



P.O. Box 1960
Virden, Manitoba
ROM 2C0
April 9, 1996

Manitoba Energy & Mines
Petroleum Branch
1395 Ellice Avenue Suite 360
Winnipeg, Manitoba
R3G 3P2

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMINGLED WELLS
DALY FIELD ANNUAL STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for 1995.

Production test results that were conducted are shown on the attached chart. Also shown are fluid level information, lab analysis, and a summary of operations carried out at each well.

Graphs showing the production histories for each pool in the well are attached.

Lab analysis reports are also attached.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

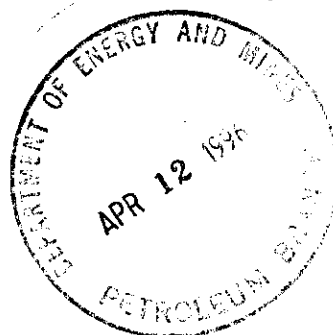
T.B. Howell, P. Eng.

TBH/mlc

Attachments

JOHN
EYE
File: Only Field
comingled
wells

BD



TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS PRODUCTION

ANNUAL STATUS REPORT - 1995

LOCATION	PRODUCTION DATA							FLUID LEVELS	IAB ANALYSIS	WELL OPERATIONS
	Date	Total Oil (m3/day)	Lodgepole Oil (m3/day)	Bakken Oil (m3/day)	Total Water (m3/day)	Lodgepole Water (m3/day)	Bakken Water (m3/day)			
A6-14-9-28	Test Tank	5.96	1.36	4.6	1.93	0.35	1.58	Aug 28 80 jls		Nov/95 Recompletion & Frac
2-23-9-28	Test Tank	0.87	0.28	0.59	0.34	0.07	0.27		95 06 13 C & G	May 29 - Pump Change & Hot Water Job
4-23-9-28	Test Tank	1.43	0.51	0.92	0.43	0.43	0.0		95 08 14 C & G	
16-22-9-29	Test Tank	1.39	0.01	1.38	1.26	0.05	1.21			
7-18-10-27	Test Tank	1.95	0.06	1.89	0.78	0.0	0.78			
10-18-10-27	Test Tank	1.01	1.01	0.0	5.08	5.08	0.0	June 5 was 75.0 10 jls		
10-20-10-28	Dec 27	0.95	0.49	0.46	0.23	0.1	0.13	Oct 12 79 jls	95 02 22 C & G	July 6 - Acidize
7-29-10-28	Feb 02	0.76	0.37	0.39	0.32	0.0	0.32	Oct 16 - 59 jls Oct 17 - 68 jls	95 02 22 C & G	Oct 19 - Pump Change & Acid Job

Daly Bakken/Lodgepole Commingled Wells Production
Page 2 - Annual Status Report - 1995

LOCATION							FLUID LEVELS	LAB ANALYSIS	WELL OPERATIONS
	Date	Total Oil (m3/day)	Lodgepole Oil (m3/day)	Bakken Oil (m3/day)	Total Water (m3/day)	Lodgepole Water (m3/day)	Bakken Water (m3/day)		
12-29-10-28	Dec 23	1.12	0.69	0.43	0.48	0.10	0.38	Oct 12 82 jts	95 02 22 C & G May 18 Acidize
13-29-10-28	Dec 23	3.57	2.99	0.58	1.06	0.31	0.75	Aug & Sep/95 Build Up Test	95 02 22 C & G Aug 21 - Pressure Buildup on Lodg. Aug 22 - Pull Packer, run pump & rods
10-30-10-28	Oct 01	2.69	1.02	1.67	1.45	0.18	1.27	Oct 2 - 82 jts Oct 3 - 83 jts Oct 31 - 84 jts	95 08 08 95 11 10 June 23 - Recompletion Sep 19 - Sand Frac
4-32-10-28	Test Tank	2.24	1.66	0.58	0.62	0.23	0.39	Oct 12 83 jts	95 06 13 C & G
5-2-10-29	Test Tank	1.27	0.64	0.63	0.72	0.14	0.58		95 04 05 95 09 28 C & G Jan 6 - Recompletion Feb 15 - Fraced June 21 - Acidize Lodg.
15-2-10-29	July 1	1.42	0.53	0.89	1.74	0.42	1.32		95 01 16 C & G



CHEMICAL & GEOLOGICAL LABORATORY LTD.



OIL ANALYSIS

LABORATORY NUMBER

S95-4183-4

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

2-23-9-28 W1

WELL NAME

TUNDRA ET AL DALY 2-23-9-28

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

JIM HAY

COMPANY

TUNDRA

TEST TYPE

NO.

TEST RECOVERY

MULTIPLE
RECOVERY

Y N

SAMPLING POINT

WELLHEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TEST INTERVAL (metres)

PERFORATIONS (metres)

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

DATE SAMPLED (Y-M-D)

95-06-08

DATE RECEIVED (Y-M-D)

95-06-12

DATE REPORTED (Y-M-D)

95-06-13

ANALYST

P. DEBUSSCHER

OTHER INFORMATION

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

BROWN

B.S. & W. (VOLUME FRACTION)

WATER

SEDIMENT

TOTAL

DENSITY at 15°C

RELATIVE

AS RECEIVED

AFTER CLEANING

0.833

ABSOLUTE kg/m³

AS RECEIVED

AFTER CLEANING

832

A.P.I. GRAVITY

38.4

TOTAL SULFUR

(MASS FRACTION)

0.0056

g/g

5.60

POUR POINT °C

U.S.B.M.

A.S.T.M.

CARBON RESIDUE
(MASS FRACTION)

RVP kPa

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s

DISTILLATION

METHOD

BAROM. PRESS. kPa (abs)

ROOM TEMP. °C

DISTILLATION SUMMARY
(VOLUME FRACTION)200°C
NAPHTHA275°C
KEROSENE350°C
LIGHT GAS OIL

RECOVERED

RESIDUE

DISTILLATION
LOSS

BASE TYPE:

CHARACTERIZATION FACTOR:

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: RELHOU FOR S. SARGIOUSApproved: RELHOU FOR

R. PAUL



CHEMICAL & GEOLOGICAL LABORATORY LTD.



OIL ANALYSIS

LABORATORY NUMBER

S95-4235

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

4-23-9-28 W1

WELL NAME

TUNDRA DALY 4-23-9-28

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

MULTIPLE
RECOVERY

Y N

TEST INTERVAL (metres)

PERFORATIONS (metres)

TEST RECOVERY

SAMPLING POINT

WELLHEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

ANALYST

OTHER INFORMATION

DATE SAMPLED (Y-M-D)

95-08-03

DATE RECEIVED (Y-M-D)

95-08-10

DATE REPORTED (Y-M-D)

95-08-14

DEBUSSCHERE

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

BROWN

B.S. & W. (VOLUME FRACTION)

WATER

SEDIMENT

TOTAL

DENSITY at 15°C

RELATIVE

AS RECEIVED

AFTER CLEANING

0.833

ABSOLUTE kg/m³

AS RECEIVED

AFTER CLEANING

832

A.P.I. GRAVITY

38.4

TOTAL SULFUR

(MASS FRACTION)

0.0059

g/kg

5.90

POUR POINT °C

U.S.B.M.

A.S.T.M.

CARBON RESIDUE
(MASS FRACTION)

RVP kPa

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s

DISTILLATION

METHOD

BAROM. PRESS. kPa (abs)

ROOM TEMP. °C

DISTILLATION SUMMARY

(VOLUME FRACTION)

200°C

NAPHTHA

275°C

KEROSENE

350°C

LIGHT GAS OIL

RECOVERED

RESIDUE

DISTILLATION
LOSS

BASE TYPE:

CHARACTERIZATION FACTOR:

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: *S. SARGIOUS* S. SARGIOUSApproved: *R. PAUL* R. PAUL



CHEMICAL & GEOLOGICAL LABORATORIES INC.

LABORATORY NUMBER

S95-4121-2

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

13-20-10-28 W1

WELL NAME

TUNDRA DALY PROV. 13-20-10-28

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

MULTIPLE
RECOVERY

Y N

TEST RECOVERY

SAMPLING POINT

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

WELLHEAD

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

ANALYST

OTHER INFORMATION

DATE SAMPLED (Y-M-D)

DATE RECEIVED (Y-M-D)

DATE REPORTED (Y-M-D)

E. SAID

ABSOLUTE DENSITY @ 15C (kg/m³) = 849

RELATIVE DENSITY @ 15/15C = 0.850

API GRAVITY = 35.0

TOTAL SULPHUR (g/kg) = 13.2

Supervisor:

E. FEDORKIN

Approved:

R. LESSARD



CHEMICAL & GEOLOGICAL LABORATORIES INC.

LABORATORY NUMBER

S95-4121-3

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

7-29-10-28 W1

WELL NAME

TUNDRA DALY PROV. 7-29-10-28

FIELD OR AREA

ITALY

POOL OR ZONE

NAME OF SAMPLER

ELEVATIONS (metres)
K.B. GRD.

COMPANY

TEST TYPE

NO.

MULTIPLE
RECOVERY

Y

N

TEST RECOVERY

SAMPLING POINT

WELL HEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

ANALYST

OTHER INFORMATION

DATE SAMPLED (Y-M-D)

DATE RECEIVED (Y-M-D)

DATE REPORTED (Y-M-D)

E. SAID

ABSOLUTE DENSITY @ 15C (kg/m³) = 842

RELATIVE DENSITY @ 15/15C = 0.843

API GRAVITY = 46.4

TOTAL SULPHUR (g/kg) = 9.2

Supervisor:

E. FEDORKIN

Approved:

R. LESSARD



CHEMICAL & GEOLOGICAL LABORATORIES INC.

file



CONTAINER IDENTITY		LABORATORY NUMBER S95-4121-4	
LICENCE NUMBER	OPERATOR NAME TUNDRA OIL AND GAS LTD.		ELEVATIONS (metres) K.B. GRD.
LOCATION 12-29-10-28 W1	WELL NAME TUNDRA DALY PROV. 12-29-10-28		
FIELD OR AREA ITALY	POOL OR ZONE	NAME OF SAMPLER	COMPANY
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
TEST INTERVAL (metres)	SAMPLING POINT WELLHEAD		AMT. & TYPE OF CUSHION
			MUD RESISTIVITY (@ 25°C)
PERFORATIONS (metres)	TYPE OF PRODUCTION		
	PUMPING	FLOWING	GAS LIFT SWAB
PRODUCTION RATES			
WATER m ³ /d		OIL m ³ /d	GAS 10 ³ m ³ /d
SEPARATOR		TREATER	RESERVOIR
GAUGE PRESSURE kPa			
SEPARATOR		TREATER	RESERVOIR
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
	95-02-16	95-02-22	E. SAID
OTHER INFORMATION			

ABSOLUTE DENSITY @ 15C (kg/m³) = 840

RELATIVE DENSITY @ 15/15C = 0.841

API GRAVITY = 36.8

TOTAL SULPHUR (g/kg) = 11.0

Supervisor:

E. FEDORKIN

E. FEDORKIN

Approved:

R. LESSARD

R. LESSARD



CHEMICAL & GEOLOGICAL LABORATORIES INC.

file



LABORATORY NUMBER

595-4121-5

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

13-29-10-28 W1

WELL NAME

TUNDRA DALY PROV. 13-29-10-28

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

TEST RECOVERY

MULTIPLE
RECOVERY

Y N

SAMPLING POINT

WELLHEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER m³/dOIL m³/dGAS 10³m³/d

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

ANALYST

OTHER INFORMATION

DATE SAMPLED (Y-M-D)

DATE RECEIVED (Y-M-D)

DATE REPORTED (Y-M-D)

E. SAID

ABSOLUTE DENSITY @ 15C (kg/m³) = 850

RELATIVE DENSITY @ 15/15C = 0.851

API GRAVITY = 34.8

TOTAL SULPHUR (g/kg) = 16.6

Supervisor:

E. FEDORKIN

Approved:

R. LESSARD



CHEMICAL & GEOLOGICAL LABORATORY LTD.

Tim



OIL ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		995-4233	
LICENCE NUMBER		OPERATOR NAME	
		TUNDRA OIL AND GAS LTD.	
LOCATION		WELL NAME	
10-30-10-28 W1		TUNDRA DALY 10-30-10-28	
FIELD OR AREA		ELEVATIONS (metres)	
DALY		K.B. GRD.	
TEST TYPE		TEST RECOVERY	
NO.			
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT	
		WELLHEAD	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		@ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		GAUGE PRESSURE kPa	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		TEMPERATURE °C	
DATE SAMPLED (Y-M-D)		ANALYST	
95-08-01		DEBUSSCHERE	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
95-08-03			
DATE REPORTED (Y-M-D)			
95-08-08			

SAMPLE PROPERTIES

COLOR OF CLEAN OIL		B.S. & W. (VOLUME FRACTION)	
BROWN		WATER SEDIMENT TOTAL	
DENSITY at 15°C			
RELATIVE		ABSOLUTE kg/m ³	
AS RECEIVED AFTER CLEANING		AS RECEIVED AFTER CLEANING	
		855	
A.P.I. GRAVITY			
33.8			
TOTAL SULFUR		POUR POINT °C	
(MASS FRACTION) g/kg		U.S.B.M. A.S.T.M.	
0.0159		15.9	
CARBON RESIDUE (MASS FRACTION)		RVP kPa	
CONRADSON RAMSBOTTOM			
VISCOSITY			
TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s	

DISTILLATION

VOLUME FRACTION DISTILLED		TEMP. °C	
I.B.P.			
0.05			
0.10			
0.15			
0.20			
0.25			
0.30			
0.35			
0.40			
0.45			
0.50			
0.55			
0.60			
0.65			
0.70			
0.75			
0.80			
0.85			
0.90			
0.95			
1.00			
F.B.P.			
CRACKED			
METHOD			
BAROM. PRESS. kPa (abs) ROOM TEMP. °C			
DISTILLATION SUMMARY (VOLUME FRACTION)			
200°C NAPHTHA		275°C KEROSENE	
350°C LIGHT GAS OIL			
RECOVERED		RESIDUE	
DISTILLATION LOSS			
BASE TYPE:			
CHARACTERIZATION FACTOR:			

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor S. SARGIOUSApproved: R. PAUL



CHEMICAL & GEOLOGICAL LABORATORY LTD.



OIL ANALYSIS

LABORATORY NUMBER

S95-4347

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

10-30-10-28 W1

WELL NAME

TUNDRA DALY 10-30-10-28

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

MULTIPLE
RECOVERY

Y N

TEST RECOVERY

SAMPLING POINT

WELLHEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TEST INTERVAL (metres)

PERFORATIONS (metres)

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

ANALYST

I. MALCOMSON

OTHER INFORMATION

DATE SAMPLED (Y-M-D)

95-10-31

DATE RECEIVED (Y-M-D)

95-11-08

DATE REPORTED (Y-M-D)

95-11-10

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

BROWN

B.S. & W. (VOLUME FRACTION)

WATER

SEDIMENT

TOTAL

DENSITY at 15°C

RELATIVE

AS RECEIVED

AFTER CLEANING

ABSOLUTE kg/m³

AS RECEIVED

AFTER CLEANING

A.P.I. GRAVITY

37.6

TOTAL SULFUR

(MASS FRACTION)

0.0076

g/kg

7.60

POUR POINT

°C

U.S.B.M.

A.S.T.M.

CARBON RESIDUE
(MASS FRACTION)

RVP kPa

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s

DISTILLATION

METHOD

BAROM. PRESS. kPa (abs)

ROOM TEMP. °C

DISTILLATION SUMMARY

(VOLUME FRACTION)

200°C

NAPHTHA

275°C

KEROSENE

350°C

LIGHT GAS OIL

RECOVERED

RESIDUE

DISTILLATION
LOSS

BASE TYPE:

CHARACTERIZATION FACTOR:

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: Jamison S. SARGIOUSApproved: W. J. Anderson R. PAUL



CHEMICAL & GEOLOGICAL LABORATORY LTD.



OIL ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		595-4183-5	
LICENCE NUMBER	OPERATOR NAME		
	TUNDRA OIL AND GAS LTD.		
LOCATION	WELL NAME		ELEVATIONS (metres)
4-32-10-28 W1	TUNDRA DALY PROV 4-32-10-28		K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
DALY		JIM HAY	TUNDRA
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
TEST INTERVAL (metres)	SAMPLING POINT		
	WELLHEAD		
PERFORATIONS (metres)	AMT. & TYPE OF CUSHION		
	MUD RESISTIVITY		
	@ 25°C		
	TYPE OF PRODUCTION		
	PUMPING FLOWING GAS LIFT SWAB		
	PRODUCTION RATES		
	WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d		
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	GAUGE PRESSURE kPa		
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	TEMPERATURE °C		
	DATE SAMPLED (Y-M-D) DATE RECEIVED (Y-M-D) DATE REPORTED (Y-M-D) ANALYST OTHER INFORMATION		
	95-06-08 95-06-12 95-06-13 P. DEBUSSCHER		

SAMPLE PROPERTIES

COLOR OF CLEAN OIL		B.S. & W. (VOLUME FRACTION)	
BROWN		WATER	SEDIMENT TOTAL
DENSITY at 15°C			
RELATIVE	ABSOLUTE kg/m ³		
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.846		845
A.P.I. GRAVITY			
35.8			
TOTAL SULFUR		POUR POINT °C	
(MASS FRACTION)	g/kg.	U.S.B.M.	A.S.T.M.
0.0129	12.9		
CARBON RESIDUE (MASS FRACTION)			
RVP kPa	CONRADSON	RAMSBOTTOM	
VISCOSITY			
TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s	

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C	METHOD
I.B.P.		
0.05		
0.10		
0.15		
0.20		
0.25		
0.30		
0.35		
0.40		
0.45		
0.50		
0.55		
0.60		
0.65		
0.70		
0.75		
0.80		
0.85		
0.90		
0.95		
1.00		
DISTILLATION SUMMARY (VOLUME FRACTION)		
200°C NAPHTHA	275°C KEROSENE	350°C LIGHT GAS OIL
RECOVERED	RESIDUE	DISTILLATION LOSS
BASE TYPE:		
CHARACTERIZATION FACTOR:		
F.B.P.		
CRACKED		

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: Richard Fox S. SARGIOUSApproved: Robert M. Paul R. PAUL



filed

CHEMICAL & GEOLOGICAL LABORATORY, LTD.

BP



OIL ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		S95-4150-1	
LICENCE NUMBER	OPERATOR NAME		
	TUNDRA OIL AND GAS LTD.		
LOCATION	WELL NAME		ELEVATIONS (metres)
5-2-10-29 W1	TUNDRA DALY 5-2-10-29		K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
DALY		MIKE DUPONT	TUNDRA OIL
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
SAMPLING POINT		AMT. & TYPE OF CUSHION	MUD RESISTIVITY
WELLHEAD			@ 25°C
TEST INTERVAL (metres)		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
PERFORATIONS (metres)		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		GAUGE PRESSURE kPa	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		TEMPERATURE °C	
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
95-03-30	95-03-31	95-04-05	P. DEBUSSCHER
		OTHER INFORMATION	

SAMPLE PROPERTIES

COLOR OF CLEAN OIL		B.S. & W. (VOLUME FRACTION)	
BROWN		WATER	SEDIMENT TOTAL
DENSITY at 15°C			
RELATIVE		ABSOLUTE kg/m ³	
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.823		822
A.P.I. GRAVITY			
40.4			
TOTAL SULFUR		POUR POINT °C	
(MASS FRACTION)	g/kg	U.S.B.M.	A.S.T.M.
0.0041	4.10		
CARBON RESIDUE (MASS FRACTION)			
RVP kPa	CONRADSON	RAMSBOTTOM	
VISCOSITY			
TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s	

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C	METHOD	
I.B.P.			
0.05			
0.10			
0.15			
0.20			
0.25			
0.30			
0.35			
0.40			
0.45			
0.50			
0.55			
0.60			
0.65			
0.70			
0.75			
0.80			
0.85			
0.90			
0.95			
1.00			
F.B.P.			
CRACKED			
DISTILLATION SUMMARY (VOLUME FRACTION)			
200°C NAPHTHA	275°C KEROSENE	350°C LIGHT GAS OIL	
RECOVERED	RESIDUE	DISTILLATION LOSS	
BASE TYPE:			
CHARACTERIZATION FACTOR:			

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: James Sargious S. SARGIOUS

Approved: R. Paul R. PAUL



CHEMICAL & GEOLOGICAL LABORATORIES INC.

file



CONTAINER IDENTITY		LABORATORY NUMBER	
		S95-4289-1	
LICENCE NUMBER	OPERATOR NAME		
	TUNDRA OIL AND GAS LTD.		
LOCATION	WELL NAME		ELEVATIONS (metres)
5-2-10-29 W1M	TUNDRA DALY 5-2-10-29		K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
DALY			
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
TEST INTERVAL (metres)	SAMPLING POINT		
	WELLHEAD		
PERFORATIONS (metres)	AMT. & TYPE OF CUSHION		
	MUD RESISTIVITY		
	(at 25°C)		
	TYPE OF PRODUCTION		
	PUMPING	FLOWING	GAS LIFT
			SWAB
	PRODUCTION RATES		
	WATER m ³ /d	OIL m ³ /d	GAS 10 ³ m ³ /d
	SEPARATOR	TREATER	RESERVOIR
	GAUGE PRESSURE kPa	SOURCE	SAMPLED
			RECEIVED
	SEPARATOR	TREATER	RESERVOIR
	TEMPERATURE °C	SOURCE	SAMPLED
			RECEIVED
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
95-09-20	95-09-22	95-09-28	T. ELGERT
OTHER INFORMATION			

ABSOLUTE DENSITY @ 15C (kg/m³) = 833

RELATIVE DENSITY @ 15/15C = 0.834

API GRAVITY = 38.2

TOTAL SULPHUR (g/kg) = 9.5

E. 92

AD1

0.100000

CHEMICAL & GEOLOGICAL LABORATORIES INC.

LABORATORY NUMBER
S95-4086



CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

15-2-10-29 W1

WELL NAME

TUNDRA DALY 15-2-10-29

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

TEST RECOVERY

MULTIPLE
RECOVERY

Y N

SAMPLING POINT

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

(at 25°C)

TEST INTERVAL (metres)

PERFORATIONS (metres)

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

ANALYST

OTHER INFORMATION

DATE SAMPLED (Y-M-D)

95-01-09

DATE RECEIVED (Y-M-D)

95-01-11

DATE REPORTED (Y-M-D)

95-01-16

I. MALCOMSON

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. GRAVITY

MASS
FRAC. G/KG

0.833 832 38.4 0.0083 8.30

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: N. Chow FOR S. SARGIOUS

Approved: R. Paul R. PAUL

Operator:
Field: 01
Zone: 59B
Type: Unknown
Group: Daly

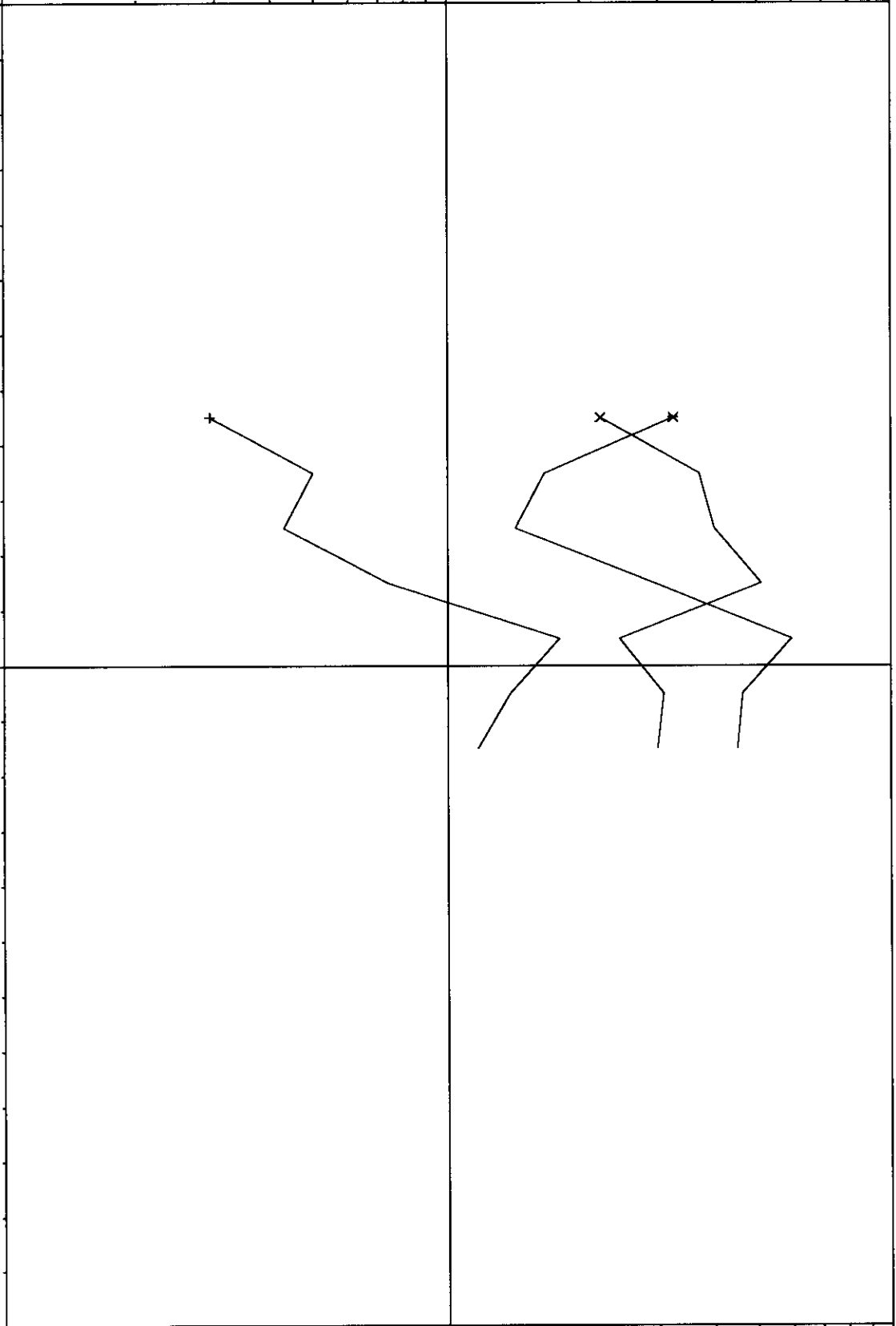
02/06-14-009-28W1/0 (Tundra Daly R//EA06-14-09-28W1) Data 08/95-02/96

Production Cums
Oil: 629.8 m3
Gas: 0 E6m3
Water: 311.4 m3
Cond: 0 m3

1 1 1
0 0 0
0 0 0

1 1 1
0 1 0
0 1 0

1 1 1
1 1 0



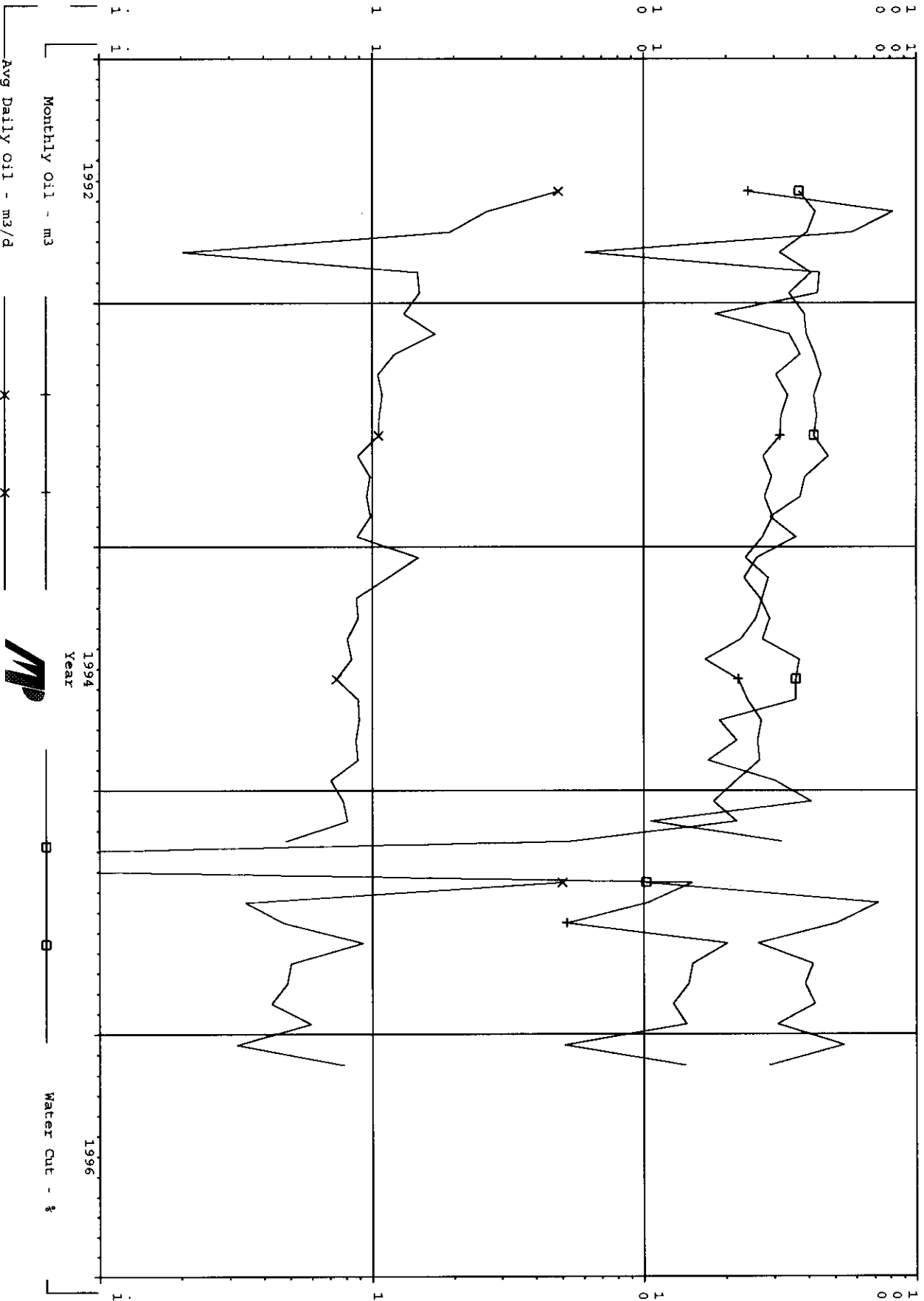
Monthly Oil - m3
Avg Daily Oil - m3/d
Water Cut - %



Operator:
Field: 01
Zone: 601
Type: Unknown
Group: Daily

00/02-23-009-28W1/2 (Tundra Et Al Daily COM R//E02-23-09-28W1) Data 07/92-02/96

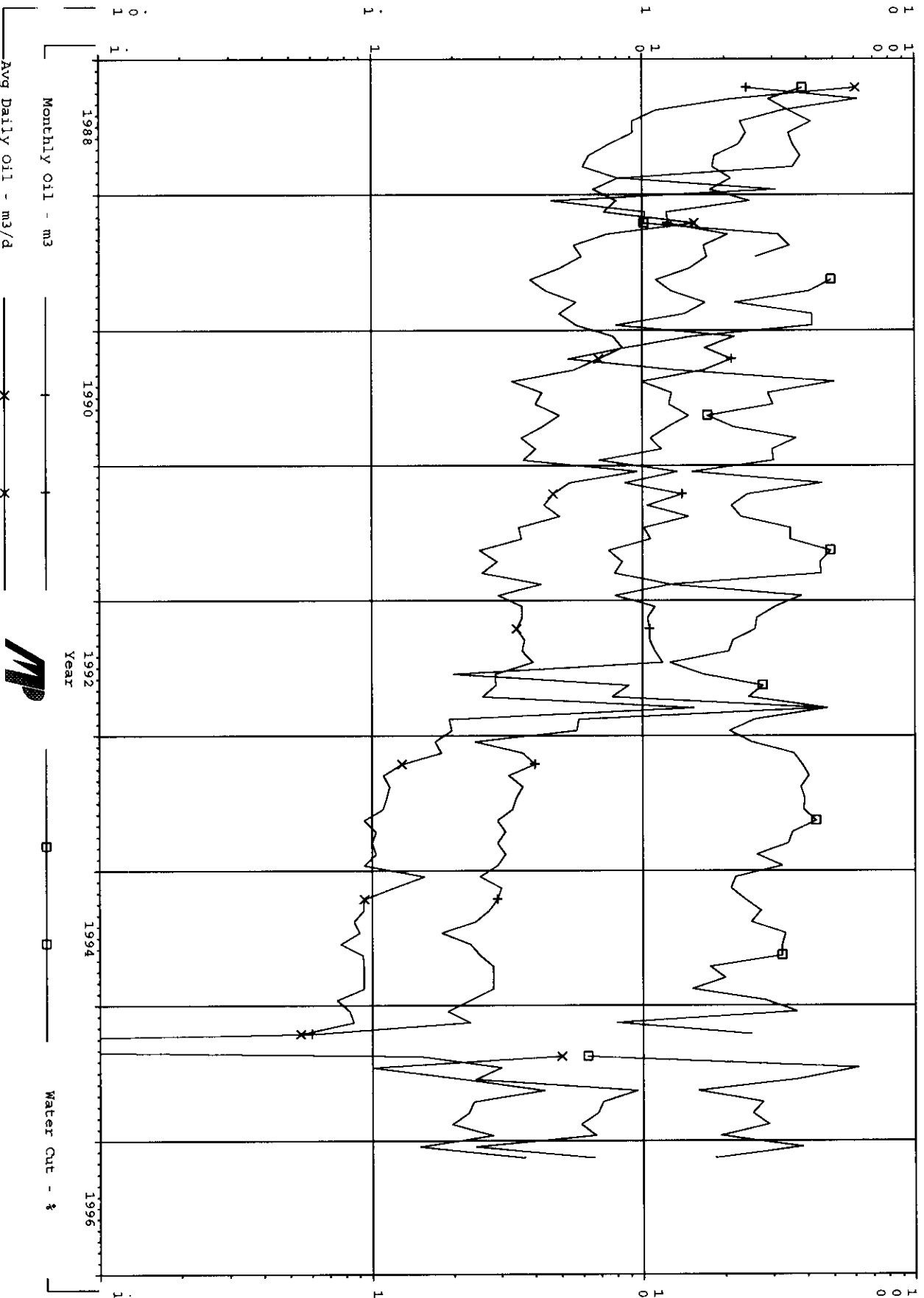
Production Cums
Oil: 1080.8 m3
Gas: 0 E6m3
Water: 630.5 m3
Cond: 0 m3



Operator:
Field: 01
Zone: 59B
Type: Unknown
Group: Daly

00/02-23-009-28W1/0 (Tundra Et Al Daly COM R//E02-23-09-28W1) Data 03/88-02/96

Production Cums
Oil: 1008.8 m3
Gas: 0 Bcm3
Water: 434.8 m3
Cond: 0 m3



Operator:
Field: 01
Zone: 59B
Type: Unknown
Group: Dally

00/04-23-009-28W1/2 (Tundra et al Dally COM R//E04-23-09-28W1) Data 10/94-02/96

Production Cume
Oil: 283.5 m3
Gas: 0 E6m3
Water: 375.9 m3
Cond: 0 m3

1 1 1
0 0 0
0 0 0

1 1 1
0 1 0

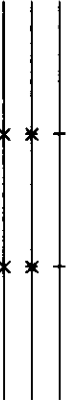
1 1 1

1994

1996

Year

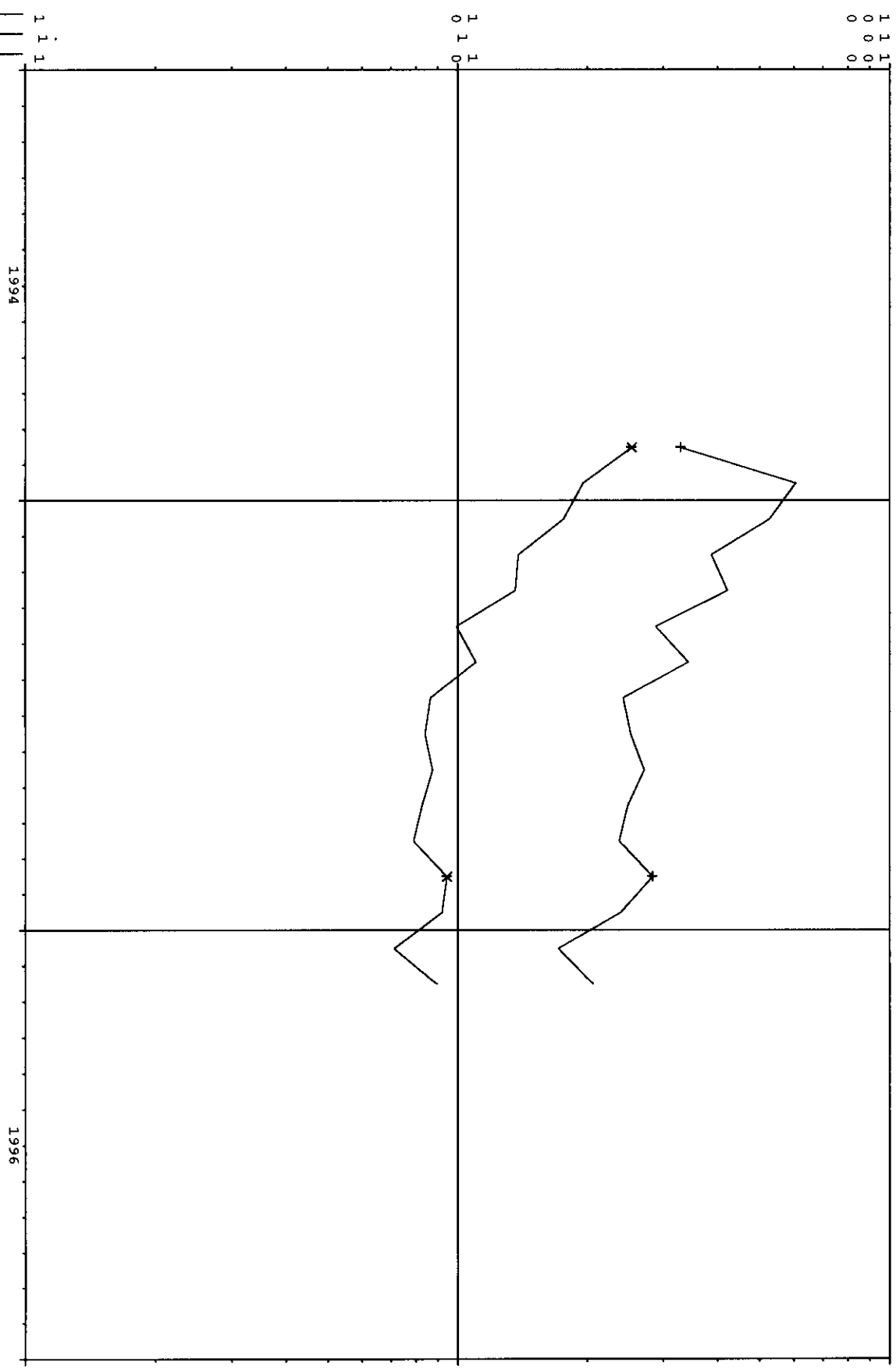
Monthly Oil - m3
Avg Daily Oil - m3/d
Water Cut - %



Operator:
Field: 01
Zone: 601
Type: Unknown
Group: Daily

00/04-23-009-28W1/3 (Tundra et al Daily COM R//E04-23-09-28W1) Data 11/94-02/96

Production Cums
Oil: 505.1 m3
Gas: 0 Em3
Water: 0 m3
Cond: 0 m3



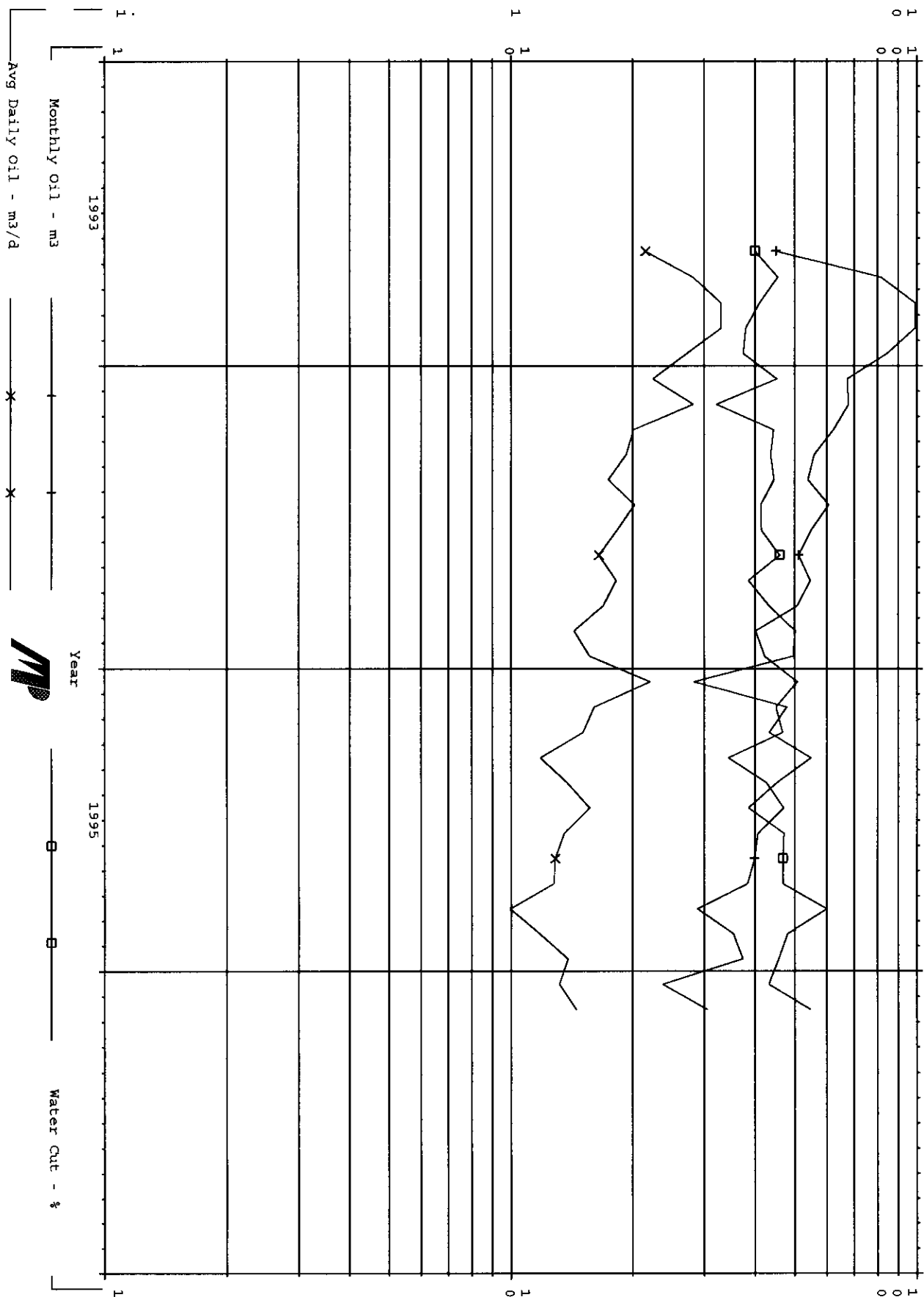
Monthly Oil - m3
Avg Daily Oil - m3/d
Water Cut - %



00/16-22-009-29W1/2 (Tundra Daly R//E16-22-09-29W1) Data 08/93-02/96

Operator:
Field: 01
Zone: 60K
Type: Unknown
Group: Daly

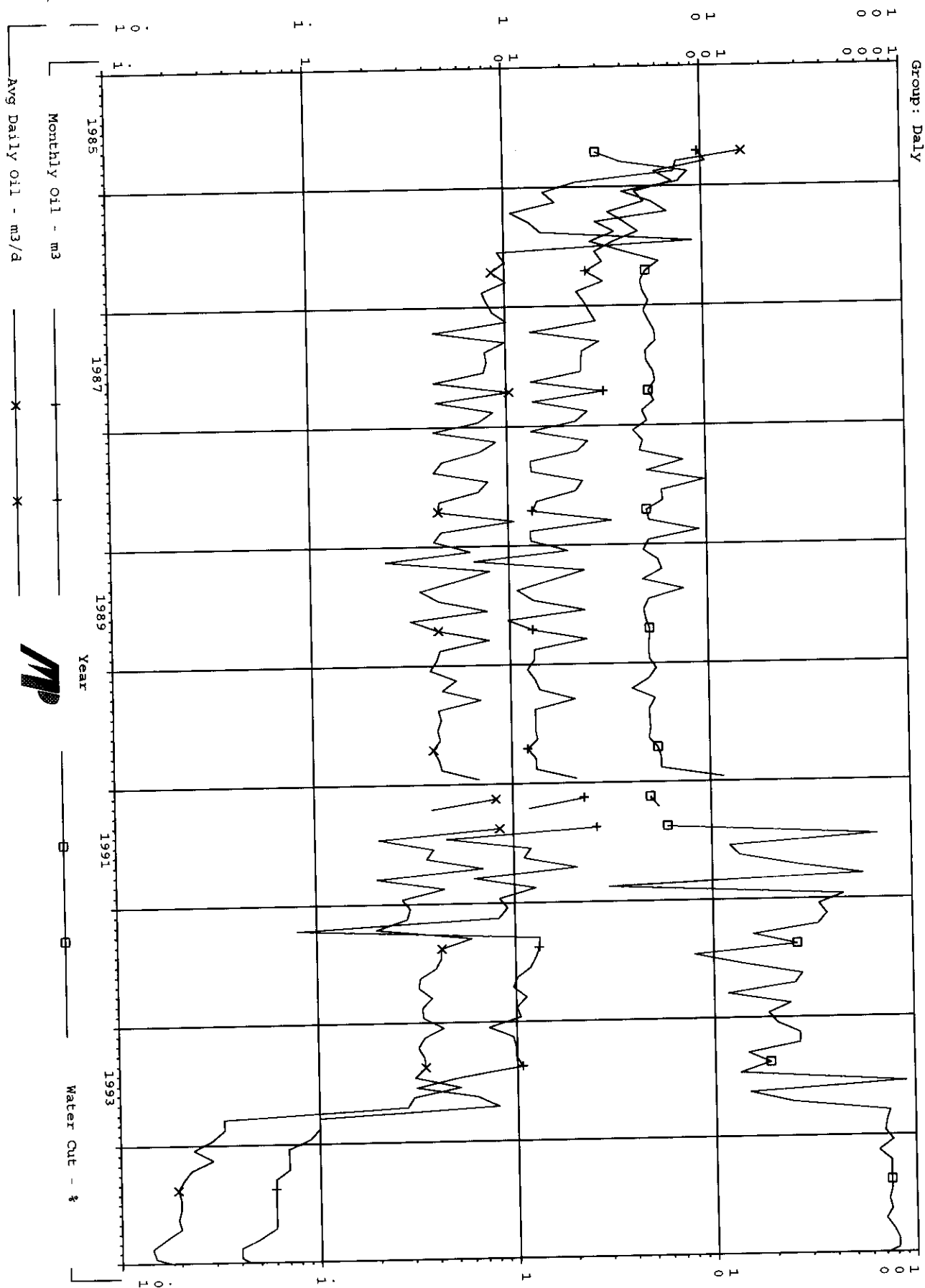
Production Cume
Oil: 1609.9 m3
Gas: 0 Ecm3
Water: 1249.2 m3
Cond: 0 m3



00/16-22-009-29W1/0 (Tundra Daly R//E16-22-09-29W1) Data 09/85-02/96

Operator:
Field: 01
Zone: 59D
Type: Unknown
Group: Daly

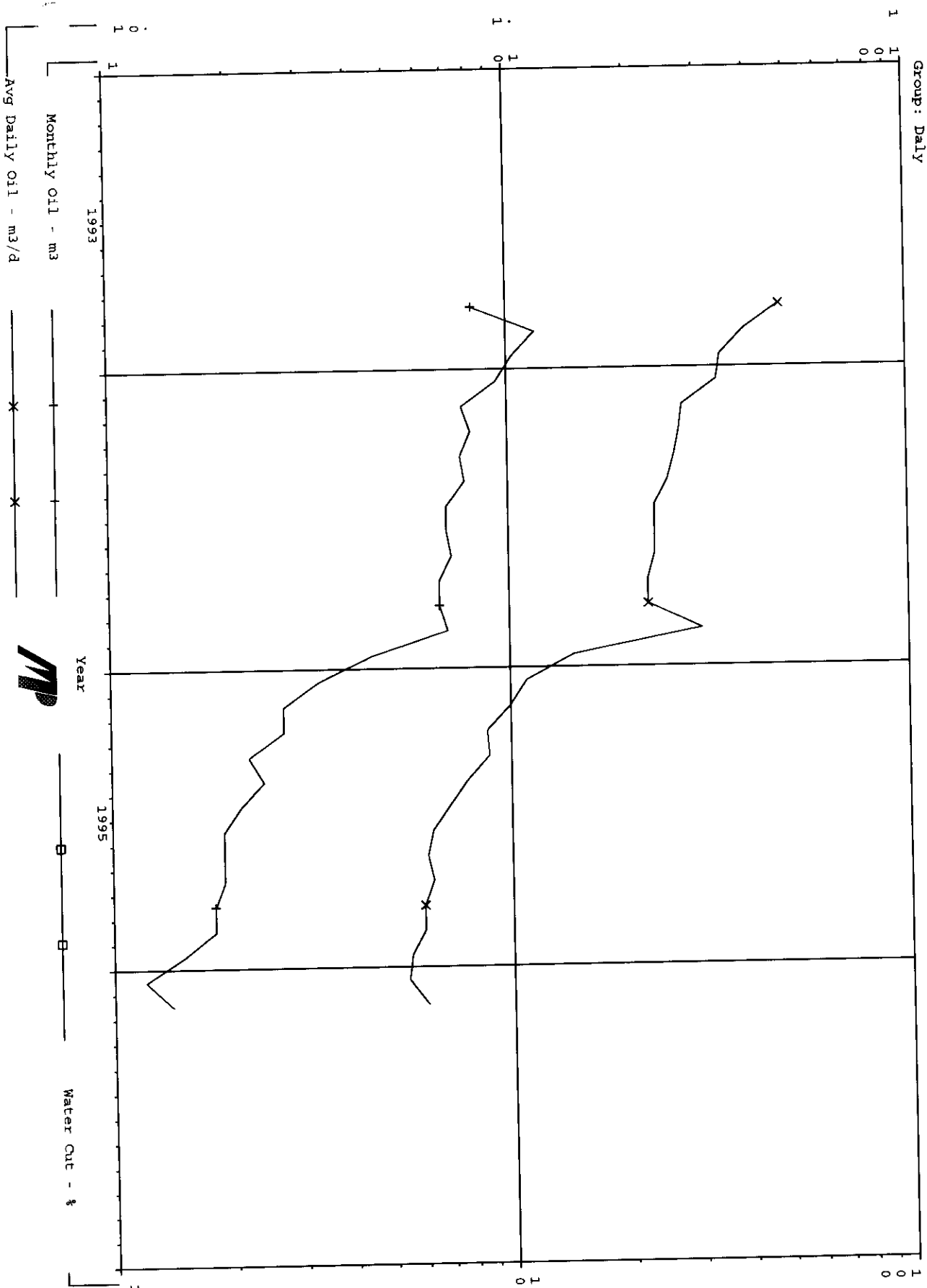
Production Cums
Oil: 1954.6 m3
Gas: 0 E6m3
Water: 258.1 m3
Cond: 0 m3



00/07-18-010-27W1/3 (Tundra Daly R//E07-18-10-27W1) Data 10/93-02/96

Operator:
Field: 01
Zone: 59A
Type: Unknown
Group: Daly

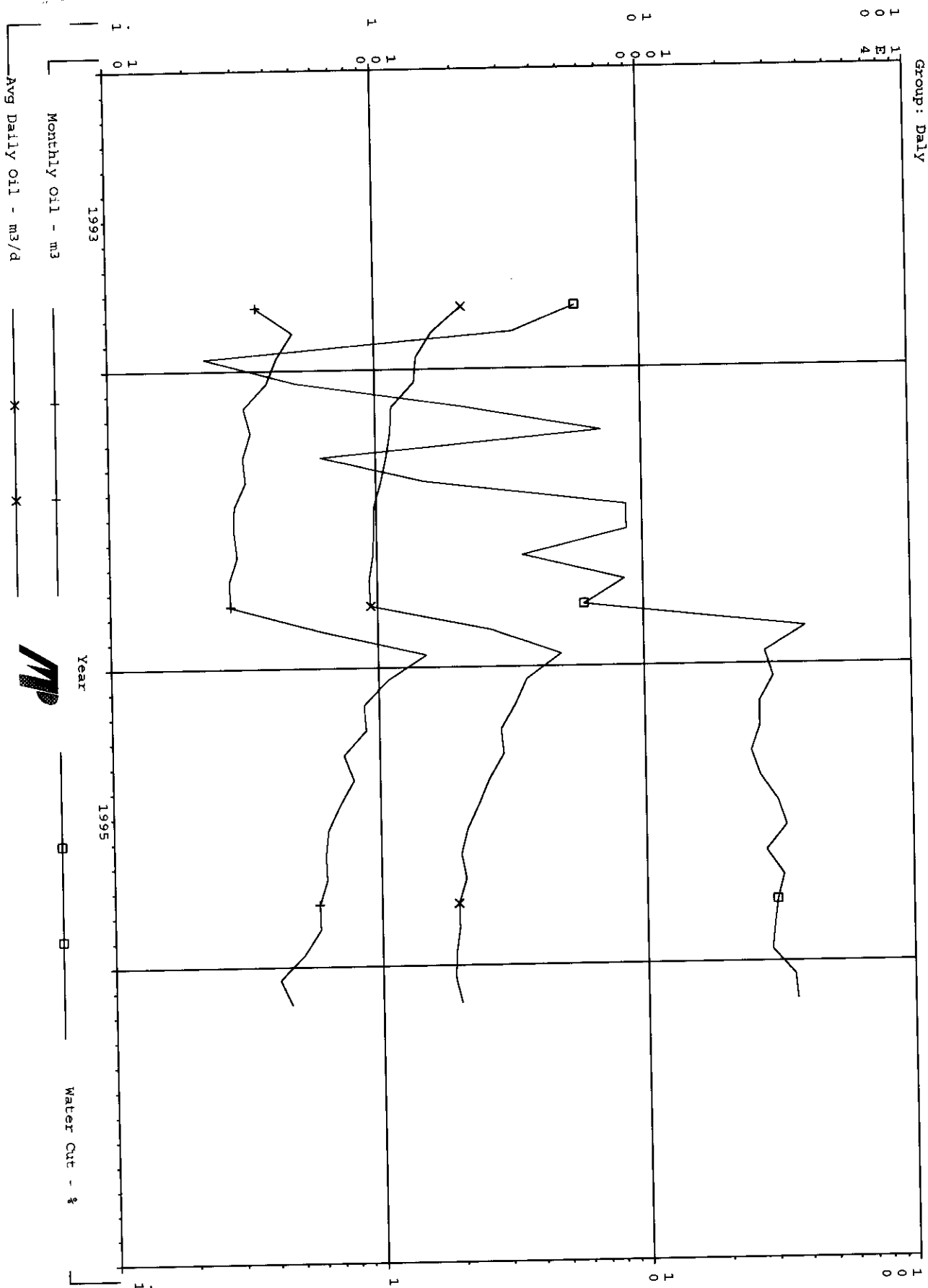
Production Cums
Oil: 145.8 m3
Gas: 0 E6m3
Water: 0 m3
Cond: 0 m3



00/07-18-010-27W1/2 (Tundra Daly COM R//E07-18-10-27W1) Data 10/93-02/96

Operator:
Field: 01
Zone: 60J
Type: Unknown
Group: Daly

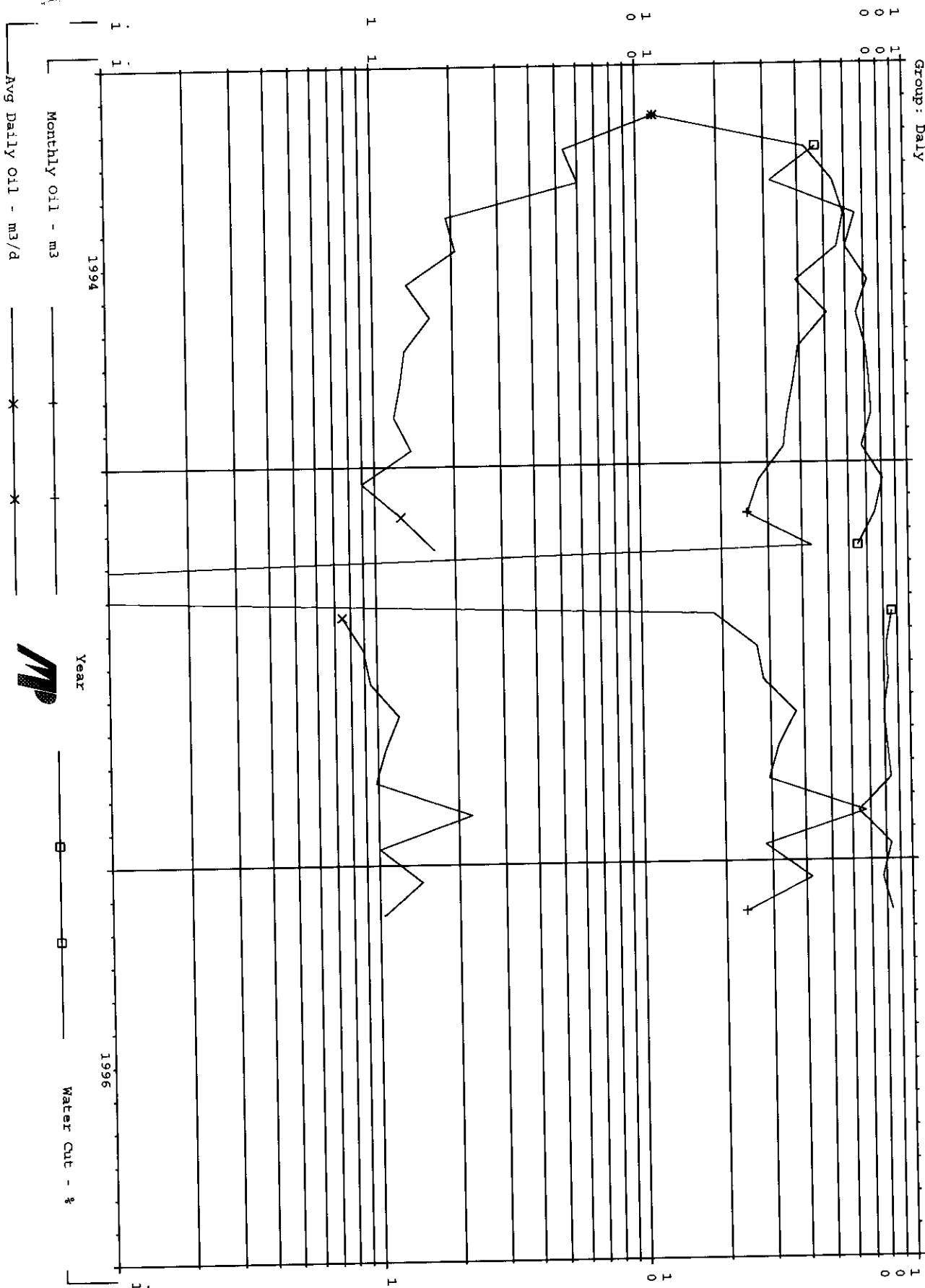
Production Cume
Oil: 1607.4 m3
Gas: 0 Em3
Water: 523.1 m3
Cond: 0 m3



00/10-18-010-27W1/2 (Tundra et al Daily COM R//E10-18-10-27W1) Data 02/94-02/96

Operator:
Field: 01
Zone: 59A
Type: Unknown
Group: Daly

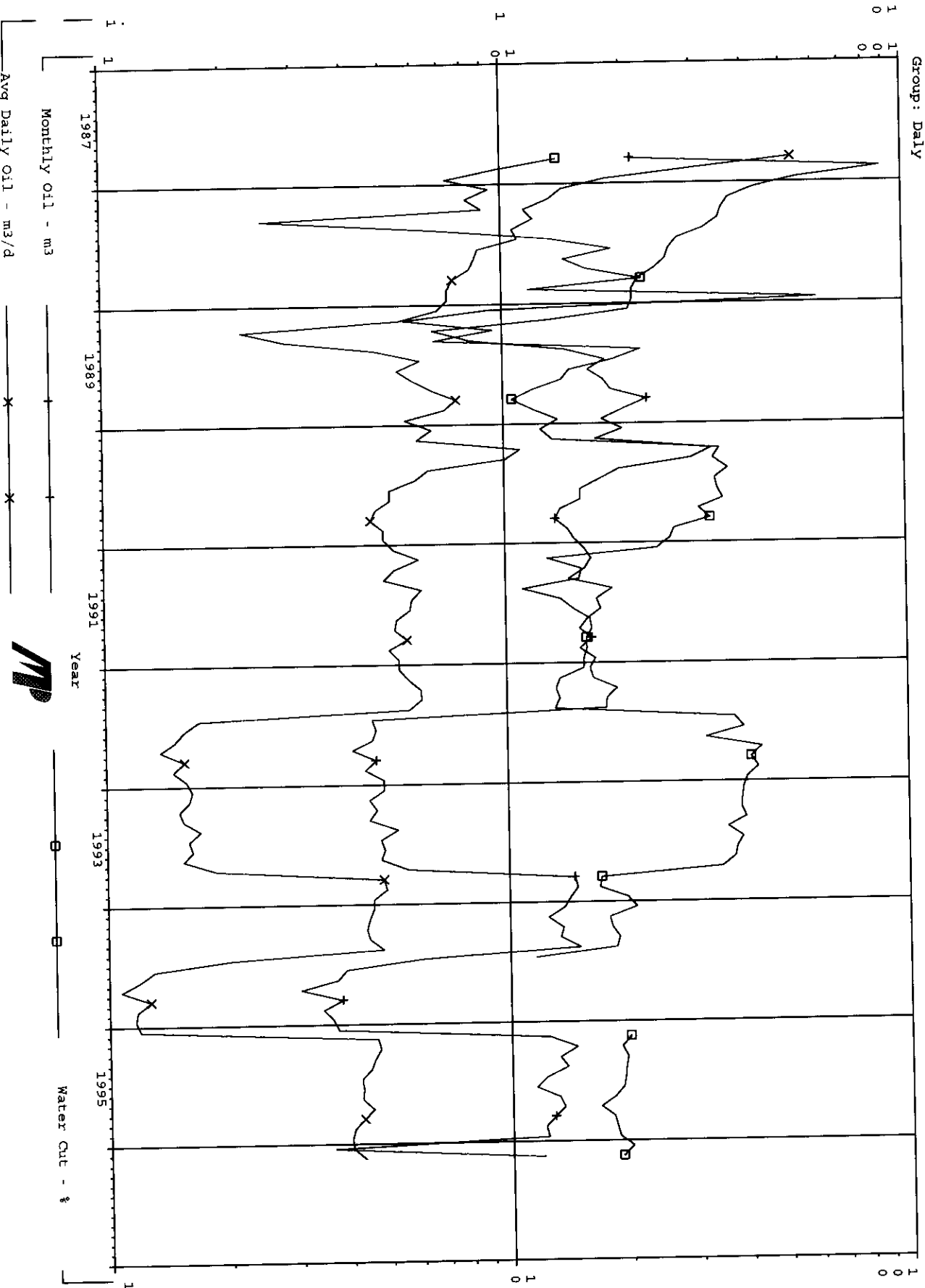
Production Cums
Oil: 891.1 m3
Gas: 0 B6m3
Water: 2428.1 m3
Cond: 0 m3



00/13-20-010-28W1/2 (Tundra Daly Prov. COM R//E13-20-10-28W1) Data 10/87-02/96

Operator:
Field: 01
Zone: 59E
Type: Unknown
Group: Daily

Production Cums
Oil: 1590.6 m3
Gas: 0 B6m3
Water: 377.7 m3
Cond: 0 m3



Operator:
Field: 01
Zone: 608
Type: Unknown
Group: Daily

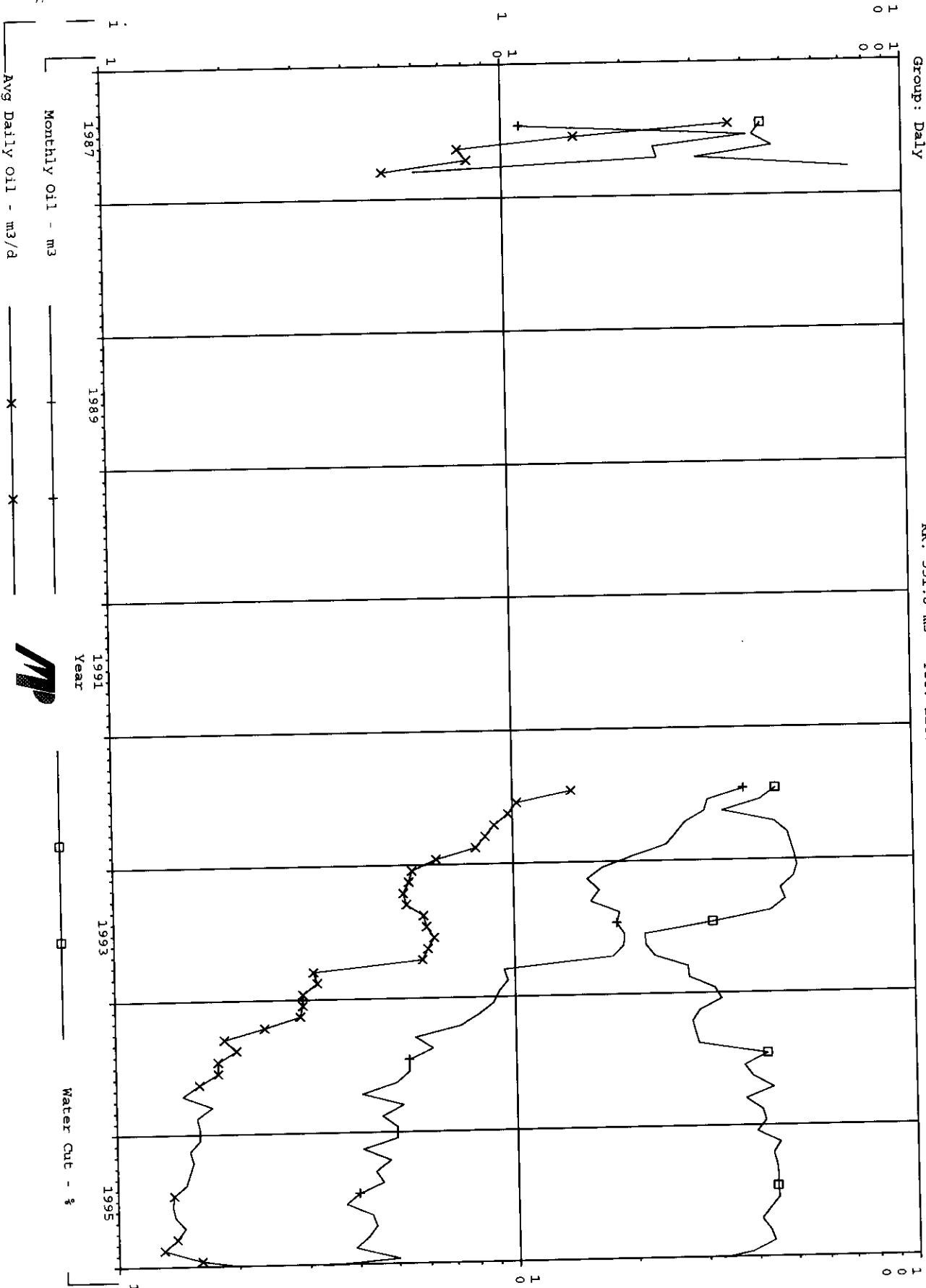
00/13-20-010-28W1/0

(Tundra Daily Prov. COM R//E13-20-10-28W1)

Data 06/87-02/96

Avg Daily Oil FC 1 (Rate-Time)
qt: 0.165196 m3/d, Sep, 1994
qt: 0.15898 m3/d, Nov, 1994
di (Exp): 14.2206 CTD: 596.1 m3
RR: 551.8 m3 Tot: 1147.9 m3

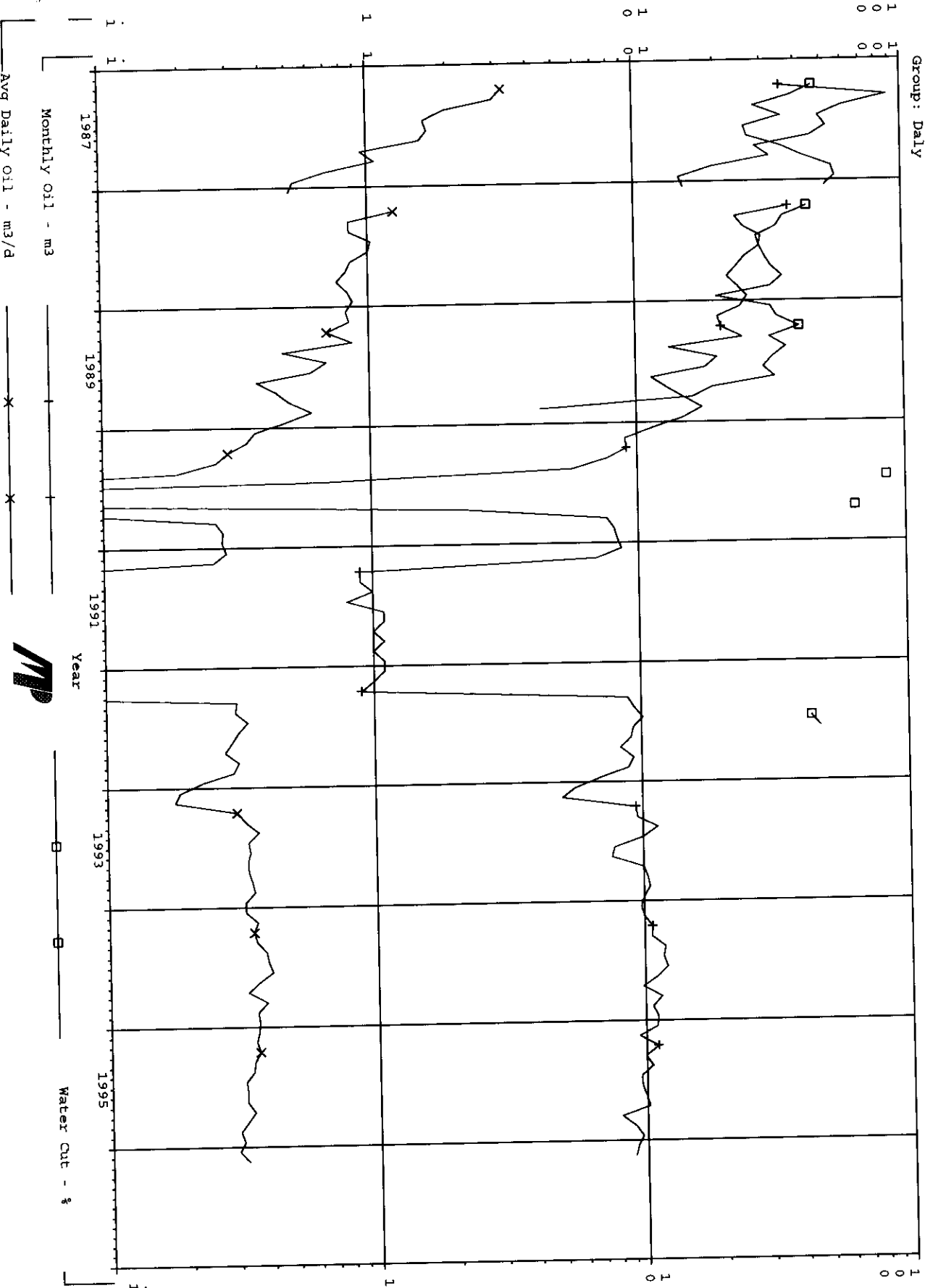
Production Cumc
Oil: 619.1 m3
Gas: 0 E6m3
Water: 439.1 m3
Cond: 0 m3



00/07-29-010-28W1/2 (Tundra Daly Prov. COM R//E07-29-10-28W1) Data 03/87-02/96

Operator:
Field: 01
Zone: 59E
Type: Unknown
Group: Daly

Production Cums
Oil: 1478.4 m3
Gas: 0 B6m3
Water: 522.8 m3
Cond: 0 m3



00/07-29-010-28W1/0

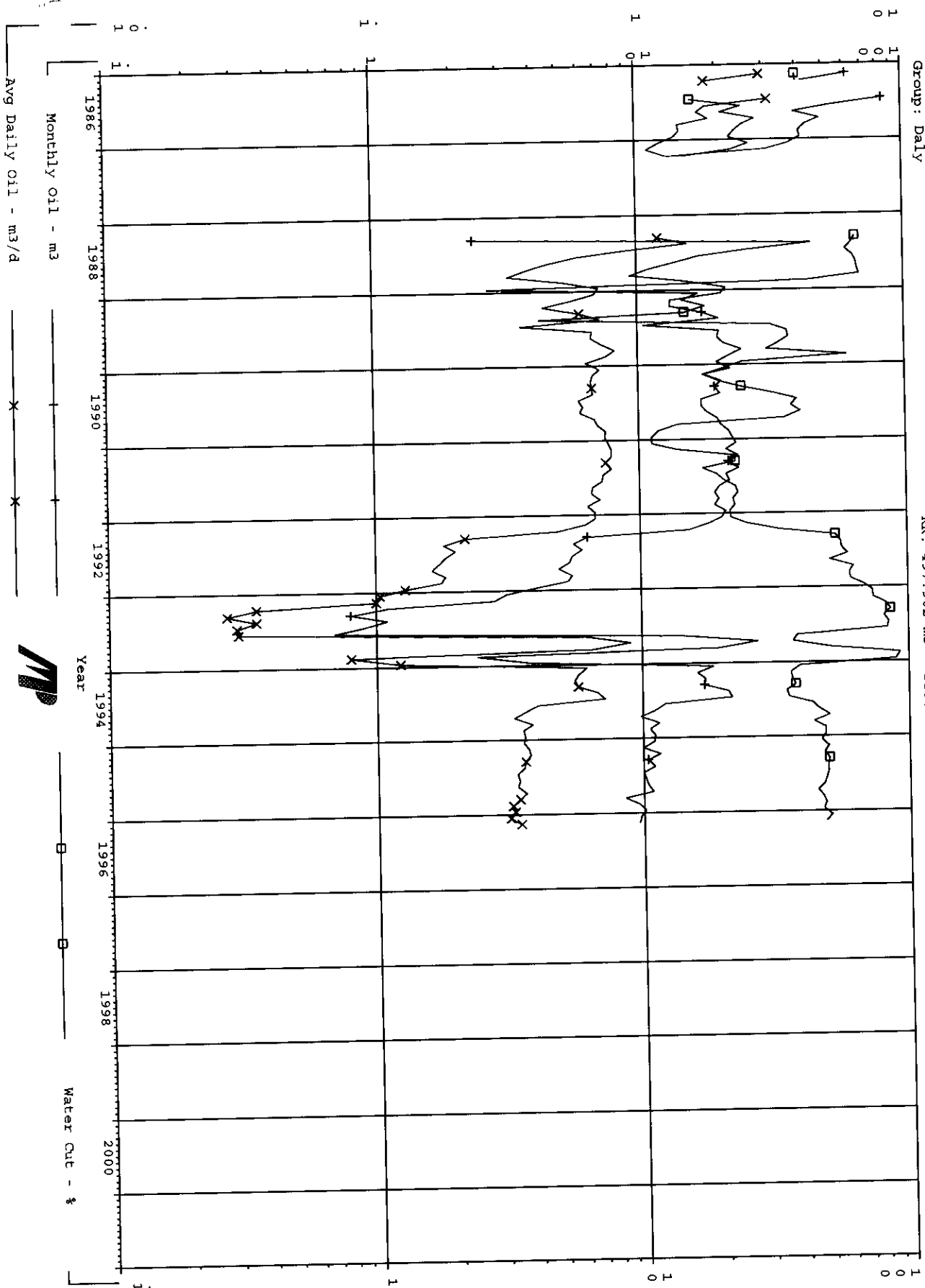
(Tundra Daly Prov. COM R//E07-29-10-28W1)

Data 02/86-02/96

Operator:
Field: 01
Zone: 60B
Type: Unknown
Group: Daly

Avg Daily Oil FC 1 (Rate-Time)
q1: 1.18255 m3/d, Jun, 1986
qf: 0.158557 m3/d, Sep, 2001
d1(Exp): 12.2819 CTD: 1865.2 m3
RR: 497.902 m3 Tot: 2363.1 m3

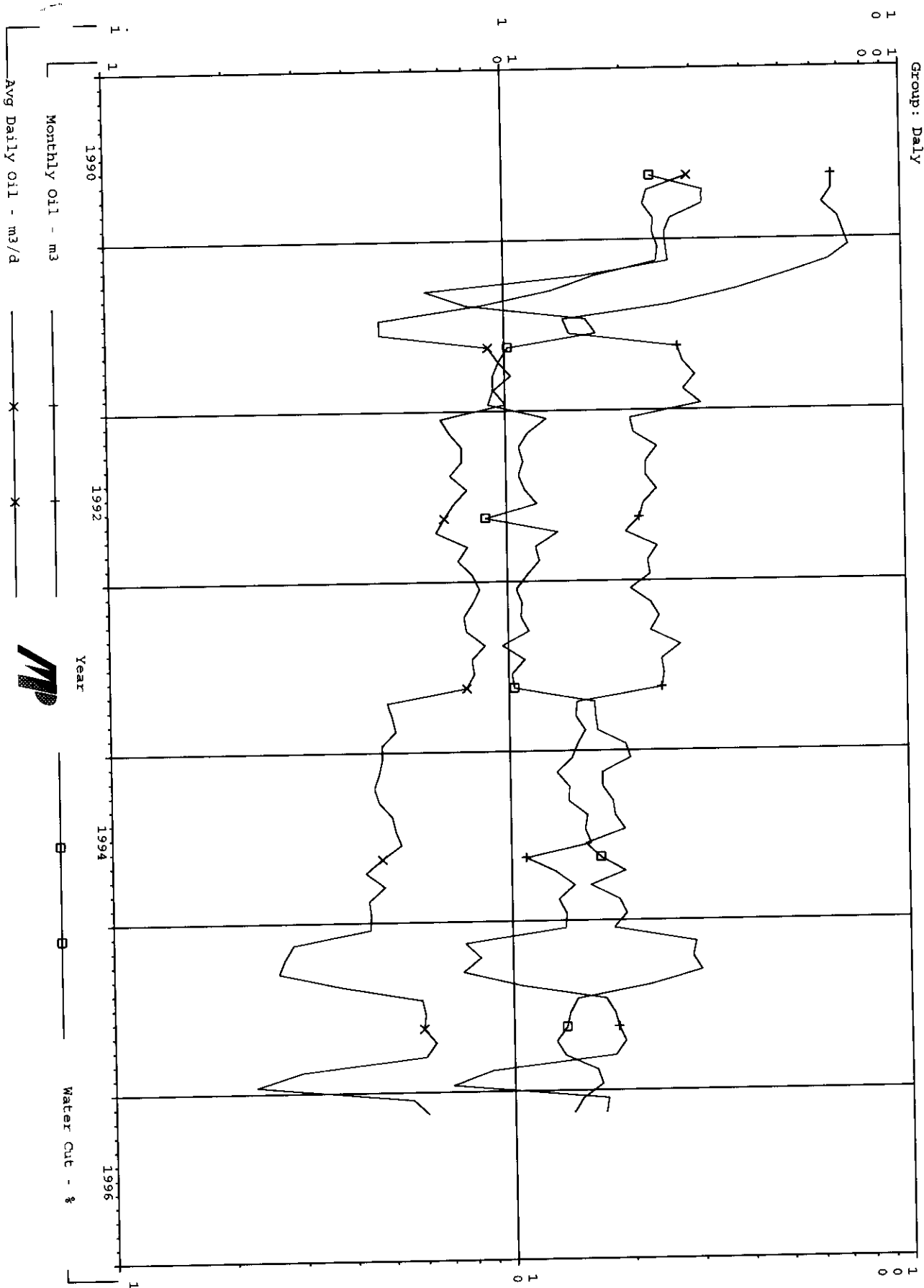
Production Cums
Oil: 1912.7 m3
Gas: 0 E6m3
Water: 1172.9 m3
Cond: 0 m3



Operator:
Field: 01
Zone: 59E
Type: Unknown
Group: Daly

00/12-29-010-28WI/2 (Tundra Daly Prov. COM R//E12-29-10-28WI) Data 08/90-02/96

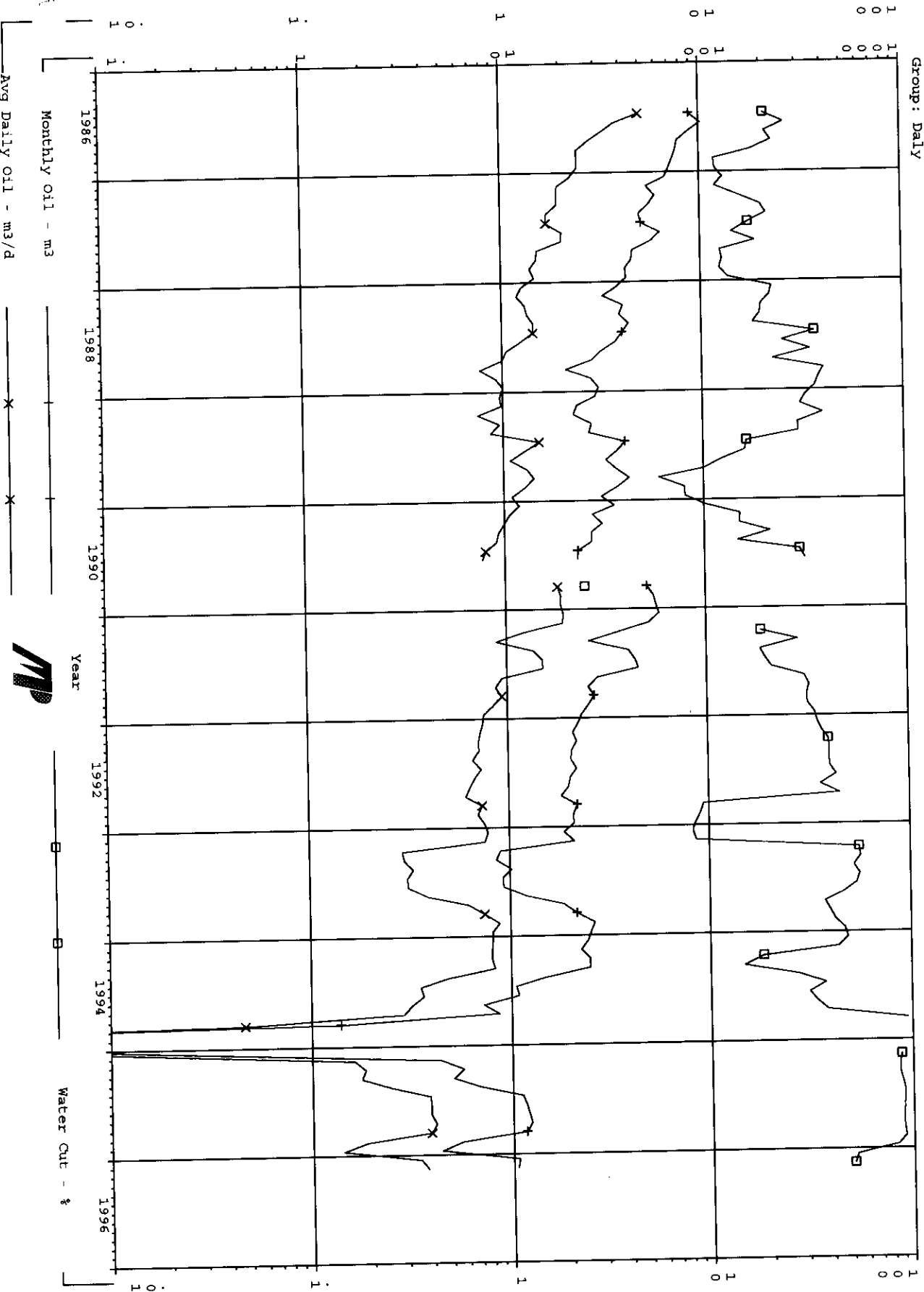
Production Cums
Oil: 1638.8 m3
Gas: 0 B6m3
Water: 359.6 m3
Cond: 0 m3



00/12-29-010-28W1/0 (Tundra Daly Prov. COM R//E12-29-10-28W1) Data 06/86-02/96

Operator:
Field: 01
Zone: 60B
Type: Unknown
Group: Daly

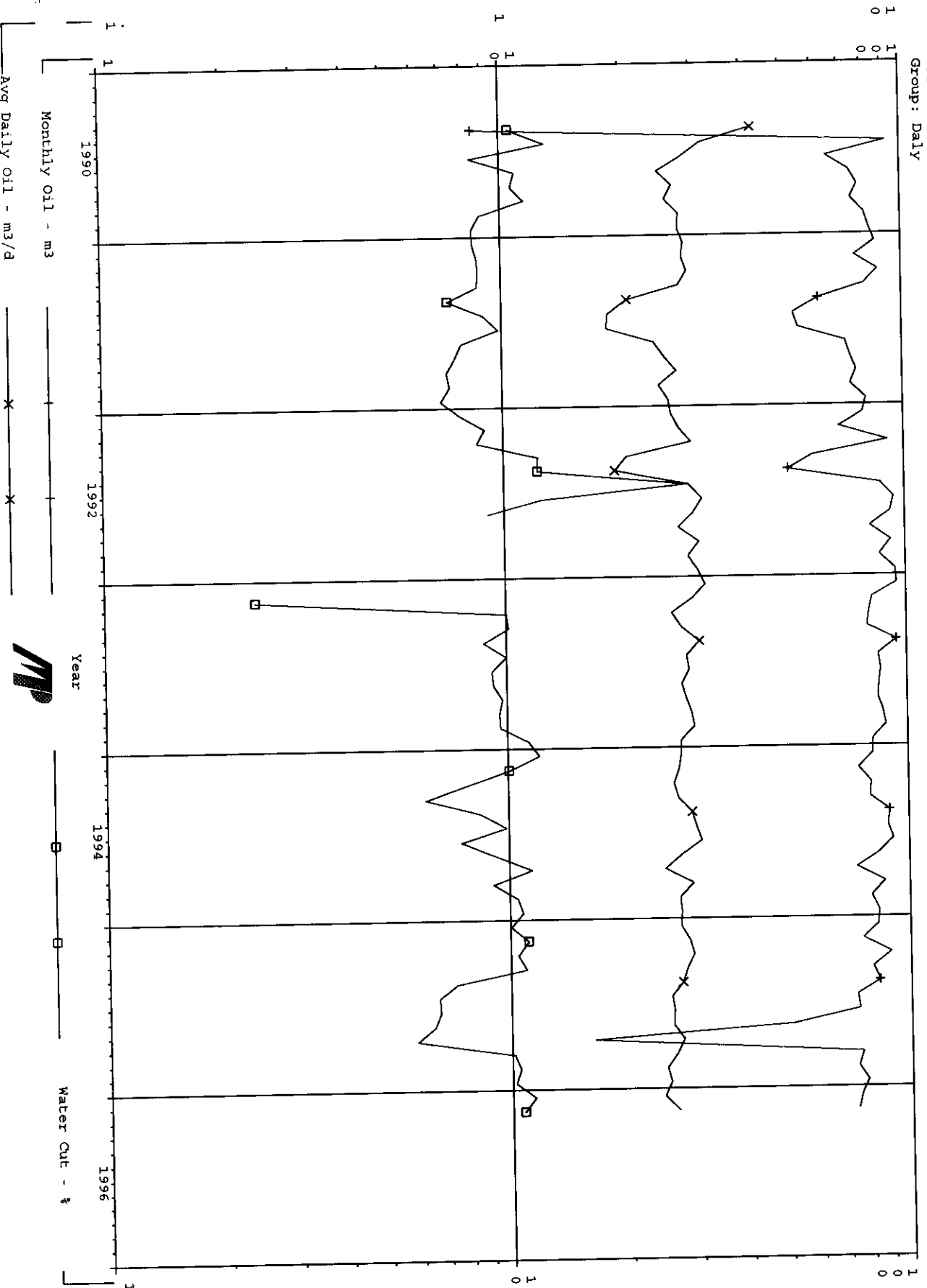
Production Cums
Oil: 3497.9 m3
Gas: 0 E6m3
Water: 1920.4 m3
Cond: 0 m3



00/13-29-010-28W1/2 (Tundra Et Al Daily Prov. COM R//E13-29-10-28) Data 05/90-02/96

Operator:
Field: 01
Zone: 59E
Type: Unknown
Group: Daily

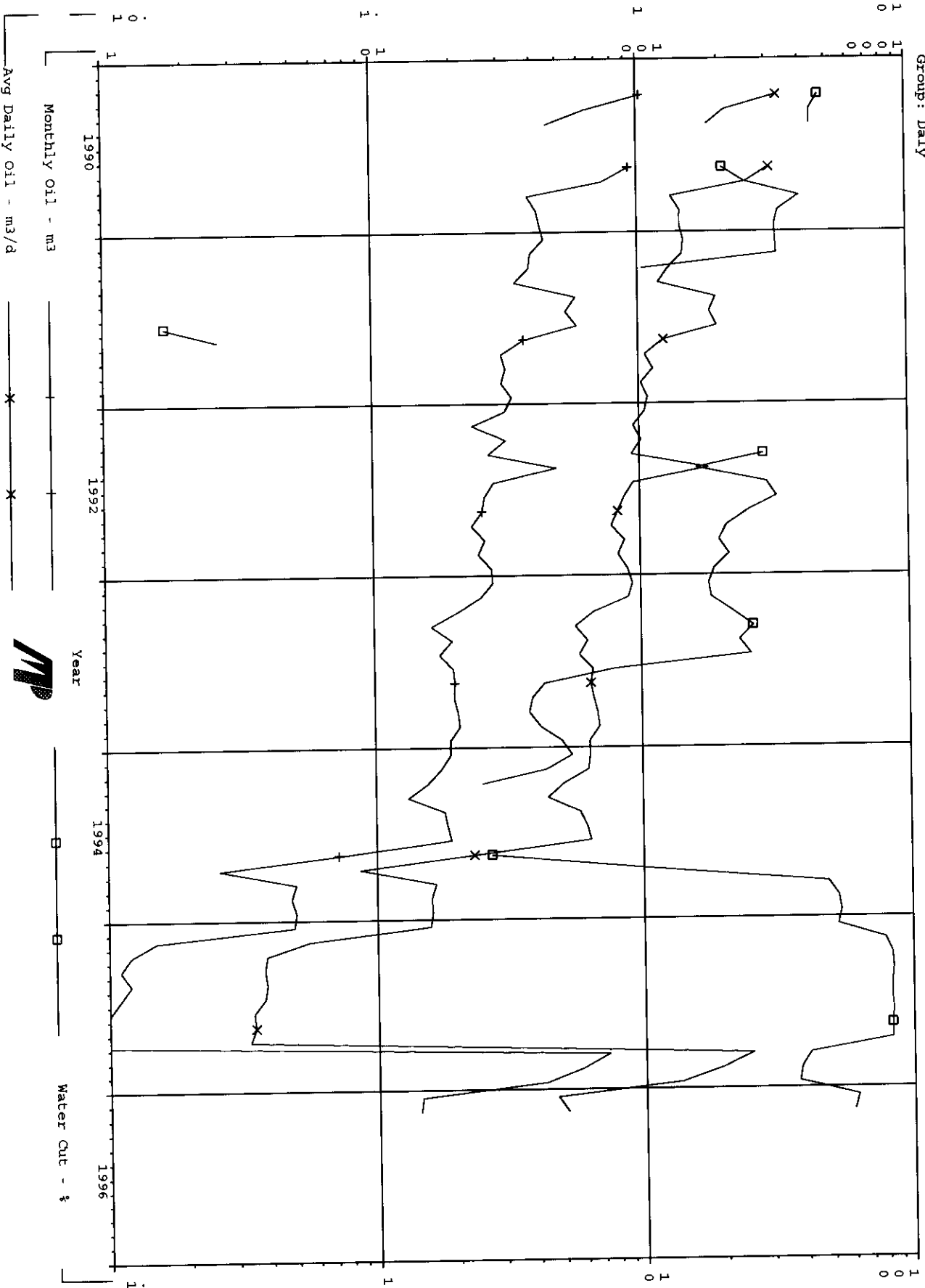
Production Cums
Oil: 5433.2 m3
Gas: 0 Bbm3
Water: 539.6 m3
Cond: 0 m3



Operator:
Field: 01
Zone: 60B
Type: Unknown
Group: Daily

00/13-29-010-28W1/0 (Tundra Et Al Daily Prov. COM R//E13-29-10-28) Data 03/90-02/96

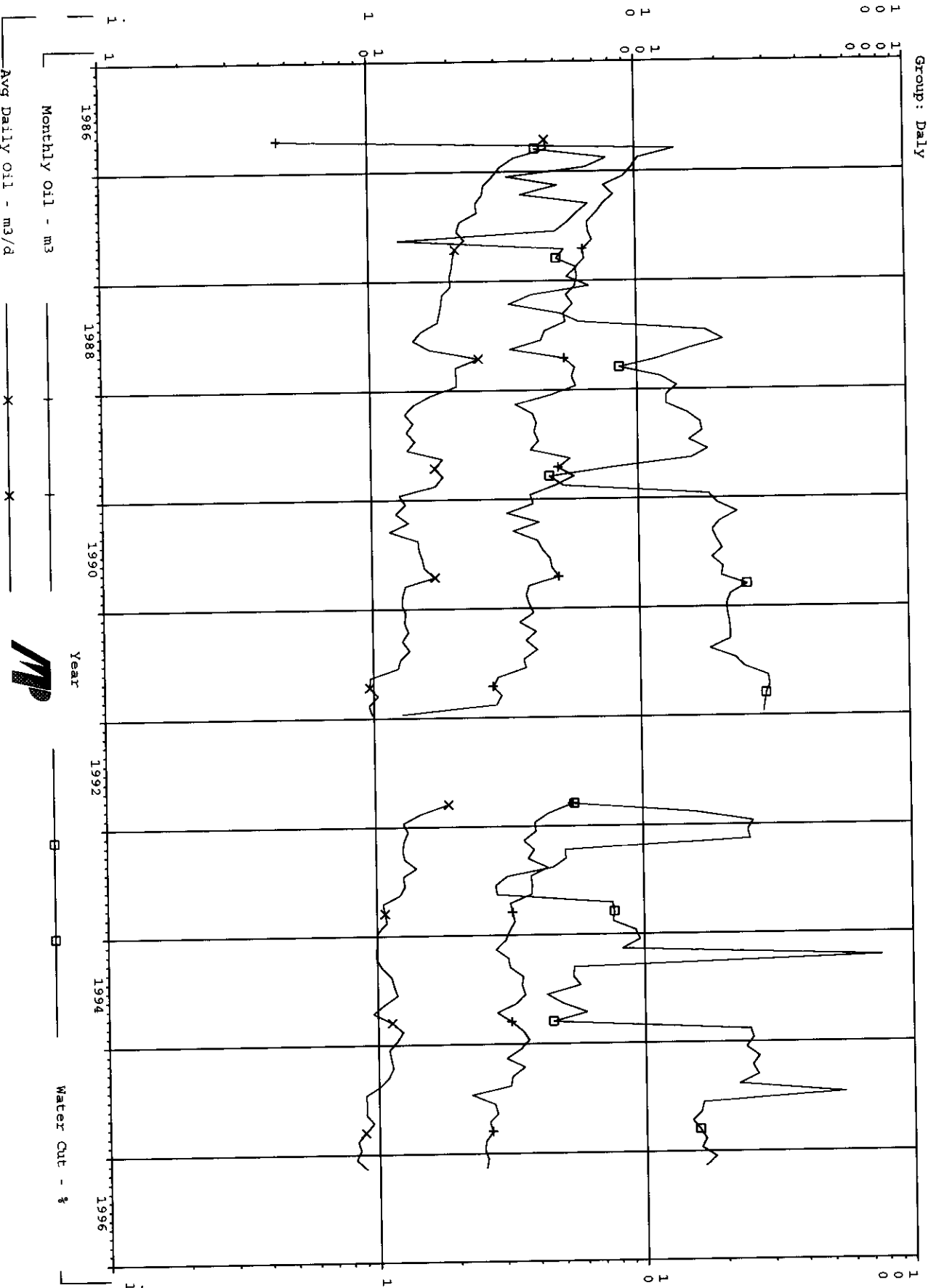
Production Cums
Oil: 1947 m3
Gas: 0 E6m3
Water: 680.4 m3
Cond: 0 m3



00/10-30-010-28W1/0 (Tundra Daly COM R//E10-30-10-28W1) Data 09/86-02/96

Operator:
Field: 01
Zone: 59E
Type: Unknown
Group: Daly

Production Cums
Oil: 4601.2 m3
Gas: 0 B6m3
Water: 808.9 m3
Cond: 0 m3



00/10-30-010-28W1/2 (Tundra Daly COM R//E10-30-10-28W1) Data 06/95-02/96

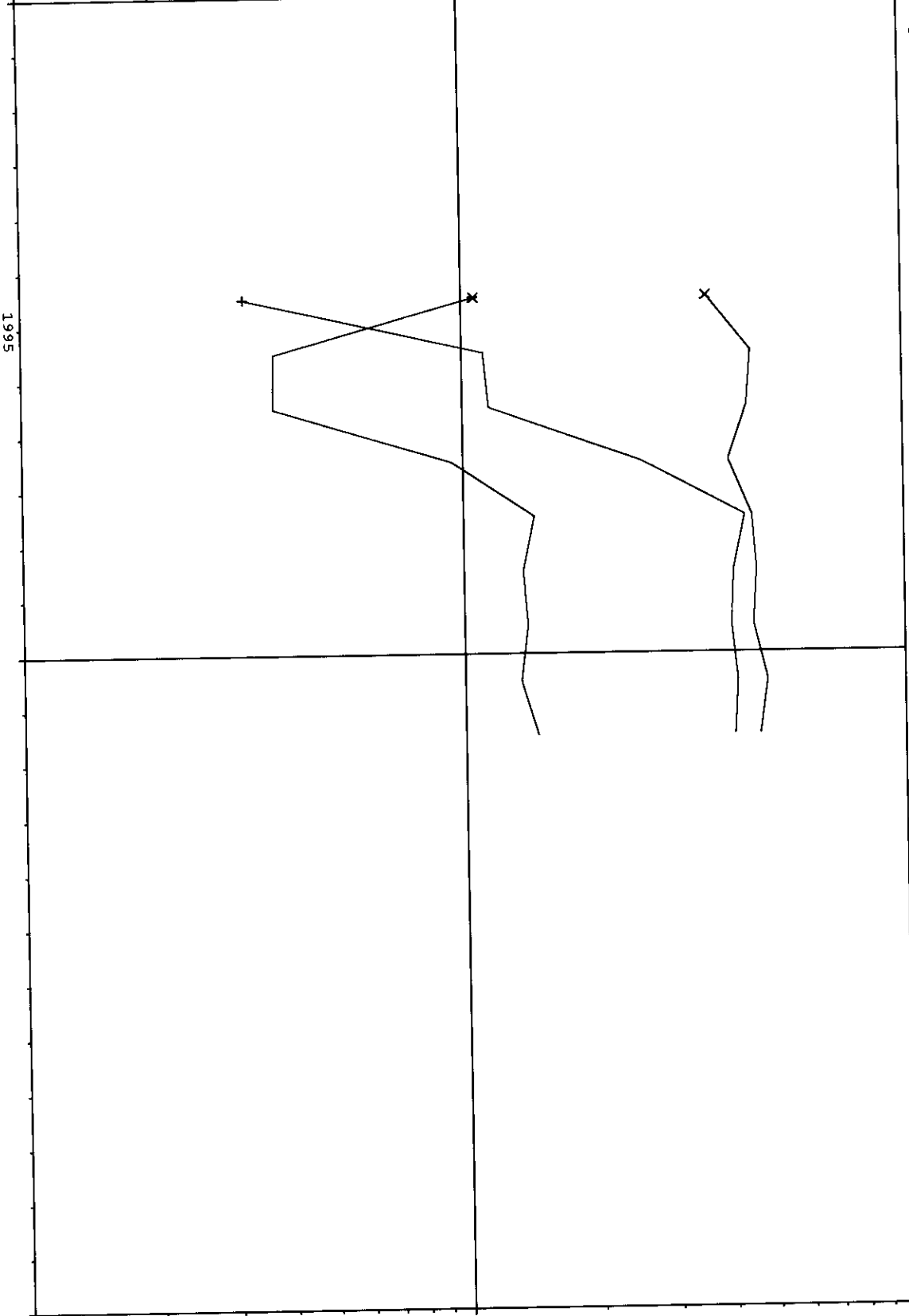
Operator:
Field: 01
Zone: 60B
Type: Unknown
Group: Daly

Production Cums
Oil: 258.6 m3
Gas: 0 B6m3
Water: 216.7 m3
Cond: 0 m3

1 1 1
0 0 0
0 0 0

1 1 1
0 1 0

1 1 1



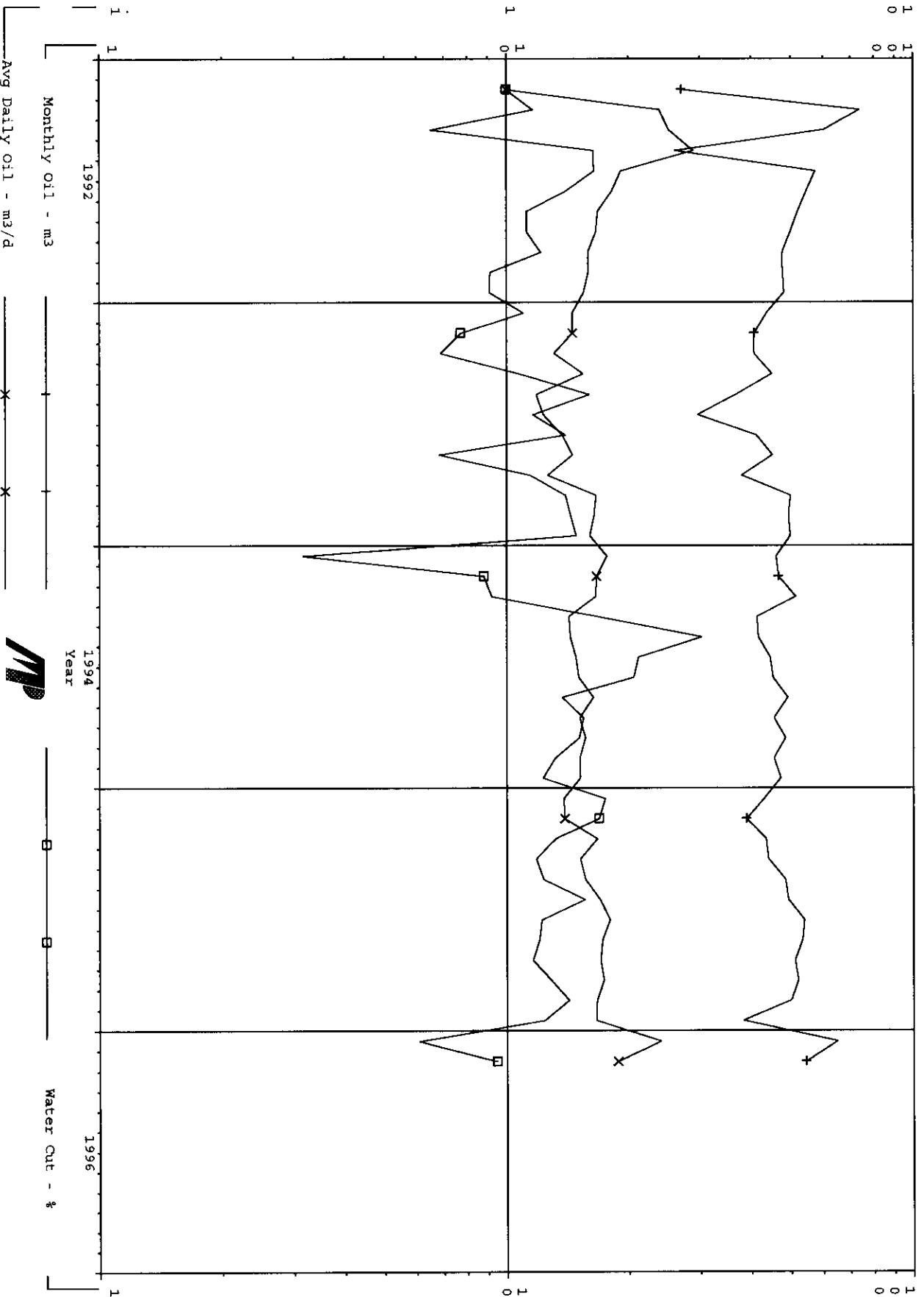
Monthly Oil - m3
Avg Daily Oil - m3/d
Water Cut - %



Operator:
Field: 01
Zone: 59E
Type: Unknown
Group: Daily

00/04-32-010-28W1/2 (Tundra Daily Prov. COM R//E04-32-10-28W1) Data 02/92-02/96

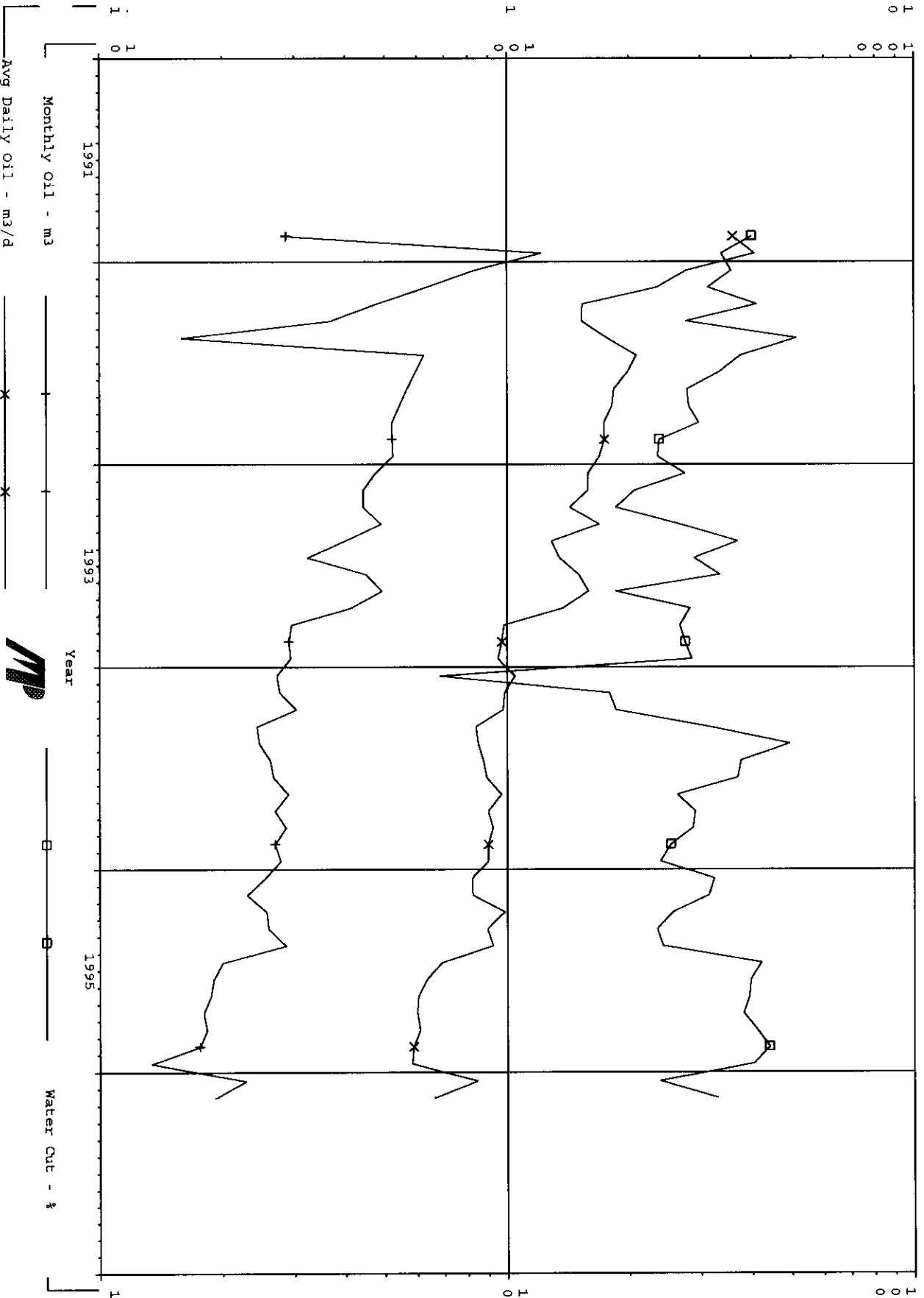
Production Cume
Oil: 2290.6 m3
Gas: 0 Bcm3
Water: 337 m3
Cond: 0 m3



Operator:
Field: 01
Zone: 60B
Type: Unknown
Group: Daly

00/04-32-010-28W1/0 (Tundra Daly Prov. COM R//E04-32-10-28W1) Data 11/91-02/96

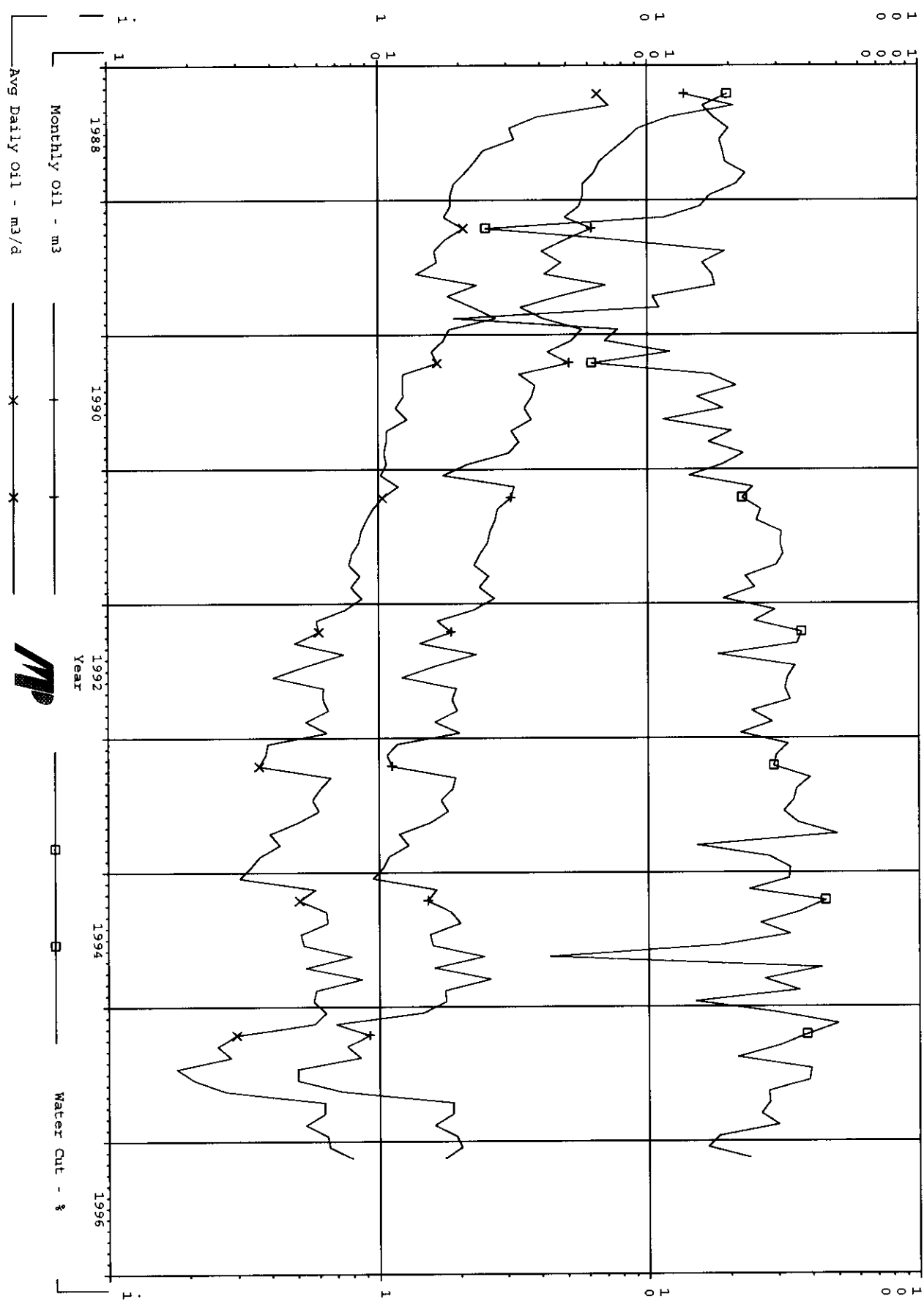
Production Cume
Oil: 1889.2 m3
Gas: 0 E6m3
Water: 844.7 m3
Cond: 0 m3



00/05-02-010-29W1/0 (Tundra Daily COM R//E05-02-10-29W1) Data 03/88-02/96

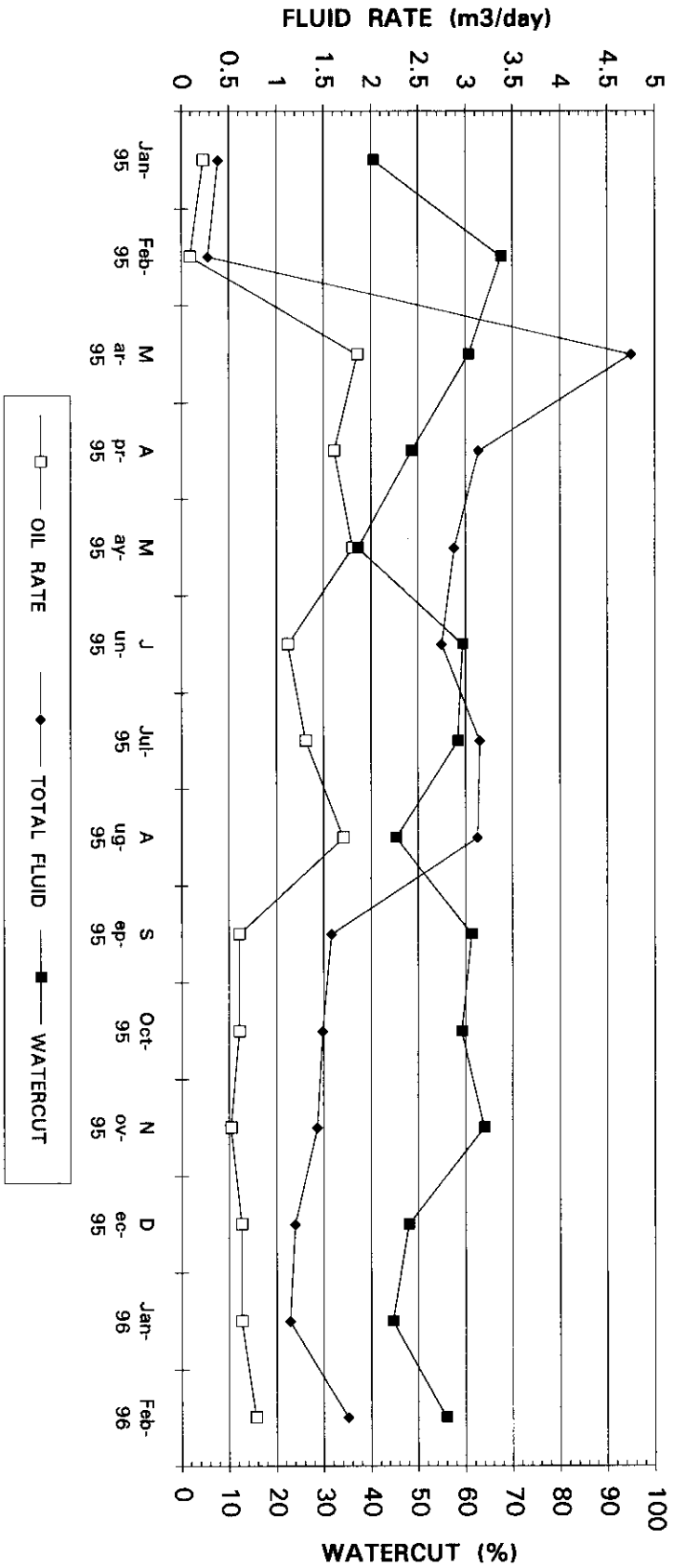
Operator:
Field: 01
Zone: 59D
Type: Unknown
Group: Daly

Production Cums
Oil: 3081.5 m3
Gas: 0 Bcm3
Water: 817.9 m3
Cond: 0 m3



WELL 5-2-10-29 BAKKEN PRODUCTION HISTORY

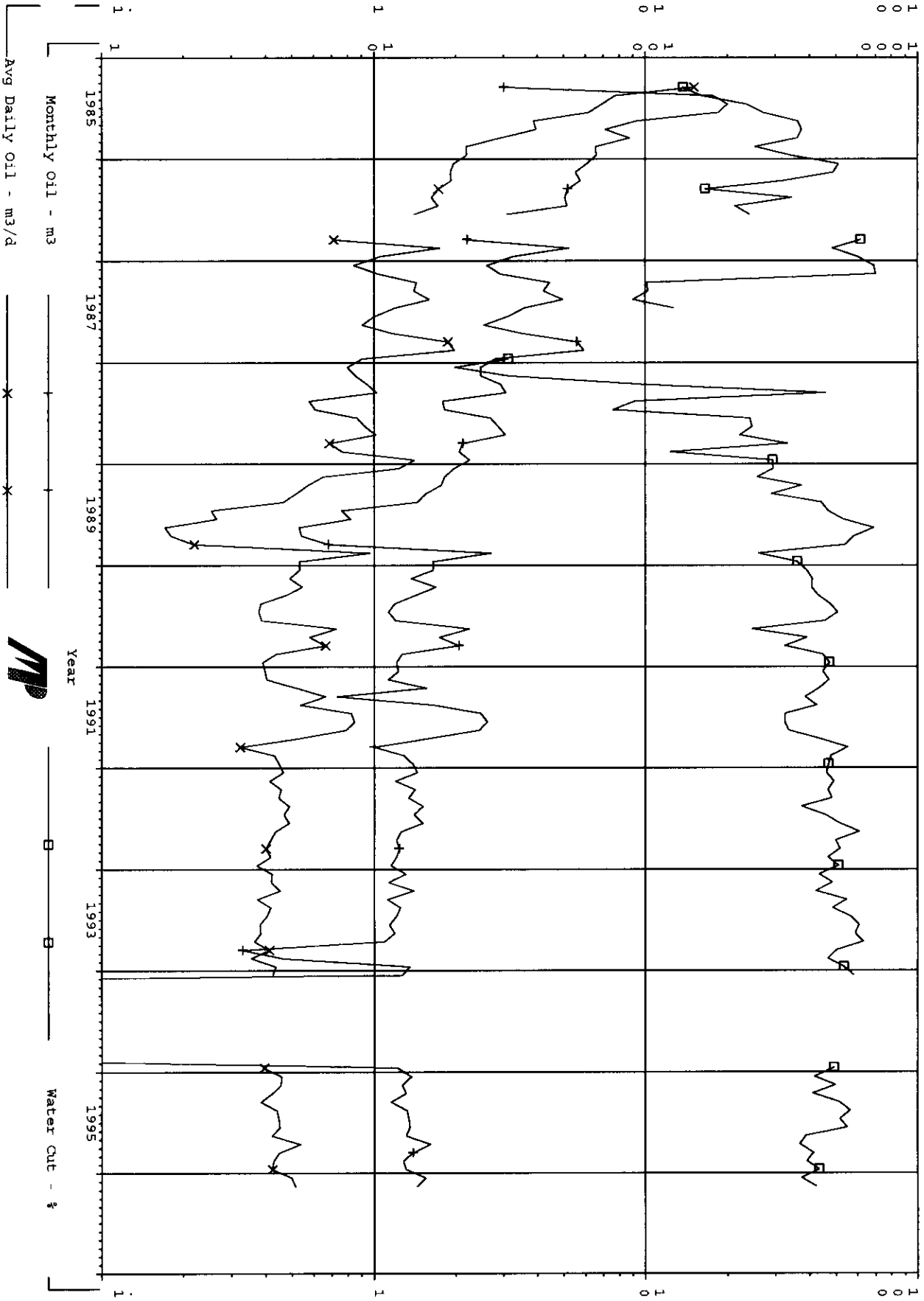
Cum. Oil = 382.5 m3



00/15-02-010-29W1/0 (Tundra Et Al Daily R//E15-02-10-29W1) Data 04/85-02/96

Operator:
Field: 01
Zone: 59D
Type: Unknown
Group: Daly

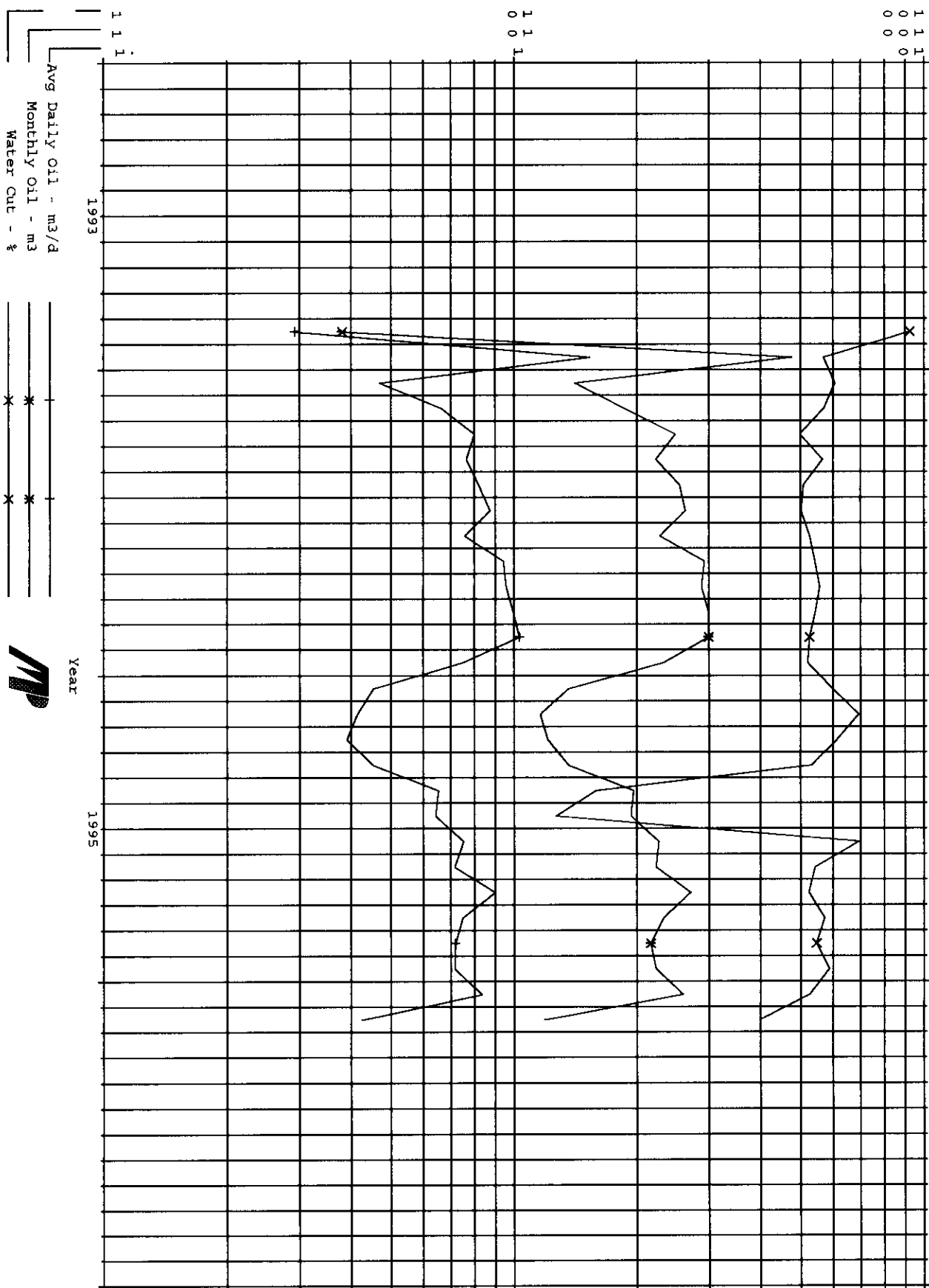
Production Cums
Oil: 3236.9 m3
Gas: 0 Bcm3
Water: 1788.4 m3
Cond: 0 m3



00/15-02-010-29W1/2 (Tundra Et Al Daily R//E15-02-10-29W1) Data 11/93-02/96

Operator:
Field: 01
Zone: 60M
Type: Unknown
Group: Dally

Production Cums
Oil: 612.8 m3
Gas: 0 Bcm3
Water: 770.3 m3
Cond: 0 m3





August 17, 1994

Tundra Oil and Gas Ltd.
P. O. Box 1960
VIRDEN, Manitoba

Attention: Mr. Tim Howell

FILE:
FIELD/POOL
DALY
COMMINGLED
PRODUCTION

Dear Mr. Howell:

Re: Bakken/Lodgepole Commingled Wells - Daly Field Status Report

The Branch acknowledges the receipt of the 2nd quarter status report for Daly commingled wells.

Please note that as per subsection 52(6) of the new Drilling and Production Regulation you are no longer required to submit quarterly reports. You are now required to submit annual reports prior to April 30 of the year following the report period.

If you have any questions please contact the undersigned at (204) 748-1608.

Yours truly,

R. M. Massinon, P. Eng.
District Petroleum Engineer

cc:

John N. Fox ✓

Tundra
oil and gas ltd.

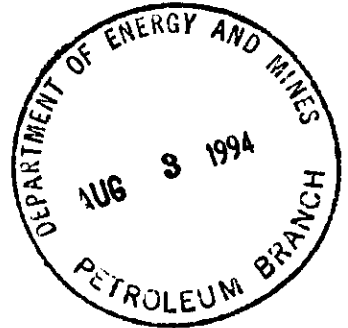
P.O. Box 1960
Virden, Manitoba
R0M 2C0
July 29, 1994

FILE: FIELD POOL
FILES

DALY FIELD
COMMINGLED
PRODUCTION

Time that under the
s, only annual
is required (ss 52(a))

Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3



Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMMINGLED WELLS
DALY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 2nd quarter of 1994.

Production and fluid level information is shown on the attached chart.

There were no pressure surveys performed during the 2nd quarter of 1994.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in dark ink, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Attachment

TUNDRA OIL AND GAS LTD.

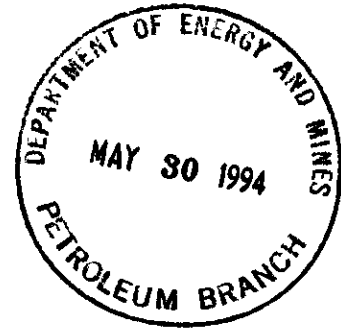
DAILY BAKKEN/LODGEPOLE COMINGLED WELLS PRODUCTION

QUARTERLY STATUS REPORT APR - JUN/94

Well Location	Bakken Oil (m3/day)	Bakken Water (m3/day)	Lodgepole Oil (m3/day)	Lodgepole Water (m3/day)	Total Oil (m3/day)	Total Water (m3/day)	Production Test Date	Lab Analysis & Date	Fluid Level & Date
2-23-9-28	0.85 ✓	0.38	0.09	0.04	0.94	0.42			
16-22-9-29	1.90 ✓	1.43	0.02	0.06	1.92	1.49			
7-18-10-27	1.13 ✓	0.04	0.25	0.00	1.38	0.04			
13-20-10-28	0.17	0.11	0.48 ✓	0.10	0.65	0.21	1994 06 03		1994 05 04 78 jts.
7-29-10-28	0.70 ✓	0.32	0.38	0.00	1.08	0.32	1994 05 12		1994 05 04 80 jts.
11-29-10-28	0.18 ✓	0.00	0.08	0.02	0.26	0.02	1994 05 03		1994 05 05 82 jts.
12-29-10-28	0.34	0.17	0.50 ✓	0.10	0.84	0.27	1994 05 09		1994 05 04 75 jts.
13-29-10-28	0.60	0.00	2.86 ✓	0.26	3.46	0.26	1994 05 07		1994 05 05 80 jts.
4-32-10-28	0.85	0.58	1.45 ✓	0.44	2.3	1.02			1994 05 09 66 jts.
15-2-10-29	0.82 ✓	0.90	0.00	0.00	0.82	0.90			1994 04 28 83 jts.

P.O. Box 1960
Virden, Manitoba
ROM 2C0
May 4, 1994

Copy for
Virden
FIELD/POOL FILES
FILE: DALY FIELD
COMMINGLED WELLS



Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

RE: BAKKEN/LODGEPOLE COMMINGLED WELLS
DALY FIELD STATUS REPORT

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 1st quarter of 1994.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed during the 1st quarter of 1994.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in cursive script, appearing to read "T. B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Attachments

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS PRODUCTION

QUARTERLY STATUS REPORT JAN - MAR/94

Well Location	Bakken Oil (m3/day)	Bakken Water (m3/day)	Lodgepole Oil (m3/day)	Lodgepole Water (m3/day)	Total Oil (m3/day)	Total Water (m3/day)	Production Test Date	Lab Analysis Date	Fluid Level Date
2-23-9-28	1.10	0.37	0.12	0.03	1.22	0.40			
16-22-9-29	2.32	1.61	0.02	0.07	2.34	1.68			
7-18-10-27	1.23	0.04	0.29	0.00	1.52	0.04			
13-20-10-28	0.20	0.07	0.48	0.10	0.68	0.17	1994 03 17		
7-29-10-28	0.61	0.33	0.38	0.00	0.99	0.33	1994 02 01	1994 02 23	
11-29-10-28	0.48	0.00	0.08	0.07	0.56	0.07	1994 03 07		
12-29-10-28	0.89	0.14	0.50	0.10	1.39	0.24	1994 03 04		
13-29-10-28	0.47	0.00	2.86	0.17	3.33	0.17	1994 03 14		
4-32-10-28	1.00	0.18	1.70	0.13	2.70	0.31			
15-2-10-29	0.68	0.83	0.00	0.00	0.68	0.83	1994 02 01	1994 02 16	



CHEMICAL & GEOLOGICAL LABORATORIES INC.



MAR 01 1994

CONTAINER IDENTITY		LABORATORY NUMBER	
		S94-3628	
LICENCE NUMBER		OPERATOR NAME	
		TUNDRA OIL AND GAS LTD.	
LOCATION		WELL NAME	
7-29-10-28 W1		TUNDRA DALY PROV COM 7-29-10-28	
FIELD OR AREA		NAME OF SAMPLER	
DALY			
TEST TYPE		TEST RECOVERY	
NO.			
MULTIPLE RECOVERY			
Y N			
SAMPLING POINT		AMT. & TYPE OF CUSHION	
WELLHEAD			
TYPE OF PRODUCTION		MUD RESISTIVITY	
PUMPING FLOWING GAS LIFT SWAB		@ 25°C	
PRODUCTION RATES			
WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
GAUGE PRESSURE kPa			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)		ANALYST	
94-02-15		K. HALABUZA	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
94-02-18			
DATE REPORTED (Y-M-D)			
94-02-23			

DENSITY @ 15C			TOTAL SULFUR	
-----			-----	
REL.	API		MASS	
	GRAVITY		FRAC.	G/KG
-----			-----	
0.830	829	39.0	0.0076	7.60

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: S. SARGIOUS

Approved:

R. PAUL



CHEMICAL & GEOLOGICAL LABORATORIES INC.



LABORATORY NUMBER S94-3624-3	
OWNER IDENTITY	
OPERATOR NAME TUNDRA OIL AND GAS LTD.	
LICENCE NUMBER	ELEVATIONS (metres) K.B. GRD.
LOCATION 15-2-10-29 W1	WELL NAME TUNDRA 15-2-10-29
FIELD OR AREA	POOL OR ZONE
TEST TYPE	NAME OF SAMPLER
NO.	TEST RECOVERY
MULTIPLE RECOVERY	
Y N	
TEST INTERVAL (metres)	SAMPLING POINT WELLHEAD
PERFORATIONS (metres)	AMT. & TYPE OF CUSHION
	MUD RESISTIVITY @ 25°C
	TYPE OF PRODUCTION
	PUMPING FLOWING GAS LIFT SWAB
	PRODUCTION RATES
	WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED
	GAUGE PRESSURE kPa
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED
	TEMPERATURE °C
	ANALYST
	OTHER INFORMATION
DATE SAMPLED (Y-M-D) 94-02-11	DATE RECEIVED (Y-M-D) 94-02-13
	DATE REPORTED (Y-M-D) 94-02-16
	I. MALCOMSON

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. GRAVITY

MASS FRAC. G/KG

0.811 810 43.0

0.0020 2.00

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

SIGNATURE OF SUPERVISOR

[Handwritten Signature]

Tundra Oil and Gas Ltd.
Box 1960
Virden, Manitoba
R0M 2C0

August 3, 1990

Dept. of Energy & Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

ATTENTION: John Fox
Chief Engineer

Dear Sir:

RE: Comingled Production Status Report Daly 29-10-28

The following is a status report for the second quarter of 1990, in regards to comingled Bakken-Lodgepole wells.

Well	Date & Fluid Level	Test Date	Total Fluid	
			OIL	WATER
07-29-10-28	May 10/90 815 m (Pumped Off)	June 5/90	0.69	0.56
			0.00	0.16 Lodgepole
			0.69	0.40 Bakken
11-29-10-28	May 10/90 817 m (Pumped Off)	June 22/90	0.52	0.50
			0.05	0.48 Lodgepole
			0.47	0.03 Bakken
13-29-10-28	Pumped off in both cases.	May/90	1.7	1.4 Bakken
		July/90	2.76	0.34 Lodgepole

(Well was put on co-mingled production as of August 1, 1990)

If any further information is required, please contact the undersigned at 748-3095 or Dan Barchyn at 934-5853.

Yours truly,

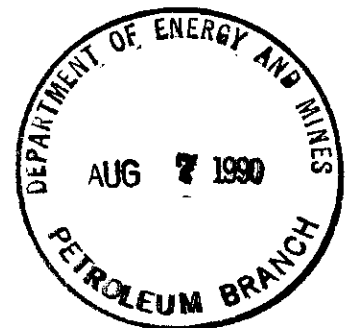


T.B. Howell, P. Eng.

TBH/bep

c.c. D. Barchyn - Tundra, Wpg.

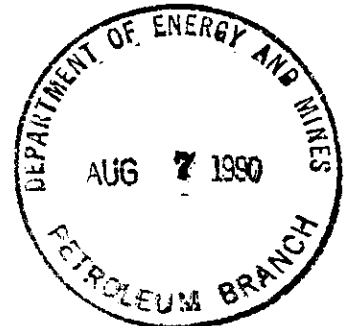
Tundra
oil and gas



Tundra Oil and Gas Ltd.
Box 1960
Virden, Manitoba
R0M 2C0

August 3, 1990

Dept. of Energy & Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3



ATTENTION: John Fox
Chief Engineer

Dear Sir:

RE: Comingle Production Status Report Daly 29-10-28

The following is a status report for the second quarter of 1990, in regards to comingled Bakken-Lodgepole wells.

Well	Date & Fluid Level	Test Date	Total Fluid	
			OIL	WATER
07-29-10-28	May 10/90 815 m (Pumped Off)	June 5/90	0.69	0.56
			0.00	0.16 Lodgepole
			0.69	0.40 Bakken
11-29-10-28	May 10/90 817 m (Pumped Off)	June 22/90	0.52	0.50
			0.05	0.48 Lodgepole
			0.47	0.03 Bakken
13-29-10-28	Pumped off in both cases.	May/90	1.7	1.4 Bakken
		July/90	2.76	0.34 Lodgepole

(Well was put on co-mingled production as of August 1, 1990)

If any further information is required, please contact the undersigned at 748-3095 or Dan Barchyn at 934-5853.

Yours truly,

A handwritten signature in cursive script, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/bep

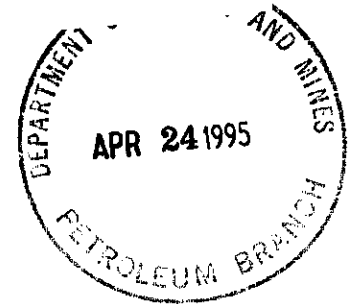
c.c. D. Barchyn - Tundra, Wpg.

Tundra
oil and gas ltd.

P.O. Box 1960
Virden, Manitoba
R0M 2C0
April 15, 1995

File:
Daly Field
Cunningham
Production

Manitoba Energy & Mines
Petroleum Branch
1395 Ellice Avenue Suite 360
Winnipeg, Manitoba
R3G 3P2



Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMMINGLED WELLS
DALY FIELD ANNUAL STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for 1994.

Production test results that were conducted are shown on the attached chart. Also shown are fluid level information, lab analysis, and a summary of operations carried out at each well.

Graphs showing the production histories for each pool in the well are attached.

Lab analysis reports are also attached.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in black ink, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Attachments

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS PRODUCTION

ANNUAL STATUS REPORT - 1994

LOCATION	PRODUCTION DATA								FLUID LEVELS	LAB ANALYSIS	WELL OPERATIONS
	Date	Total Oil (m3/day)	Lodgepole Oil (m3/day)	Bakken Oil (m3/day)	Total Water (m3/day)	Lodgepole Water (m3/day)	Bakken Water (m3/day)				
2-23-9-28	Test Tank	0.77	0.07	0.70	0.33	0.03	0.30				June 9 Pump Change
4-23-9-28	Test Tank	2.87	0.92	1.95	1.64	1.64	Nil			Nov. 03 Dec. 16	Nov. 14 Frac
								Oct. 17 - 66 jts. Oct. 20 - 87 jts. Nov. 22 - 52 jts. Dec. 08 - 78 jts.		C & G Labs	
16-22-9-29	Test Tank	1.57	0.01	1.56	1.59	0.06	1.53				
7-18-10-27	Test Tank	5.04	0.15	4.89	1.93	Nil	1.93			Dec. 21	Nov. 17 Frac
										C & G Labs	
10-18-10-27	Test Tank	1.38	1.38	Nil	2.88	2.88	Nil		Mar. 11 - 39 jts. Mar 14 - 53 jts. May 24 - 68 jts.	March 9	
13-20-10-28	Mar 17	0.68	0.48	0.20	0.17	0.1	0.07		May 4 - 78 jts. Sep 15 - 73 jts. Sep 19 - 77 jts. Sep 20 - empty before acid treat. Sep 26 - 89 jts. after hot oil & acid	C & G Labs	Sep. 20 Acid Job
	Jun 03	0.65	0.48	0.17	0.21	0.1	0.11				
7-29-10-28	Feb 01	0.99	0.38	0.61	0.33	Nil	0.33		May 5 - 80 jts.	Feb. 16	
	May 12	0.76	0.38	0.70	0.32	Nil	0.32			C & G Labs	
	Jul 01	0.76	0.38	0.38	0.32	Nil	0.32				

Daily Bakken/Lodgepole Commingled Wells Production
Page 2 - Annual Status Report - 1994

LOCATION	PRODUCTION TESTS							FLUID LEVELS	LAB ANALYSIS	WELL OPERATIONS
	Date	Total Oil (m3/day)	Lodgepole Oil (m3/day)	Bakken Oil (m3/day)	Total Water (m3/day)	Lodgepole Water (m3/day)	Bakken Water (m3/day)			
11-29-10-28	May 3	0.26	0.08	0.18	0.02	0.02	Nil	May 5 - 82 jts		
	Aug 6	0.48	0.08	0.40	0.28	0.28	Nil			
12-29-10-28	Oct 2	0.07	0.07	Nil	0.49	0.48	0.01			
	Mar 4	1.39	0.50	0.89	0.24	0.10	0.14	May 4 - 75 jts		Aug. 09 Pump Change
	May 9	0.84	0.50	0.34	0.27	0.10	0.17			
13-29-10-28	Oct 5	0.47	0.47	Nil	1.11	0.10	1.01			
	Mar 14	3.33	2.86	0.47	0.17	0.17	Nil	May 4 - 74 jts May 5 - 80 jts		
	May 7	3.46	2.86	0.60	0.26	0.26	Nil			
	Aug 10	2.96	2.86	0.10	0.32	0.31	0.01			
	Oct 3	3.03	2.86	0.17	0.49	0.31	0.18			
4-32-10-28	Test Tank	2.42	1.52	0.90	0.49	0.21	0.28	May 4 - 64 jts May 9 - 68 jts		May 10 Pump Change
15-2-10-29	Jan 1	1.13	0.45	0.68	1.38	0.52	0.86	Apr 28 - 83 jts	Feb 16 Mar 21	Nov. 30 Acid Stim.
	Jan 19	0.68	0.45	0.23	0.83	0.52	0.31	C & G Labs		
	Feb 1	0.68	Nil	0.68	0.83	Nil	0.83			
	Jul 19	1.01	Nil	1.01	1.01	Nil	1.01			
	Aug 1	1.20	Nil	1.20	1.20	Nil	1.20			
	Dec 15	1.25	0.53	0.72	1.25	0.42	0.83			



CHEMICAL & GEOLOGICAL LABORATORY LTD.



OIL ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		S94-4062-1	
LICENCE NUMBER	OPERATOR NAME		
	TUNDRA OIL AND GAS LTD.		
LOCATION	WELL NAME		ELEVATIONS (metres)
4-23-9-28 W1	TUNDRA ET AL DALY RE 4-23-9-28		K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
DALY			
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
SAMPLING POINT		AMT. & TYPE OF CUSHION	MUD RESISTIVITY
WELLHEAD			@ 25°C
TYPE OF PRODUCTION			
PUMPING FLOWING GAS LIFT SWAB			
PRODUCTION RATES			
WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
GAUGE PRESSURE kPa			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
94-12-13	94-12-16	94-12-21	DEBUSSCHERE
TEST INTERVAL (metres)		OTHER INFORMATION	
PERFORATIONS (metres)			

SAMPLE PROPERTIES

COLOR OF CLEAN OIL		B.S. & W. (VOLUME FRACTION)	
BROWN		WATER	SEDIMENT TOTAL
DENSITY at 15°C			
RELATIVE		ABSOLUTE kg/m ³	
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.827		826
A.P.I. GRAVITY			
39.6			
TOTAL SULFUR		POUR POINT °C	
(MASS FRACTION)	g/kg.	U.S.B.M.	A.S.T.M.
0.0052	5.20		
CARBON RESIDUE (MASS FRACTION)			
RVP kPa	CONRADSON	RAMSBOTTOM	
VISCOSITY			
TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s	

DISTILLATION

VOLUME FRACTION DISTILLED		TEMP. °C
I.B.P.		
0.05		
0.10		
0.15		
0.20		
0.25		
0.30		
0.35		
0.40		
0.45		
0.50		
0.55		
0.60		
0.65		
0.70		
0.75		
0.80		
0.85		
0.90		
0.95		
1.00		
F.B.P.		
CRACKED		
METHOD		
BAROM. PRESS kPa (abs)		
ROOM TEMP. °C		
DISTILLATION SUMMARY (VOLUME FRACTION)		
200°C NAPHTHA	275°C KEROSENE	350°C LIGHT GAS OIL
RECOVERED	RESIDUE	DISTILLATION LOSS
BASE TYPE		
CHARACTERIZATION FACTOR		

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: Samir Sargious S. SARGIOUSApproved: W. J. Anderson for R. PAUL



CHEMICAL & GEOLOGICAL LABORATORY

LTD.



OIL ANALYSIS

LABORATORY NUMBER

S94-4002

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

4-23-9-28 W1

WELL NAME

TUNDRA ET AL DALY 4-23-9-28

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

MIKE DUPONT

COMPANY

TUNDRA

TEST TYPE

NO.

MULTIPLE
RECOVERY

Y

N

TEST RECOVERY

SAMPLING POINT

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TEST INTERVAL (metres)

PERFORATIONS (metres)

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

DATE SAMPLED (Y-M-D)

DATE RECEIVED (Y-M-D)

94-11-02

DATE REPORTED (Y-M-D)

94-11-03

ANALYST

I. MALCOMSON

OTHER INFORMATION

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

B.S. & W. (VOLUME FRACTION)

WATER

SEDIMENT

TOTAL

DENSITY at 15°C

RELATIVE

AS RECEIVED

0.850

AFTER CLEANING

ABSOLUTE kg/m³

AS RECEIVED

849

AFTER CLEANING

A.P.I. GRAVITY

35.0

TOTAL SULFUR

(MASS FRACTION)

0.0129

g/kg.

12.9

U.S.B.M.

A.S.T.M.

POUR POINT °C

CARBON RESIDUE
(MASS FRACTION)

RVP kPa

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s

DISTILLATION

VOLUME FRACTION
DISTILLED

TEMP °C

METHOD

BAROM. PRESS. kPa (abs)

ROOM TEMP. °C

DISTILLATION SUMMARY
(VOLUME FRACTION)

200°C NAPHTHA	275°C KEROSENE	350°C LIGHT GAS OIL
RECOVERED	RESIDUE	DISTILLATION LOSS

F.B.P.

BASE TYPE

CRACKED

CHARACTERIZATION FACTOR

ANALYSIS DETERMINED ON SAMPLE AS RECEIVED.

Supervisor: S. SARGIOUS

Approved: R. PAUL



OIL ANALYSIS

LABORATORY NUMBER

S94-4062-2

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

7-18-10-27 W1

WELL NAME

TUNDRA ET AL DALY RE 7-18-10-27

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

DALY

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

MULTIPLE
RECOVERY

Y N

TEST RECOVERY

SAMPLING POINT

WELL HEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TEST INTERVAL (metres)

PERFORATIONS (metres)

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

DATE SAMPLED (Y-M-D)

94-12-13

DATE RECEIVED (Y-M-D)

94-12-16

DATE REPORTED (Y-M-D)

94-12-21

ANALYST

DEBUSSCHERE

OTHER INFORMATION

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

BROWN

B.S. & W. (VOLUME FRACTION)

WATER

SEDIMENT

TOTAL

DENSITY at 15°C

RELATIVE

AS RECEIVED

AFTER CLEANING

0.829

ABSOLUTE kg/m³

AS RECEIVED

AFTER CLEANING

828

A.P.I. GRAVITY

39.2

TOTAL SULFUR

(MASS FRACTION)

0.0025

g/kg.

2.50

POUR POINT
°C

U.S.B.M.

A.S.T.M.

CARBON RESIDUE
(MASS FRACTION)

RVP kPa

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s

DISTILLATION

METHOD

BAROM. PRESS. kPa (abs)

ROOM TEMP. °C

DISTILLATION SUMMARY

(VOLUME FRACTION)

200°C
NAPHTHA275°C
KEROSENE350°C
LIGHT GAS OIL

RECOVERED

RESIDUE

DISTILLATION
LOSS

BASE TYPE:

CHARACTERIZATION FACTOR:

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor Samir Sargious S. SARGIOUSApproved: W.J. Anderson for R. PAUL



CHEMICAL & GEOLOGICAL LABORATORIES INC.



CONTAINER IDENTITY		LABORATORY NUMBER	
		S94-3652	
LICENCE NUMBER		OPERATOR NAME	
		TUNDRA OIL AND GAS LTD.	
LOCATION		WELL NAME	
10-18-10-27 W1		TUNDRA DALY 10-18-10-22	
FIELD OR AREA		POOL OR ZONE	
DALY			
TEST TYPE		TEST RECOVERY	
NO.			
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT	
		SWAB	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		(at 25°C)	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB ***	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)		ANALYST	
94-03-02		K. HALABUZA	
DATE RECEIVED (Y-M-D)		OTHER INFORMATION	
94-03-07			
DATE REPORTED (Y-M-D)			
94-03-09			

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. GRAVITY

MASS FRAC. G/KG

0.866 865 31.9 0.0183 18.3

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

Supervisor: *Sam Sargious* S. SARGIOUSApproved: *R. Paul* R. PAUL



CHEMICAL & GEOLOGICAL LABORATORIES INC.



CONTAINER IDENTITY		LABORATORY NUMBER S94-3624-1	
LICENCE NUMBER		OPERATOR NAME TUNDRA OIL AND GAS LTD.	
LOCATION 7-29-10-28 W1		WELL NAME TUNDRA DALY PROV COM 7-29-10-28	
FIELD OR AREA		NAME OF SAMPLER	
TEST TYPE		TEST RECOVERY	
NO.			
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT WELLHEAD	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY @ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
TEMPERATURE °C		ANALYST I. MALCOMSON	
DATE SAMPLED (Y-M-D) 94-02-04		DATE RECEIVED (Y-M-D) 94-02-13	
		DATE REPORTED (Y-M-D) 94-02-16	
		OTHER INFORMATION	

DENSITY @ 15C			TOTAL SULFUR	
-----			-----	
API			MASS	
REL.	ABS.	GRAVITY	FRAC.	G/KG
-----			-----	
0.835	834	38.0	0.0077	7.70

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

SIGNATURE OF SUPERVISOR

Samir Saeed



CHEMICAL & GEOLOGICAL LABORATORIES INC.



CONTAINER IDENTITY		LABORATORY NUMBER S94-3624-3	
LICENCE NUMBER	OPERATOR NAME TUNDRA OIL AND GAS LTD.		ELEVATIONS (metres) K.B. GRD.
LOCATION 15-2-10-29 W1	WELL NAME TUNDRA 15-2-10-29		COMPANY
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
TEST INTERVAL (metres)	SAMPLING POINT WELLHEAD		
PERFORATIONS (metres)	AMT. & TYPE OF CUSHION MUD RESISTIVITY @ 25°C		
	TYPE OF PRODUCTION PUMPING / FLOWING GAS LIFT SWAB		
	PRODUCTION RATES WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d		
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	GAUGE PRESSURE kPa		
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	TEMPERATURE °C		
DATE SAMPLED (Y-M-D) 94-02-11	DATE RECEIVED (Y-M-D) 94-02-13	DATE REPORTED (Y-M-D) 94-02-16	ANALYST I. MALCOMSON
OTHER INFORMATION			

DENSITY @ 15C			TOTAL SULFUR	
-----			-----	
REL.	ABS.	API GRAVITY	MASS FRAC.	G/KG
-----			-----	
0.811	810	43.0	0.0020	2.00

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

SIGNATURE OF SUPERVISOR

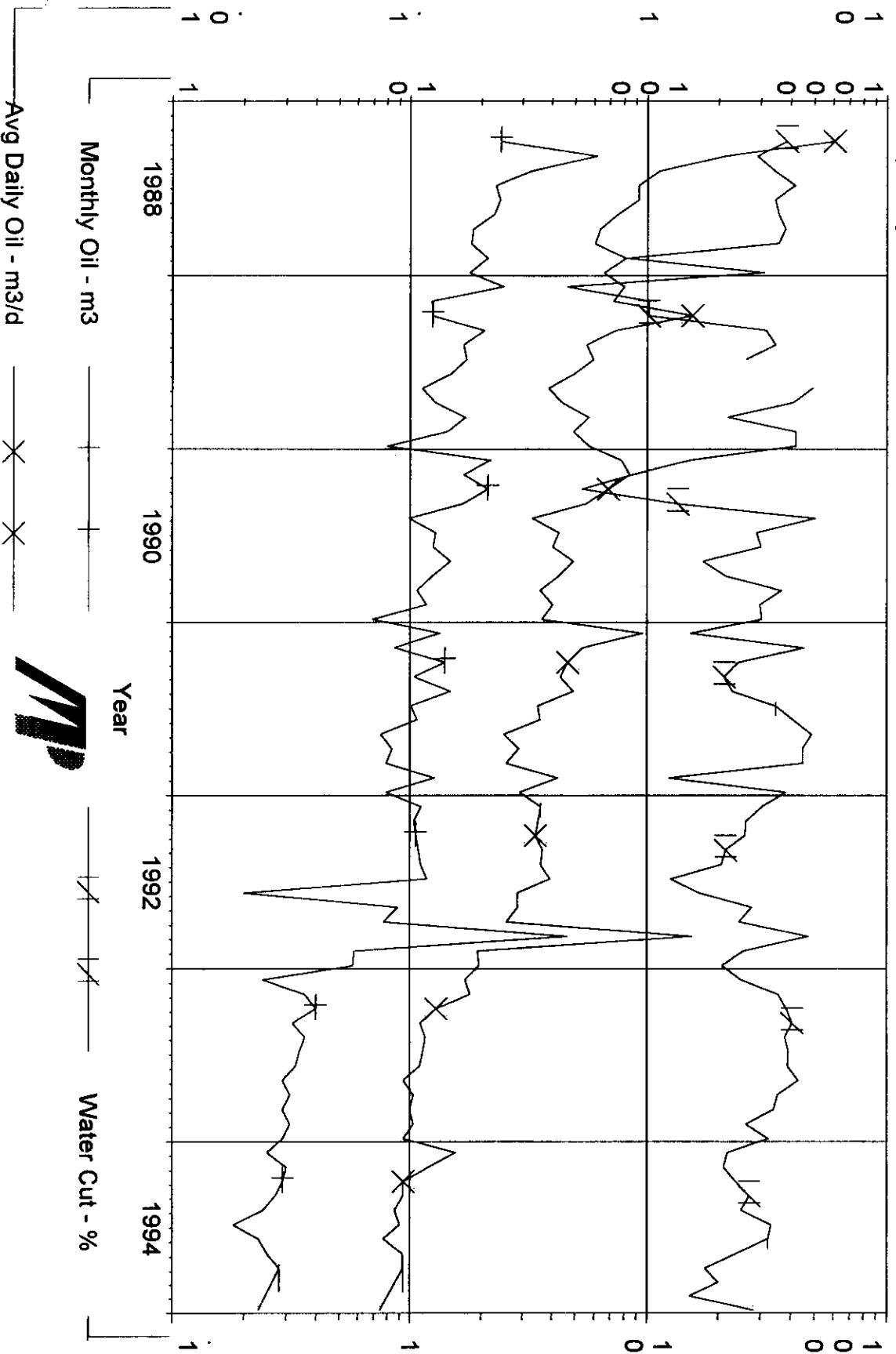
T. S. S. S.

Tundra Et Al Daly Com 02-23-09-28W1
00/02-23-009-28W1/0 Data 03/88-12/94

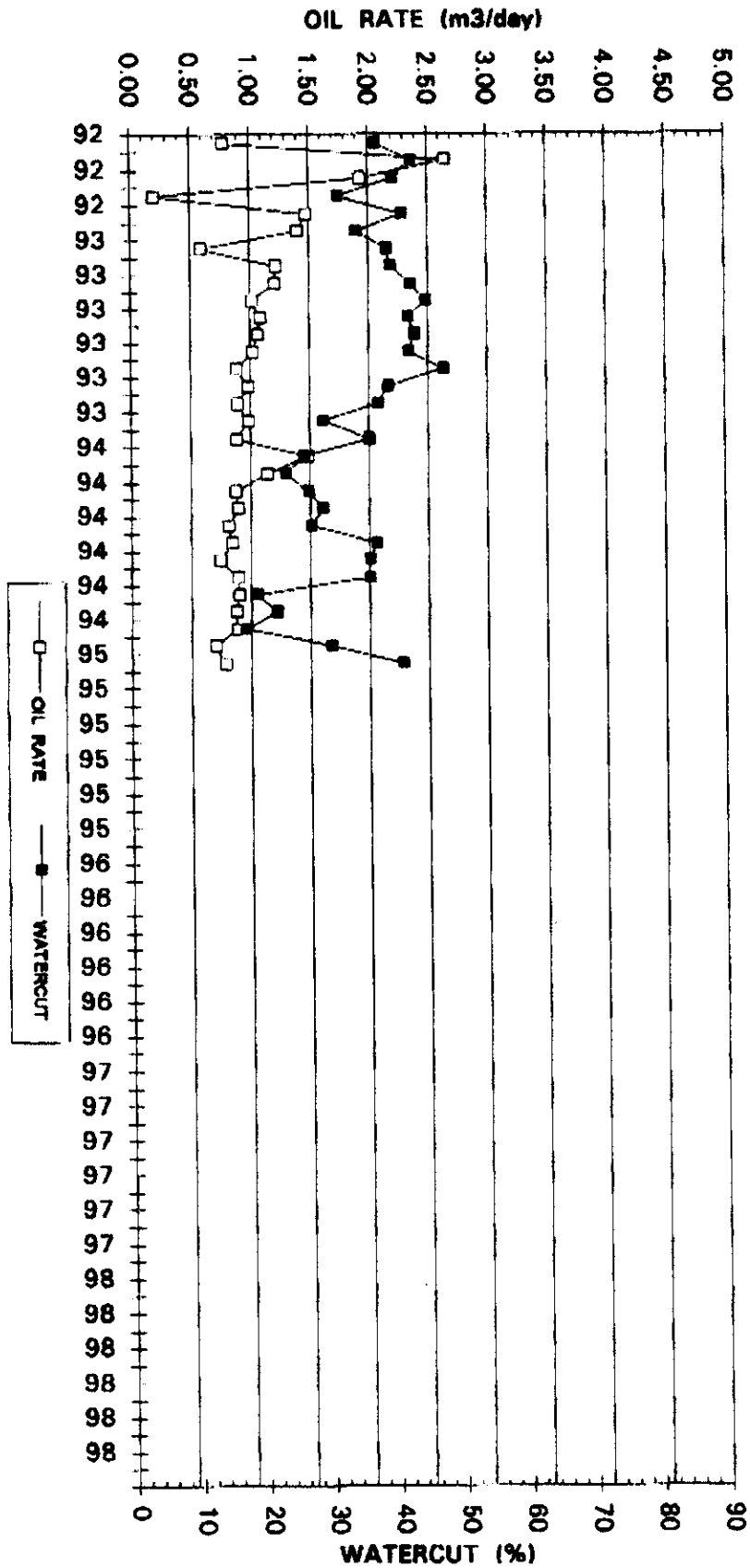
Operator:
Field: 01
Zone/Pool: 59B
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 952.1 m3
Gas: 0 E6m3
Water: 413.2 m3
Cond: 0 m3



WELL 2-23-9-28 PRODUCTION HISTORY (BARKEN) PRODUCTION TO 95.01.31

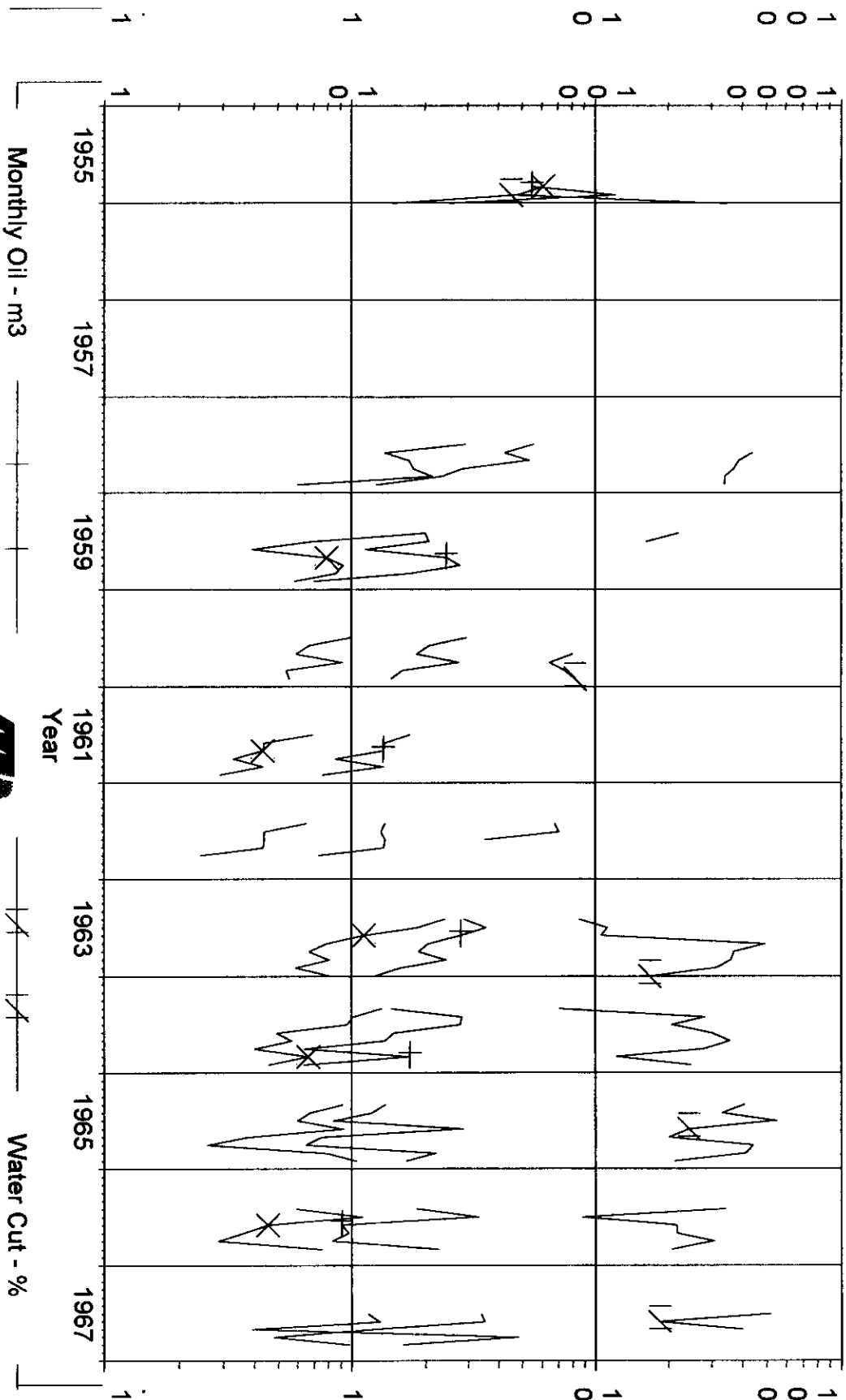


Chevron King Daly 04-23-09-28
00/04-23-009-28W1/0 Data 10/55-10/67

Operator:
Field: 01
Zone/Pool: 59B
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 1472.38 m3
Gas: 0 E6m3
Water: 396.282 m3
Cond: 0 m3



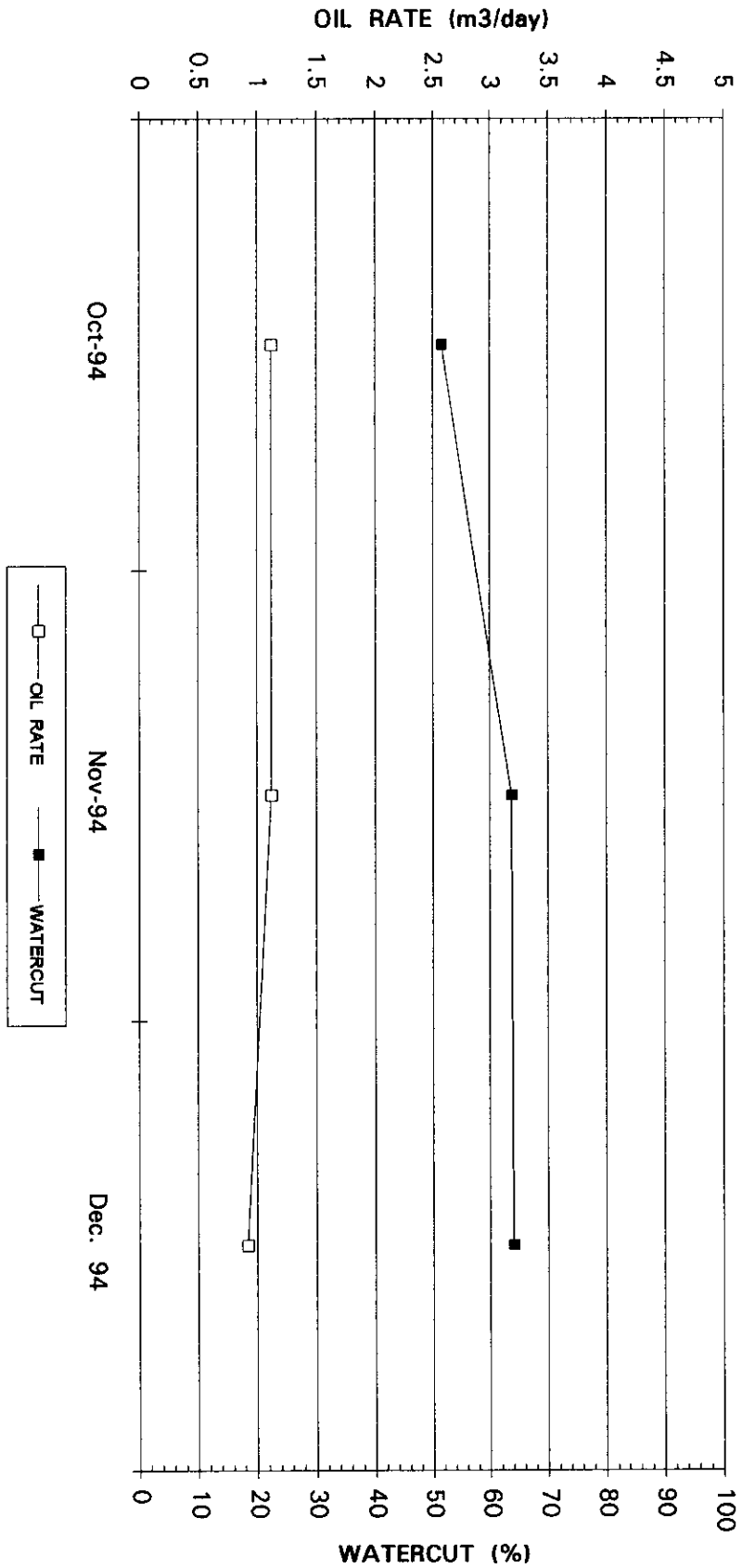
Avg Daily Oil - m3/d

x x



Water Cut - %

WELL 4-23-9-28 LODGEPOLE PRODUCTION HISTORY

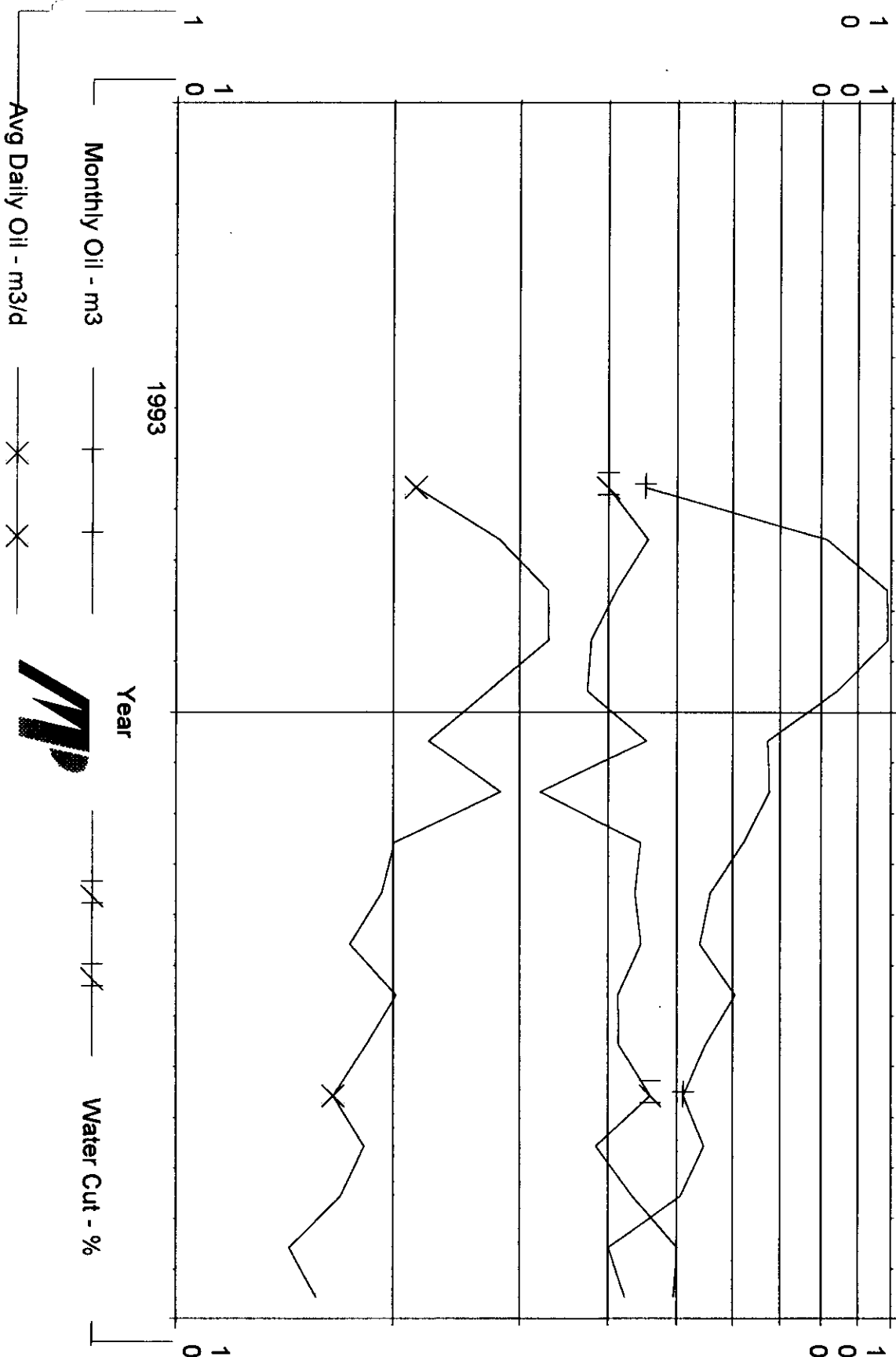


Tundra Daly 16-22-09-29W1
00/16-22-009-29W1/2 Data 08/93-12/94

Operator:
Field: 01
Zone/Pool: 60J
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 1069.3 m3
Gas: 0 E6m3
Water: 779.8 m3
Cond: 0 m3



Tundra Daly 16-22-09-29

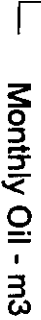
No

Active

Forecast

Water: 238.6 m3

Cond: 0 m3



Water Cut - %

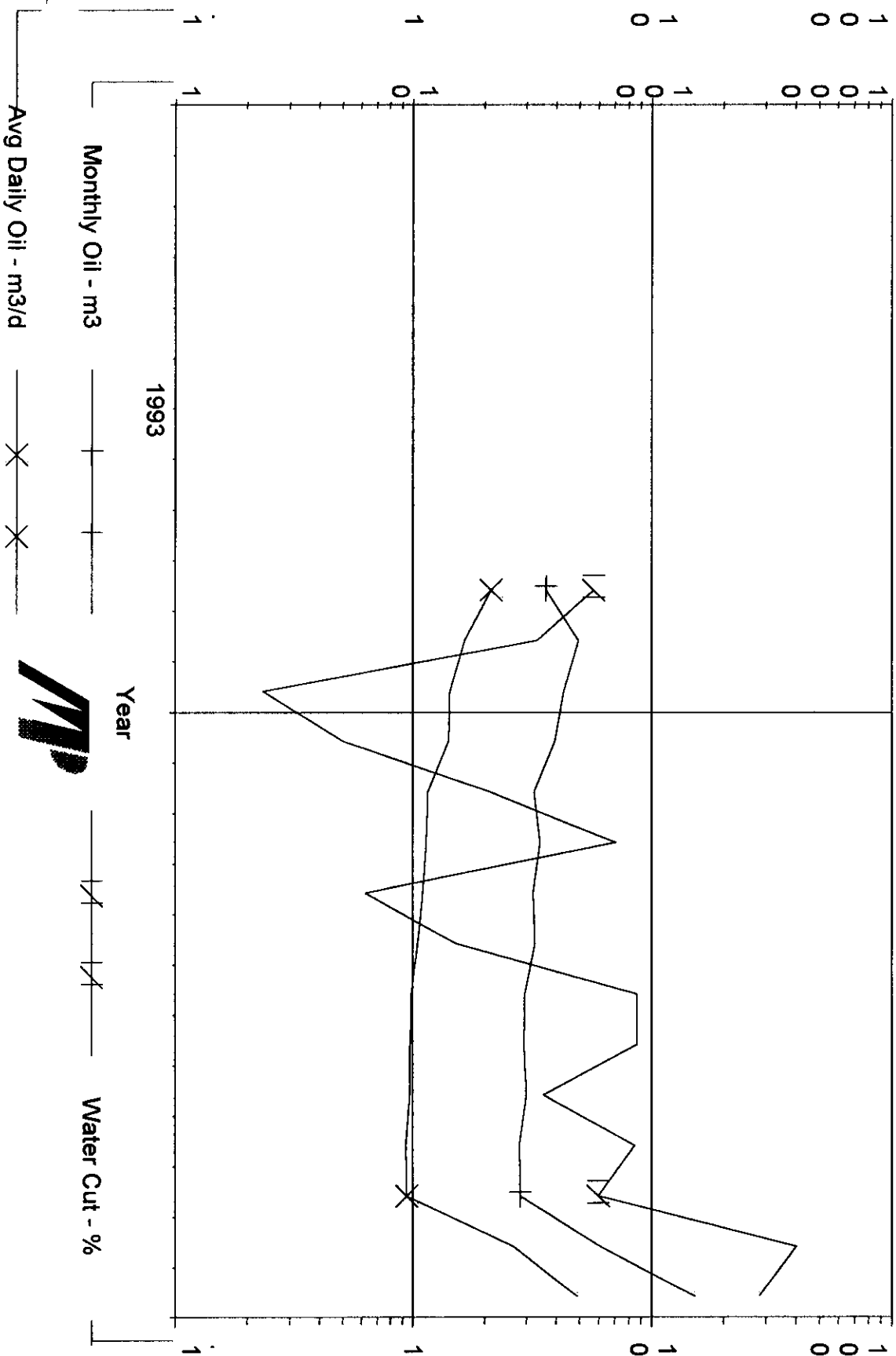


Tundra Daly R/E07-18-10-27W1
00/07-18-010-27W1/2 Data 10/93-12/94

Operator:
Field: 01
Zone/Pool: 60J
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 656.7 m3
Gas: 0 E6m3
Water: 120.1 m3
Cond: 0 m3

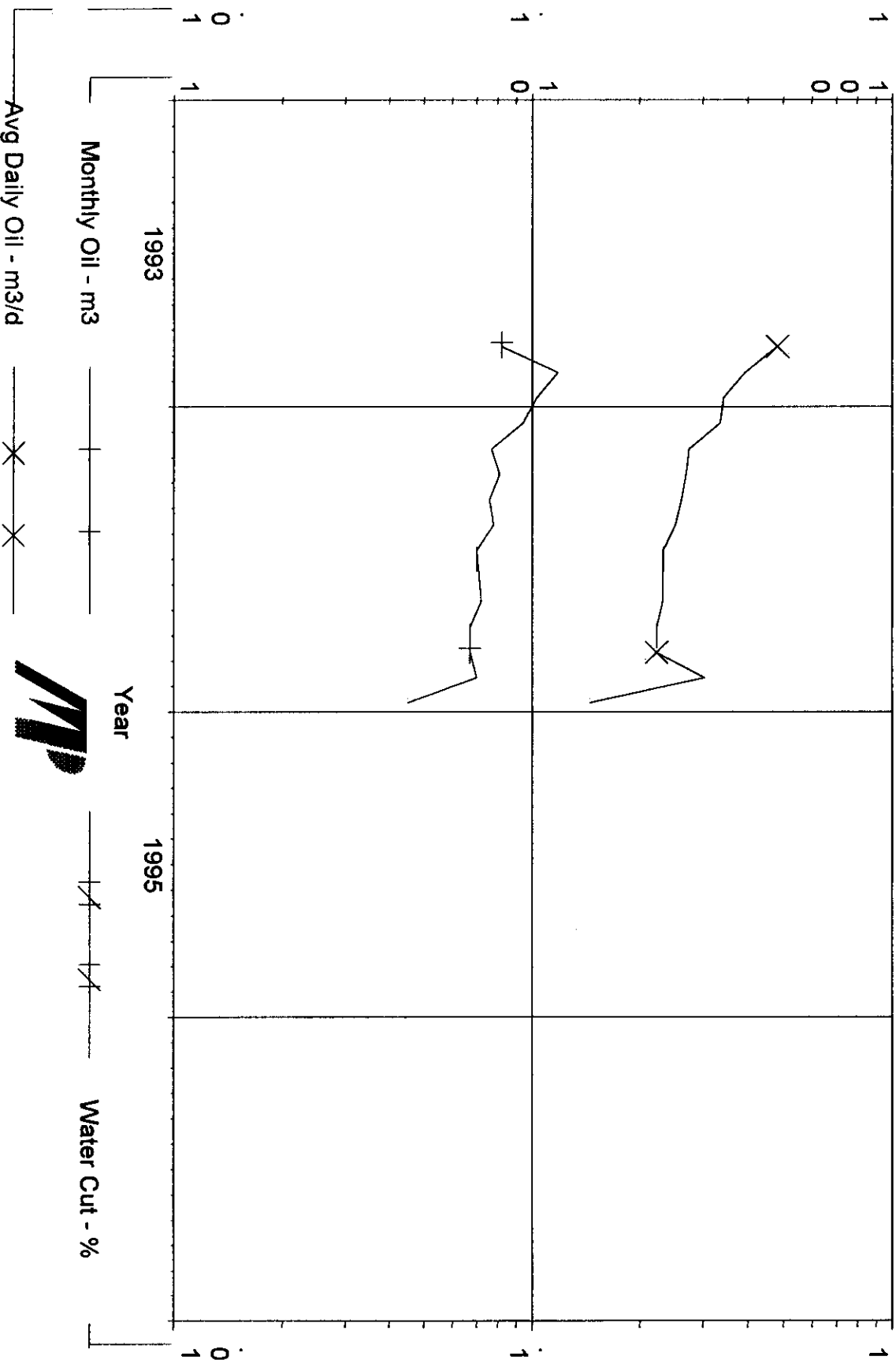


Tundra Daly ---
00/07-18-010-27W1/3 Data 10/93-12/94

Operator:
Field: 01
Zone/Pool: 59A
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 117 m3
Gas: 0 E6m3
Water: 0 m3
Cond: 0 m3



Operator:

Field: 01

Zone/Pool: 60J

Type: Unknown

Group: Dally - 01

No

Active

Forecast

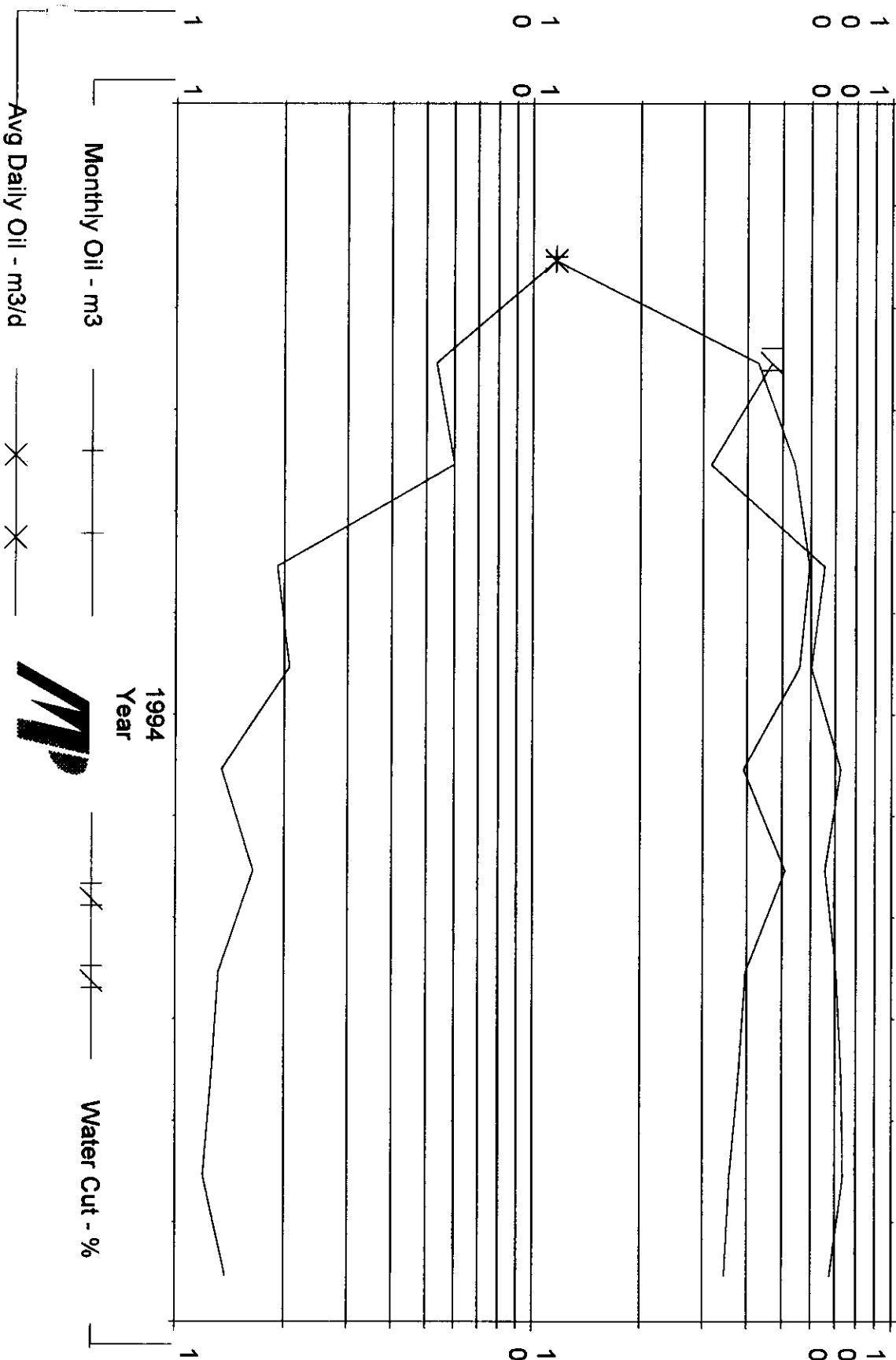
Production Cums

Oil: 461 m3

Gas: 0 E6m3

Water: 827 m3

Cond: 0 m3

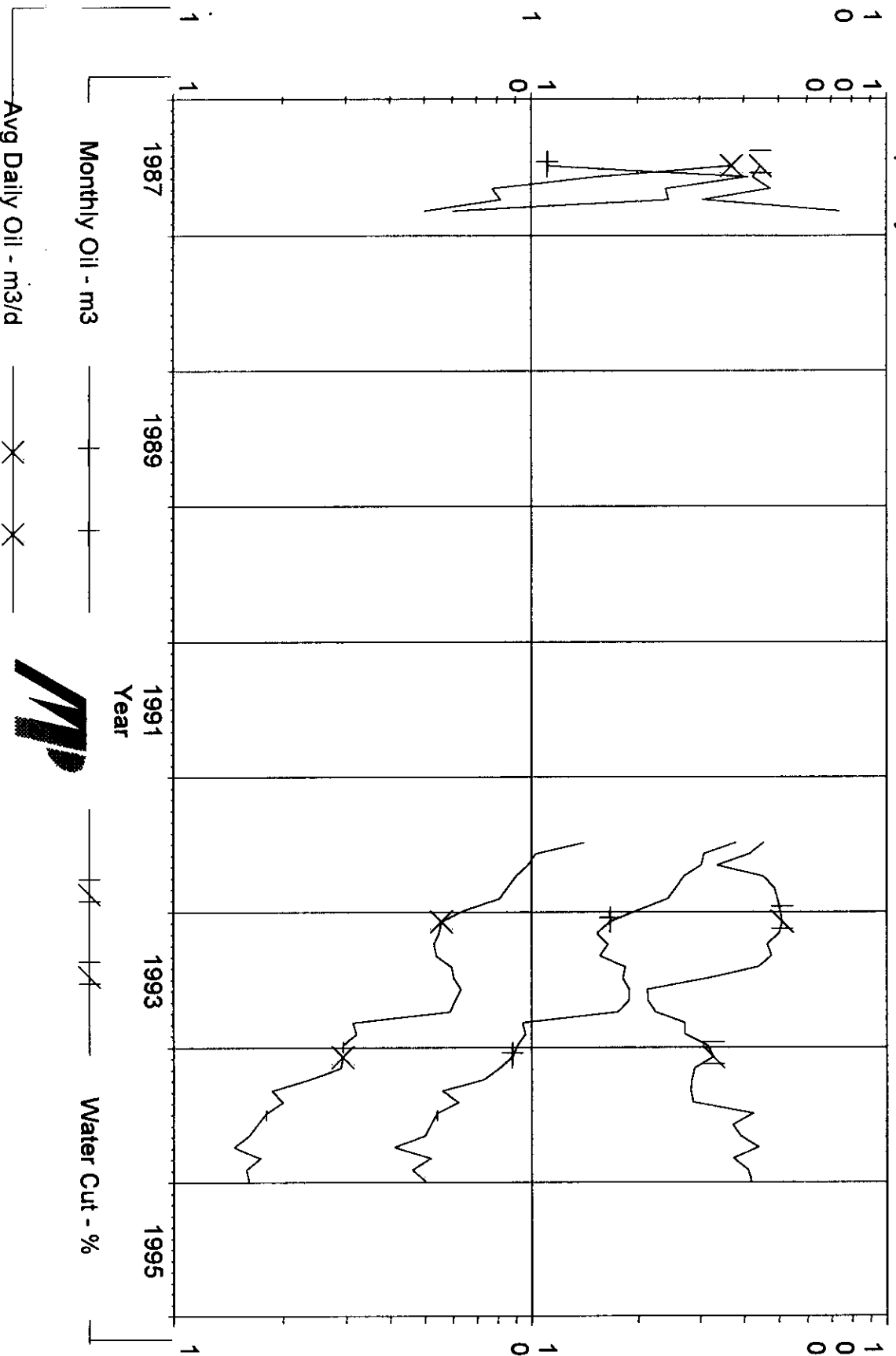


Tundra Daly Prov. Com 13-20-10-28
00/13-20-010-28W1/0 Data 06/87-12/94

Operator:
Field: 01
Zone/Pool: 60B
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 556.8 m3
Gas: 0 E6m3
Water: 396.3 m3
Cond: 0 m3

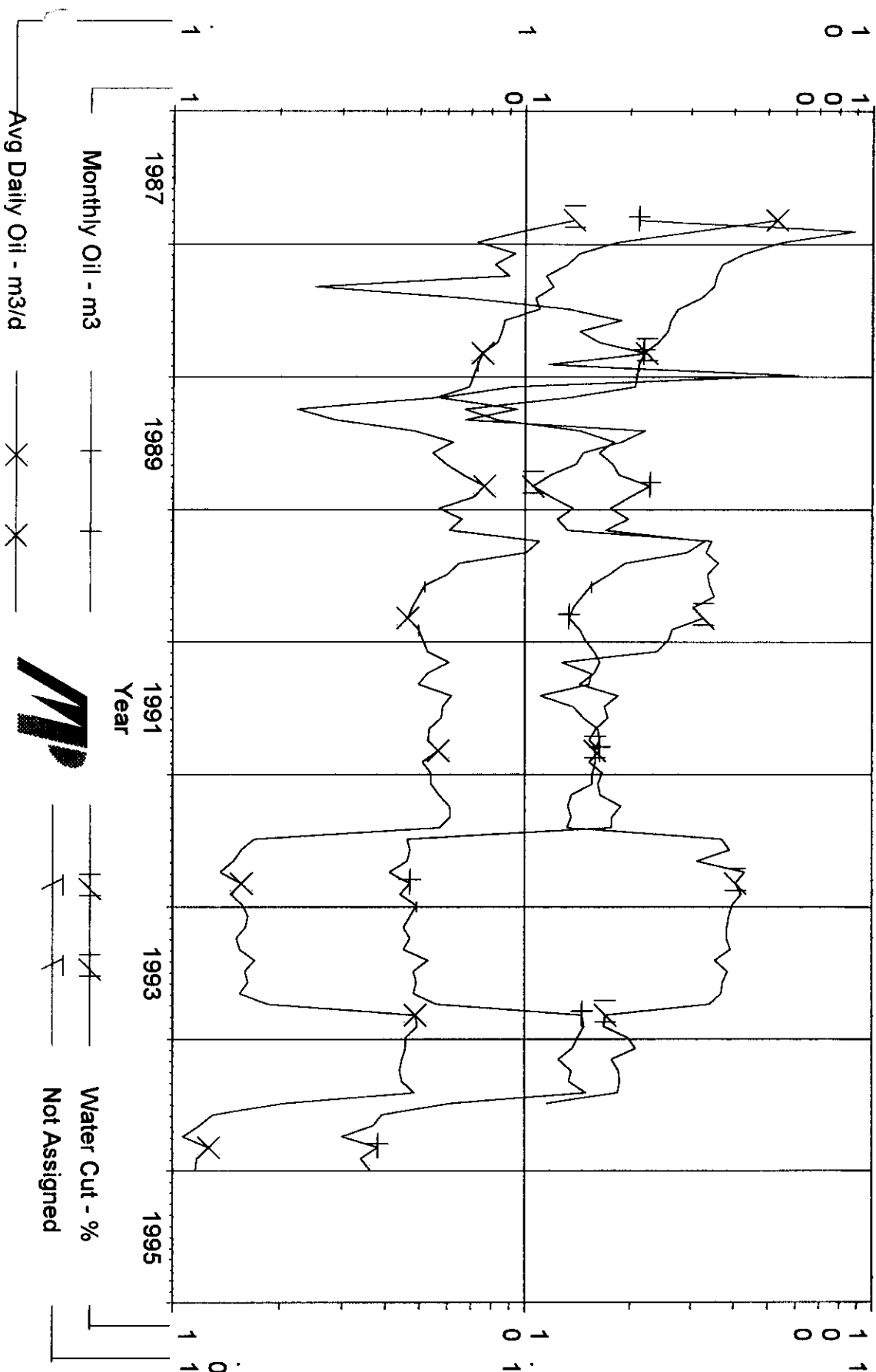


Tundra Daly Prov. Com 13-20-10-28
00/13-20-010-28W1/2 Data 10/87-12/94

Operator:
Field: 01
Zone/Pool: 59E
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 1429.7 m3
Gas: 0 E6m3
Water: 341.6 m3
Cond: 0 m3

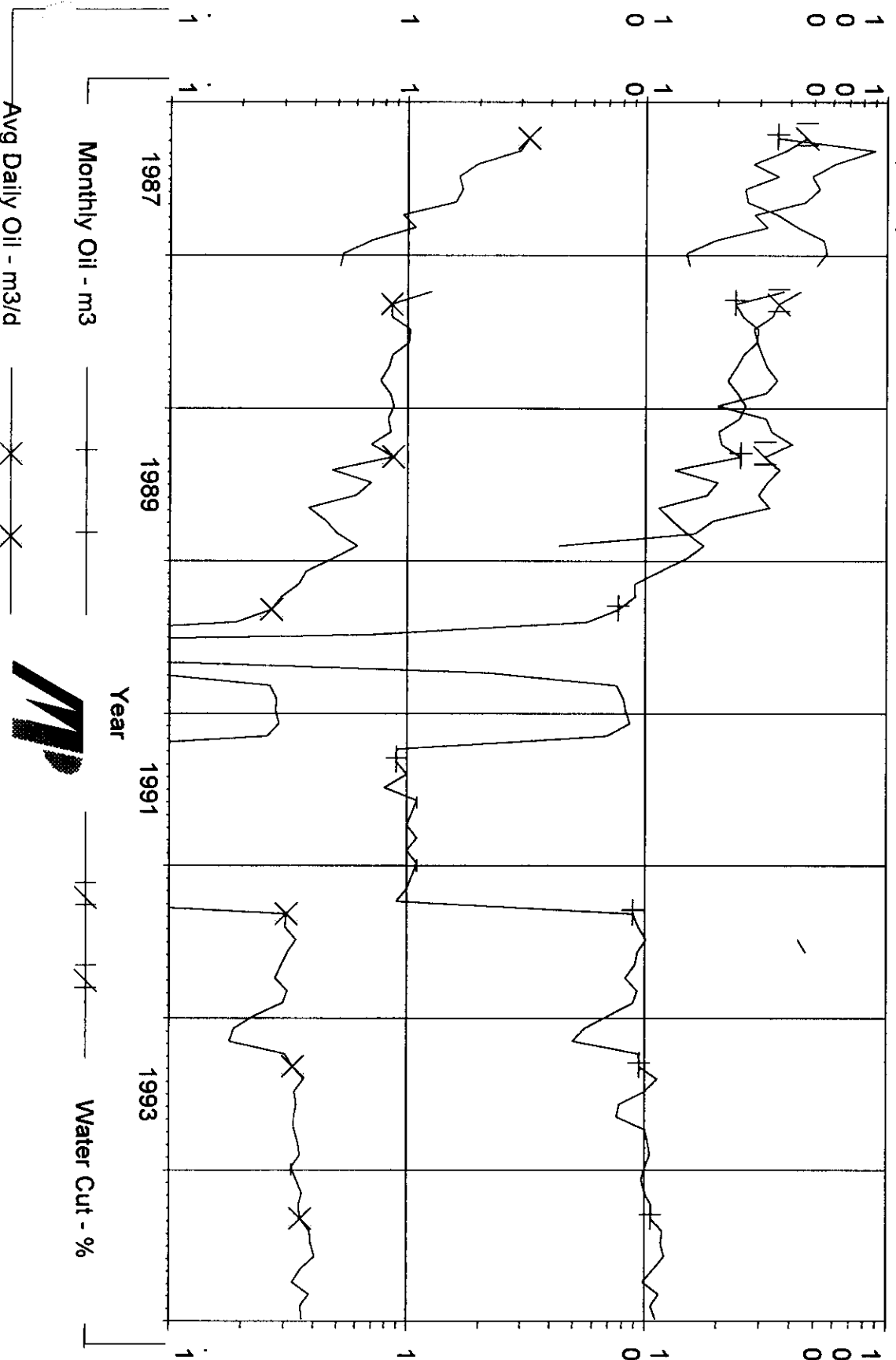


Tundra Daly Prov. Com 07-29-10-28
00/07-29-010-28W1/2 Data 03/87-12/94

Operator:
Field: 01
Zone/Pool: 59E
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 1342.4 m3
Gas: 0 E6m3
Water: 522.8 m3
Cond: 0 m3

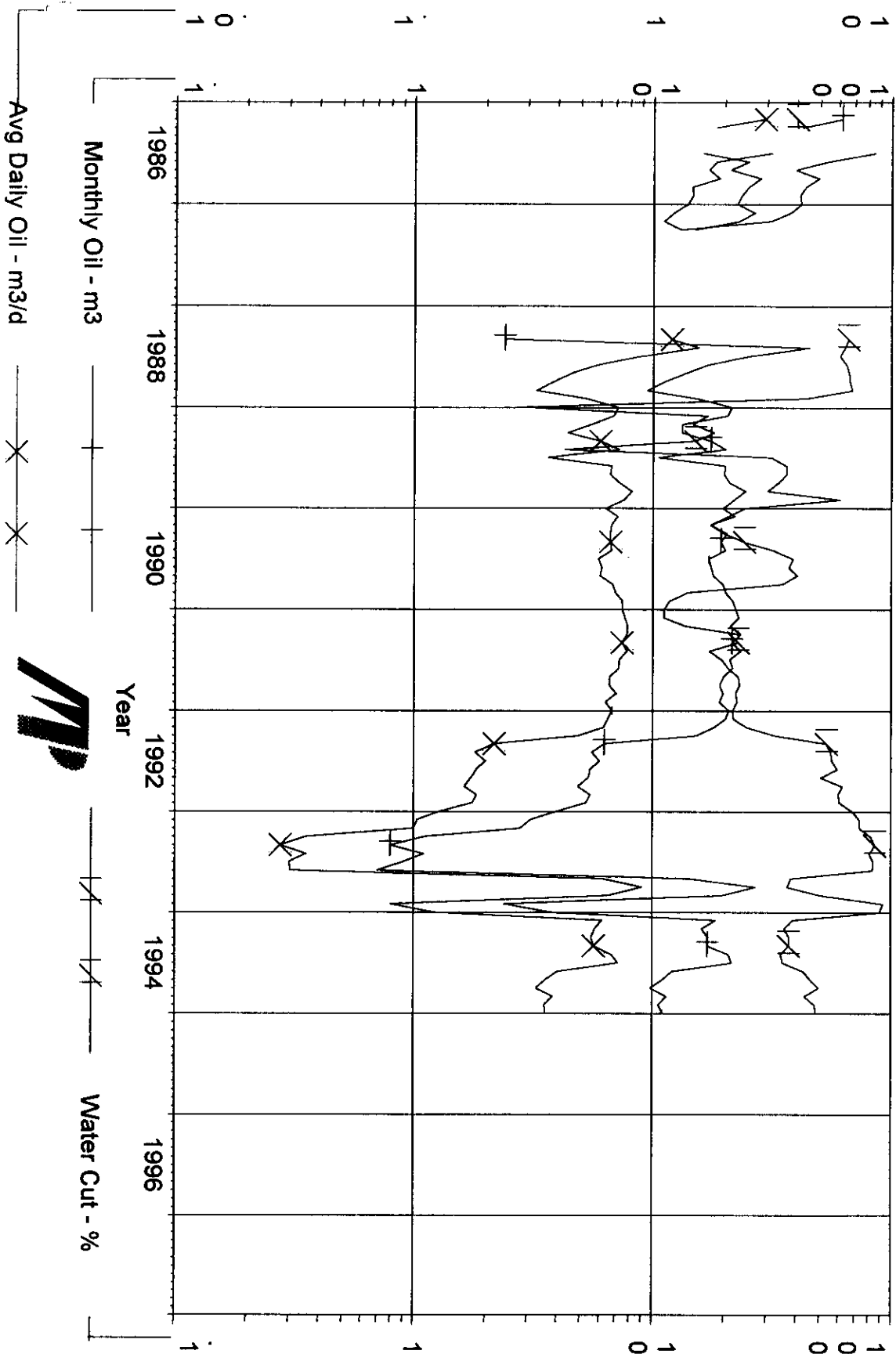


Tundra Daly Prov. Com 07-29-10-28
00/07-29-010-28W1/0 Data 02/86-12/94

Operator:
Field: 01
Zone/Pool: 60B
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 1769.8 m3
Gas: 0 E6m3
Water: 1040.8 m3
Cond: 0 m3

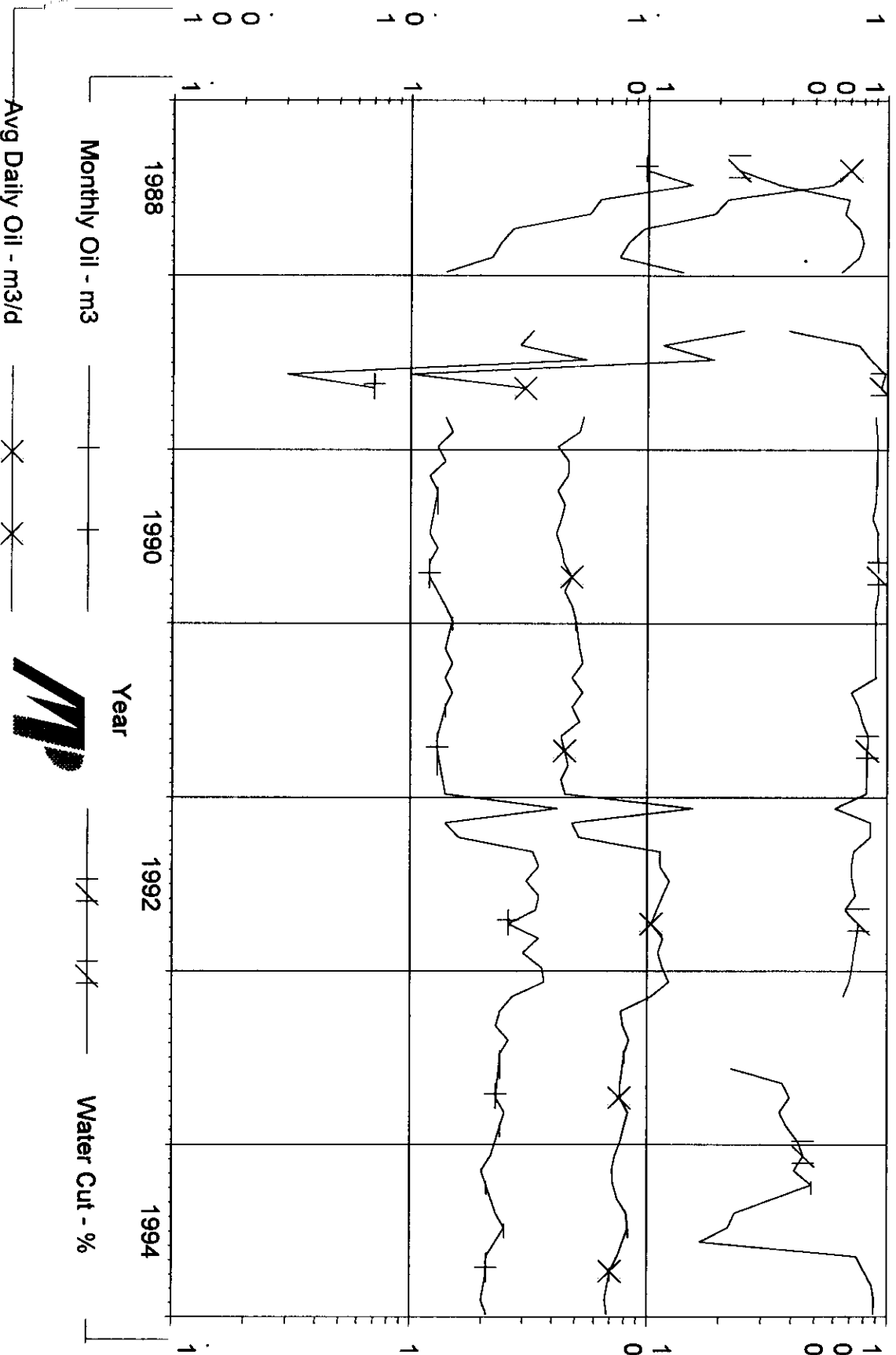


Tundra Daly Prov. Com 11-29-10-28
00/11-29-010-28W1/2 Data 05/88-12/94

Operator:
Field: 01
Zone/Pool: 59E
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 188.3 m3
Gas: 0 E6m3
Water: 606.8 m3
Cond: 0 m3

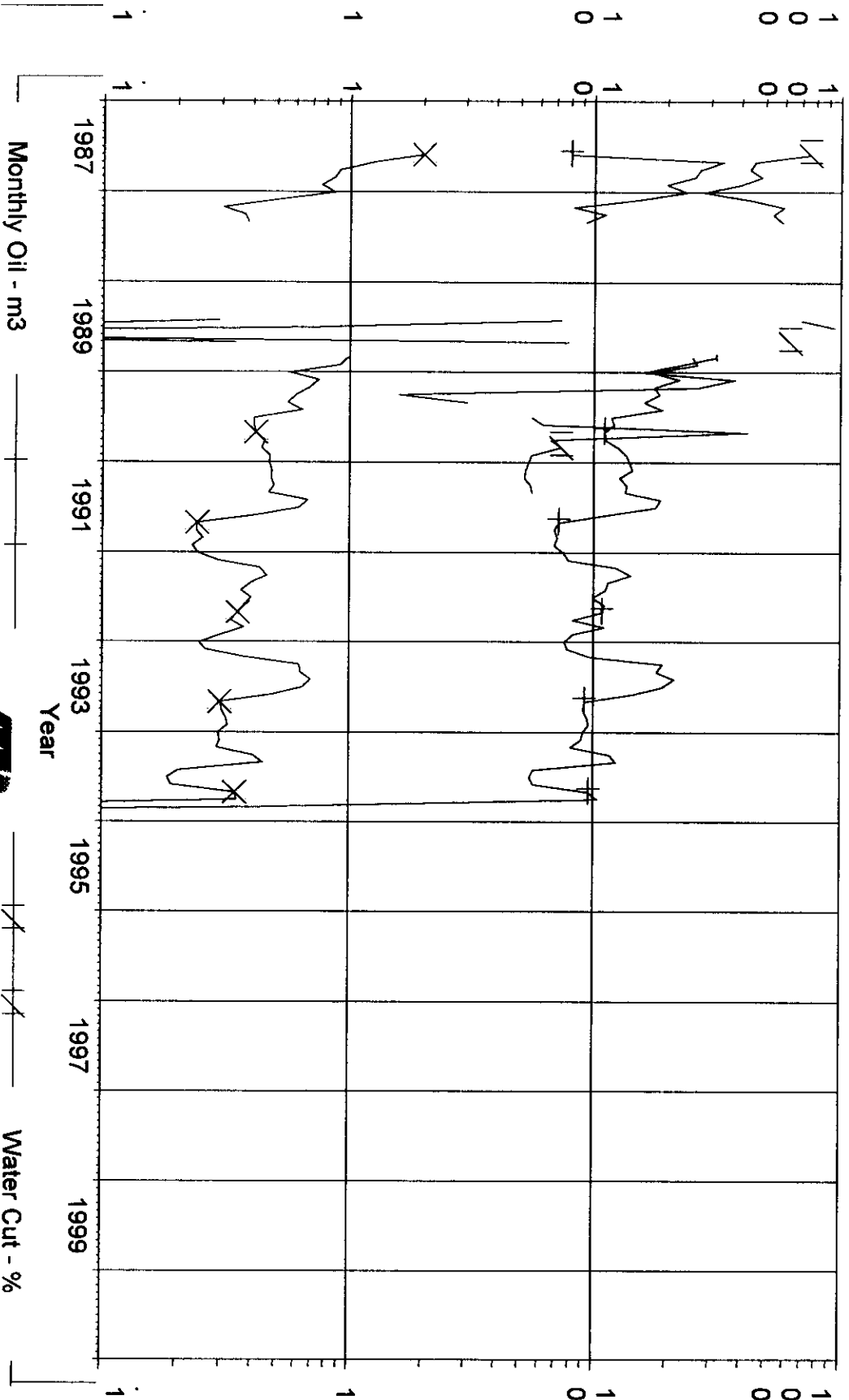


Tundra Daly Prov. Com 11-29-10-28
00/11-29-010-28W1/0 Data 07/87-12/94

Operator:
Field: 01
Zone/Pool: 60B
Type: Unknown
Group: Daly - 01

No
Active
Forecast

Production Cums
Oil: 944.7 m3
Gas: 0 E6m3
Water: 306.5 m3
Cond: 0 m3



Avg Daily Oil - m3/d

x x



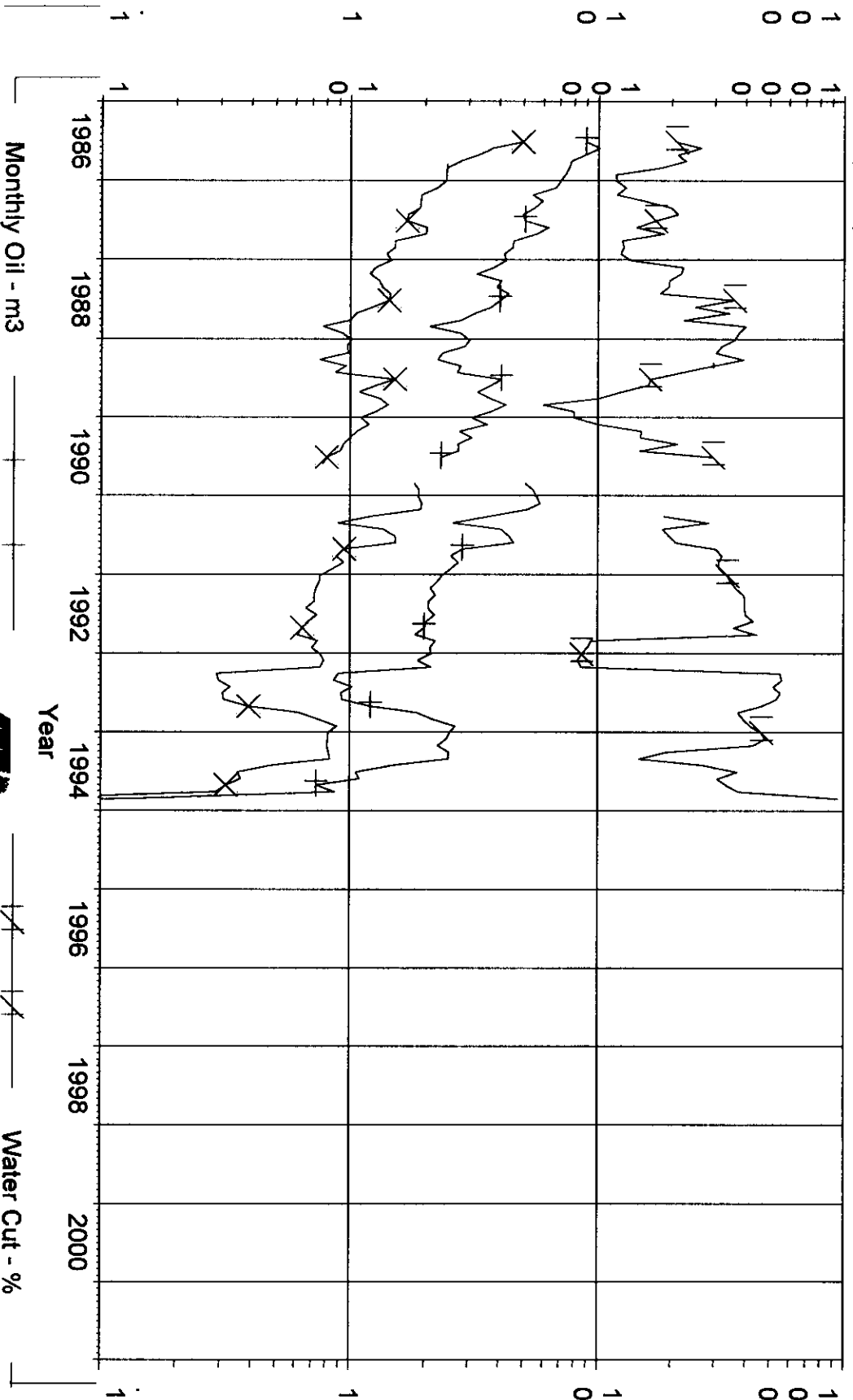
Water Cut - %

Tundra Daly Prov. Com 12-29-10-28
00/12-29-010-28W1/0 Data 06/86-12/94

Operator:
Field: 01
Zone/Pool: 60B
Type: Unknown
Group: daly129bat

No
Active
Forecast

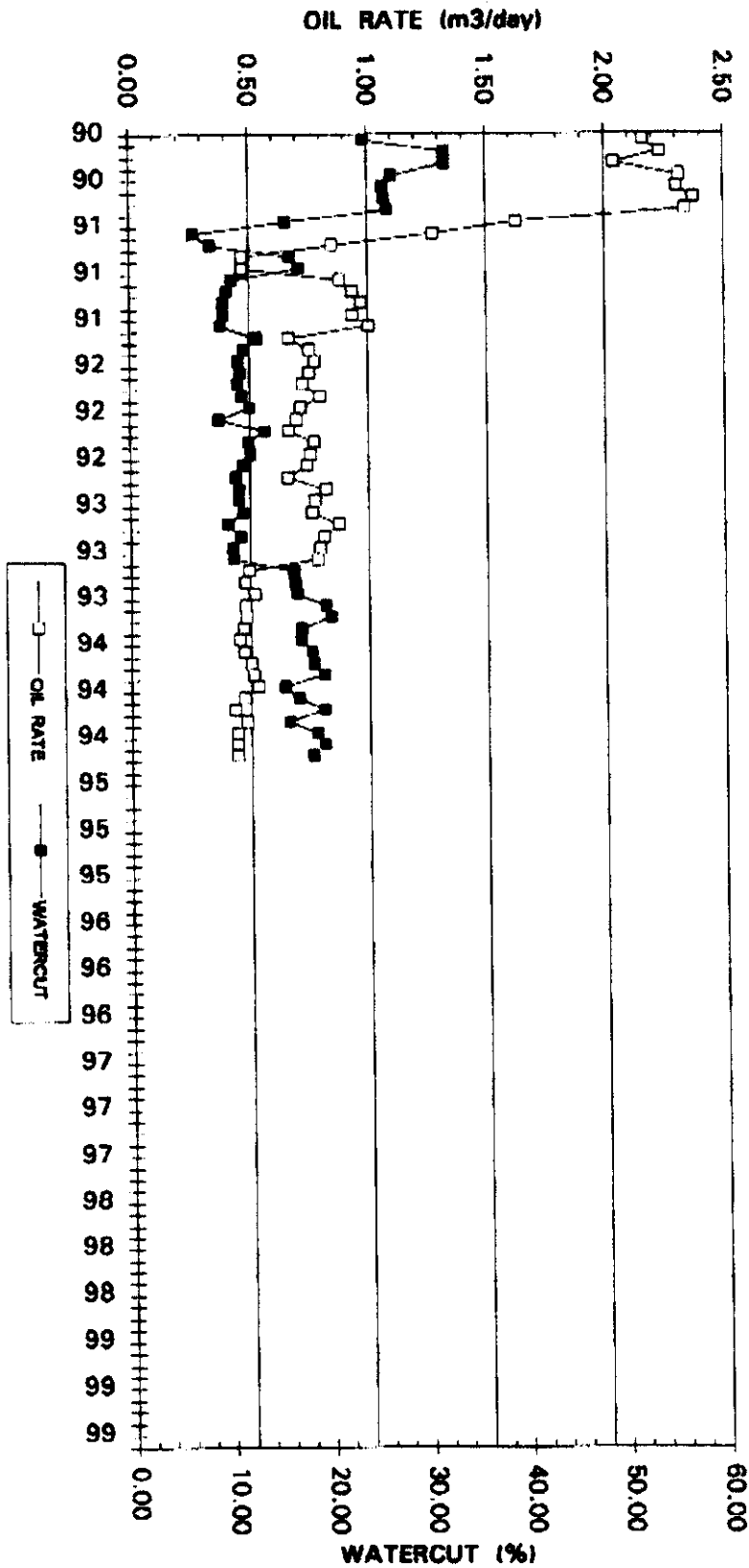
Production Cums
Oil: 3385.4 m3
Gas: 0 E6m3
Water: 1095.7 m3
Cond: 0 m3



DALY 'E' POOL WELL 12-29-10-28 PRODUCTION HISTORY

(LOOSEPOLE)

PRODUCTION TO 95.01.31



Tundra Et Al Daly Prov. Com 13-29-10-28
00/13-29-010-28W1/0 Data 03/90-12/94

Operator:

Field: 01

Zone/Pool: 60B

Type: Unknown

Group: daly129bat

No

Active

Forecast

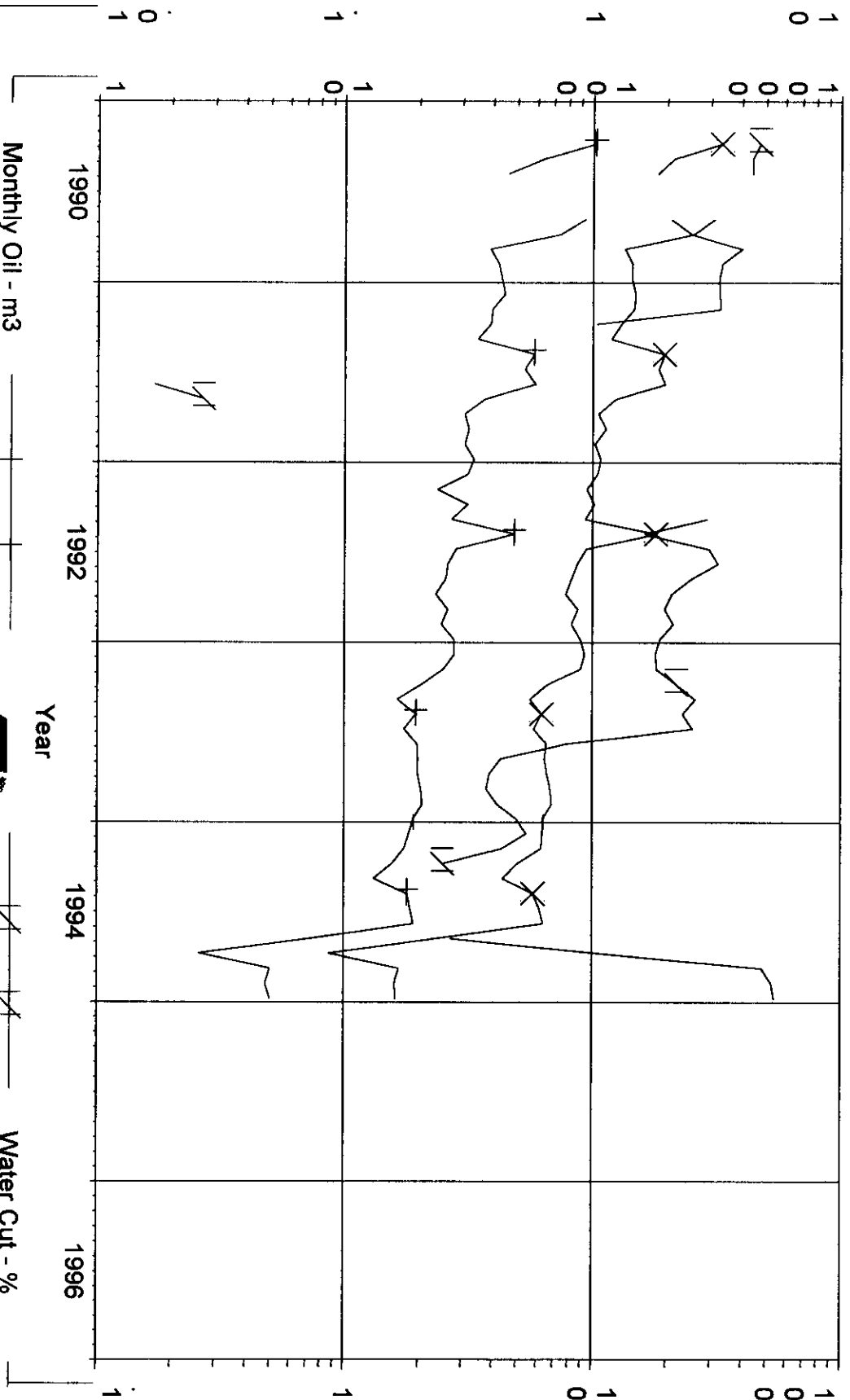
Production Cums

Oil: 1731.3 m3

Gas: 0 E6m3

Water: 480.4 m3

Cond: 0 m3



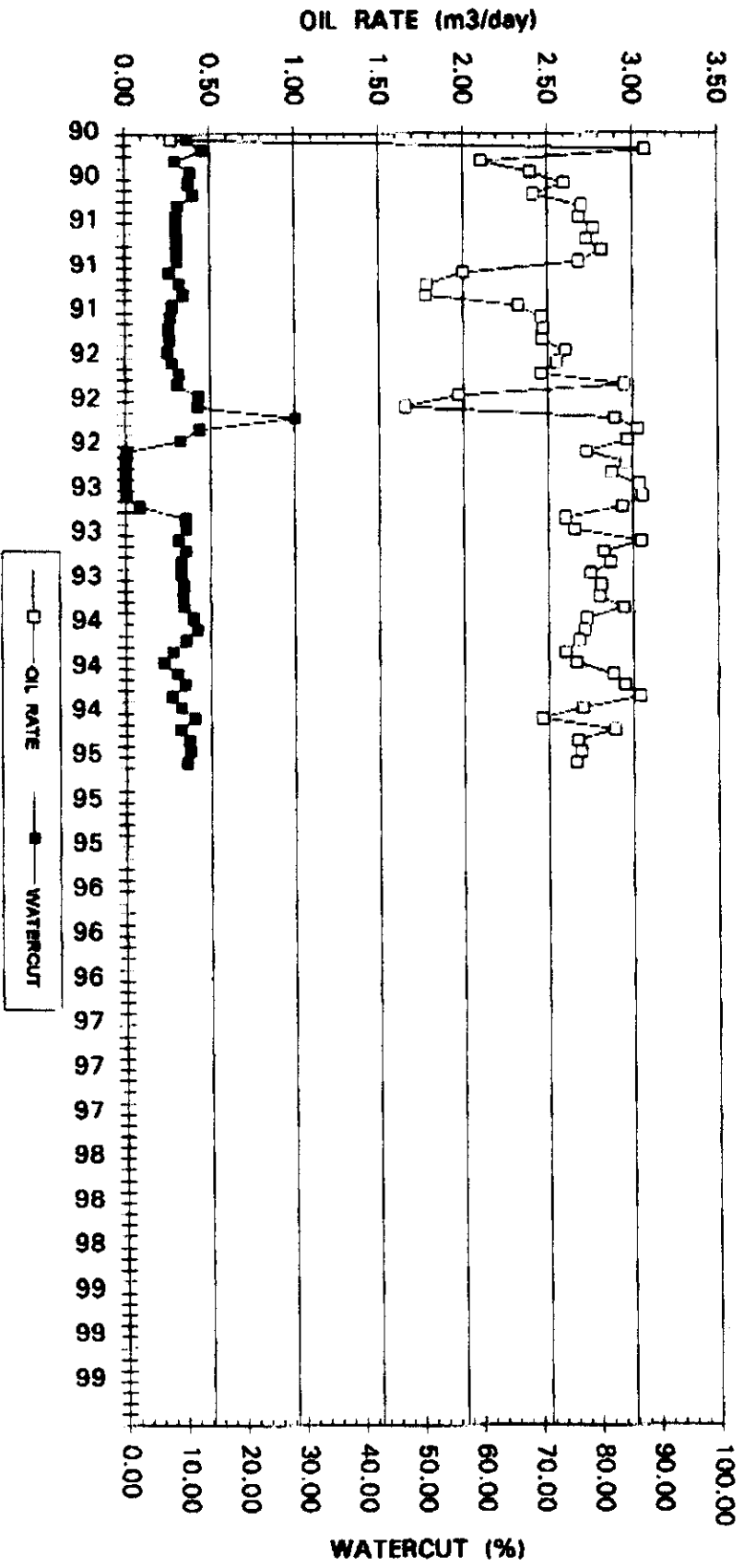
Avg Daily Oil - m3/d

X

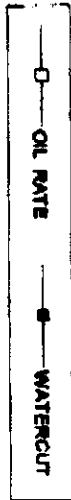


Water Cut - %

DALY 'E' POOL WELL 13-29-10-28 PRODUCTION HISTORY (LOOSE SCALE)
 PRODUCTION TO 95.01.31



PRODUCTION TO 95.01.31

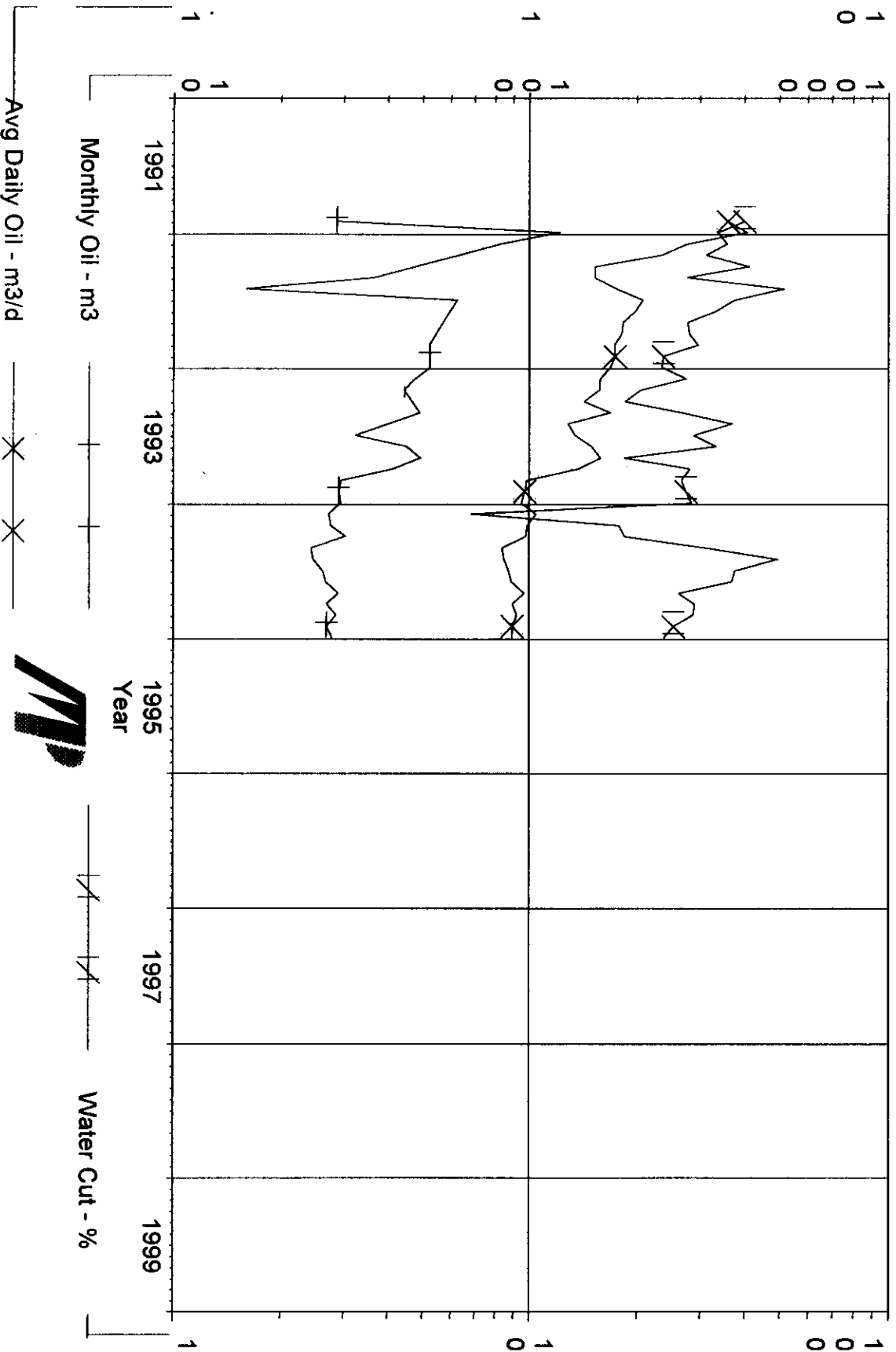


Tundra Daly Prov. Com 04-32-10-28
00/04-32-010-28W1/0 Data 11/91-12/94

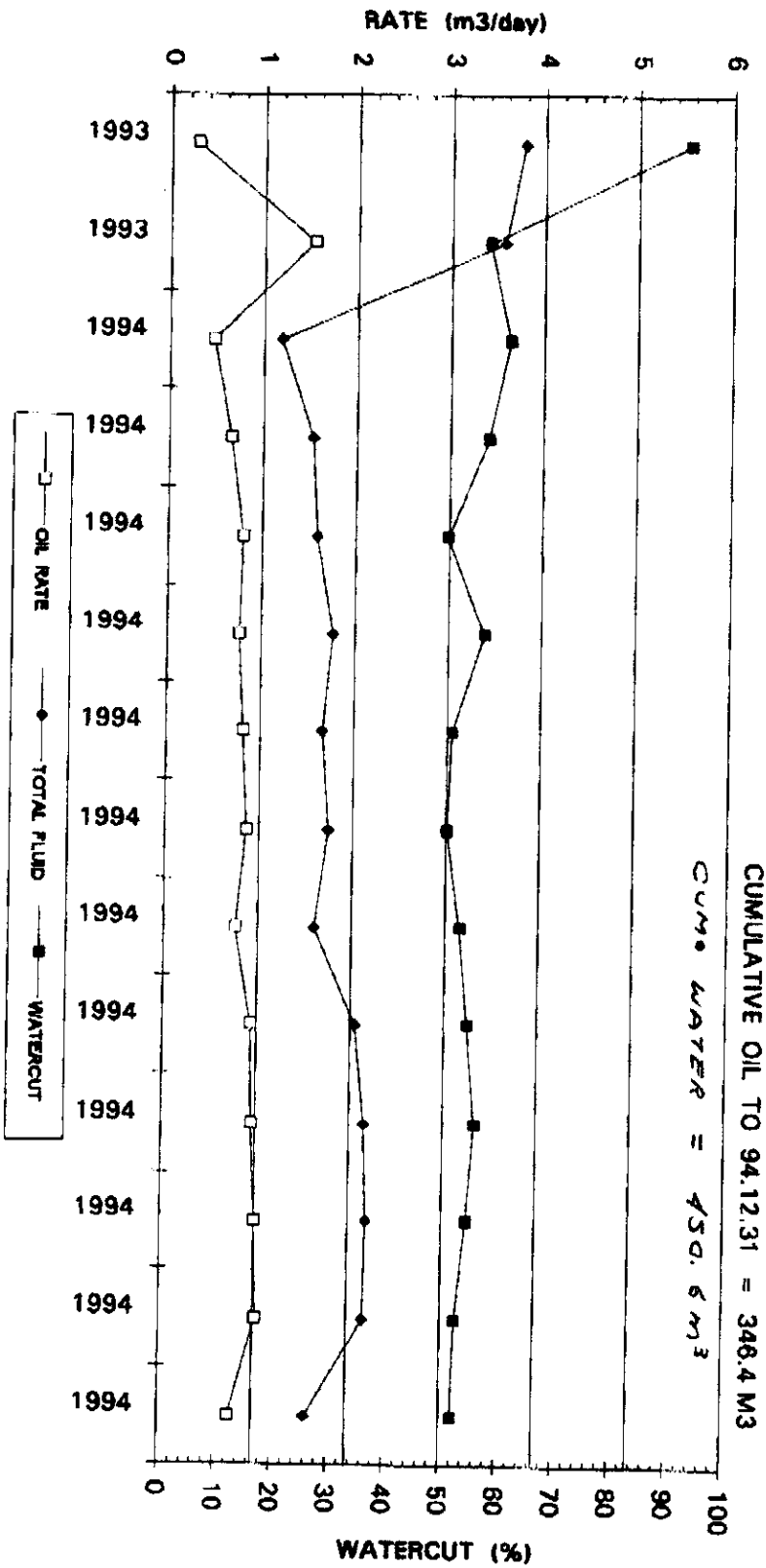
Operator:
Field: 01
Zone/Pool: 60B - Kkn
Type: Unknown
Group: daly129bat

No
Active
Forecast

Production Cums
Oil: 1593.6 m3
Gas: 0 E6m3
Water: 693.8 m3
Cond: 0 m3



BAKKEN PRODUCTION HISTORY WELL 15-2-10-29



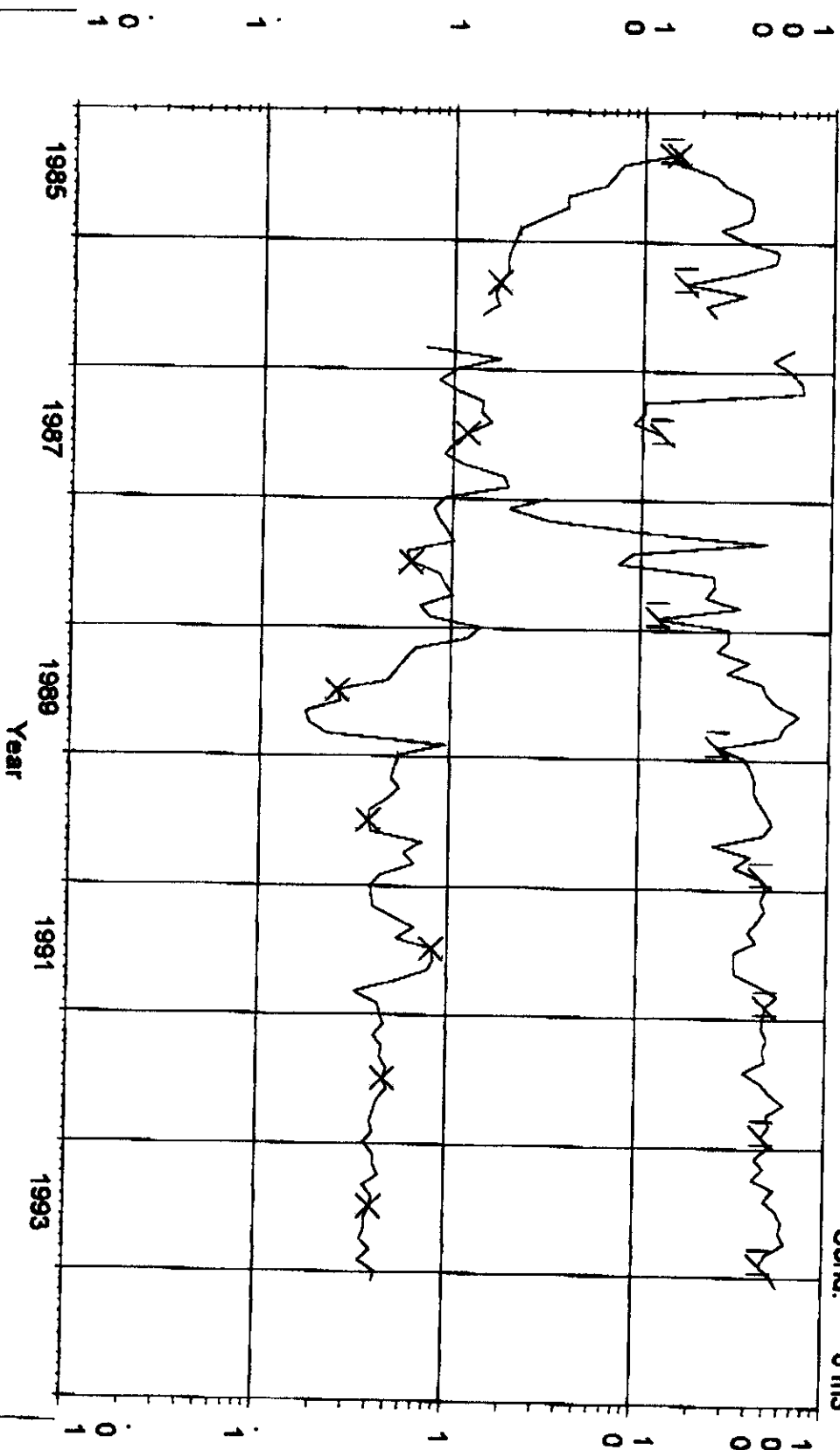
Loose Pole

Tundra Et Al Daily 15-02-10-29W1
00/15-02-010-29W1/O Data 04/85-12/94

Operator:
Field: 01
Zone/Pool: 59D
Type: Unknown
Group: Daily - 01

No
Active
Forecast

Production Cums
Oil: 3046.7 m3
Gas: 0 E6m3
Water: 1619.8 m3
Cond: 0 m3



Avg Daily Oil - m3/d

X X



Water Cut - %

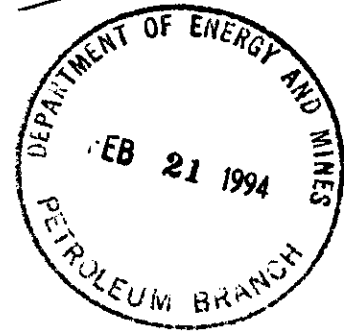
1985 1987 1989 1991 1993

Tundra
oil and gas ltd.

P.O. Box 1960
Virden, Manitoba
R0M 2C0
February 1, 1994

File
DALY FIELD
COMMINGLED
PARO.

John



Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMMINGLED WELLS
DALY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 4th quarter of 1994.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed during the 4th quarter of 1994.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in black ink, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Attachments

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS PRODUCTION

QUARTERLY STATUS REPORT OCT - DEC/93

Well Location	Bakken Oil (m3/day)	Bakken Water (m3/day)	Lodgepole Oil (m3/day)	Lodgepole Water (m3/day)	Total Oil (m3/day)	Total Water (m3/day)	Production Test Date	Lab Analysis & Date	Fluid Level & Date
✓ 2-23-9-28	0.94	0.49	0.10	0.04	1.04	0.53			
✓ 16-22-9-29	3.10	1.97	0.03	0.08	3.13	2.05		1993 11 01	
✓ 7-18-10-27	1.74	0.05	0.37	0.00	2.11	0.05			
✓ 13-20-10-28	0.31	0.12	0.48	0.10	0.79	0.22			
✓ 7-29-10-28	0.28	0.90	0.34	0.00	0.62	0.90	1993 10 22 1993 12 27		
✓ 11-29-10-28	0.31	0.00	0.08	0.15	0.39	0.15			
✓ 12-29-10-28	0.82	0.62	0.50	0.11	1.32	0.73	1993 10 18		
✓ 13-29-10-28	0.67	0.03	2.85	0.32	3.52	0.35			
✓ 4-32-10-28	1.29	0.37	1.64	0.28	2.93	0.65	1993 10 01		
✓ 15-2-10-29	1.17	2.47	0.41	0.44	1.58	2.91	1993 12 19		86 fts. 1993 12 08

7-14-10-29 comingled.



CHEMICAL & GEOLOGICAL LABORATORY LTD.

file



CONTAINER IDENTITY		LABORATORY NUMBER	
		893-3511	
LICENCE NUMBER		OPERATOR NAME	
		TUNDRA OIL AND GAS LTD.	
LOCATION		WELL NAME	
16-22-9-29 W1		TUNDRA DALY 16-22-9-29	
FIELD OR AREA		POOL OR ZONE	
DALY			
TEST TYPE		TEST RECOVERY	
NO.			
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT	
PERFORATIONS (metres)		WELLHEAD	
		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		@ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa			
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)		DATE RECEIVED (Y-M-D)	
93-10-20		93-10-27	
DATE REPORTED (Y-M-D)		ANALYST	
93-11-01		I. MALCOMSON	
		OTHER INFORMATION	

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. GRAVITY

MASS FRAC. G/KG

0.817 816 41.7

0.0022 2.20

RECEIVED
NOV 5 1993
RECEIVED

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

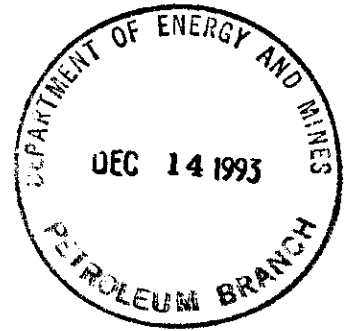
SIGNATURE OF SUPERVISOR *Samir Sargious*

Tundra
oil and gas ltd.

- copy to Record
File - Daly Field
"Commingled
Production"

John

P.O. Box 1960
Virden, Manitoba
R0M 2C0
November 8, 1993



Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMMINGLED WELLS
DALY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 3rd quarter of 1993.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed during the 3rd quarter of 1993.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in cursive script, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Attachments

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS PRODUCTION

QUARTERLY STATUS REPORT JUL - SEP/93

Well Location	Bakken Oil (m3/day)	Bakken Water (m3/day)	Lodgepole Oil (m3/day)	Lodgepole Water (m3/day)	Total Oil (m3/day)	Total Water (m3/day)	Production Test Date	Lab Analysis & Date	Fluid Level & Date
2-23-9-28	0.97	0.73	0.10	0.07	1.07	0.80			
16-22-9-29	2.94	2.28	0.31	0.58	3.25	2.86		1993 09 10	77 jts. 1993 08 14
13-20-10-28	0.61	0.17	0.17	0.09	0.78	0.26	1993 09 28	1993 09 10	
7-29-10-28	0.55	0.37	0.33	Nil	0.88	0.37	1993 08 18		
11-29-10-28	0.36	Nil	0.08	0.04	0.44	0.04	1993 07 17		
12-29-10-28	0.44	0.35	0.70	0.09	1.14	0.44	1993 09 01	1993 09 18	
13-20-10-28	0.65	0.04	2.81	0.29	3.46	0.33	1993 07 07		
4-32-10-28	1.49	0.55	1.36	0.16	2.85	0.71		1993 09 10	

47-14-10 29

09/17/1993 08:33

FROM C. G. LABS

TO 12L 481007

P. 01
LABORATORY NUMBER
593-3483

LICENCE NUMBER		OPERATOR NAME TUNDRA OIL & GAS LTD.		ELEVATIONS (metres) K.B. GHD.	
LOCATION 50R		WELL NAME TUNDRA DALY PROV		COMPANY TUNDRA	
FIELD OR AREA DALY		POOL OR ZONE		NAME OF SAMPLER MIKE DUFONT	
TEST TYPE NO.		TEST RECOVERY			
MULTIPLE RECOVERY Y N		SAMPLING POINT		AMT. & TYPE OF CUSHION	
				MUD RESISTIVITY @ 25°C	
TEST INTERVAL (meters)		TYPE OF PRODUCTION			
PERFORATIONS (metres)		PUMP/IG FLOWING GAS LIFT SWAB PRODUCTION RATES WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED GAUGE PRESSURE KPS SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED TEMPERATURE °C ANALYST I. HALCUNSON OTHER INFORMATION			
DATE SAMPLED (Y-M-D) 93-09-06		DATE RECEIVED (Y-M-D) 93-09-10		DATE REPORTED (Y-M-D) 93-09-13	

	DENSITY @ 15C			TOTAL SULPHUR	
	REL.	ABS.	API. GRAVITY	MASS FRAC.	G/KG
13-20-10-28 W1	0.850	849	35.0	0.0109	10.9
12-29-10-28 W1	0.839	838	37.2	0.0086	8.6
04-32-10-28 W1	0.842	841	36.6	0.0112	11.2

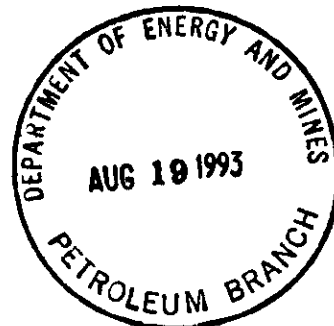
SAMPLES CENTERFUGED PRIOR TO ANALYSIS

16-22-9-29 W1 0.811 810 43.0 0.0023 2.3

Tundra
oil and gas ltd.

FIG: Daly Field
Commingled Wells *John*

P.O. Box 1960
Virden, Manitoba
R0M 2C0
July 30, 1993



Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMMINGLED WELLS
DALY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 2nd quarter of 1993.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed during the 2nd quarter of 1993.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in dark ink, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Attachments

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS

QUARTERLY STATUS REPORT APR - JUN/93

WELL LOCATION	PRODUCTION (m3/day)						PRODUCTION TEST DATE	LAB ANALYSIS & DATE	FLUID LEVEL & DATE
	BAKKEN Oil	BAKKEN Water	LODGEPOLE Oil	LODGEPOLE Water	TOTAL Oil	TOTAL Water			
2-23-9-28	1.17	0.81	0.12	0.07	1.29	0.88	—	—	1993 04 14 (87 jts.)
13-20-10-28	0.58	0.41	0.16	0.10	0.74	0.51	1993 06 10	—	1993 04 19 (78 jts.)
7-29-10-28	0.03	0.16	0.34	Nil	0.37	0.16	—	—	1993 04 05 (80 jts.)
11-29-10-28	0.65	Nil	0.08	Nil	0.73	Nil	—	—	1993 04 19 (82 jts.)
12-29-10-28	0.31	0.37	0.82	0.10	1.13	0.47	—	—	1993 04 19 (79 jts.)
13-29-10-28	0.59	0.20	2.88	0.31	3.47	0.51	—	1993 04 08 CKG Labs	1993 04 19 (79 jts.)
4-32-10-28	1.44	0.65	1.32	0.19	2.76	0.84	—	—	1993 04 08 (83 jts.)

04/12/1993 07:56

FROM C & G LABS

TO 12047481007

P.01



CHEMICAL & GEOLOGICAL LABORATORIES INC.



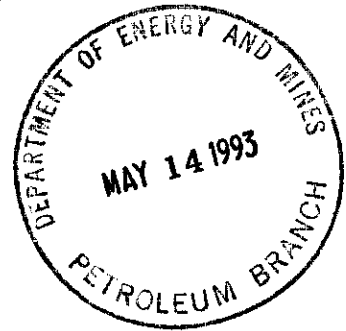
CONTAINER IDENTITY		LABORATORY NUMBER 693-3375	
LICENCE NUMBER	OPERATOR NAME TUNDRA OIL & GAS LTD.		ELEVATIONS (metres) K.B. G.B.
LOCATION SEE BELOW	WELL NAME SEE BELOW		COMPANY
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
TEST INTERVAL (metres)	SAMPLING POINT		AMT. & TYPE OF CUSHION
			MUD RESISTIVITY @ 25°C
	TYPE OF PRODUCTION		
	<input type="checkbox"/> PUMPING <input type="checkbox"/> FLOWING <input type="checkbox"/> GAS LIFT <input type="checkbox"/> SWAB		
PERFORATIONS (metres)	PRODUCTION RATES		
	WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d		
	SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	GAUGE PRESSURE kPa TEMPERATURE °C		
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
	93-04-08	93-04-08	1. HALDUNSON
OTHER INFORMATION			

AREA	LOCATION		REL.	ABS.	API. GRAVITY	TOTAL SULPHUR	
						MASS FRAC.	G/KG
DALY PROV.	13-29-10-28 W1	WELLHEAD	0.849	848	35.2	0.0142	14.2
REGENT	08-11-04-22 W1	TREATER	1.0851	850	34.8	0.0092	9.2

Tundra
oil and gas ltd.

P.O. Box 1960
Virden, Manitoba
ROM 2C0
April 30, 1993

JOHN



Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMINGLED WELLS
DALY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 1st quarter of 1993.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There was a pressure survey performed at Daly 2-23-9-28 during the 1st quarter of 1993. See attached.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in dark ink, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Attachments

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS

QUARTERLY STATUS REPORT JAN - MAR/93

WELL LOCATION	PRODUCTION (m3/day)						PRODUCTION TEST DATE	LAB ANALYSIS & DATE	FLUID LEVEL & DATE
	BAKKEN Oil	BAKKEN Water	LODGEPOLE Oil	LODGEPOLE Water	TOTAL Oil	TOTAL Water			
2-23-9-28	1.38	0.94	0.15	0.08	1.53	1.02	1993 02 01	1993 02 22 CKG Labs	—
13-20-10-28	0.54	0.53	0.16	0.10	0.70	0.63	1993 02 18	—	1993 03 18 (76 jts.)
7-29-10-28	0.08	0.24	0.22	Nil	0.30	0.24	1993 03 05	1993 02 22 CKG Labs	—
11-29-10-28	0.42	Nil	0.10	0.16	0.52	0.16	1993 02 19	1993 02 22 CKG Labs	—
12-29-10-28	0.59	0.18	0.81	0.10	1.40	0.28	1993 03 01	—	—
13-29-10-28	0.83	0.20	2.89	0.12	3.72	0.32	1993 03 12	—	—
4-32-10-28	1.53	0.45	1.40	0.13	2.93	0.58		—	—



CHEMICAL & GEOLOGICAL LABORATORIES LTD.



OIL ANALYSIS

LABORATORY NUMBER

993-3333-2

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

2-23-9-28 W1

WELL NAME

TUNDRA DALY COM 2-23-9-28

ELEVATIONS (metres)

K.B.

GRD.

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

TEST RECOVERY

MULTIPLE
RECOVERY

Y

N

SAMPLING POINT

WELLHEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25°C

TEST INTERVAL (metres)

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

PERFORATIONS (metres)

GAUGE PRESSURE

kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE

°C

DATE SAMPLED (Y-M-D)

93-02-11

DATE RECEIVED (Y-M-D)

93-02-15

DATE REPORTED (Y-M-D)

93-02-22

ANALYST

I. MALCOMSON

OTHER INFORMATION

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

B.S. & W. (VOLUME FRACTION)

WATER

SEDIMENT

TOTAL

DENSITY at 15°C

RELATIVE

AS RECEIVED

AFTER CLEANING

ABSOLUTE kg/m³

AS RECEIVED

AFTER CLEANING

A.P.I. GRAVITY

39.4

TOTAL SULFUR

(MASS FRACTION)

0.0031

g/kg.

3.10

POUR POINT

°C

U.S.B.M.

A.S.T.M.

CARBON RESIDUE

(MASS FRACTION)

RVP kPa

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s

DISTILLATION

VOLUME
FRACTION
DISTILLEDTEMP.
°C

I.B.P.

0.05

0.10

0.15

0.20

0.25

0.30

0.35

0.40

0.45

0.50

0.55

0.60

0.65

0.70

0.75

0.80

0.85

0.90

0.95

1.00

F.B.P.

CRACKED

METHOD

BAROM. PRESS. kPa (abs)

ROOM TEMP. °C

DISTILLATION SUMMARY

(VOLUME FRACTION)

200°C

NAPHTHA

275°C

KEROSENE

350°C

LIGHT GAS OIL

RECOVERED

RESIDUE

DISTILLATION

LOSS

BASE TYPE:

CHARACTERIZATION FACTOR:

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

SIGNATURE OF SUPERVISOR



CHEMICAL & GEOLOGICAL LABORATORIES LTD.



OIL ANALYSIS

CONTAINER IDENTITY		LABORATORY NUMBER	
		693-2333-3	
LICENCE NUMBER	OPERATOR NAME		
	TUNDRA OIL AND GAS LTD.		
LOCATION	WELL NAME		ELEVATIONS (metres)
7-29-10-28 W1	TUNDRA DALY PROV COM 7-29-10-28		K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
SAMPLING POINT		AMT. & TYPE OF CUSHION	MUD RESISTIVITY
WELLHEAD			@ 25° C
TYPE OF PRODUCTION			
PUMPING FLOWING GAS LIFT SWAB			
PRODUCTION RATES			
WATER m ³ /d		OIL m ³ /d	
SEPARATOR		TREATER	
GAUGE PRESSURE kPa		RESERVOIR	
SEPARATOR		SOURCE	
TEMPERATURE °C		SAMPLED	
RECEIVED			
DATE SAMPLED (Y-M-D)		DATE RECEIVED (Y-M-D)	
93-02-11		93-02-15	
DATE REPORTED (Y-M-D)		ANALYST	
93-02-22		I. MALCOMSON	
OTHER INFORMATION			

SAMPLE PROPERTIES

B.S. & W. (VOLUME FRACTION)			
COLOR OF CLEAN OIL	WATER	SEDIMENT	TOTAL
DENSITY at 15° C			
RELATIVE		ABSOLUTE kg/m ³	
AS RECEIVED	AFTER CLEANING	AS RECEIVED	AFTER CLEANING
	0.875		874
A.P.I. GRAVITY			
30.2			
TOTAL SULFUR		POUR POINT °C	
(MASS FRACTION)	g/kg	U.S.B.M.	A.S.T.M.
0.0156	15.6		
CARBON RESIDUE (MASS FRACTION)			
RVP kPa	CONRADSON	RAMSBOTTOM	
VISCOSITY			
TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s	

DISTILLATION

VOLUME FRACTION DISTILLED	TEMP. °C	
I.B.P.		
0.05		
0.10		
0.15		
0.20		
0.25		
0.30		
0.35		
0.40		
0.45		
0.50		
0.55		
0.60		
0.65		
0.70		
0.75		
0.80		
0.85		
0.90		
0.95		
1.00		
F.B.P.		
CRACKED		
METHOD		
BAROM. PRESS. kPa (abs)		
ROOM TEMP. °C		
DISTILLATION SUMMARY (VOLUME FRACTION)		
200° C NAPHTHA	275° C KEROSENE	350° C LIGHT GAS OIL
RECOVERED	RESIDUE	DISTILLATION LOSS
BASE TYPE:		
CHARACTERIZATION FACTOR:		

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

SIGNATURE OF SUPERVISOR Samir Sanghvi



OIL ANALYSIS

LABORATORY NUMBER

S93-3333-4

CONTAINER IDENTITY

LICENCE NUMBER

OPERATOR NAME

TUNDRA OIL AND GAS LTD.

LOCATION

11-29-10-28 W1

WELL NAME

TUNDRA DALY PROV COM 11-29-10-28

ELEVATIONS (metres)
K.B. GRD.

FIELD OR AREA

POOL OR ZONE

NAME OF SAMPLER

COMPANY

TEST TYPE

NO.

MULTIPLE
RECOVERY

Y N

TEST RECOVERY

SAMPLING POINT

WELLHEAD

AMT. & TYPE OF CUSHION

MUD RESISTIVITY

@ 25° C

TEST INTERVAL (metres)

PERFORATIONS (metres)

TYPE OF PRODUCTION

PUMPING

FLOWING

GAS LIFT

SWAB

PRODUCTION RATES

WATER

m³/d

OIL

m³/d

GAS

10³m³/d

GAUGE PRESSURE kPa

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

TEMPERATURE °C

SEPARATOR

TREATER

RESERVOIR

SOURCE

SAMPLED

RECEIVED

DATE SAMPLED (Y-M-D)

93-02-11

DATE RECEIVED (Y-M-D)

93-02-15

DATE REPORTED (Y-M-D)

93-02-22

ANALYST

I. MALCOMSON

OTHER INFORMATION

SAMPLE PROPERTIES

COLOR OF CLEAN OIL

S.S. & W. (VOLUME FRACTION)

WATER

SEDIMENT

TOTAL

DENSITY at 15° C

RELATIVE

AS RECEIVED

AFTER CLEANING

ABSOLUTE kg/m³

AS RECEIVED

AFTER CLEANING

A.P.I. GRAVITY

39.8

TOTAL SULFUR

(MASS FRACTION)

0.0036

g/kg.

3.60

POUR POINT
°C

U.S.B.M.

A.S.T.M.

CARBON RESIDUE
(MASS FRACTION)

RVP kPa

CONRADSON

RAMSBOTTOM

VISCOSITY

TEMP. °C	ABSOLUTE mPa.s	KINEMATIC mm ² /s

DISTILLATION

VOLUME
FRACTION
DISTILLEDTEMP.
°C

I.B.P.

0.05

0.10

0.15

0.20

0.25

0.30

0.35

0.40

0.45

0.50

0.55

0.60

0.65

0.70

0.75

0.80

0.85

0.90

0.95

1.00

F.B.P.

CRACKED

METHOD

BAROM. PRESS. kPa (abs)

ROOM TEMP. °C

DISTILLATION SUMMARY

(VOLUME FRACTION)

200° C
NAPHTHA275° C
KEROSENE350° C
LIGHT GAS OIL

RECOVERED

RESIDUE

DISTILLATION
LOSS

BASE TYPE:

CHARACTERIZATION FACTOR:

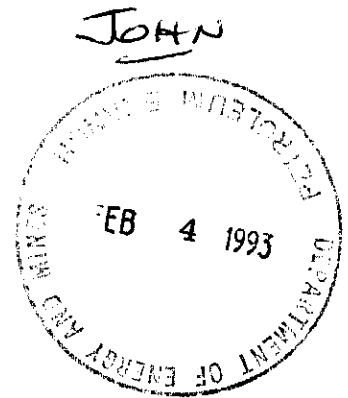
ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.

SIGNATURE OF SUPERVISOR

James Sargison

Tundra
oil and gas ltd.

File - Daly Field
Commingled Production
Tundra



P.O. Box 1960
Virden, Manitoba
ROM 2C0
February 1, 1993

Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMINGLED WELLS
DALY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 4th quarter of 1992.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed in the 4th quarter of 1992.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in dark ink, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

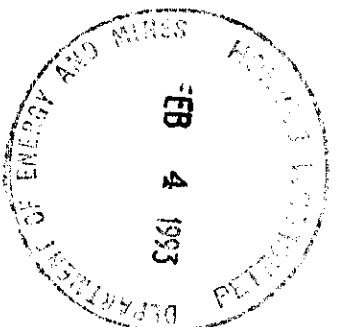
TBH/mlc

Att.

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMBINED WELLS

QUARTERLY STATUS REPORT OCT - DEC/92



WELL LOCATION	PRODUCTION (m3/day)						PRODUCTION TEST DATE	LAB ANALYSIS & DATE	FLUID LEVEL & DATE
	BAKKEN Oil	BAKKEN Water	LODGEPOLE Oil	LODGEPOLE Water	TOTAL Oil	TOTAL Water			
2-23-9-28 (commingled July/92)	1.50	1.07	0.20	0.07	1.70	1.14	(test tank)	--	--
13-20-10-28	0.77	0.75	0.15	0.11	0.92	0.86	1992 12 11	--	--
7-29-10-28	0.16	0.28	0.28	Nil	0.44	0.28	1992 12 11	--	--
11-29-10-28	0.31	Nil	0.11	0.31	0.42	0.31	1992 11 19	--	--
12-29-10-28	0.73	0.07	0.79	0.10	1.52	0.17		--	1992 12 02 (90 jts.)
13-29-10-28	0.86	0.21	2.99	Nil	3.85	0.21	1992 11 24	--	--
1-32-10-28	1.72	0.60	1.58	0.18	3.30	0.78	(test tank)	--	--

Tundra
oil and gas ltd.

DALY FIELD
File: COMINGLED PRODUCTION (TUN824)

P.O. Box 1960
Virden, Manitoba
R0M 2C0
November 13, 1992

Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3



Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMINGLED WELLS
DALY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 3rd quarter of 1992.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed in the 3rd quarter of 1992.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in dark ink, appearing to read "T.B. Howell". The signature is fluid and cursive, with a large loop at the end.

T.B. Howell, P. Eng.

TBH/mlc

Enclosures

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS

QUARTERLY STATUS REPORT JUL - SEP/92

WELL LOCATION	PRODUCTION (m3/day)						PRODUCTION TEST DATE	LAB ANALYSIS & DATE	FLUID LEVEL & DATE
	BAKKEN Oil	BAKKEN Water	LODGEPOLE Oil	LODGEPOLE Water	TOTAL Oil	TOTAL Water			
2-23-9-28 (comingled July/92)	2.49	1.71	0.27	0.09	2.76	1.80	1992 08 08	1992 09 08 (C&G Labs)	86 joints Aug. 14
13-20-10-28	0.97	0.65	0.15	0.09	1.12	0.74	1992 09 28	1992 07 10	—
7-29-10-28	0.12	0.15	0.29	0.09	0.41	0.24			
11-29-10-28	0.35	Nil	0.11	0.29	0.46	0.29			
12-29-10-28	0.65	0.46	0.70	0.09	1.35	0.55	1992 09 28	1992 09 08 (C&G Labs)	
13-29-10-28	0.83	0.30	2.95	0.25	3.78	0.55	1992 09 01		78½ jts. Sept. 1
4-32-10-28	1.88	0.80	1.72	0.24	3.6	1.04	(Test track)	1992 07 10	



CHEMICAL & GEOLOGICAL LABORATORIES INC.

file

CONTAINER IDENTITY		LABORATORY NUMBER	
		892-3189-3	
SEQUENCE NUMBER		OPERATOR NAME	
		TUNDRA OIL AND GAS LIMITED	
LOCATION		WELL NAME	
12-29-10-28 W1		TUNDRA DALY PROV. COM 12-29-10-28	
FIELD OR AREA		NAME OF SAMPLER	
TEST TYPE		TEST RECOVERY	
NO.			
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT	
		WELLHEAD	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		@ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
GAUGE PRESSURE kPa			
SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED			
TEMPERATURE °C			
DATE SAMPLED (Y-M-D)		DATE RECEIVED (Y-M-D)	
92-08-23		92-08-31	
DATE REPORTED (Y-M-D)		ANALYST	
92-09-08		I. MALCOMSON	
		OTHER INFORMATION	

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. API

MASS
FRAC. G/KG

0.839 838 37.2

0.0096 9.60

SIGNATURE OF SUPERVISOR



CHEMICAL & GEOLOGICAL LABORATORIES INC.

file



CONTAINER IDENTITY		LABORATORY NUMBER S92-3189-2	
LICENCE NUMBER	OPERATOR NAME TUNDRA OIL AND GAS LIMITED		
LOCATION 2-23-9-28 W1	WELL NAME TUNDRA ET AL DALY 2-23-9-28		ELEVATIONS (metres) K.B. GRD.
FIELD OR AREA DALY	POOL OR ZONE	NAME OF SAMPLER	COMPANY
TEST TYPE NO.	TEST RECOVERY		
MULTIPLE RECOVERY Y N	SAMPLING POINT WELLHEAD		
TEST INTERVAL (metres)	TYPE OF PRODUCTION PUMPING FLOWING GAS LIFT SWAB		
	PRODUCTION RATES WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d		
PERFORATIONS (metres)	GAUGE PRESSURE kPa SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
	TEMPERATURE °C SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED		
DATE SAMPLED (Y-M-D) 92-08-21	DATE RECEIVED (Y-M-D) 92-08-31	DATE REPORTED (Y-M-D) 92-09-08	ANALYST I. MALCOMSON
OTHER INFORMATION			

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. API

MASS
FRAC. G/KG

0.828 827 39.4

0.0034 3.40

RECEIVED
SEP 12 1992
C.G.L.

SIGNATURE OF SUPERVISOR _____



CHEMICAL & GEOLOGICAL LABORATORIES INC.



CONTAINER IDENTITY		LABORATORY NUMBER	
		592-3156	
LICENCE NUMBER	OPERATOR NAME		
	TUNDRA OIL AND GAS LIMITED		
LOCATION	WELL NAME		ELEVATIONS (metres)
			K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
TEST INTERVAL (metres)	SAMPLING POINT		
PERFORATIONS (metres)	AMT. & TYPE OF CUSHION		MUD RESISTIVITY
			@ 25°C
TYPE OF PRODUCTION			
PUMPING FLOWING GAS LIFT SWAB			
PRODUCTION RATES			
WATER m ³ /d		OIL m ³ /d	GAS 10 ³ m ³ /d
SEPARATOR		TREATER	RESERVOIR
GAUGE PRESSURE kPa		SOURCE	SAMPLED
SEPARATOR		TREATER	RESERVOIR
TEMPERATURE °C		SOURCE	SAMPLED
DATE SAMPLED (Y-M-D)		DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)
		92-07-08	92-07-10
		ANALYST	OTHER INFORMATION
		I. MALCOMSON	

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. API

MASS
FRAC. G/KG

TUNDRA DALY PROV 4-32-10-28 W1

0.841 840 36.8

0.0030 9.00

TUNDRA DALY PROV 13-20-10-28 W1

0.831 830 39.0

0.0034 9.40

SIGNATURE OF SUPERVISOR

Samir Sargu

Tundra
oil and gas ltd.

JOHN

P.O. Box 1960
Virden, Manitoba
R0M 2C0
August 18, 1992



Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMINGLED WELLS
DAILY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 2nd quarter of 1992.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed in the 2nd quarter of 1992.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

A handwritten signature in cursive script, appearing to read "T.B. Howell".

T.B. Howell, P. Eng.

TBH/mlc

Enclosures

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS

QUARTERLY STATUS REPORT APR - JUN/92



WELL LOCATION	PRODUCTION (m3/day)						PRODUCTION TEST DATE	LAB ANALYSIS & DATE	FLUID LEVEL & DATE
	BAKKEN OIL	BAKKEN Water	LODGEPOLE Oil	LODGEPOLE Water	TOTAL Oil	TOTAL Water			
13-20-10-28 (comingled & on production June 4/92)	1.40	1.17	0.17	0.10	1.57	1.27	1992 06 28		
7-29-10-28	0.20	0.25	0.32	0.09	0.52	0.34	1992 04 03	92-04-01	82 jts. (800 m) Apr. 4
11-29-10-28	0.38	Nil	0.12	0.30	0.50	0.30	1992 04 04	92-04-01	83 jts. (800 m) Apr. 4
12-29-10-28	0.70	0.47	0.76	0.09	1.46	0.56	—		
13-29-10-28	1.21	0.38	2.29	0.58	3.50	0.96	1992 06 06	92-04-01	83 jts. (800 m) May
4-32-10-28	1.83	1.09	2.28	0.33	4.11	1.42	1992 06 01		84 jts. (810 m) May



CONTAINER IDENTITY		LABORATORY NUMBER	
		S92-3130	
E NUMBER		OPERATOR NAME	
		TUNDRA OIL AND GAS LIMITED	
LOCATION		WELL NAME	
FIELD OR AREA		POOL OR ZONE	
TEST TYPE		TEST RECOVERY	
NO.			
MULTIPLE RECOVERY			
Y N			
TEST INTERVAL (metres)		SAMPLING POINT	
		WELLHEAD	
PERFORATIONS (metres)		AMT. & TYPE OF CUSHION	
		MUD RESISTIVITY	
		@ 25°C	
		TYPE OF PRODUCTION	
		PUMPING FLOWING GAS LIFT SWAB	
		PRODUCTION RATES	
		WATER m ³ /d OIL m ³ /d GAS 10 ³ m ³ /d	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		GAUGE PRESSURE kPa	
		SEPARATOR TREATER RESERVOIR SOURCE SAMPLED RECEIVED	
		TEMPERATURE °C	
		ANALYST	
DATE SAMPLED (Y-M-D)		OTHER INFORMATION	
92-04-01		I. MALCOMSON	
DATE RECEIVED (Y-M-D)		DATE REPORTED (Y-M-D)	
92-04-01		92-04-03	

	DENSITY @ 15C			TOTAL SULFUR	
	REL.	ABS.	API	MASS FRAC.	G/KG
TUNDRA DALY PROV COM 7-29-10-28 W1 1992-03-26	0.847	846	35.6	0.0113	11.3
TUNDRA DALY PROV COM 11-29-10-28 W1 1992-03-26	0.830	829	39.0	0.0054	5.40
TUNDRA ET AL DALY PROV COM 13-29-10-28 W1 1992-03-27	0.846	845	35.8	0.0123	12.3

ANALYSIS DETERMINED ON SAMPLE AFTER CLEANING BY CENTRIFUGING.



SIGNATURE OF SUPERVISOR Samuel Longdon

Tundra
oil and gas ltd.

JOHN

P.O. Box 1960
Virden, Manitoba
ROM 2C0
March 25, 1992



Department of Energy & Mines
Mineral Resources
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Attention: L.R. Dubreuil, Director

Dear Sir:

**RE: BAKKEN/LODGEPOLE COMINGLED WELLS
DAILY FIELD STATUS REPORT**

As per your request, Tundra Oil and Gas Ltd. hereby submits a status report for the above wells for the 1st quarter of 1992.

Production and fluid level information is shown on the attached chart. Also, lab analysis data is included.

There were no pressure surveys performed in the 1st quarter of 1992.

If further information is required, please contact the undersigned at 748-3095.

Yours truly,

Marcia Carter

for: T.B. Howell, P. Eng.

TBH/mlc

Enclosures

TUNDRA OIL AND GAS LTD.

DAILY BAKKEN/LODGEPOLE COMINGLED WELLS

QUARTERLY STATUS REPORT JAN - MAR/92

WELL LOCATION	PRODUCTION (m ³ /day)						PRODUCTION TEST DATE	LAB ANALYSIS & DATE	FLUID LEVEL & DATE
	BAKKEN Oil	BAKKEN Water	LODGEPOLE Oil	LODGEPOLE Water	TOTAL Oil	TOTAL Water			
7-29-10-28	0.48	0.26	0.03	Nil	0.51	0.29	Feb. 19-28		
11-29-10-28	0.45	Nil	0.05	0.32	0.50	0.32	Jan. 25-27		
12-29-10-28	0.70	0.52	0.76	0.1	1.46	0.62	Feb. 15-18	92-01-21 C & G - Estevan	Mar. 18 82 fts. (800 m)
13-29-10-28	1.00	0.40	2.93	0.33	2.93	0.73	Jan. 25-27		
4-32-10-28	2.3	1.3	2.7	0.3	5.0	1.6	Feb. 19-29	92-03-06 C & G - Estevan	Feb. 27 84 fts. (810 m)



CHEMICAL & GEOLOGICAL LABORATORIES LTD.



Self

CONTAINER IDENTITY		LABORATORY NUMBER	
		S92-3085	
LICENCE NUMBER	OPERATOR NAME		
	TUNDRA OIL AND GAS LIMITED		
LOCATION	WELL NAME		ELEVATIONS (metres)
12-29-10-28 W1	TUNDRA DALY PROV. COM. 12-29-10-28		K.B. GRD.
FIELD OR AREA	POOL OR ZONE	NAME OF SAMPLER	COMPANY
DALY PROV.			
TEST TYPE	NO.	TEST RECOVERY	
MULTIPLE RECOVERY	Y N		
TEST INTERVAL (metres)	SAMPLING POINT		AMT. & TYPE OF CUSHION
	WELL HEAD		
PERFORATIONS (metres)	TYPE OF PRODUCTION		MUD RESISTIVITY
	PUMPING FLOWING GAS LIFT SWAB		@ 25°C
PRODUCTION RATES			
WATER m ³ /d		OIL m ³ /d	GAS 10 ³ m ³ /d
SEPARATOR		TREATER	RESERVOIR
GAUGE PRESSURE kPa		SOURCE	SAMPLED RECEIVED
SEPARATOR		TREATER	RESERVOIR
TEMPERATURE °C		SOURCE	SAMPLED RECEIVED
DATE SAMPLED (Y-M-D)	DATE RECEIVED (Y-M-D)	DATE REPORTED (Y-M-D)	ANALYST
92-01-21	92-01-23	92-01-30	I. MALCOMSON
OTHER INFORMATION			

DENSITY @ 15C

TOTAL SULFUR

REL. ABS. API

MASS
FRAC. G/KG

0.843 842 36.1

0.0091 9.1

RECEIVED
FEB 8 1992
RECEIVED

SIGNATURE OF SUPERVISOR

CHEMICAL & GEOLOGICAL LABORATORIES

TO BARB FROM IAN MALCONSON AT DATE MAR. 6/92 SUBJECT

MESSAGE

RE. TUNDRA DAILY PROV
4-32-10-28W1

DENSITY @ 15C

TOTAL Sulphur

~~REL~~

API

MASS

REL

ABS

GRAVITY

FRAC

G/Kg

0.839

838

37.2

0.0093

9.3

REPLY:

Manitoba



Energy and Mines

555 -- 330 Graham Avenue
Winnipeg, Manitoba, CANADA
R3C 4E3

FAX NO.: (204) 945-0586

FAX: (204) 945-0586

DATE: MAR 25/94

TOTAL NO. OF PAGES (including this page) 20

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME:	<u>GERD LUCAS</u>	FROM:	<u>JOHN FOX</u>
BRANCH:	<u>MARK RESOURCES</u>	BRANCH:	<u>PETROLEUM</u>
FAX NO:	<u>(903) 269-6094</u>	PHONE:	<u>(204) 945-6574</u>
COMMENTS:	<u>MANITOBA HORIZONTAL DRILLING INFORMATION</u>		

This message is intended only for the use of the individual or entity to which it is addressed, and may contain information that is privileged, confidential and exempt from disclosure under applicable law.

If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone, and return the original to us by postal service at the address noted above. Thank you.

ORIGINALS WILL BE:

☐ Mailed to you: ☐ Delivered to you: ☐ Picked up
☐ Mailed/Delivered upon request: ☒ Remain on our file.

July 24, 1990

Tundra Oil and Gas Ltd.
1313 One Lombard Place
Winnipeg, Manitoba
R3B 0X3

Attention: Mr. D.P. Barchyn
Exploration Manager

Dear Sir:

RE: Commingled Production Approval
Tundra Daly Prov. 12-29-10-28 (WPM)

Attached please find an approved copy of your application to recomplete the subject well. Approval is also granted to commingle production from the Bakken and Lodgepole Formations in the ~~the~~ subject well. The conditions of approval that follow are consistent with those previously imposed on wells commingled in Section 29-10-28 (WPM).

1. Determination of Crown royalties based on total production from the well. However, production is to be reported separately for each zone based on well test data.
2. Conduct a production test on the recompleted zone until the production stabilizes (minimum test period 14 days) prior to commingling. Upon completion of the testing, please advise the Branch of the results and the proposed zonal production allocation.
3. Annual production testing involving isolation of the Lodgepole and production of the Bakken or vice versa.
4. Producing fluid levels are to be monitored monthly. Every effort is to be made to keep these levels as low as possible and to minimize down time.
5. A quarterly status report including all production test, pressure survey, fluid level and other related data is to be submitted to the Branch.

Our records indicate that the quarterly report due July 1, 1990 has not been received. If the Branch does not receive this report by August 8, 1990, the approvals to commingle may be revoked.

If you have any further questions, please contact John Fox at 945-6574.

Yours truly,

ORIGINAL SIGNED BY
JOHN N. FOX

 L.R. Dubreuil
Director, Petroleum Branch

cc: Virden Office



May 30, 1990

Tundra Oil and Gas Ltd.
1313 One Lombard Place
Winnipeg, Manitoba
R3B 0X3

ATTENTION: Mr. D.P. Barchyn
Exploration Manager

RE: Commingled Production Approval
Tundra et al Daly Prov. 13-29-10-28 (WPM)

Attached please find an approved copy of your application to recomplete the subject well. Approval is also granted to commingle production from the Bakken and Lodgepole Formations in the the subject well. The conditions of approval that follow are consistent with those previously imposed on wells commingled in Section 29-10-28 (WPM).

1. Determination of Crown royalties based on total production from the well. However, production is to be reported separately for each zone based on well test data.
2. Conduct a production test on the recompleted zone until the production stabilizes (minimum test period 14 days) prior to commingling. Upon completion of the testing, please advise the Branch of the results and the proposed zonal production allocation.
3. Annual production testing involving isolation of the Lodgepole and production of the Bakken or vice versa.

4. Producing fluid levels are to be monitored monthly. Every effort is to be made to keep these levels as low as possible and to minimize down time.
5. A quarterly status report including all production test, pressure survey, fluid level and other related data is to be submitted to the Branch.

Our records indicate that we have received only one bi-monthly report from Tundra since the start of this project. We are now requiring that these reports be submitted quarterly, with the next one due July 1, 1990.

If you have any further questions please contact John Fox at 945-6574.

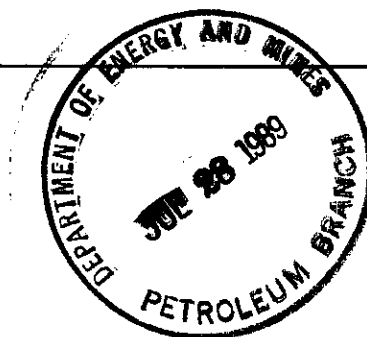
Yours truly,

A handwritten signature in cursive script, appearing to read "L.R. Dubreuil".

L.R. Dubreuil
Director, Petroleum Branch

DS:JNF:cvs

July 27, 1989



Manitoba Department of Energy and Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4A5

Attention: Mr. John Fox
Chief Petroleum Engineer

RE: Commingled Production Section 29-10-28 WPM

In response to your letter of June 20, 1989 concerning the above, the following summarizes our data and our current opinions regarding this pilot project and the feasibility of pressure maintenance in this area.

1. Production Tests

7-29-10-28

June 2, 1989 Bakken only
.75 m³ OPD, .40 m³ WPD

June 17, 1989 Bakken and Lodgepole
1.58 m³ OPD, .52 m³ WPD

Therefore, Lodgepole only
.83 m³ OPD, .12 m³ WPD

Allocation by test result:	<u>Bakken</u>	<u>Lodgepole</u>
	47%	53%
Allocation by measured density:	69%	31%

11-29-10-28

May 12, 1989 Lodgepole only
.05 m³ OPD, .48 m³ WPD

June 13, 1989 Bakken and Lodgepole
.02 m³ OPD, 1.87 m³ WPD

Therefore, Bakken only
0 m³ OPD, 1.39 m³ WPD

... 2

2. Reservoir Pressure Surveys

<u>Well</u>	<u>Zone</u>	<u>Date</u>	<u>Reservoir Pressure (KPA)</u>	<u>Method</u>
10-29-10-28	Bakken	March/88	6560	Fluid Build-up
11-20-10-28	Lodgepole	July/88	6613	DST
11-29-10-28	Lodgepole	April/89	4500	Fluid Build-up
3-29-10-28	Lodgepole	March/89	1399	Fluid Build-up
5-29-10-28	Lodgepole	March/89	586	Fluid Build-up
11-20-10-28	Lodgepole	May/89	1187	Fluid Build-up

3. Discussion

Bakken Reservoir - The pressure survey conducted at 10-29 suggests that the production decline seen in the Bakken wells is likely due to either a near wellbore permeability problem or generally low reservoir permeability rather than pressure depletion of the reservoir. With this in mind, pressure maintenance is not seen as a priority here. Our plans are to re-frac the 10-29 well and, if successful, do the same at the 11-29 well in the Bakken in order to improve productivity. If sustained economic production can be re-established from the Bakken here, we will again measure reservoir pressure and assess the need for pressure maintenance here.

We consider our Bakken reservoir in Sections 13, 14 and 23 of 10-29 to be a better candidate for a pilot water flood project. Here we have seen much better primary performance, evidence of good reservoir continuity between wells and significant pressure drawdown at this early stage of depletion.

We are currently having lab work done to ascertain water - water and water - reservoir compatibility and hope to be able to initiate a pilot flood project here some time in 1990.

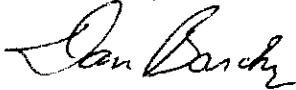
Lodgepole Reservoir - The pressure data suggests that this reservoir has experienced severe pressure depletion following a poor primary production performance with low volumes of fluid withdrawal. This indicates that the effective reservoir is likely very small in volumetric terms. The DST result at 11-20 which indicated approximately 90% of original reservoir pressure at a location with three producing offsets further suggests that pressure communication and, therefore, continuity between wells is limited. Both these factors do not bode well for economically flooding this reservoir even though some form of pressure maintenance would be beneficial. Our intention is to continue to monitor our Lodgepole production and assess the economics of a pilot water flood using a single injector.

4. Commingling of Production - Our experience to date at 7-29 suggests that commingling of production from marginal Lodgepole and Bakken zones is the only way to economically produce these wells. Production has actually exceeded our projections which were based on the summation of extrapolated declines from individual zones. This suggests that commingling has not adversely affected either zone but has enabled us to continue to economically recover reserves which otherwise may have been abandoned.

Future commingling operations will be assessed on a well by well basis and the Branch will be advised of all proposed recompletion operations.

If you have any further questions or require further information, please call.

Sincerely,



Dan Barchyn, P. Eng.
Exploration Manager

DB/ck

cc: Tim Howell

Manitoba

BF July 31/89



Energy and Mines

Petroleum

555 — 330 Graham Avenue
Winnipeg, Manitoba, CANADA
R3C 4E3

(204) 945-6577

June 20, 1989

Tundra Oil and Gas Ltd.
1313 One Lombard Place
WINNIPEG, Manitoba R3B 0X3

Attention: Mr. D.P. Barchyn
Exploration Manager

Re: Commingled Production Section 29-10-28 (WPM)
Tundra MOGC MLC Daly Prov. 11-29-10-28 (WPM)
Tundra MOGC Daly Prov. 7-29-10-28 (WPM)

On January 17, 1989 approval was granted to commingle production from the Bakken and Lodgepole Formations in Section 29-10-28 (WPM) subject to the conditions reiterated below:

1. Pre approval by the Branch of individual recompletion operations.
2. Determination of Crown Royalties based on total production from the well. However, production is to be reported separately for each zone based on well test data.
3. Production testing of the non completed zone prior to commingling.
4. Annual production testing involving isolation of the Lodgepole and production of the Bakken.
5. A pressure survey is to be conducted in either the Lodgepole or the Bakken on each well prior to commingling.
6. Producing fluid levels are to be monitored monthly. Every effort is to be made to keep these levels as low as possible and to minimize down time.
7. A bi-monthly status report including all production test, pressure survey, fluid level and other related data is to be submitted to the Branch.

According to our records, conditions 1, 3 and 5 were not met by Tundra when the 11-29-10-28 well was recompleted to commingle production from the Bakken and Lodgepole.

In addition, the following conditions of approval with respect to commingled production at Tundra MOGC Daly Prov. 7-29-10-28 (WPM) have not been met to date:

8. Approval expires February 29, 1989 unless otherwise extended or curtailed by the Director of the Petroleum Branch as circumstances warrant.
9. Annual (or more frequent) production testing utilizing downhole equipment to isolate zones is required as a means of evaluating the accuracy of the proposed method of allocating production to individual zones (i.e. by gravity of produced fluids).
10. Determination of the static reservoir pressure of the Lodgepole Formation before completion of the well for commingling. Determination of the static reservoir pressure in the Bakken Formation either in the subject well or a nearby well.
11. Submission of a summary report, prior to January 31, 1989, outlining all aspects of this pilot project and providing a comprehensive review of the need for and feasibility of pressure maintenance.


Please provide the Branch with the following information by ~~July 31, 1989~~:

1. The summary report pursuant to condition 11 above.
2. The results of the annual production test at 7-29-10-28 and a comparison of the results with Tundra's method of allocating production to individual zones on the basis of measured oil density.
3. The static reservoir pressure in the Lodgepole and Bakken Formations. In previous correspondence (88-12-21) Tundra indicated that pressure surveys would be conducted at 3-29-10-28, 5-29-10-28, 10-29-10-28 and 11-29-10-28 in early 1989.
4. Tundra's estimate of the production rates for the Bakken and Lodgepole Formations in the 11-29 well and its proposal for allocating production to individual zones.
5. The first bi-monthly status report pursuant to condition 7 is also due July 31, 1989.

Continued failure to meet the conditions for commingled production from Section 29-10-28 (WPM) may result in revocation of the approval.

If you have any questions please contact the undersigned at 945-6574.

Yours sincerely,

 John N. Fox
Chief Petroleum Engineer
Petroleum Branch

JNF:dah



Energy and Mines

Petroleum

555 — 330 Graham Avenue
Winnipeg, Manitoba, CANADA
R3C 4E3

(204) 945-6577

Notice

Tundra Oil and Gas has made application for approval to commingle production from the Bakken and Lodgepole Formations in wells in the following Lands:

Section 29-10-28(WPM)

As operator of offsetting lands, you are hereby notified of Tundra's proposal. If no valid objections to or interventions in this application are received at this office prior to January 16, 1989, the application may be approved.

Copies of the application are available from:

Tundra Oil and Gas
1313 Richardson Building
One Lombard Place
Winnipeg, Manitoba
R3B 0X3

or can be viewed at the letterhead address.

A handwritten signature in cursive script, reading "L.R. Dubreuil". The signature is written in black ink.

L.R. Dubreuil
Director of Petroleum
Petroleum Branch



Energy and Mines

Petroleum

555 — 330 Graham Avenue
Winnipeg, Manitoba, CANADA
R3C 4E3

(204) 945-6577

January 17, 1989

Tundra Oil and Gas
1313 One Lombard Place
WINNIPEG, Manitoba R3B 0X3

Attention: Mr. D.P. Barchyn, Exploration Manager

Re: Commingled Production
Section 29-10-28 (WPM)

Dear Dan:

Further to your letter of December 21, 1988, approval is hereby given to commingle production from the Bakken and Lodgepole Formations in Section 29-10-28 (WPM). Approval is subject to the following conditions:

1. Pre approval by the Branch of individual recompletion operations.
2. Determination of Crown Royalties based on total production from the well. However, production is to be reported separately for each zone based on well test data.
3. Production testing of the non completed zone prior to commingling.
4. Annual production testing involving isolation of the Lodgepole and production of the Bakken.
5. A pressure survey is to be conducted in either the Lodgepole or the Bakken on each well prior to commingling.
6. Producing fluid levels are to be monitored monthly. Every effort is to be made to keep these levels as low as possible and to minimize down time.
7. A bi-monthly status report including all production test, pressure survey, fluid level and other related data is to be submitted to the Branch.

Please call me if you have any questions.

Yours sincerely,

Original Signed By
L. R. DUBREUIL

L.R. Dubreuil
Director of Petroleum

LRD:dah



Memorandum

Date December 28, 1988

To L.R. Dubreuil
Director of Petroleum

From Chief Petroleum Engineer

Subject Section 29-10-28 (WPM)
Commingled Production

Telephone

Tundra Oil and Gas has applied for approval to commingle production from the Bakken and Lodgepole Formations in the subject lands.

Recommendation:

It is recommended that notice of the application (attached) be forwarded to all offset operators (see Fig No.1). In the absence of valid objections or interventions, it is recommended that the application be approved subject to the conditions outlined in this memo.

Discussion:

Tundra (through Pioneer Energy Ltd & Brosco Fund) is the holder of Crown Petroleum and Natural Gas Leases L 812-250 and L 802-139 covering the West Half and the East Half of Section 29-10-28(WPM) respectively. Tundra has drilled and operates 7 wells (6 oil wells and one salt water disposal wells) on the lands. Both the Lodgepole (Daly Lodgepole E Pool) and the Bakken (Daly Bakken B Pool) formation are productive on the lands. Currently, three wells are completed in the Lodgepole, two in the Bakken and in one (7-29), production from both Formations is commingled. Current production data for wells in the area is shown on Fig No. 2.

Production from both Bakken and Lodgepole completions in the area exhibit very severe production declines (see Fig No. 3 and Fig No. 4). This quickly results in uneconomic conditions and has already led to curtailment of production in four wells. Commingling of production will permit continued operation of the wells and may, if oil prices increase, permit further development of the area. Without commingling it is likely that the wells would be abandoned shortly.

Commingling is justified on economic grounds (see Table No.1) and therefore is recommended.

A number of operators hold land offsetting the lands proposed for commingling (see Fig No. 1). It is proposed to notify these operators of Tundra's plans. A notice is attached.

Tundra proposes to monitor production rates from individual zones by isolation of the Lodgepole and production of the Bakken. This will be done at yearly intervals. This method of testing is acceptable. Testing of the non completed zone prior to commingling will also be required.

Prior to proceeding with commingling, Tundra plans to determine reservoir pressures in the current completion zones. This will provide additional reservoir pressure data to assist in the planning of pressure maintenance in the area. A pressure survey in either Lodgepole or Bakken should be obtained in each well prior to commingling. If pressure data on one or the other zone is inadequate, further surveys will be required.

One of the concerns with commingled production is cross flow of fluids from one formation to the other.

This problem can be minimized by keeping pumping fluid levels as low as possible and by minimizing shut in time for the well. Approval should be conditional on monthly fluid level determinations and field operations as required to minimize shut in time.

To properly monitor and assess the commingling project, summary progress reports will be required. These reports will be required on a bimonthly basis and include all production test, fluid level and reservoir pressure information. Reports similar to those submitted by Omega would be considered adequate.

A handwritten signature in dark ink, appearing to be 'LRD', is written above the typed name.

Chief Petroleum Engineer

LRD:jtb

Table No. 1

Economics of Production

I. Lodgepole

Oil Rate = $0.16 \text{ m}^3/\text{d} = 4.8 \text{ m}^3/\text{Month.}$

Revenue $4.8 \times \$98.42 = \468.74

Expenses

Royalty	8.56	
Fixed Cost	1250.00	
Variable Cost (1)	<u>70.50</u>	
	1329.06	Loss (860.32)

II. Bakken

Oil Rate: $0.48 \text{ m}^3/\text{d} = 14.4 \text{ m}^3/\text{Mon}$

Revenue $14.4 \times \$105.15 = 1518.37$

Expenses

Royalty	82.28	
Fixed Cost	1250.00	
Variable Cost (2)	<u>161.41</u>	
	1493.69	Profit 24.68

1. Ave WOR = $3.41 \text{ m}^3/\text{m}^3$ 80% of water recovered in FWK0
Treating Cost \$6.30 (Oil + $0.2 \times$ water)
Disposal Cost = $1.20 \times$ water

2. Ave WOR = $2.80 \text{ m}^3/\text{m}^3$

DALY

FIELD

OPEN?

CROWN
UNDISPOSED




AREA PROPOSED FOR COMMINGLING

CROWN

CROWN
TUNDRA

CROWN

LEGEND

-  TUNDRA
-  INTERLAKE
-  NEWSCOPE

CNW



DALY

FIELD

AREA PROPOSED FOR COMMINGLING

L(2.09/0.09) 1088

L(0.08/3.83)
1088

B(0.18/4.92) 0988

B(0.58/0.78)
1088

L(2.89/0.17) 1088

B(0.77/0.67)
1088

L(0.31/1.02) 1088

B(0.32/2.15) 1088

L(0.76/0.55) 1088

L(6.45/0.12) 1088

L(0.08/5.37)
1088L(1.63/16.68)
1088L(0.76/0.29)
1088L(1.17/10.87)
1088L(0.37/0.43)
1088L(0.91/0.32)
1088L(0.81/0.53)
1088L(7.90/0.13)
1088L(9.77/0.97)
1088L(1.73/0.59)
1088L(0.18/2.77)
1088L(6.92/1.59)
1088L(0.62/0.36)
1088L(0.36/0.76)
1088L(0.32/1.63)
1088L(2.07/9.67)
1088Legend

0.32/2.15 Latest Oil Rate / WOR

1088 Date

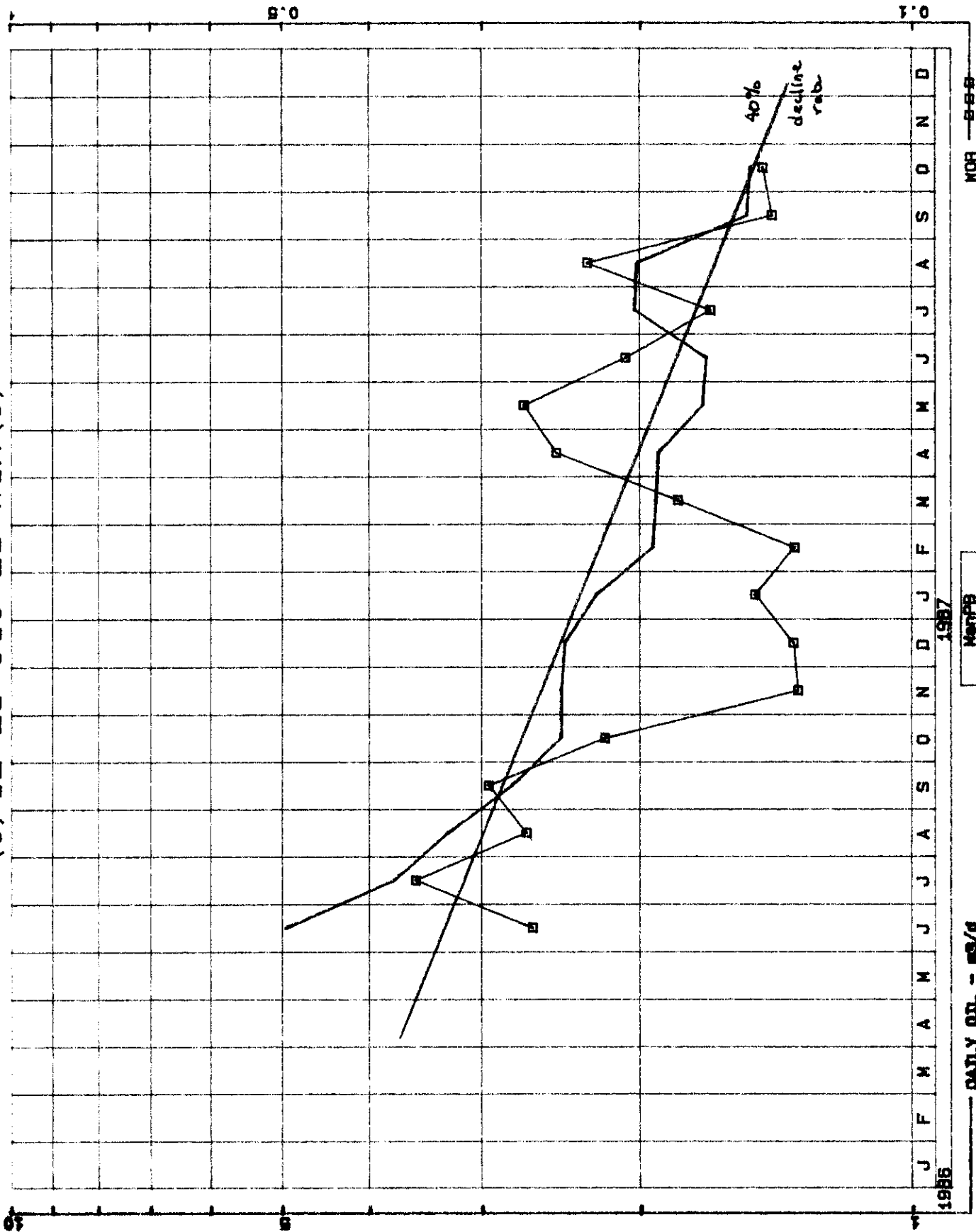
X Currently Shut in

L Lodgepole

B Backen

FILE No. 3

(0) 12-29-010-28 W1M (0) BAKKEN



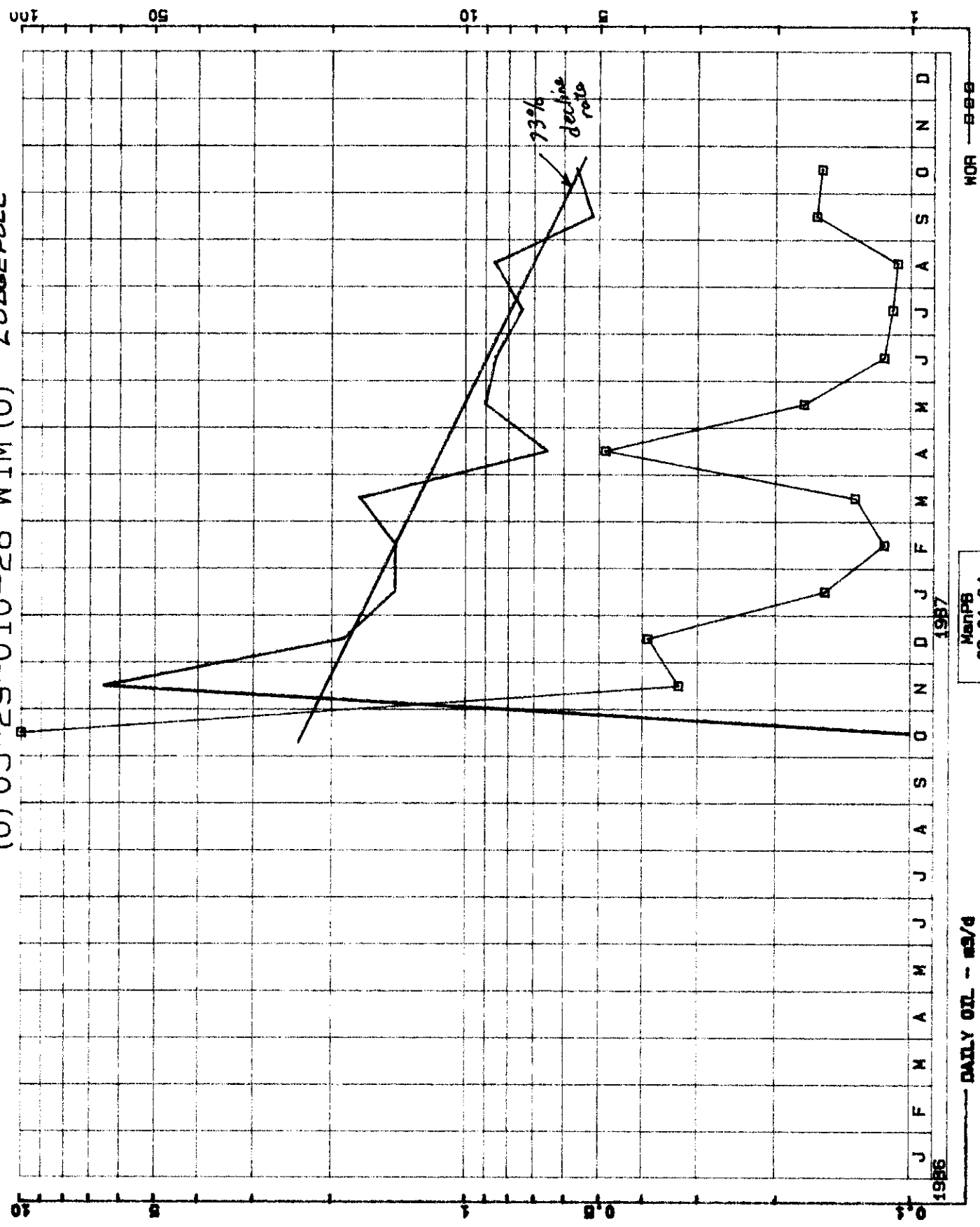
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14:02:38

DAILY OIL - 88/8

NOV - 88-8

FILE No. 4

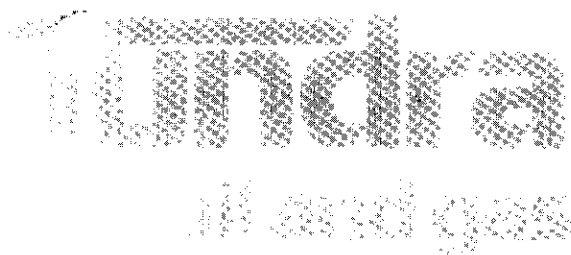
(0) 05-29-010-28 W1M(0) LOGEPOLE



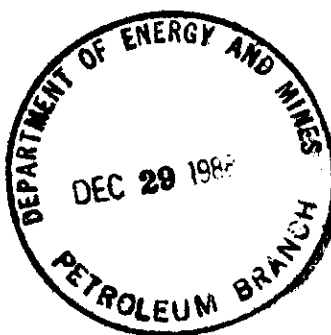
ManPB
88-01-04
13:55:01

WOB - B-B-B

DAILY OIL - 88/8



December 21, 1988



1313 Richardson Building
One Lombard Place
Winnipeg, Manitoba R3B 0X3
Phone (204) 949-1195
FAX (204) 956-1282

Mr. Bob Dubreuil, P.Eng.
Director
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4A5

Dear Bob:

RE: Daly Section 29-10-28 WPM
Commingling of Production

Further to my letter of October 3, 1988 regarding the above, the following is some additional information in support of our application.

A lease on the NE quarter of Section 20-10-28 is currently held by Interlake et al. The south half of Section 32-10-28 is Crown land and is currently open. The SW quarter of Section 33-12-28 is indicated on our maps as being held by Canada Northwest. We are not aware of any current lease on the SE quarter of Section 31-10-28.

Production testing of any commingled well on Section 29 will be carried out in accordance with the procedure we intend to apply to 7-29 as outlined by Tim Howell in his letter to you dated November 17, 1988.

Prior to commingling production in any additional wells, we intend to obtain more reservoir pressure information by observing fluid levels in shut-in wells. Currently, Lodgepole wells 3-29, 5-29 and 11-29 and Bakken well 10-29 are shut-in. Fluid levels will be shot once the fluid levels have stabilized. This information should be available some time early in the new year.

If you require any further information pending approval of this application, please contact the undersigned.

Sincerely,

D. Barchyn, P.Eng.

DB/sk

Tundra Oil and Gas
Box 1960
Virden, Manitoba
ROM 2C0
1988 11 17



Dept. of Energy & Mines
Petroleum Branch
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

ATTENTION: Bob Dubreuil
Chief Engineer

Dear Bob:

RE: Comingled Production Tundra MOGC Daly Prov. 7-29-10-28 WPM

The subject well was placed on comingled production 1988 04 29. At this time a packer was installed on the tubing string, and left in the unset position to allow for an annual production test. This shall be accomplished by setting the packer at 761.5 m and producing the Bakken Zone separately for 7 days to determine its contribution to the total production. The packer shall then be released and the well returned to comingled production. This test shall be performed during the first 2 weeks of May, 1989.

Current production from this well is as follows:

<u>ZONE</u>	<u>OIL (m³/day)</u>	<u>WATER (m³/day)</u>
Bakken Zone (810.0-814.0)	0.4	0.6
Lodgepole Zone (754.0-758.6)	<u>0.9</u>	<u>0.4</u>
TOTAL	1.3	1.0

*How
Determined*

Due to the marginal production of the well, and the high cost of testing (approximately \$1,500.00), the economics based on testing more than once per year are questionable.

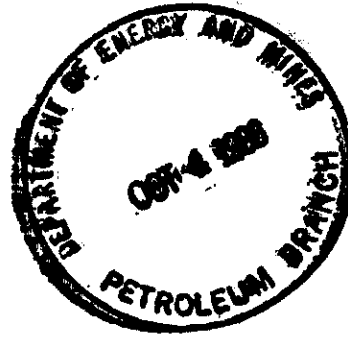
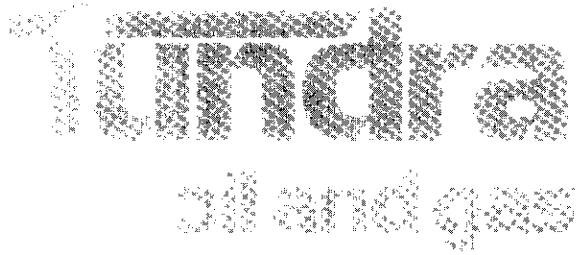
If any further information is required, please contact the undersigned at 748-3095.

Yours truly

A handwritten signature in dark ink, appearing to read "T.B. Howell".

T.B. Howell
P. Eng.

TBH/bep



1313 Richardson Building
One Lombard Place
Winnipeg, Manitoba R3B 0X3
Phone (204) 949-1195
FAX (204) 956-1282

October 3, 1988

Mr. H. Clare Moster, P. Eng.
Executive Director, Petroleum Division
Manitoba Energy and Mines
555 - 330 Graham Avenue
Winnipeg, Manitoba
R3C 4E3

Dear Clare:

RE: DALY SECTION 29-10-28 WPM
Commingling of Production

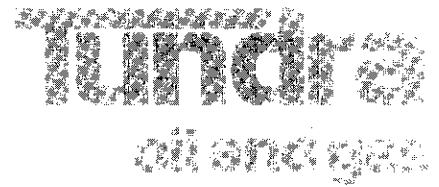
Tundra Oil and Gas hereby makes application to commingle production from the Lodgepole and Bakken pools in Section 29-10-28 WPM.

Technical information supporting this application is on file under our application to commingle production in Tundra MOGC Daly Prov. 7-29-10-28 WPM dated December 17, 1987.

The attached production plot for the 7-29 well shows Bakken, Lodgepole, and commingled production to date. Although a definite decline curve has not yet been established for the commingled production, it appears that the production performance will be the summation of expected performance from each zone individually.

As discussed in our application of December 17, 1988, commingling of Lodgepole and Bakken production is required to make development of this section an economic proposition. We are now requesting permission to commingle production in the existing wells and any future wells drilled on this section. Given the economics of the situation, this approval is required to justify any plans to continue development of this section.

... 2



Mr. Clare Moster
October 3, 1988
Page 2

Our plans for this property also include a pilot waterflood in the Bakken zone using the 11-29 wells as an injector. An engineering and economic evaluation is currently in progress and we hope to have an application for this project in shortly.

Sincerely,

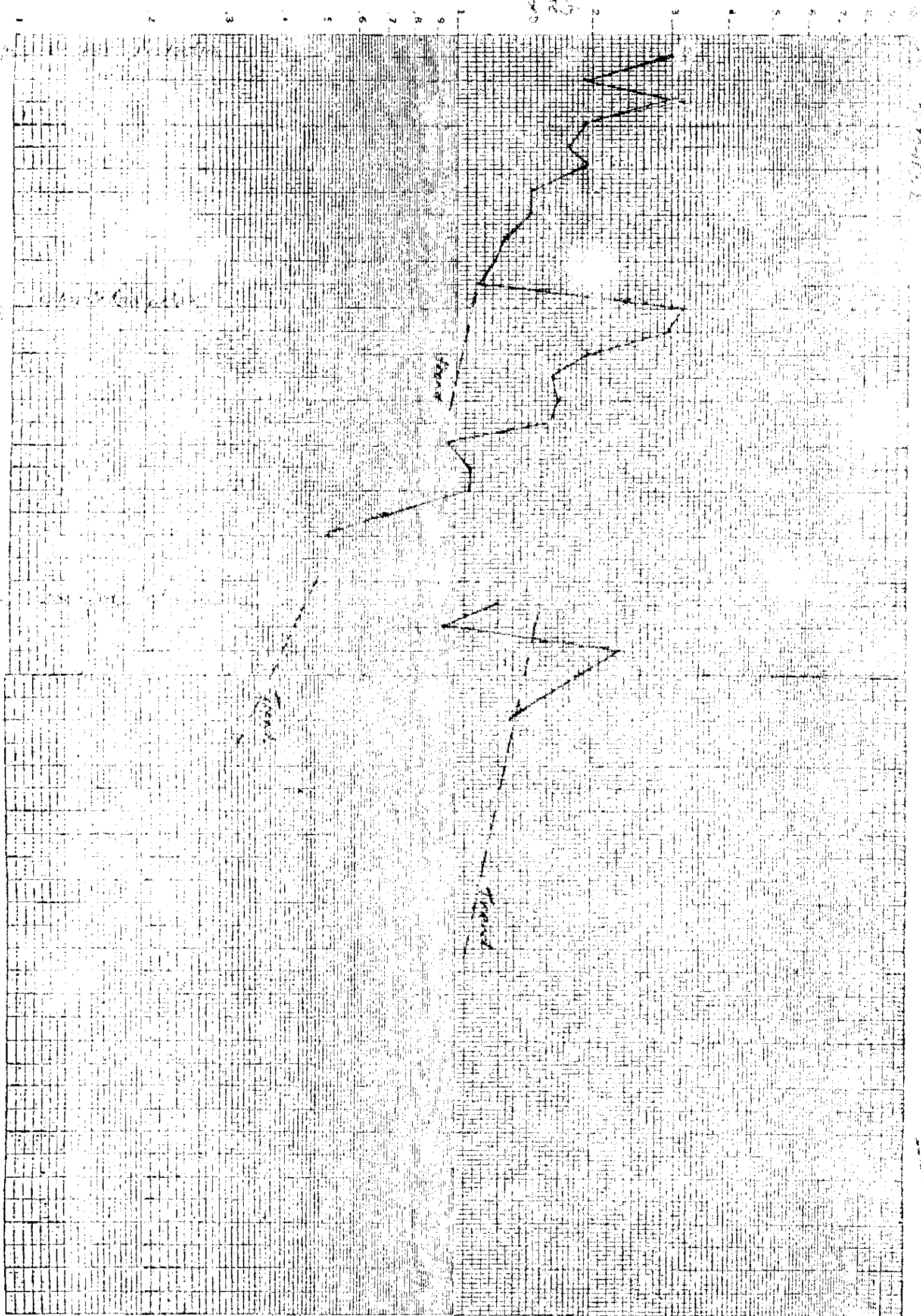
A handwritten signature in cursive script, appearing to read "Dan Barchyn".

Dan Barchyn, P.Eng.
Exploration Manager

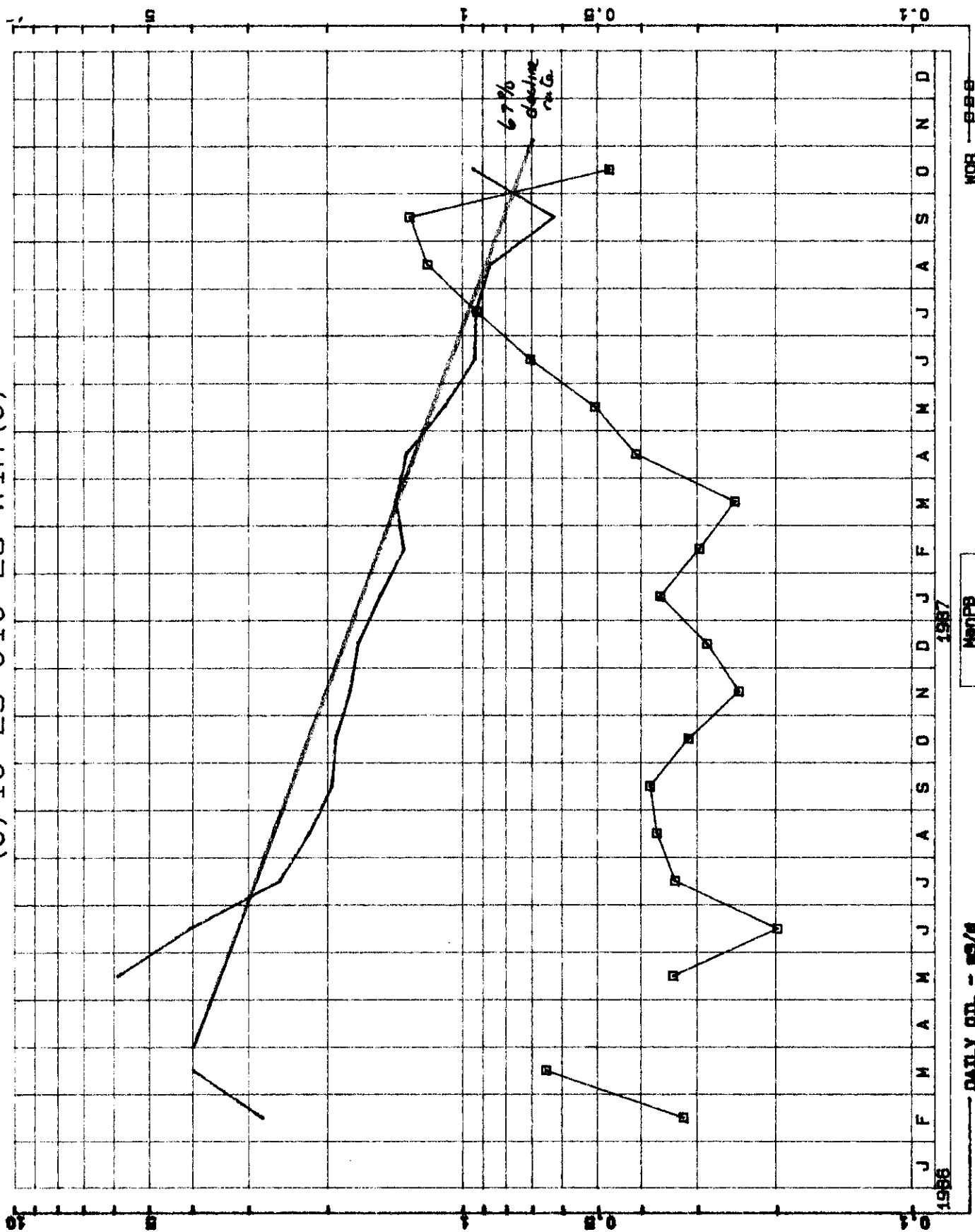
DB/sk

cc: Marc Junghans, MGC
John Essex, MLC

45 550



(0) 10-29-010-28 W1M(0)

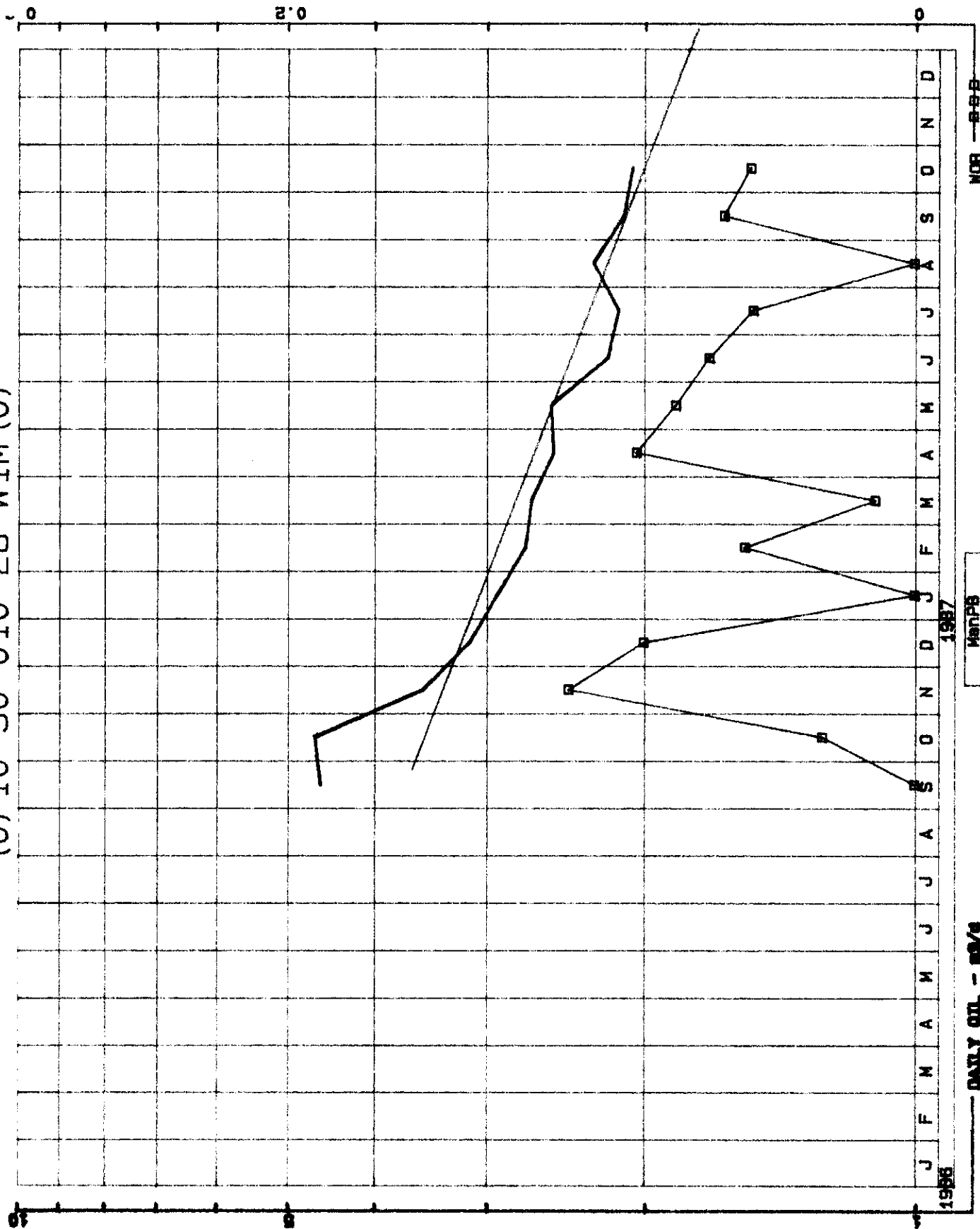


NetPB
88-01-04
14:00:00

DAILY OIL - 88/8

WDR - 88-8

(0) 10-30-010-28 W1M (0)



ManPB
88-01-05
12:18:53

DAILY OIL - 88/8

NOR - 88/8

(0) 07-29-010-28 W1M (2)

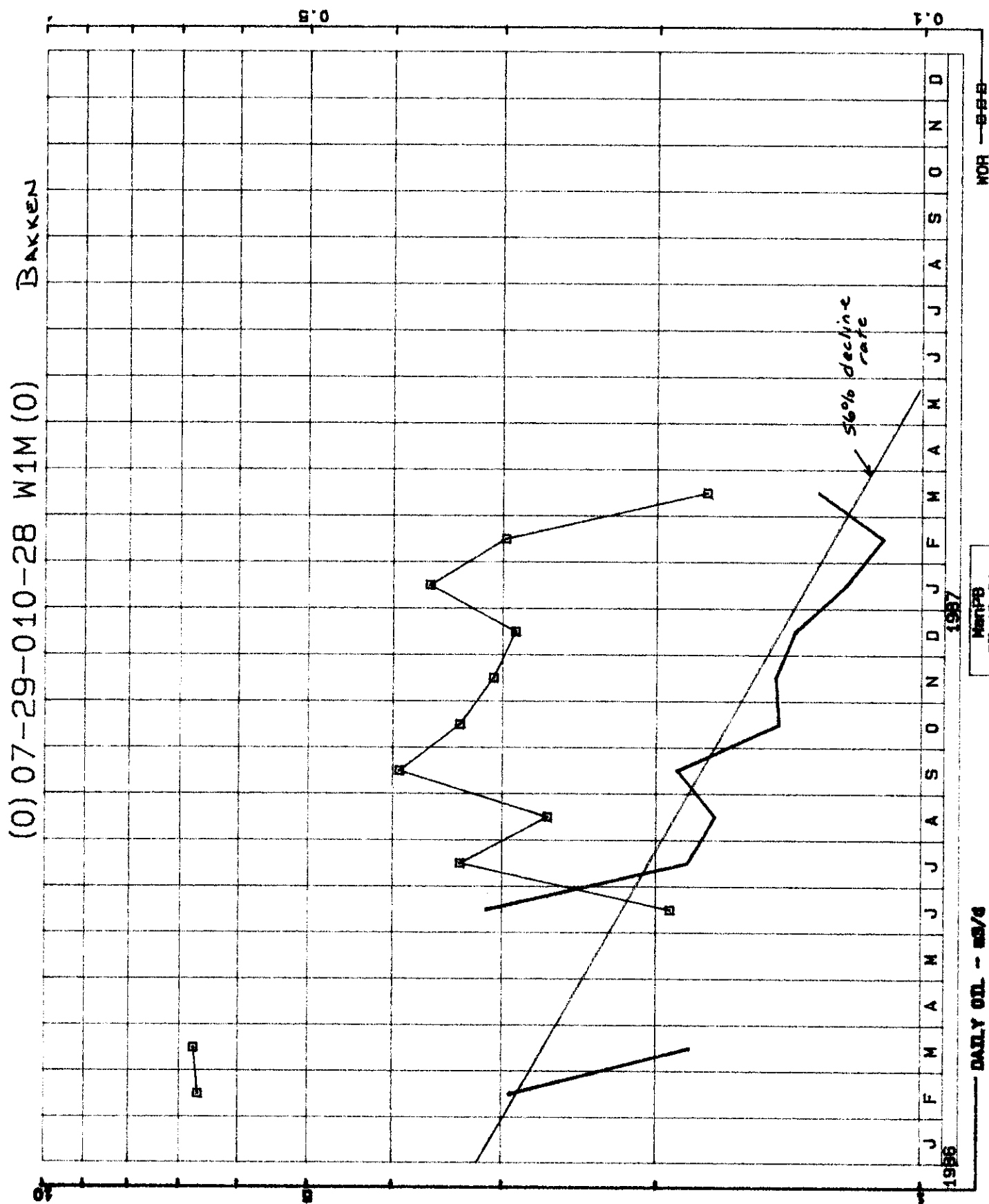


ManPB
87-12-31
14:40:31

DAILY OIL - m3/d

WOR - 888

FIG. No. 1



MERRIS
 87-12-31
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DAILY OIL - 88/8

WOB - 88-8