec., 2003 | | | | 8.56422 |
| Jan., 2004 | | | | 8.58008 |
| Feb., 2004 | | | | 8.59593 |
| Mar., 2004 | | | | 8.61179 |
| Apr., 2004 | | | | 8.62765 |
| May., 2004 | | | | 8.64351 |
| Jun., 2004 | | | | 8.65937 |
| Jul., 2004 | | | | 8.67522 |
| Aug., 2004 | | | | 8.69108 |
| Sep., 2004 | | | | 8.70694 |
| Oct., 2004 | | | | 8.7228 |
| Nov., 2004 | | | | 8.73866 |
| Dec., 2004 | | | | 8.75451 |
| Jan., 2005 | | | | 8.77037 |
| Feb., 2005 | | | | 8.78623 |
| Mar., 2005 | | | | 8.80209 |
| Apr., 2005 | | | | 8.81795 |
| May., 2005 | | | | 8.8338 |
| Jun., 2005 | | | | 8.84966 |
| Jul., 2005 | | | | 8.86552 |
| Aug., 2005 | | | | 8.88138 |
| Sep., 2005 | | | | 8.89723 |
| Oct., 2005 | | | | 8.91309 |
| Nov., 2005 | | | | 8.92895 |
| Dec., 2005 | | | | 8.94481 |

Daly Unit #4 Summary Well Data 09/62-10/99

Operator:

Field:

Zone:

Type: Unknown

Group: Daly Unit No. 4

WOR FC 1 (Rate-Time)

qi: 5.64637 m3/m3, Sep, 1988

qf: 10.0073 m3/m3, Jul, 2011

di(Lin): -3.3702 CTD: 1.20323e+06 m3

RR: 1253.3 m3 Tot: 1.20449e+06 m3

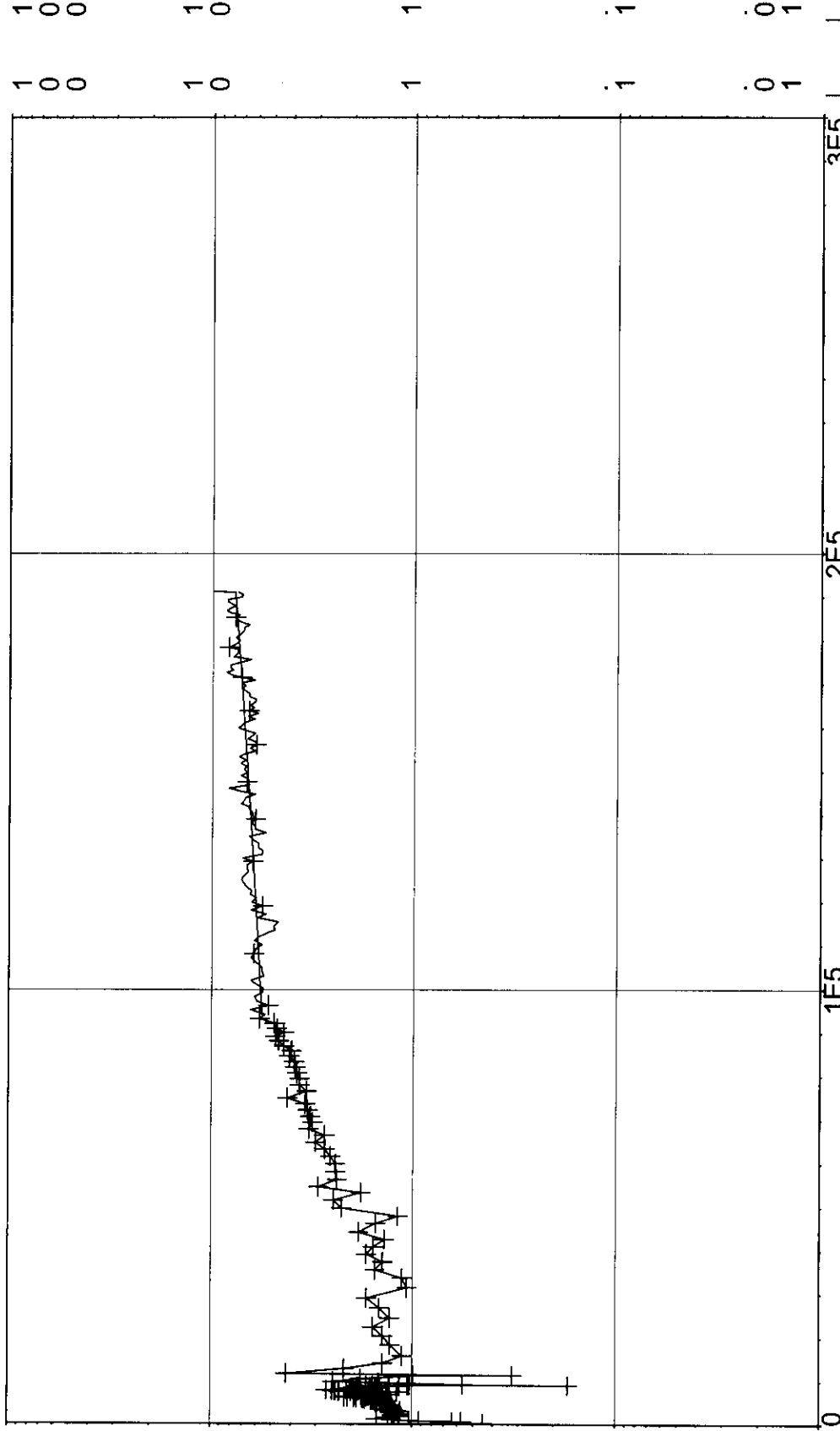
Production Cums

Oil: 191122 m3

Gas: 0 E6m3

Water: 866998 m3

Cond: 0 m3



Cum Oil - m3

WOR - m3/m3

WOR FC 1 - m3/m3

MP

Production Report

| | | | |
|-----------|-----------------------------|---------|----------------------|
| Group | : Daly Unit No. 4 | Date | : 8/14/5 10:23:40 am |
| Well | : Daly Unit #4 Summary Well | User | : jfox |
| | : 000000277 | | |
| Hist.Data | : 09/62-10/99 | On Prod | : 02/09 |
| Operator | : | Status | : Unknown |
| Field | : | Zone | : |

Production Data from January, 1988 to January, 2016

| Year | Cum Oil m3 | WOR m3/m3 | Avg Daily Oil m3/d |
|------------|---------------|--------------|-----------------------|
| Jan., 1988 | 85970.4 | 4.01867 | 42.4752 |
| Feb., 1988 | 87042 | 4.3855 | 41.683 |
| Mar., 1988 | 88189 | 4.66295 | 40.3636 |
| Apr., 1988 | 89234.3 | 4.82933 | 36.2532 |
| May., 1988 | 90149.2 | 4.37709 | 37.3429 |
| Jun., 1988 | 91068.5 | 4.75035 | 33.4798 |
| Jul., 1988 | 92232.3 | 4.90531 | 39.5067 |
| Aug., 1988 | 93264.3 | 5.79031 | 34.6406 |
| Sep., 1988 | 94295.2 | 5.44204 | 35.8055 |
| Oct., 1988 | 95322.6 | 6.42058 | 34.2467 |
| Nov., 1988 | 96326.7 | 5.25366 | 34.1821 |
| Dec., 1988 | 97324 | 5.98416 | 32.6984 |
| Jan., 1989 | 98352.6 | 6.14321 | 33.4504 |
| Feb., 1989 | 99261.9 | 5.60992 | 32.475 |
| Mar., 1989 | 100330 | 5.5775 | 34.4419 |
| Apr., 1989 | 101326 | 6.1145 | 33.6371 |
| May., 1989 | 102098 | 6.40542 | 30.872 |
| Jun., 1989 | 103045 | 5.53008 | 35.0889 |
| Jul., 1989 | 104107 | 5.65439 | 35.1812 |
| Aug., 1989 | 105211 | 5.69418 | 35.6576 |
| Sep., 1989 | 106217 | 6.0772 | 33.6435 |
| Oct., 1989 | 107241 | 6.41371 | 33.1181 |
| Nov., 1989 | 108236 | 6.19606 | 33.1994 |
| Dec., 1989 | 109255 | 6.06386 | 33.1995 |
| Jan., 1990 | 110288 | 5.6566 | 33.9682 |
| Feb., 1990 | 111123 | 6.15714 | 30.1554 |
| Mar., 1990 | 112096 | 5.85921 | 31.9486 |
| Apr., 1990 | 113149 | 5.23861 | 35.3162 |
| May., 1990 | 113641 | 4.89535 | 19.9838 |
| Jun., 1990 | 114518 | 4.94992 | 31.8281 |
| Jul., 1990 | 115467 | 4.69044 | 31.2989 |
| Aug., 1990 | 116386 | 5.97344 | 29.9984 |
| Sep., 1990 | 117282 | 5.39174 | 29.9082 |
| Oct., 1990 | 118220 | 6.43011 | 30.7929 |
| Nov., 1990 | 119146 | 5.64033 | 30.923 |
| Dec., 1990 | 120073 | 6.39721 | 29.9338 |
| Jan., 1991 | 121060 | 6.06163 | 31.9514 |
| Feb., 1991 | 121828 | 6.46624 | 27.8262 |
| Mar., 1991 | 122736 | 6.40694 | 29.4324 |
| Apr., 1991 | 123579 | 6.78304 | 28.2176 |
| May., 1991 | 124391 | 6.98831 | 26.8259 |
| Jun., 1991 | 125188 | 7.14816 | 27.0203 |
| Jul., 1991 | 126043 | 7.03617 | 27.8988 |
| Aug., 1991 | 126854 | 6.64739 | 26.8033 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

Date : 8/14/5 10:23:40 am
User : jfox

Production Data from January, 1988 to January, 2016 (cont.)

| Year | Cum Oil m3 | WOR m3/m3 | Avg Daily Oil m3/d |
|------------|---------------|--------------|-----------------------|
| Sep., 1991 | 127679 | 6.70462 | 27.6 |
| Oct., 1991 | 128524 | 6.74438 | 27.2818 |
| Nov., 1991 | 129344 | 6.2939 | 27.3713 |
| Dec., 1991 | 130158 | 7.0596 | 28.4262 |
| Jan., 1992 | 130992 | 5.69017 | 27.4568 |
| Feb., 1992 | 131799 | 5.63579 | 27.8849 |
| Mar., 1992 | 132653 | 5.9328 | 27.9302 |
| Apr., 1992 | 133475 | 5.88951 | 46.4075 |
| May., 1992 | 134274 | 6.22873 | 43.1029 |
| Jun., 1992 | 135117 | 6.57607 | 48.2635 |
| Jul., 1992 | 135973 | 5.43093 | 46.6691 |
| Aug., 1992 | 136790 | 6.13679 | 45.6167 |
| Sep., 1992 | 137568 | 6.17382 | 43.9567 |
| Oct., 1992 | 138384 | 6.39944 | 45.0152 |
| Nov., 1992 | 139153 | 6.12336 | 25.8588 |
| Dec., 1992 | 139902 | 6.33298 | 24.348 |
| Jan., 1993 | 140633 | 6.35145 | 24.4145 |
| Feb., 1993 | 141325 | 6.56724 | 24.9853 |
| Mar., 1993 | 142013 | 6.6262 | 22.2728 |
| Apr., 1993 | 142682 | 7.20263 | 37.8509 |
| May., 1993 | 143368 | 6.97813 | 37.4925 |
| Jun., 1993 | 144083 | 6.83727 | 40.5504 |
| Jul., 1993 | 144832 | 6.12423 | 24.2721 |
| Aug., 1993 | 145533 | 7.32777 | 23.2409 |
| Sep., 1993 | 146242 | 8.28394 | 24.1226 |
| Oct., 1993 | 146976 | 6.58237 | 24.0623 |
| Nov., 1993 | 147702 | 6.75661 | 25.0705 |
| Dec., 1993 | 148387 | 6.7338 | 22.9356 |
| Jan., 1994 | 149065 | 7.24089 | 22.7866 |
| Feb., 1994 | 149735 | 6.77471 | 24.6931 |
| Mar., 1994 | 150504 | 6.99312 | 26.0615 |
| Apr., 1994 | 151198 | 6.81568 | 23.3571 |
| May., 1994 | 151926 | 7.26275 | 23.8134 |
| Jun., 1994 | 152631 | 6.83163 | 23.966 |
| Jul., 1994 | 153326 | 7.38611 | 22.8938 |
| Aug., 1994 | 153979 | 7.01287 | 30 |
| Sep., 1994 | 154647 | 6.15374 | 22.8702 |
| Oct., 1994 | 155351 | 6.51846 | 23.1518 |
| Nov., 1994 | 156068 | 6.07573 | 24.4432 |
| Dec., 1994 | 156745 | 6.16802 | 22.1763 |
| Jan., 1995 | 157436 | 6.71309 | 22.4043 |
| Feb., 1995 | 158039 | 6.42793 | 21.6611 |
| Mar., 1995 | 158716 | 6.15024 | 21.8875 |
| Apr., 1995 | 159353 | 6.94615 | 21.5594 |
| May., 1995 | 159962 | 7.47158 | 28.9331 |
| Jun., 1995 | 160580 | 7.15416 | 29.2639 |
| Jul., 1995 | 161239 | 6.90329 | 29.1138 |
| Aug., 1995 | 161939 | 6.19337 | 31.3522 |

Production Report

Group : Daly Unit No. 4
Well : Daly Unit #4 Summary Well
: 000000277

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User : jfox

Production Data from January, 1988 to January, 2016 (cont.)

| Year | Cum Oil m3 | WOR m3/m3 | Avg Daily Oil m3/d |
|------------|---------------|--------------|-----------------------|
| Sep., 1995 | 162592 | 6.68841 | 29.856 |
| Oct., 1995 | 163263 | 5.98061 | 30.4106 |
| Nov., 1995 | 163904 | 6.61279 | 21.5462 |
| Dec., 1995 | 164565 | 6.25533 | 21.8847 |
| Jan., 1996 | 165212 | 6.53581 | 21.0667 |
| Feb., 1996 | 165841 | 6.17537 | 21.8258 |
| Mar., 1996 | 166509 | 6.12253 | 21.7957 |
| Apr., 1996 | 167115 | 6.5856 | 20.8562 |
| May., 1996 | 167751 | 6.57379 | 20.8908 |
| Jun., 1996 | 168346 | 6.85135 | 20.1878 |
| Jul., 1996 | 168961 | 7.12492 | 19.8857 |
| Aug., 1996 | 169628 | 6.86757 | 21.5903 |
| Sep., 1996 | 170245 | 7.2219 | 20.6937 |
| Oct., 1996 | 170898 | 6.17473 | 21.0929 |
| Nov., 1996 | 171497 | 7.17298 | 20.1231 |
| Dec., 1996 | 172088 | 8.09186 | 19.275 |
| Jan., 1997 | 172663 | 8.53744 | 18.6479 |
| Feb., 1997 | 173200 | 7.90527 | 19.4205 |
| Mar., 1997 | 173787 | 8.22343 | 19.0443 |
| Apr., 1997 | 174365 | 8.17606 | 19.4081 |
| May., 1997 | 174998 | 7.2701 | 20.6727 |
| Jun., 1997 | 175608 | 6.47096 | 20.8114 |
| Jul., 1997 | 176197 | 7.92518 | 19.2196 |
| Aug., 1997 | 176784 | 7.64251 | 19.3021 |
| Sep., 1997 | 177332 | 7.49754 | 19.7802 |
| Oct., 1997 | 177923 | 7.52616 | 20.8176 |
| Nov., 1997 | 178466 | 8.31196 | 18.6602 |
| Dec., 1997 | 179003 | 7.83163 | 17.5272 |
| Jan., 1998 | 179582 | 7.51572 | 19.0617 |
| Feb., 1998 | 180117 | 7.38054 | 19.407 |
| Mar., 1998 | 180677 | 7.71418 | 18.1538 |
| Apr., 1998 | 181265 | 7.39799 | 19.7378 |
| May., 1998 | 181849 | 7.18434 | 18.9154 |
| Jun., 1998 | 182418 | 7.00317 | 19.1831 |
| Jul., 1998 | 183038 | 6.98598 | 20.0972 |
| Aug., 1998 | 183620 | 6.5816 | 18.885 |
| Sep., 1998 | 184192 | 7.2821 | 19.1365 |
| Oct., 1998 | 184771 | 7.58954 | 18.6806 |
| Nov., 1998 | 185341 | 7.73077 | 18.98 |
| Dec., 1998 | 185916 | 7.38666 | 18.6462 |
| Jan., 1999 | 186467 | 8.28429 | 17.7581 |
| Feb., 1999 | 186958 | 8.5392 | 17.5916 |
| Mar., 1999 | 187476 | 8.15083 | 16.839 |
| Apr., 1999 | 187977 | 7.73148 | 16.6967 |
| May., 1999 | 188478 | 8.14172 | 16.3592 |
| Jun., 1999 | 188941 | 8.44449 | 15.4333 |
| Jul., 1999 | 189419 | 8.47583 | 15.4161 |
| Aug., 1999 | 190002 | 7.21202 | 19.4904 |

Production Report

Group : Daly Unit No. 4 Date : 8/14/5 10:23:40 am
Well : Daly Unit #4 Summary Well User : jfox
: 000000277

Production Data from January, 1988 to January, 2016 (cont.)

| Year | Cum Oil m3 | WOR m3/m3 | Avg Daily Oil m3/d |
|------------|---------------|--------------|-----------------------|
| Sep., 1999 | 190572 | 7.14491 | 19.0529 |
| Oct., 1999 | 191122 | 7.50137 | 18.0526 |
| Nov., 1999 | | | |
| Dec., 1999 | | | |
| Jan., 2000 | | | |
| Feb., 2000 | | | |
| Mar., 2000 | | | |
| Apr., 2000 | | | |
| May., 2000 | | | |
| Jun., 2000 | | | |
| Jul., 2000 | | | |
| Aug., 2000 | | | |
| Sep., 2000 | | | |
| Oct., 2000 | | | |
| Nov., 2000 | | | |
| Dec., 2000 | | | |
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| Jul., 2001 | | | |
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| Oct., 2001 | | | |
| Nov., 2001 | | | |
| Dec., 2001 | | | |
| Jan., 2002 | | | |
| Feb., 2002 | | | |
| Mar., 2002 | | | |
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| Jul., 2003 | | | |
| Aug., 2003 | | | |