OMEGA HYDROCARBONS LTD.

Application for Approval to
Commingle Production from
Two or More Zones Within a Wellbore

WASKADA AREA

IN THE MATTER OF THE MINES ACT, R.S.M. 1970, c. M160, AS AMENDED, AND THE PETROLEUM DRILLING AND PRODUCTION REGULATIONS, 1984;

AND IN THE MATTER OF AN APPLICATION BY OMEGA HYDROCARBONS LTD. FOR APPROVAL TO COMMINGLE PRODUCTION FROM TWO OR MORE ZONES WITHIN A WELLBORE.

APPLICATION OF OMEGA HYDROCARBONS LTD.

OMEGA HYDROCARBONS LTD.
1300 SUN LIFE PLAZA III
112 - 4TH AVENUE S.W.
CALGARY, ALBERTA T2P 0H3

APPLICATION OF OMEGA HYDROCARBONS LTD.

1. Omega Hydrocarbons Ltd. ("Omega") is a body corporate, continued under the Business Corporations Act of Alberta, having its head office at the City of Calgary, in the Province of Alberta and registered to do business in the Province of Manitoba.

2. Omega holds interests in over 50,000 acres of oil and gas rights in the Province of Manitoba and operates over 400 wells for the production of crude oil.

3. Omega, pursuant to section 120 of the Petroleum Drilling and Production Regulations, 1984, hereby applies to the director of the Petroleum Branch of the Department of Energy and Mines for approval to commingle production from two or more zones within a wellbore. In support of the application, Omega submits the following information:

(a) Schedule "A" which provides the official names, licence numbers and locations of the wells included in this application.

(b) (i) Schedule "B" which is a map showing the location of all wells, including salt water disposal wells, within one kilometre of those included in the proposed commingling;

(ii) Schedule "C" which provides the interpreted structure, effective reservoir thickness, extent and fluid interfaces of the pools.

(c) Schedule "D" which is a sketch showing the present and proposed completion details of each well included in the application.

(d) Schedule "E" which provides discussions of

(i) geological and reservoir characteristics, hydrocarbon reserves, production and injection history, production capacity and pool pressures;

(ii) reasons justifying the proposed commingling, including details of economic factors;

(iii) proposed methods of measuring production including frequency and method of testing for each producing zone in each well;

(iv) effects on conservation or the rights of owners which may result under all possible circumstances from the pools being in communication through the wellbore.

(e) Schedule "F" which provides the name, address, phone number and signature of an authorized representative of Omega.

4. Omega will provide any additional information that the director may require and is prepared to appear before the director to explain or expand on the information provided in this application.

All of which is respectfully submitted.

Dated at the City of Calgary this 19th day of November, 1987.

OMEGA HYDROCARBONS LTD.

Per: _____
Thomas U. Hall, President

SCHEDULE "A"

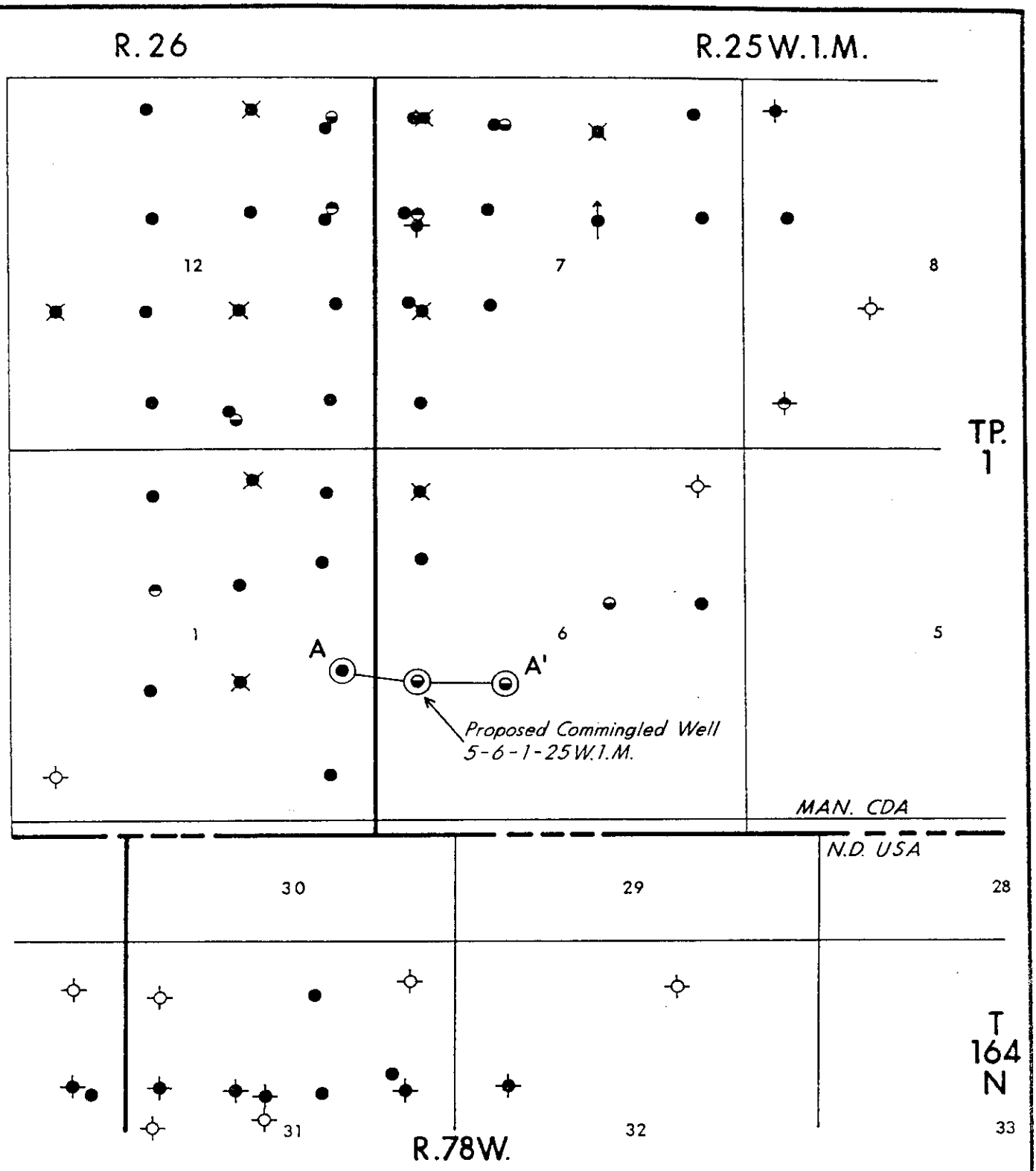
Description of Wells

Name	Licence Number	Location
Omega Waskada 5-6-1-25	3783	Legal subdivision five (5) of Section six (6), Township one (1), Range twenty-five (25) West of the Principal Meridian.
Omega Waskada 10-35-1-26	3089	Legal subdivision ten (10) of Section thirty-five (35), Township one (1), Range twenty-six (26) West of the Principal Meridian.
Omega Waskada 6-3-2-26	3250	Legal subdivision six (6) of Section three (3), Township two (2), Range twenty-six (26) West of the Principal Meridian.

SCHEDULE "B"

Locations of all Wells within One Kilometre of those included in the Proposed Commingling Wells

See Attachments 1, 2, 3



- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

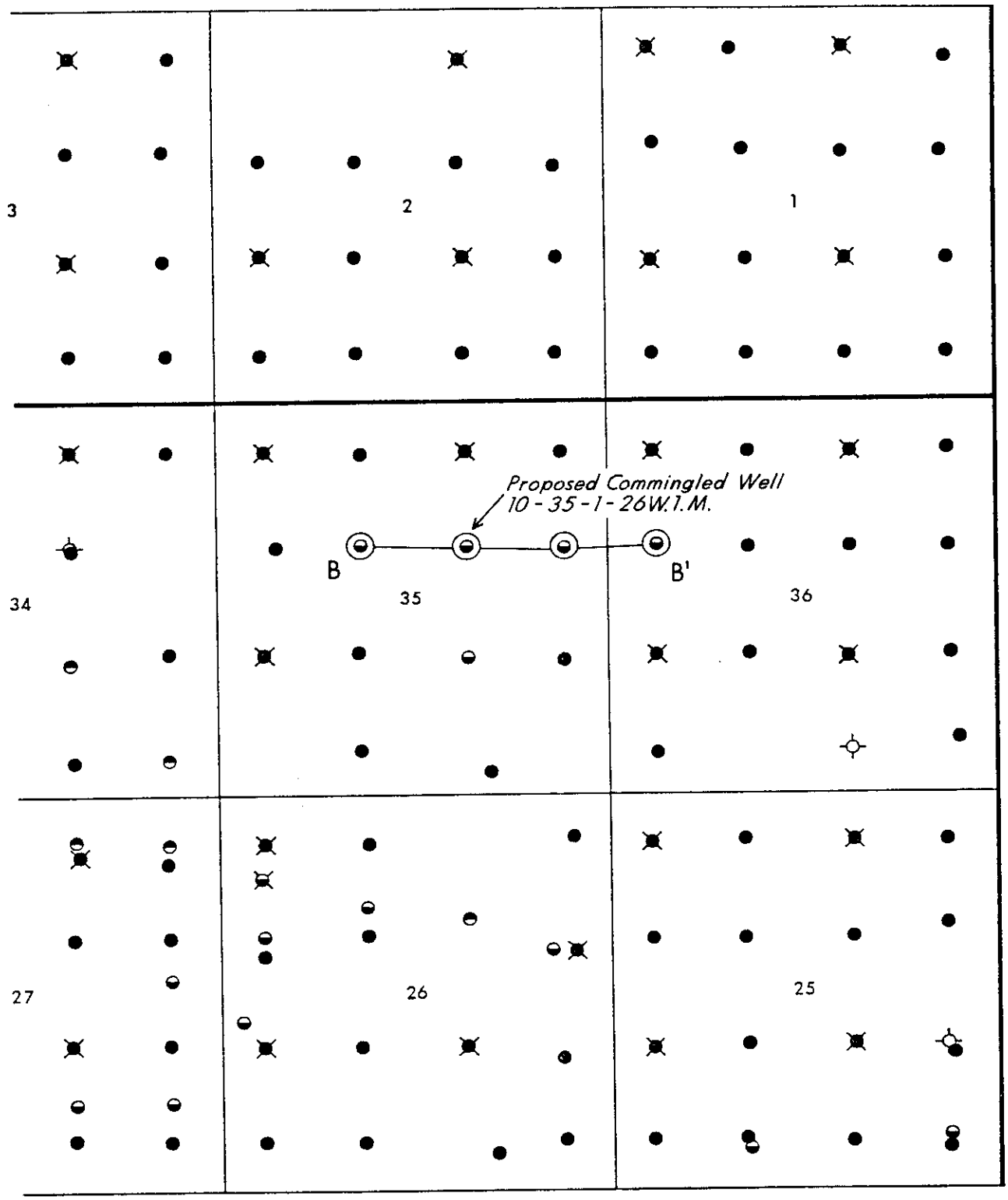
Schedule "B" Attachment 1

OMEGA HYDROCARBONS LTD.

WELL LOCATION MAP

Scale 1:25,000	Date NOV. 16, 1987
Geology	Contour Interval
Revised	File / Drafting

R.26W.1.M.



- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

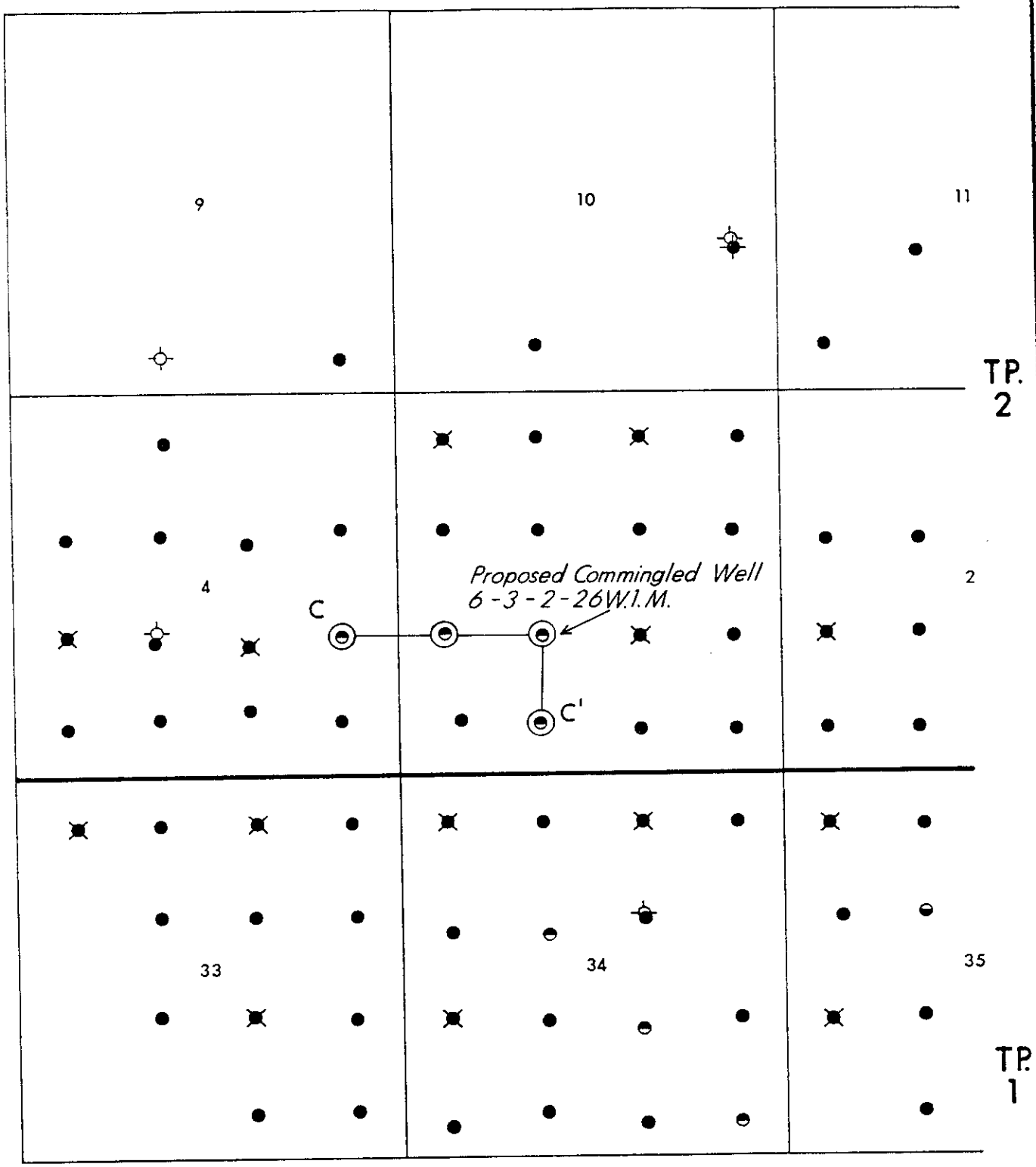
Schedule "B" Attachment 2

OMEGA HYDROCARBONS LTD

WELL LOCATION MAP

Scale 1:25,000	Date NOV. 16, 1987
Geology:	Contour Interval:
Revised:	File: Drafting:

R. 26W.1.M.



- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

Schedule "B" Attachment 3

OMEGA HYDROCARBONS LTD.

WELL LOCATION MAP

Scale: 1:25,000	Date: NOV, 16. 1987
Geology	Contour interval:
Revised	File: Drafting:

SCHEDULE "C"

Interpreted Structure, Effective Reservoir Thickness Extent and Fluid Interfaces of the Pools

The Geological parameters are outlined in a series of maps and cross-sections as listed below.

Omega Waskada 5-6-1-25 WPM

Attachment 1a - Lower Amaranth Net Pay Map
Attachment 1b - Structure Top - of MC3a Porosity Map
Attachment 1c - Lower Alida (MC3a) Øh Map
* Attachment 1d - Structural Cross-Section A-A'

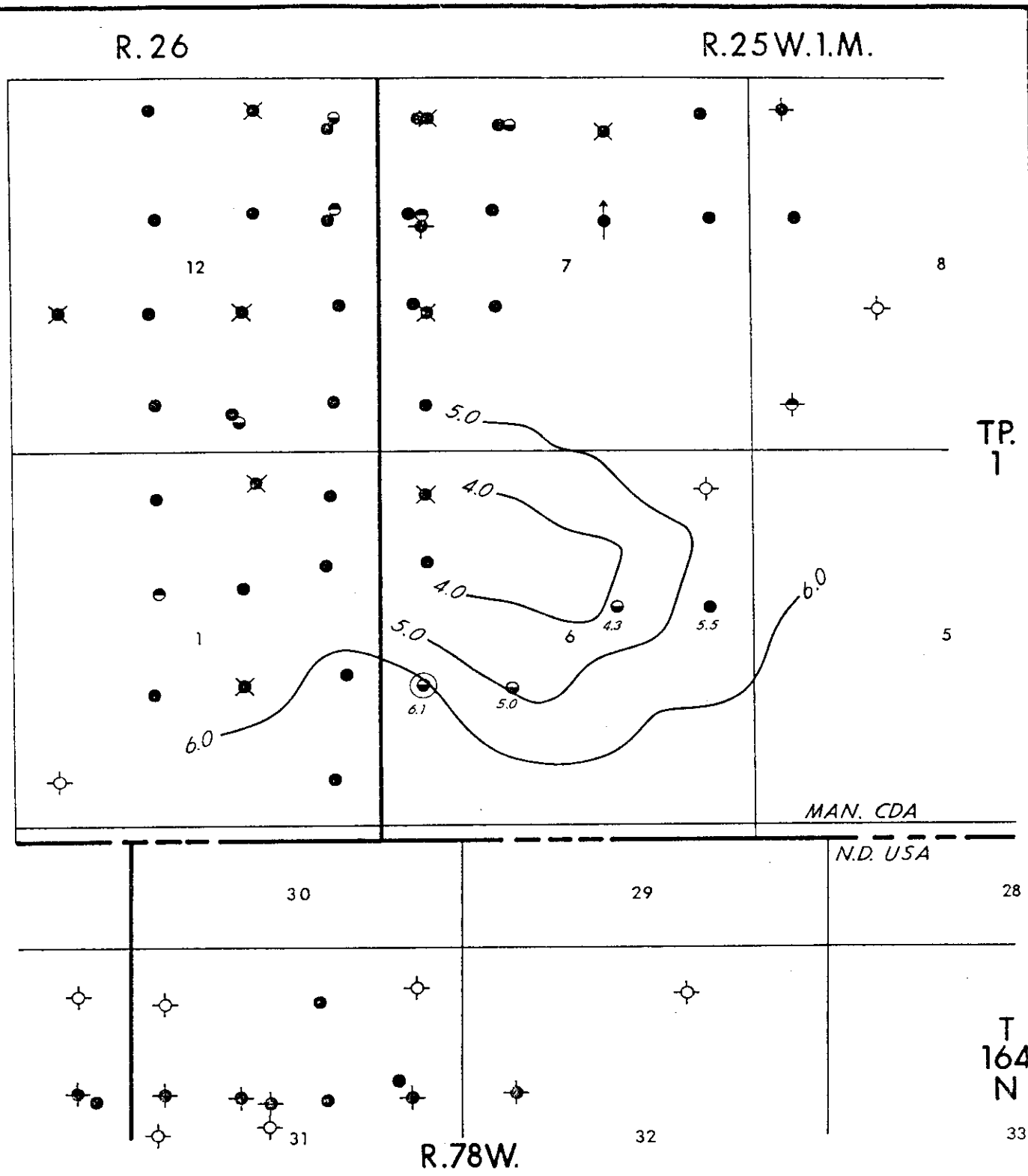
Omega Waskada 10-35-1-26 WPM

Attachment 2a - Lower Amaranth Net Pay Map
Attachment 2b - Structure Top - of MC3a Porosity Map
Attachment 2c - Lower Alida (MC3a) Øh Map
* Attachment 2d - Structure Cross-Section B-B'

Omega Waskada 6-3-2-26 WPM

Attachment 3a - Lower Amaranth Net Pay Map
Attachment 3b - Structure Top - of MC3b Porosity Map
Attachment 3c - Upper Alida (MC3b) Øh Map
* Attachment 3d - Structure Cross-Section C-C'

* Contained in map pocket at the back of the Application.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

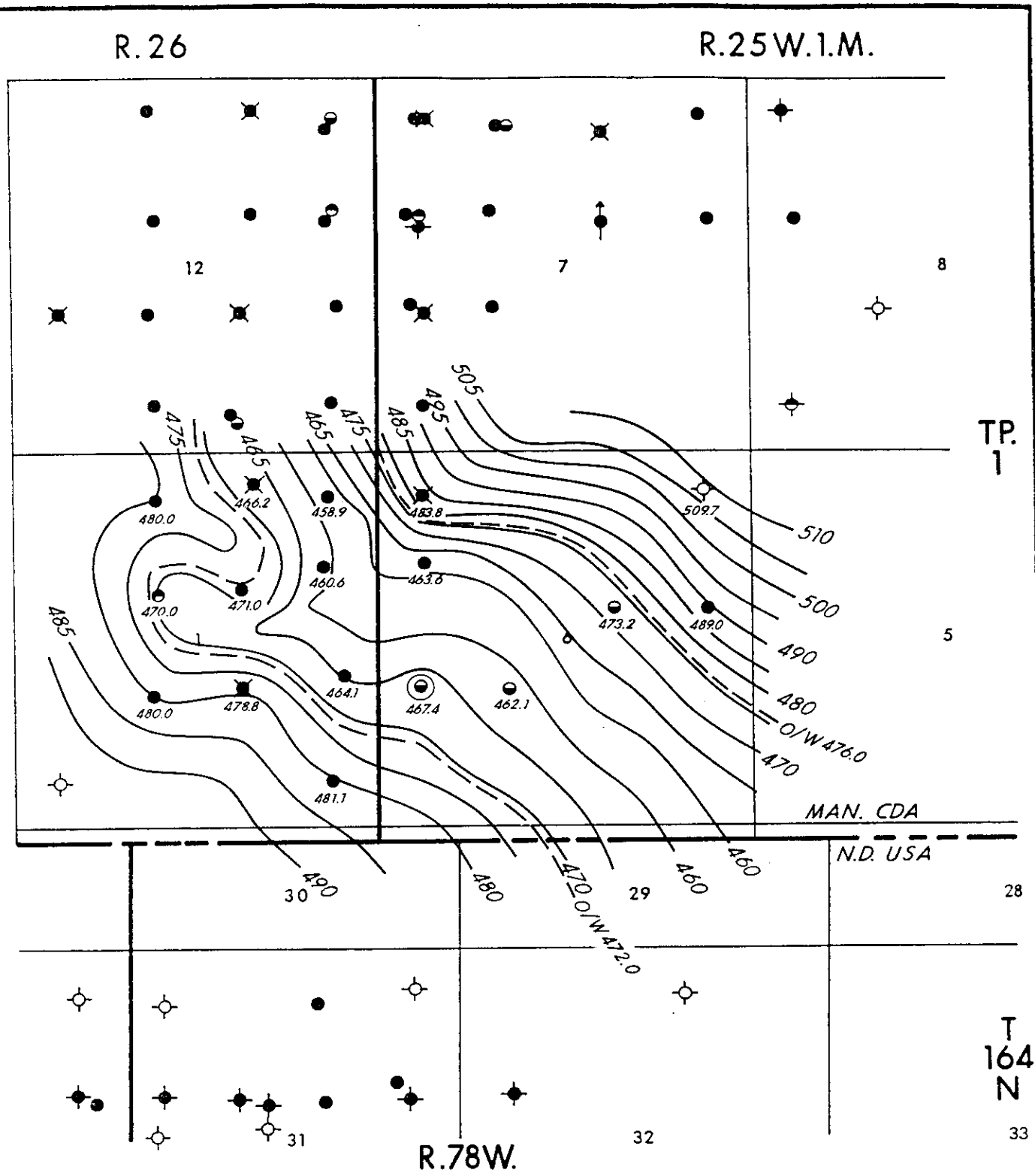
Schedule "C" Attachment 1a

OMEGA HYDROCARBONS LTD.

WASKADA, MN.

Lower Amaranth Net Pay Map

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 1.0 m
Revised:	File: / Drafting:



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

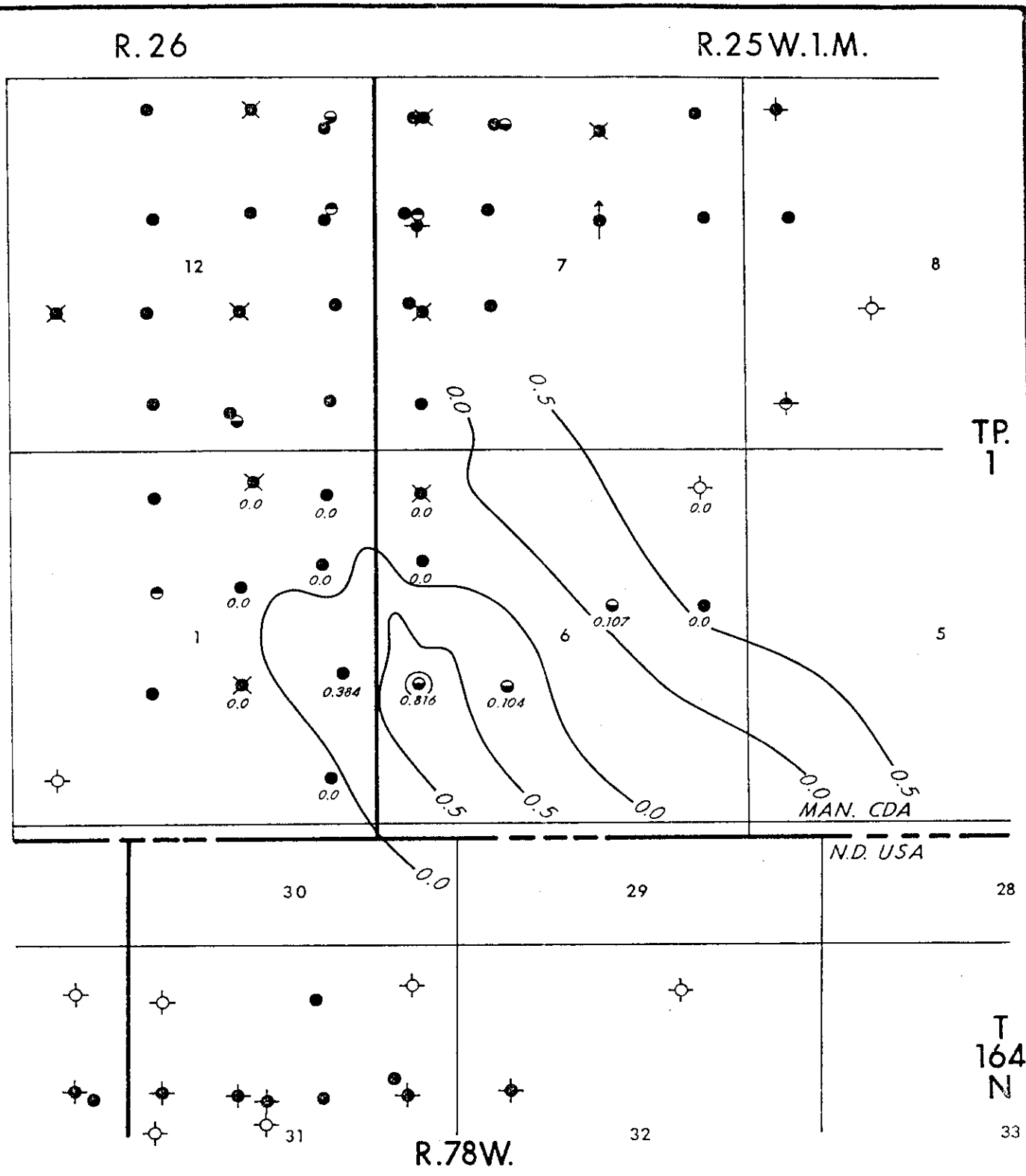
Schedule "C" Attachment 1b

OMEGA HYDROCARBONS LTD.

WASKADA, MN.

Structure-Top of MC3a Porosity

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 5.0 m
Revised:	File: / Drafting: PAB.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

Schedule "C" Attachment 1c

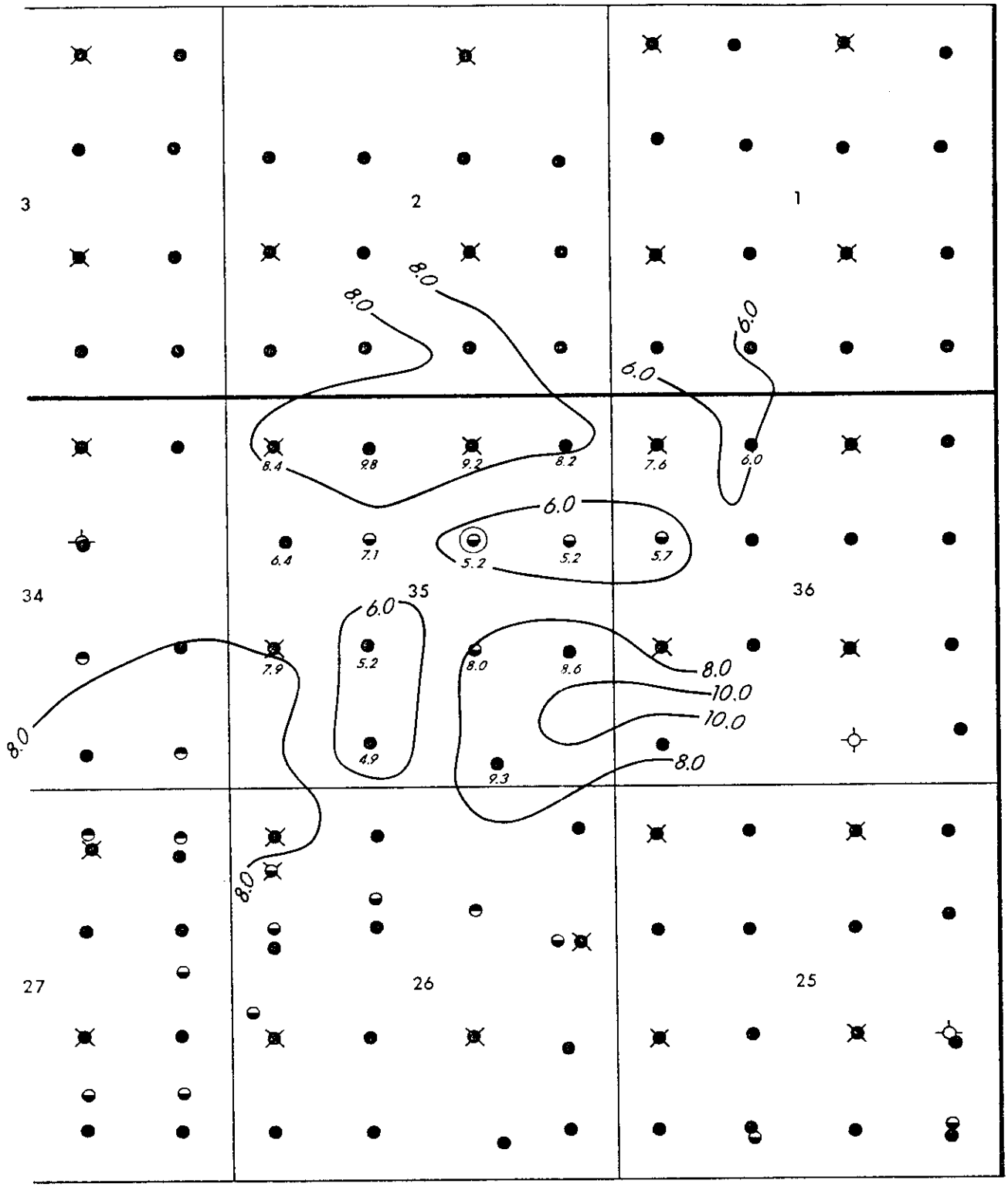
OMEGA HYDROCARBONS LTD.

WASKADA, MN.

Lower Alida(MC3a) øh Map

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 0.5 øh
Revised:	File: Drafting: PAB

R.26W.1.M.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

Schedule "C" Attachment 2 a

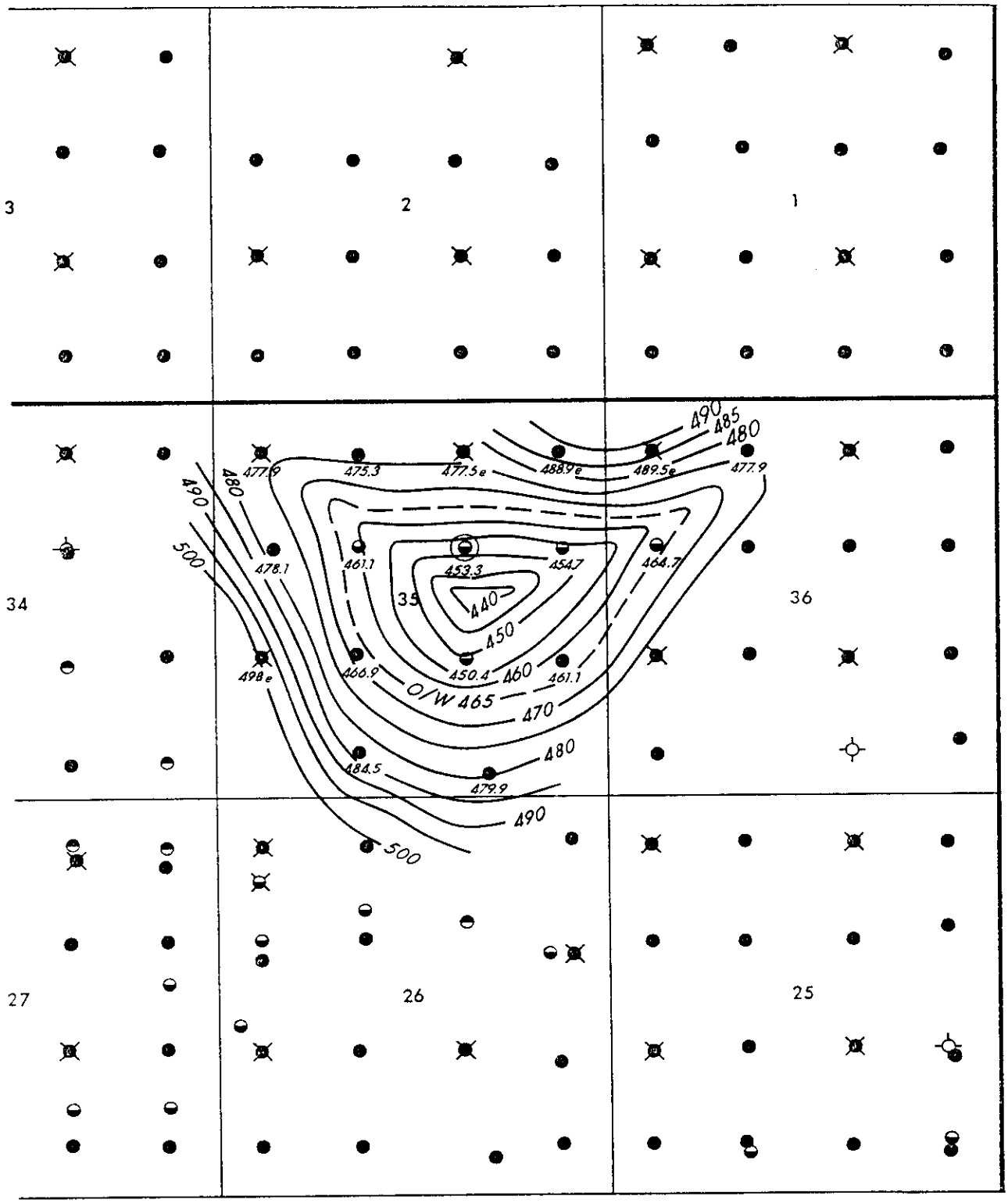
OMEGA HYDROCARBONS LTD.

WASKADA, MN.

Lower Amaranth Net Pay Map

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 2.0 m
Revised:	File: Drafting: PAB

R. 26 W. 1. M.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

Schedule "C" Attachment 2 b

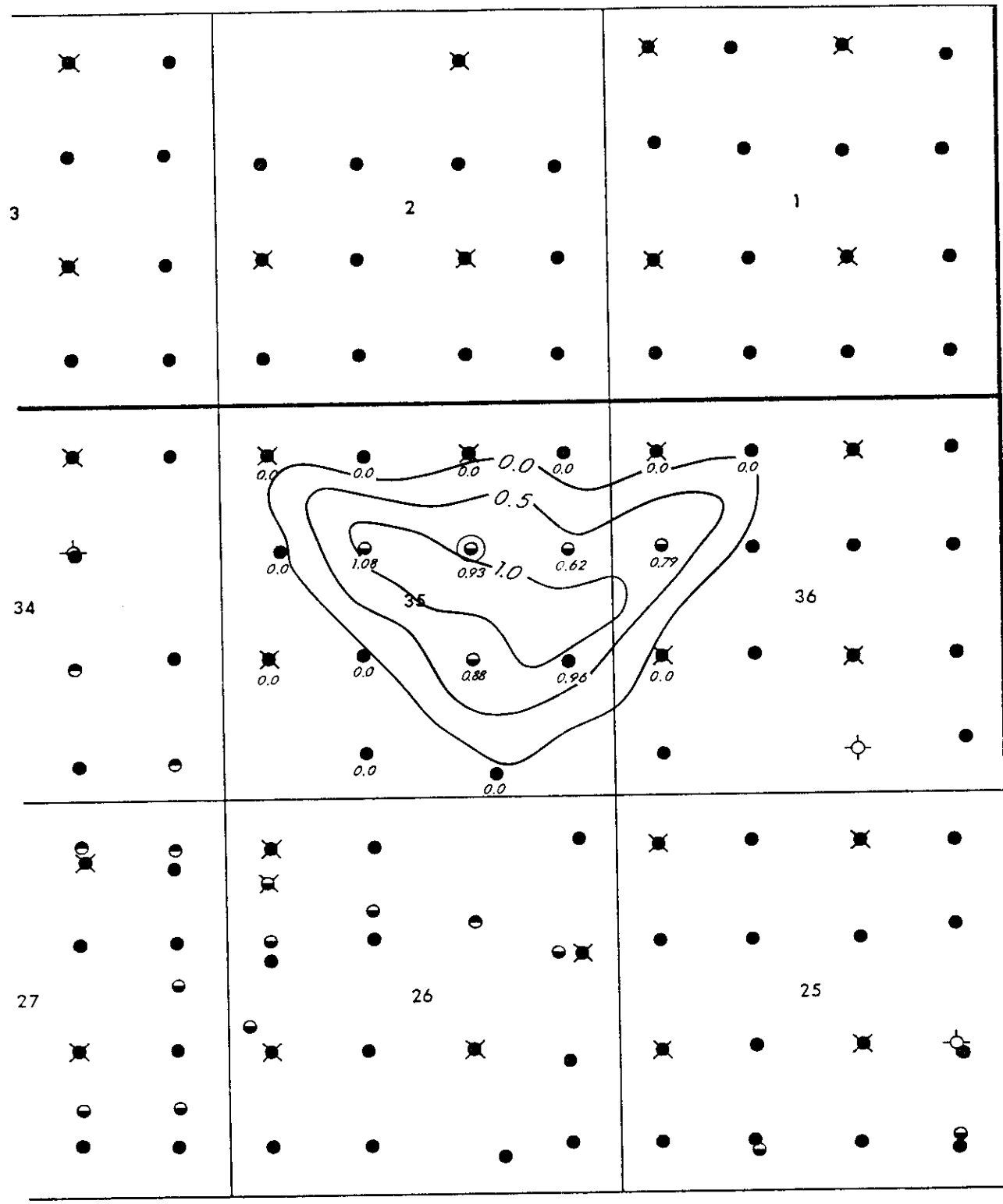
OMEGA HYDROCARBONS LTD.

WASKADA, MN.

Structure-Top of MC3a Porosity

Scale 1: 25,000	Date NOV. 16, 1987
Geology P. Patton	Contour Interval 5.0 m
Revised	File / Drafting PAB

R.26W.1.M.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

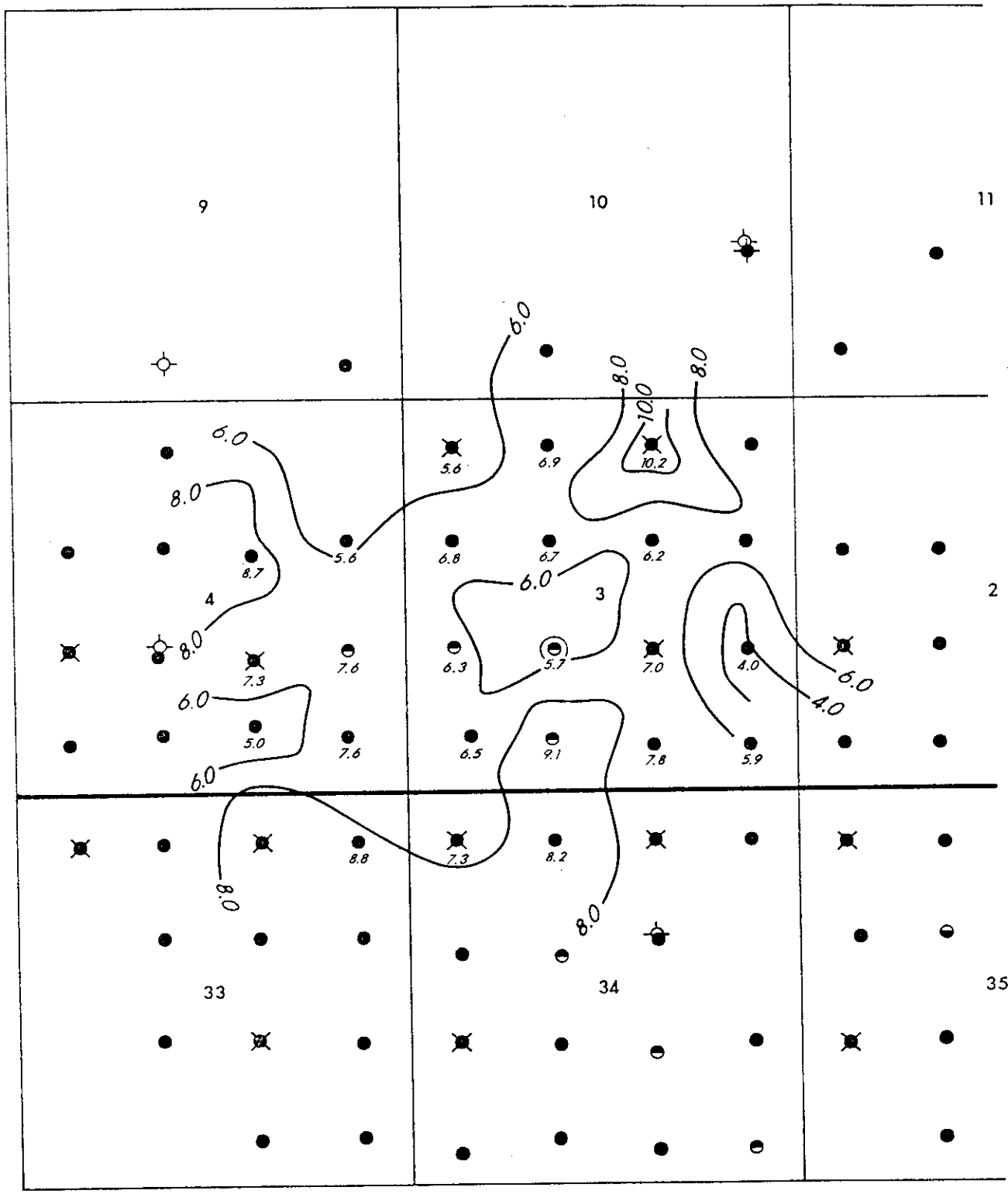
Schedule "C" Attachment 2 c

OMEGA HYDROCARBONS LTD.

WASKADA, MN.
Lower Alida (MC3a) øh Map

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 0.5 ø h
Revised:	File: Drafting:

R. 26W.1.M.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

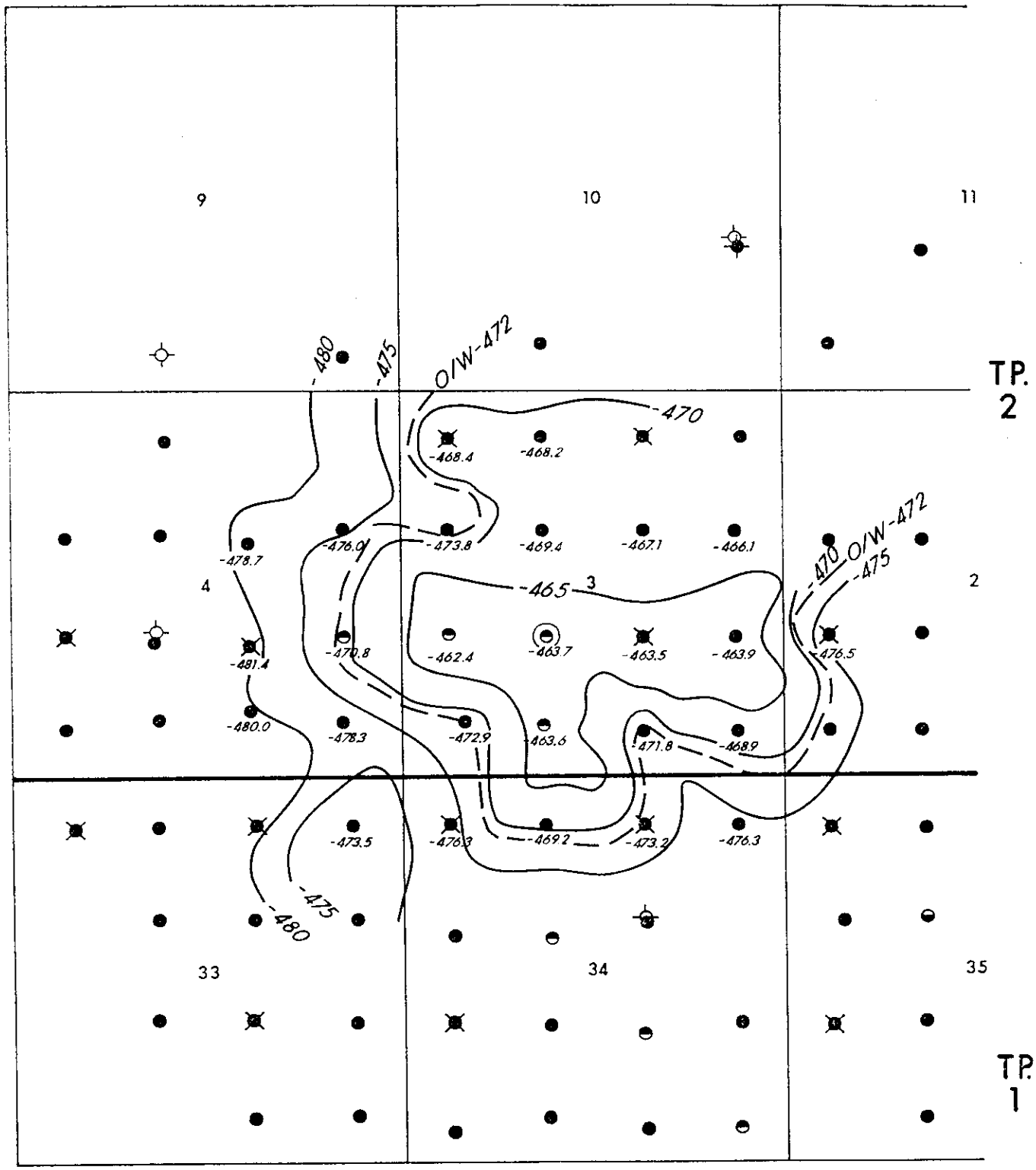
Schedule "C" Attachment 3a

OMEGA HYDROCARBONS LTD.

WASKADA, MN.

Lower Amaranth Net Pay Map

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 2.0 m
Revised:	File: Drafting: PAB.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

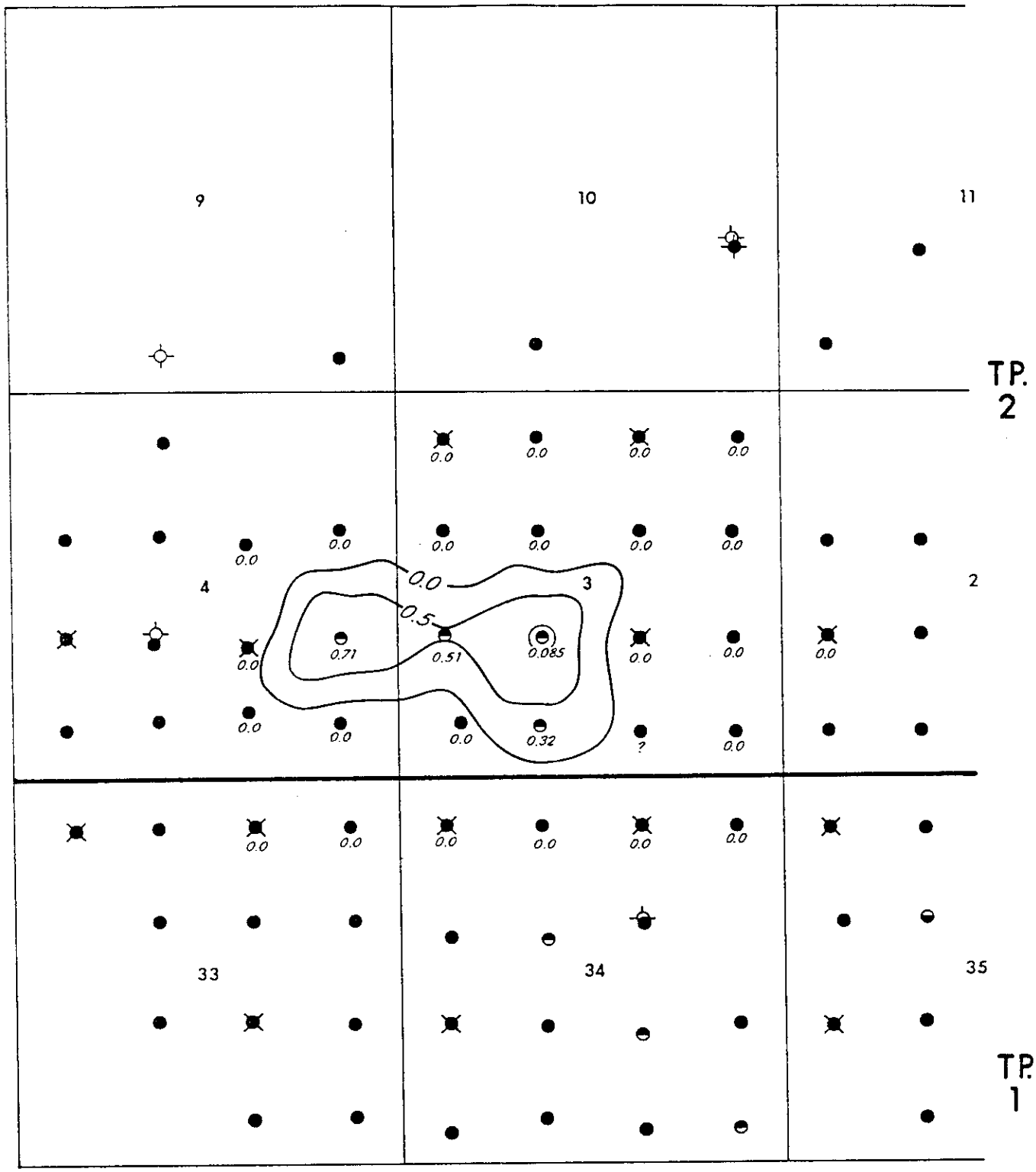
Schedule "C" Attachment 3 b

OMEGA HYDROCARBONS LTD

WASKADA, MN.

Structure-Top of MC3b Porosity

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 5.0 m
Revised:	File: Drafting: PAB.



- Proposed Commingled Well
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

Schedule "C" Attachment 3c

OMEGA HYDROCARBONS LTD.

WASKADA, MN.

Upper Alida (MC3b) øh Map

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: P. Patton	Contour Interval: 0.5 ø h
Revised:	File: Drafting: PAB.

SCHEDULE "D"

Present and Proposed Completion Details

Detailed recompletion programs for each of the wells are attached.

Omega Waskada 5-6-1-25 WPM

Attachment No. 1 sets out the workover program.
Attachment No. 2 sets out the current completion.
Attachment No. 3 sets out the Lower Amaranth test completion.
Attachment No. 4 sets out the commingled production completion.
Attachment No. 5 sets out the production test completion.

Omega Waskada 10-35-1-26 WPM

Attachment No. 6 sets out the workover program.
Attachment No. 7 sets out the current completion.
Attachment No. 8 sets out the Lower Amaranth test completion.
Attachment No. 9 sets out the commingled production completion.
Attachment No. 10 sets out the production test completion.

Omega Waskada 6-3-2-26 WPM

Attachment No. 11 sets out the workover program.
Attachment No. 12 sets out the current completion.
Attachment No. 13 sets out the Lower Amaranth test completion.
Attachment No. 14 sets out the commingled production completion.
Attachment No. 15 sets out the production test completion.

Schedule D - Attachment 1

Omega Waskada 5-6-1-25 WPM

Commingled Production - Well Completion Program

A. LAm Completion

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Run in tubing and tag PBTD. Pull tubing.
4) Release rig.
5) Rig up slickline and run pressure bombs to 935 mKB. Record the pressure for 7 days.
6) Pull pressure bombs and release slickline unit.
7) Dump sand to fill well to 928 mKB. Allow sufficient time for sand to settle.
8) Rig up wireline. Tag sand fill level.
9) Perforate the Lower Amaranth from 911 to 922 mKB with 79mm HSC gun at 14 SPM. Rig out wireline.
10) Frac the Lower Amaranth using 10 Tonne polyemulsion.
11) Move in service rig and rig up.
12) Run in tubing and circulate out sand to 928 mKB.
13) Land tubing at 925 mKB.
14) Run BHP and rods.
15) Release rig.

B. LAm Evaluation

1) Put well on production.
2) Conduct 24 - hour tests on the LAm on a weekly basis for one month.

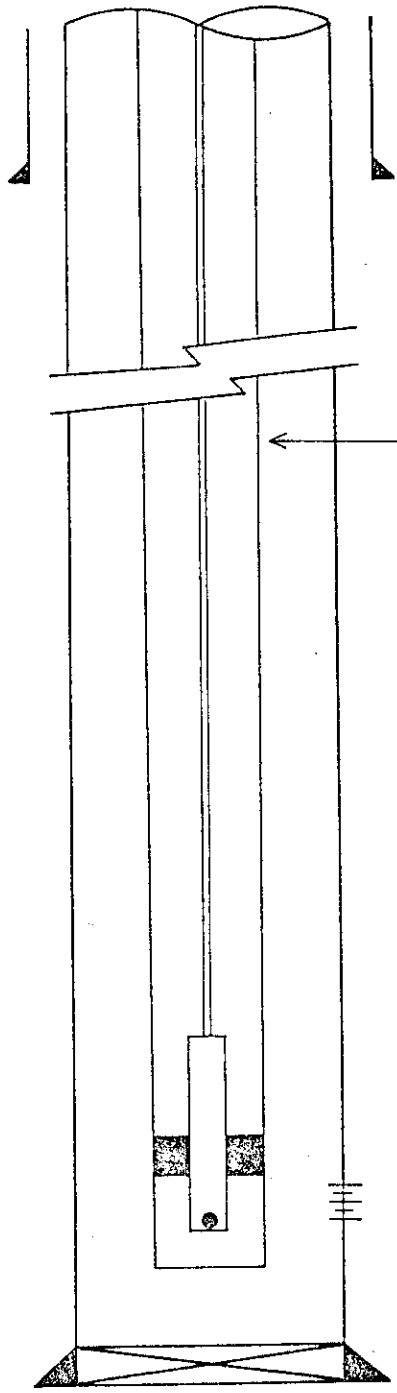
that factors based on 4 month production

C. Recompletion for Commingled Production

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Circulate out sand to PBTD.
4) Land the tubing at 945 mKB.
5) Run BHP and rods.
6) Put well on production.

D. Annual Testing Program

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Pull tubing.
4) Run in hole with tubing and retrievable packer. Tubing to be completed with perforated joint above the packer and bull plug below the packer.
5) Set packer at 928 mKB.
6) Run BHP and rods.
7) Release rig.
8) Production test the Lower Amaranth for one week.
9) Move in service rig and rig up.
10) Pull BHP and rods.
11) Release packer and pull out of hole.
12) Run tubing and land at 945 mKB.
13) Run BHP and rods.
14) Release rig.
15) Put well on production.

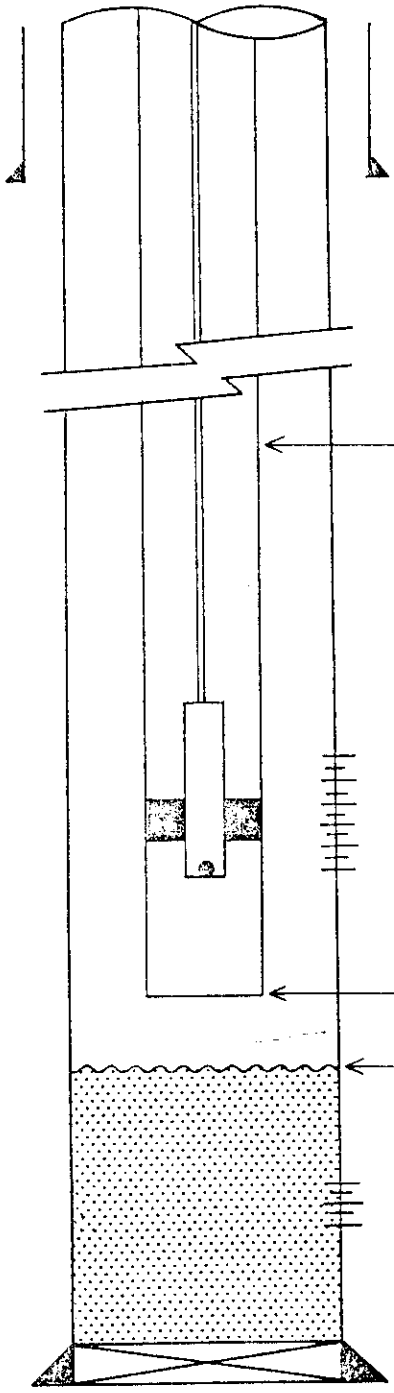


Schedule 'D' Attachment No. 2

OMEGA HYDROCARBONS LTD.

Omega Waskada 5-6-1-25
Current Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:

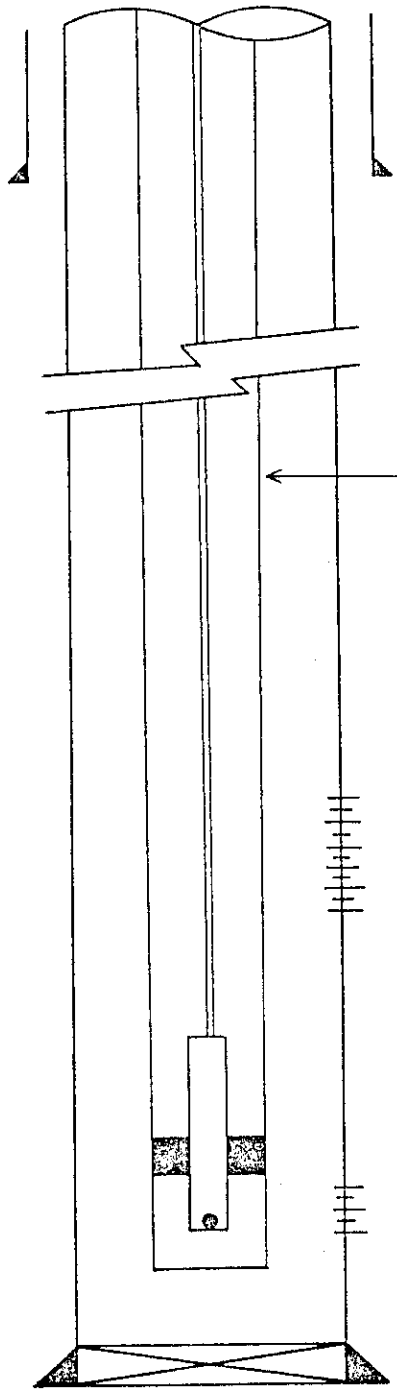


Schedule 'D' Attachment No.3

OMEGA HYDROCARBONS LTD.

Omega Waskada 5-6-1-25 WPM
Lower Amaranth Test Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:



60.3mm Tubing

911.0

Lower Amaranth Completion Interval

922.0

934.2

Mississippian Completion Interval

935.2

945 mKB

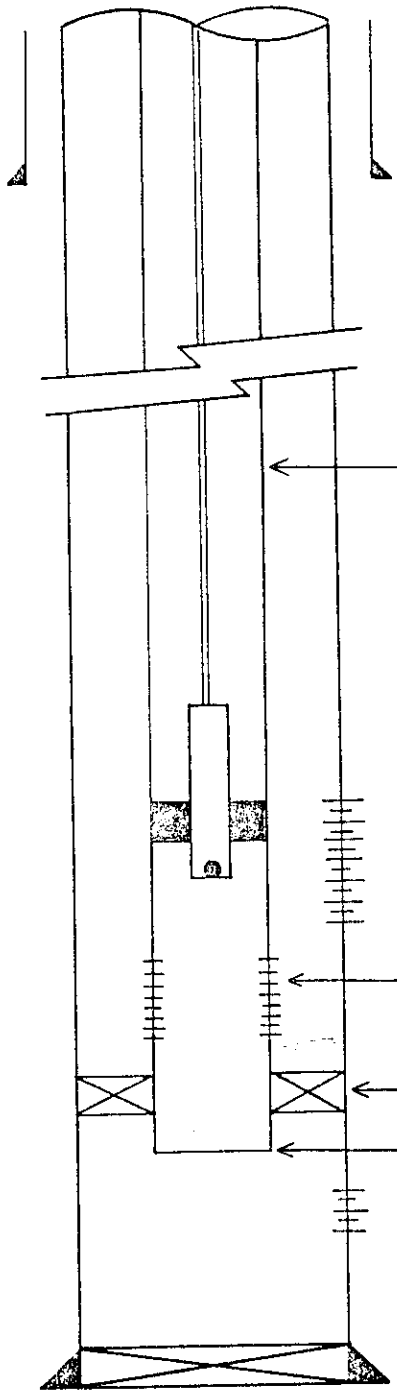
960 mKB 114.3mm Casing Shoe

Schedule 'D'- Attachment No. 4

OMEGA HYDROCARBONS LTD.

Omega Waskada 5-6-1-25 WPM
Commingled Production Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:



Schedule 'D'- Attachment No.5

OMEGA HYDROCARBONS LTD.

Omega Waskada 5-6-1-25 WPM
Annual Production Test Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:

Schedule D - Attachment 6

Omega Waskada 10-35-1-26 WPM

Commingled Production - Well Completion Program

A. LAm Completion

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Run in tubing and tag PBTD. Pull tubing.
4) Release rig.
5) Rig up slickline and run pressure bombs to 927 mKB. Record the pressure for 7 days.
6) Pull pressure bombs and release slickline unit.
7) Dump sand to fill well to 918 mKB. Allow sufficient time for sand to settle.
8) Rig up wireline. Tag sand fill level.
9) Perforate the Lower Amaranth from 900 to 912 mKB with 79mm HSC gun at 14 SPM. Rig out wireline.
10) Frac the Lower Amaranth using 10 Tonne polyemulsion.
11) Move in service rig and rig up.
12) Run in tubing and circulate out sand to 918 mKB.
13) Land tubing at 915 mKB.
14) Run BHP and rods.
15) Release rig.

B. LAm Evaluation

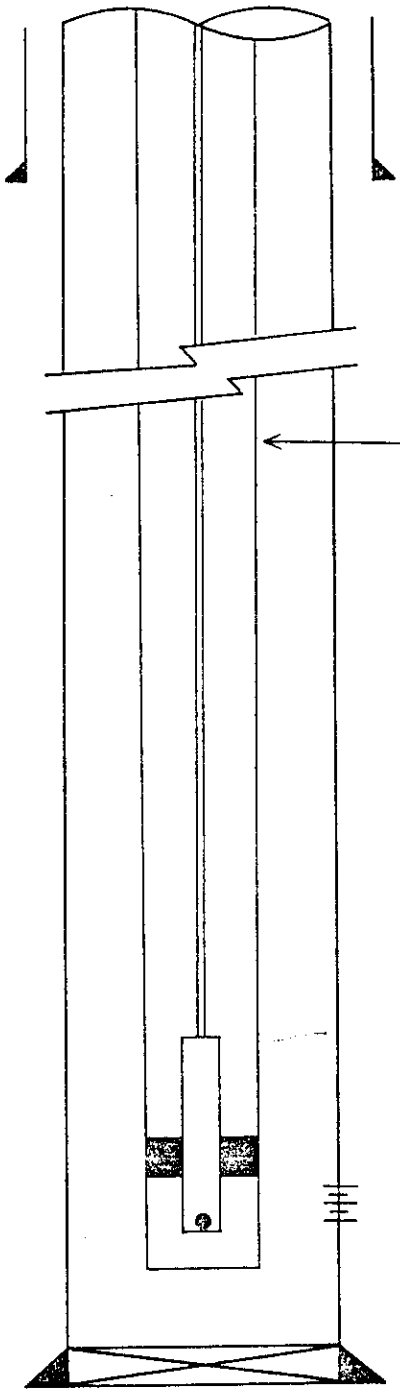
1) Put well on production.
2) Conduct 24 - hour tests on the LAm on a weekly basis for one month.

C. Recompletion for Commingled Production

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Circulate out sand to PBTD.
4) Land the tubing at 935 mKB.
5) Run BHP and rods.
6) Put well on production.

D. Annual Testing Program

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Pull tubing.
4) Run in hole with tubing and retrievable packer. Tubing to be completed with perforated joint above the packer and bull plug below the packer.
5) Set packer at 918 mKB.
6) Run BHP and rods.
7) Release rig.
8) Production test the Lower Amaranth for one week.
9) Move in service rig and rig up.
10) Pull BHP and rods.
11) Release packer and pull out of hole.
12) Run tubing and land at 935 mKB.
13) Run BHP and rods.
14) Release rig.
15) Put well on production.



922.0
932.0 Mississippian Completion Interval

934.12 mKB

942.4 mKB PBTD

949.75 mKB 114.3mm Casing Shoe

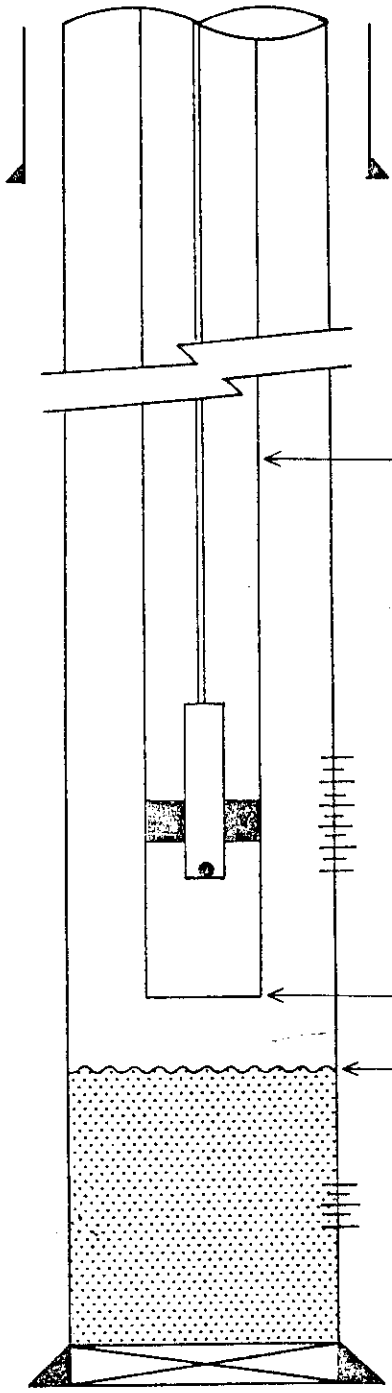
Schedule 'D'- Attachment No.7

OMEGA HYDROCARBONS LTD.

Omega Waskada 10-35-1-26 WPM

Current Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:

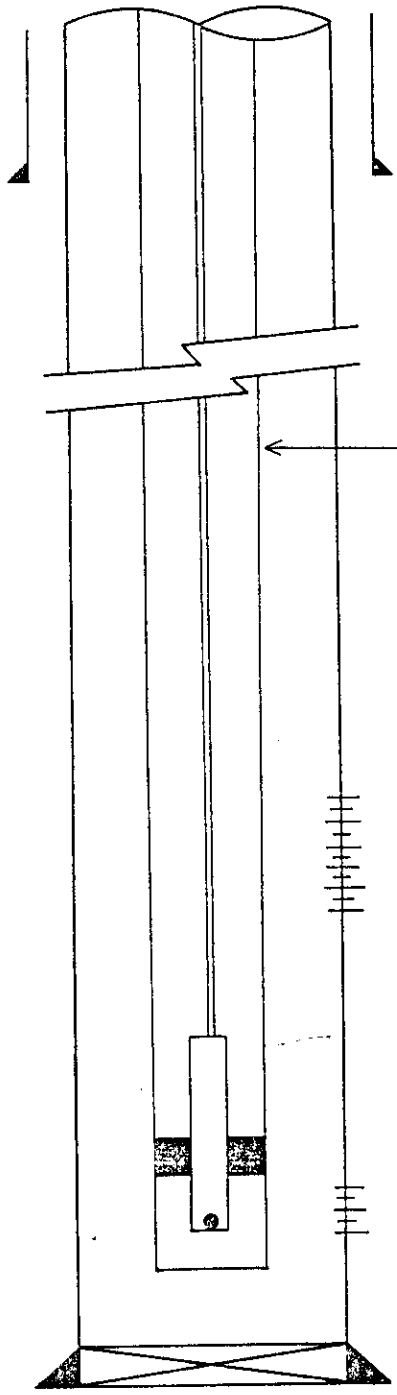


Schedule 'D'- Attachment No.8

OMEGA HYDROCARBONS LTD.

Omega Waskada 10-35-1-26 WPM
Lower Amaranth Test Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:



60.3mm Tubing

900.0

Lower Amaranth Completion Interval

912.0

922.0
Mississippian Completion Interval
932.0

935 mKB

942.4 mKB PBTD

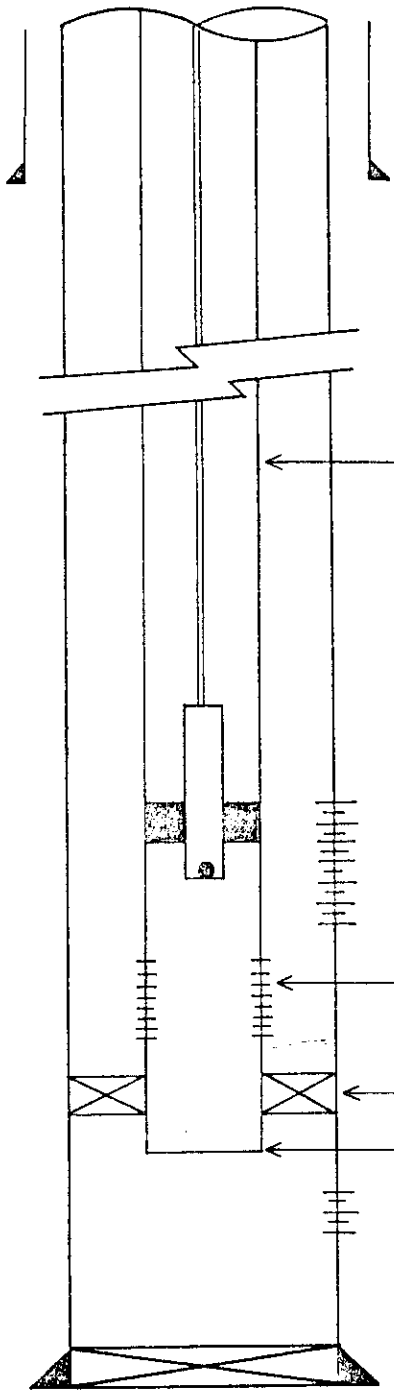
949.75 mKB 114.3mm Casing Shoe

Schedule 'D'- Attachment No.9

OMEGA HYDROCARBONS LTD.

Omega Waskada 10-35-1-26 WPM
Commingled Production Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:



60.3mm Tubing

900.0

Lower Amaranth Completion Interval

912.0

Perforated Tubing Joint

918 mKB Retrievable Packer

Tailpipe with Bull Plug

922.0

Mississippian Completion Interval

932.0

942.4 mKB PBTD

949.75 mKB 114.3mm Casing Shoe

Schedule 'D'- Attachment No.10

OMEGA HYDROCARBONS LTD.

Omega Waskada 10-35-1-26
Annual Production Test Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:

Schedule D - Attachment 11

Omega Waskada 6-3-2-26 WPM

Commingled Production - Well Completion Program

A. LAm Completion

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Run in tubing and tag PBTD. Pull tubing.
4) Release rig.
5) Rig up slickline and run pressure bombs to 930 mKB. Record the pressure for 7 days.
6) Pull pressure bombs and release slickline unit.
7) Dump sand to fill well to 924 mKB. Allow sufficient time for sand to settle.
8) Rig up wireline. Tag sand fill level.
9) Perforate the Lower Amaranth from 906 to 918 mKB with 79mm HSC gun at 14 SPM. Rig out wireline.
10) Frac the Lower Amaranth using 10 Tonne polyemulsion.
11) Move in service rig and rig up.
12) Run in tubing and circulate out sand to 924 mKB.
13) Land tubing at 921 mKB.
14) Run BHP and rods.
15) Release rig.

B. LAm Evaluation

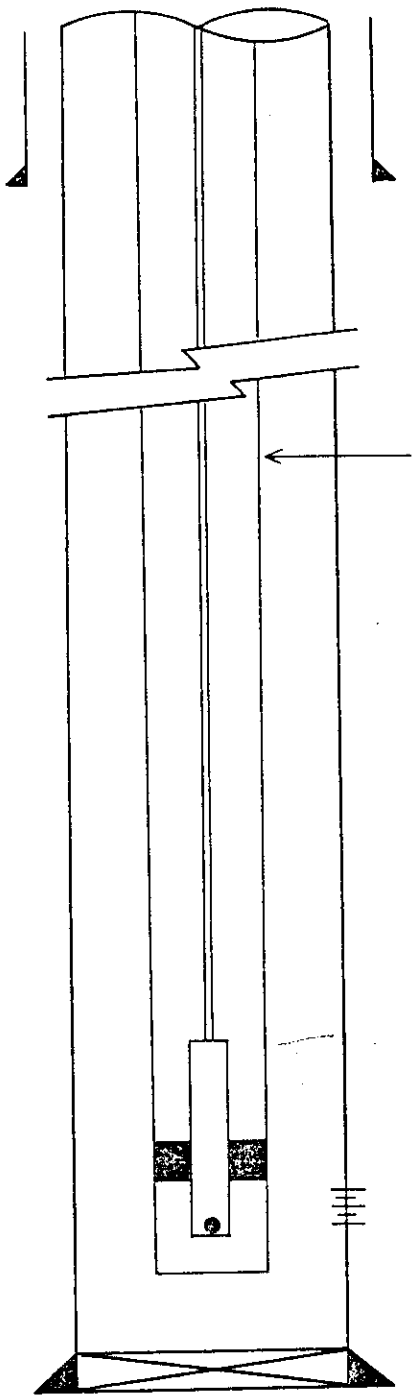
1) Put well on production.
2) Conduct 24 - hour tests on the LAm on a weekly basis for one month.

C. Recompletion for Commingled Production

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Circulate out sand to PBTD.
4) Land the tubing at 936 mKB.
5) Run BHP and rods.
6) Put well on production.

D. Annual Testing Program

1) Move in service rig and rig up.
2) Pull BHP and rods.
3) Pull tubing.
4) Run in hole with tubing and retrievable packer. Tubing to be completed with perforated joint above the packer and bull plug below the packer.
5) Set packer at 924 mKB.
6) Run BHP and rods.
7) Release rig.
8) Production test the Lower Amaranth for one week.
9) Move in service rig and rig up.
10) Pull BHP and rods.
11) Release packer and pull out of hole.
12) Run tubing and land at 936 mKB.
13) Run BHP and rods.
14) Release rig.
15) Put well on production.

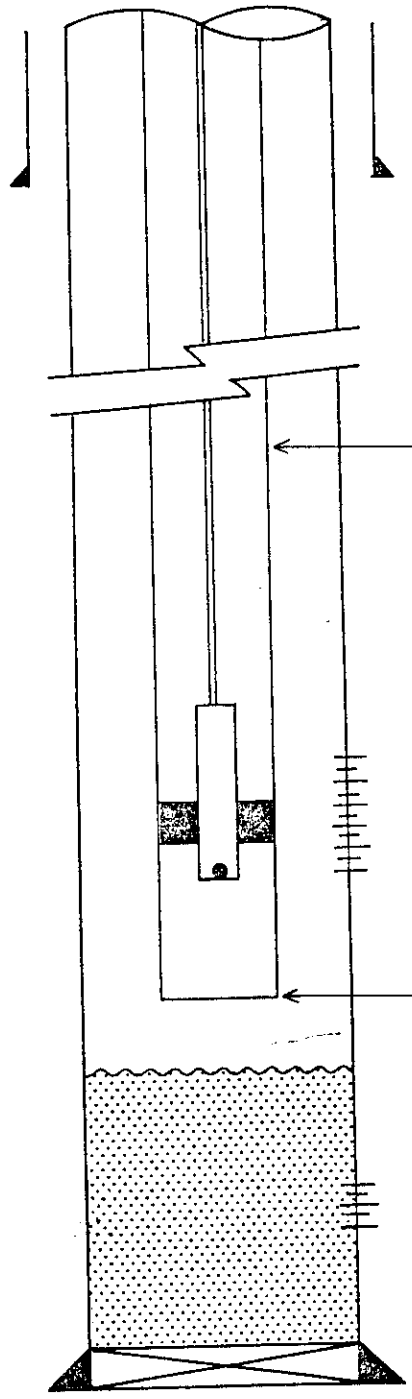


Schedule 'D'- Attachment No. 12

OMEGA HYDROCARBONS LTD.

Omega Waskada 6-3-2-26 WPM
Current Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:

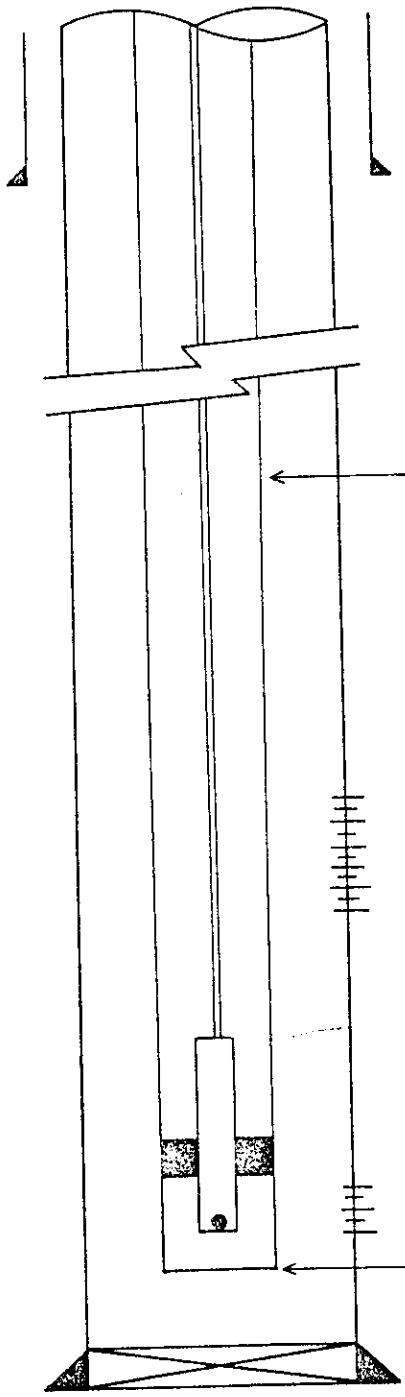


Schedule 'D'-Attachment No. 13

OMEGA HYDROCARBONS LTD.

Omega Waskada 6-3-2-26 WPM
Lower Amaranth Test Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:

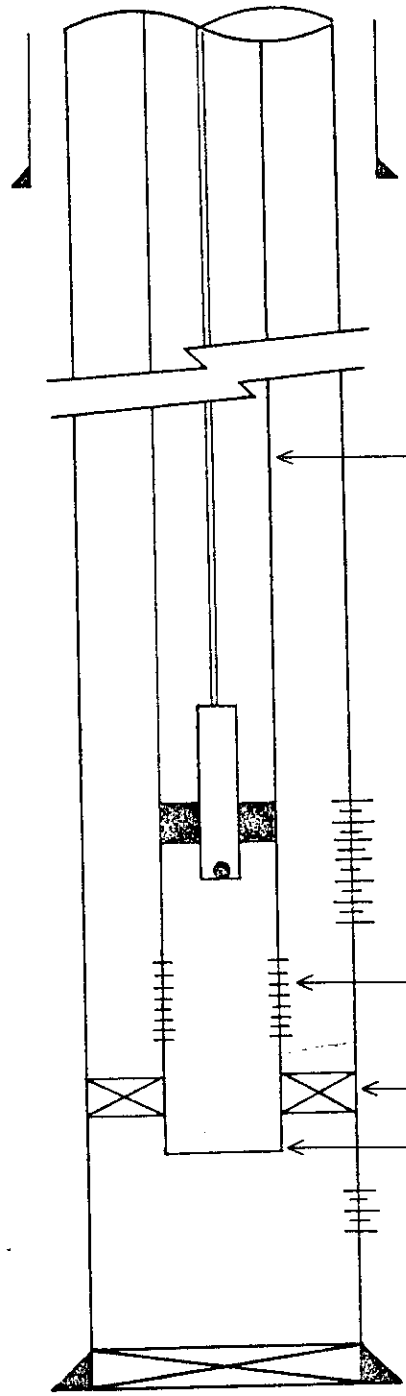


Schedule 'D'- Attachment No.14

OMEGA HYDROCARBONS LTD.

Omega Waskada 6-3-2-26 WPM
Commingled Production Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:



Schedule 'D'- Attachment No.15

OMEGA HYDROCARBONS LTD.

Omega Waskada 6-3-2-26 WPM
Annual Production Test Completion

Scale:	Date:	
Geology:	Contour Interval:	
Revised:	File:	Drafting:

SCHEDULE "E"

(i)

Geological and Reservoir Characteristics, Hydrocarbon Reserves, Production and Injection History, Production Capacity and Pool Pressures

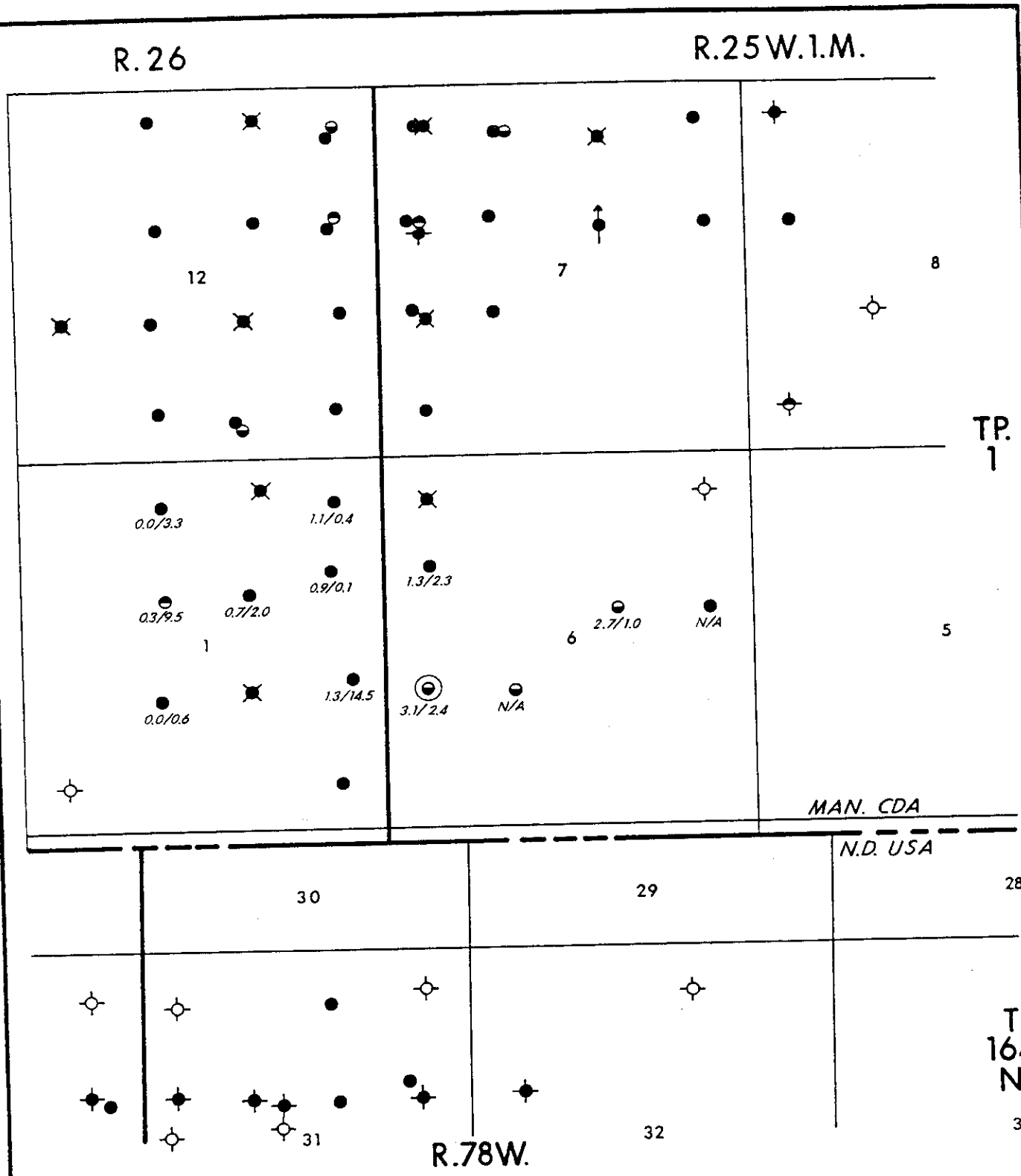
Below is a table which summarizes the specific geological and reservoir characteristics for each of the individual wells to be commingled under this application.

	Mission Canyon					Lower Amaranth			
Location	Zone	Øh (m)	OOIP (m^3)	Prod. Rate (m^3/d)	Pool Pressure (kPa)	Øh (m)	OOIP (m^3)	Prod. Rate (m^3/d)	Pool Pressure (Kpa)
5-6-1-25 WPM	LAlida	0.816	56765	3.1/2.4	N/A	0.915	57039	1.0/0.5	N/A
10-35-1-26 WPM	LAlida	0.930	64696	1.8/0.2	N/A	0.780	48623	1.5/0.2	6500
6-3-2-26 WPM	UAlida	0.085	5913	1.7/1.2	N/A	0.923	57563	1.3/0.2	2100

Original oil in place calculations were determined by using the h and/or øh values contained in Schedule C in combination with other average reservoir parameters. For the Lower Amaranth formation it was assumed that A=16 ha, Sw=0.55, Bo=1.155 Rm^3/m^3. For both the Alida formations it was assumed that A=16ha, Sw=0.50, Bo=1.15 Rm^3/m^3.

Attachments 1-3 contain current oil and water production rates for all wells within one kilometre of the wells to be commingled. These maps were used to estimate the Lower Amaranth production rates at each of the commingled wells following completion. Additional technical data in support of this application is included in Attachments 4-12.

As shown in the geological cross sections contained in Schedule C, at each of the proposed commingled locations segregation exists between the Lower Amaranth and Mission Canyon formations by way of a tight reservoir interval consisting of anhydrite and/or argillaceous limestone. Pool pressures for the Lower Amaranth formation have been extrapolated from offsetting wells; in the case of well 10-35 falloff tests at injection wells 15-35 and 5-36 were used whereas for well 6-3 falloff tests at injection wells 7-3 and 7-4 were used. Due to a lack of pressure data in all three Mission Canyon reservoirs the magnitude of crossflow which might be caused by commingled production is difficult to assess at the present time. Therefore, as part of the workover program Omega intends to obtain bottomhole pressures in each Mission Canyon reservoir prior to recompleting the wells. Technically speaking Omega believes that it can eliminate the probability of zonal crossflow by running a bottomhole pump and pumping the wells off. Using this means of production ensures that the pressure within the wellbore is always less than either reservoir whether under primary or seconday recovery.



- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

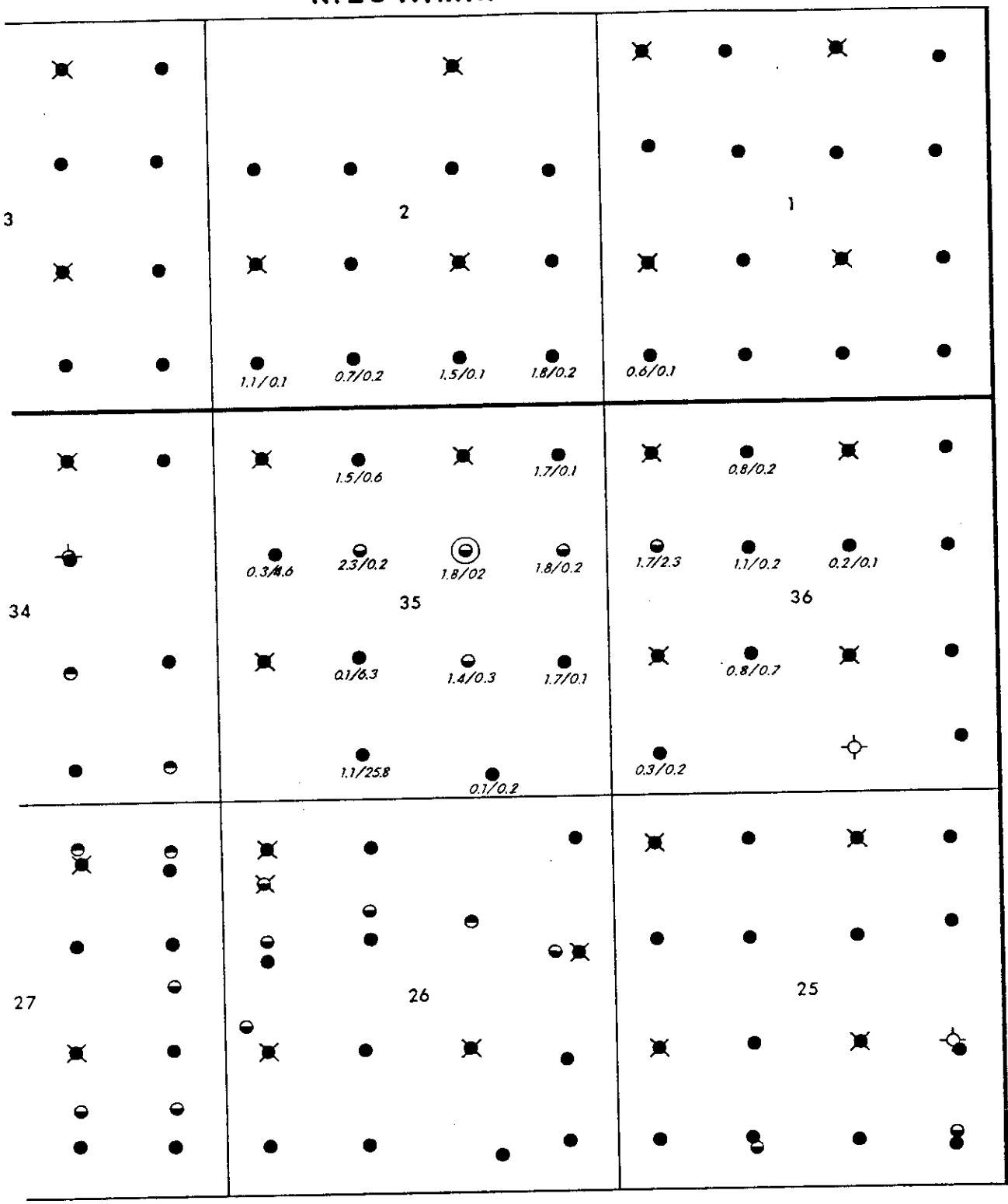
Schedule "E"(i) Attachment 1

OMEGA HYDROCARBONS LTD.

Current Oil/Water Production Rates
Offsetting Well 5-6-1-25W.1.M.(m^3/d)

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: R. B.	Contour Interval:
Revised:	File: Drafting: PAB

R.26W.1.M.



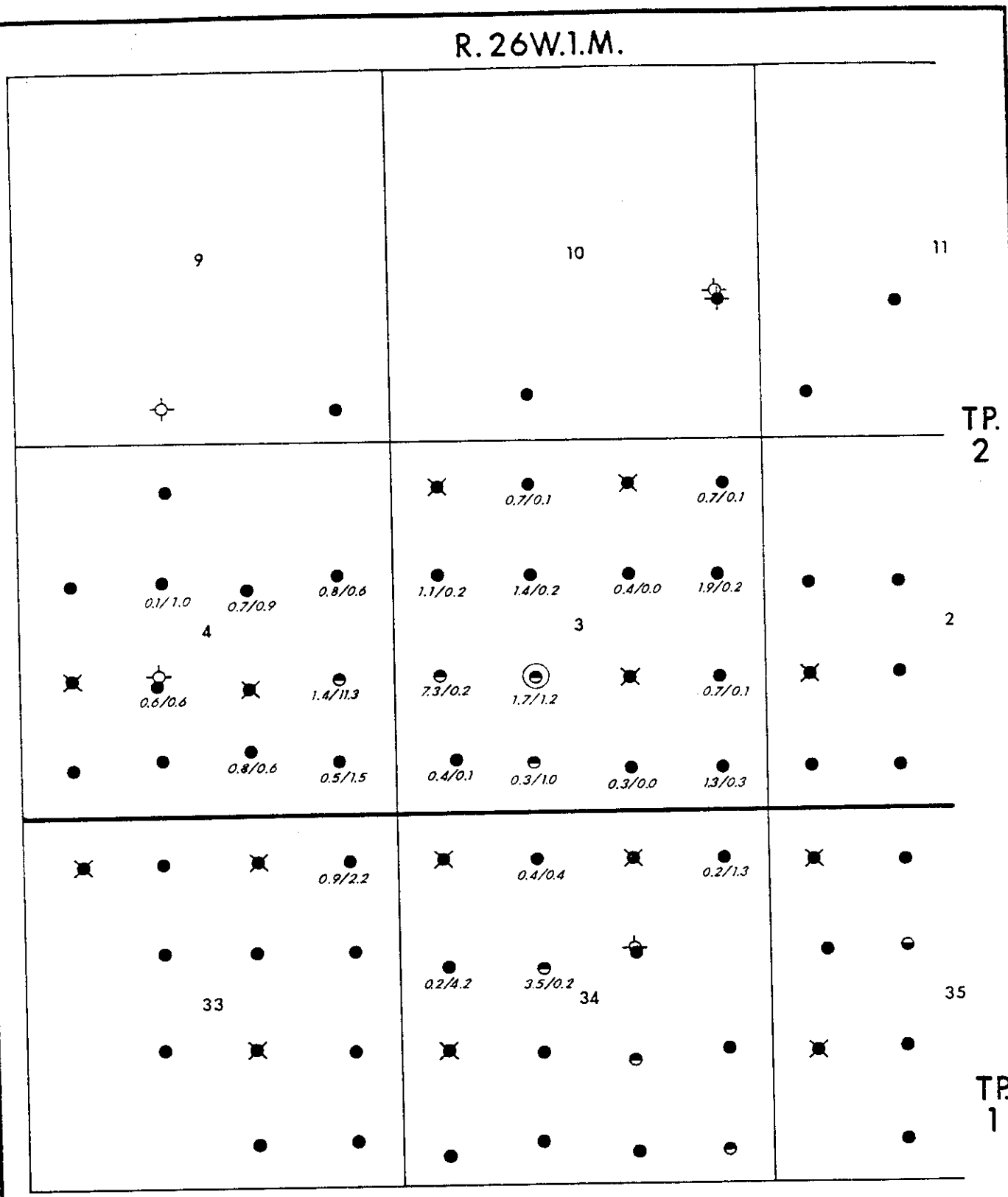
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

Schedule "E"(i) Attachment 2

OMEGA HYDROCARBONS LTD

Current Oil/Water Production Rates
Offsetting Well 10-35-1-26W.1.M.(m^3/d)

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: R.B.	Contour Interval:
Revised:	File: Drafting PAB



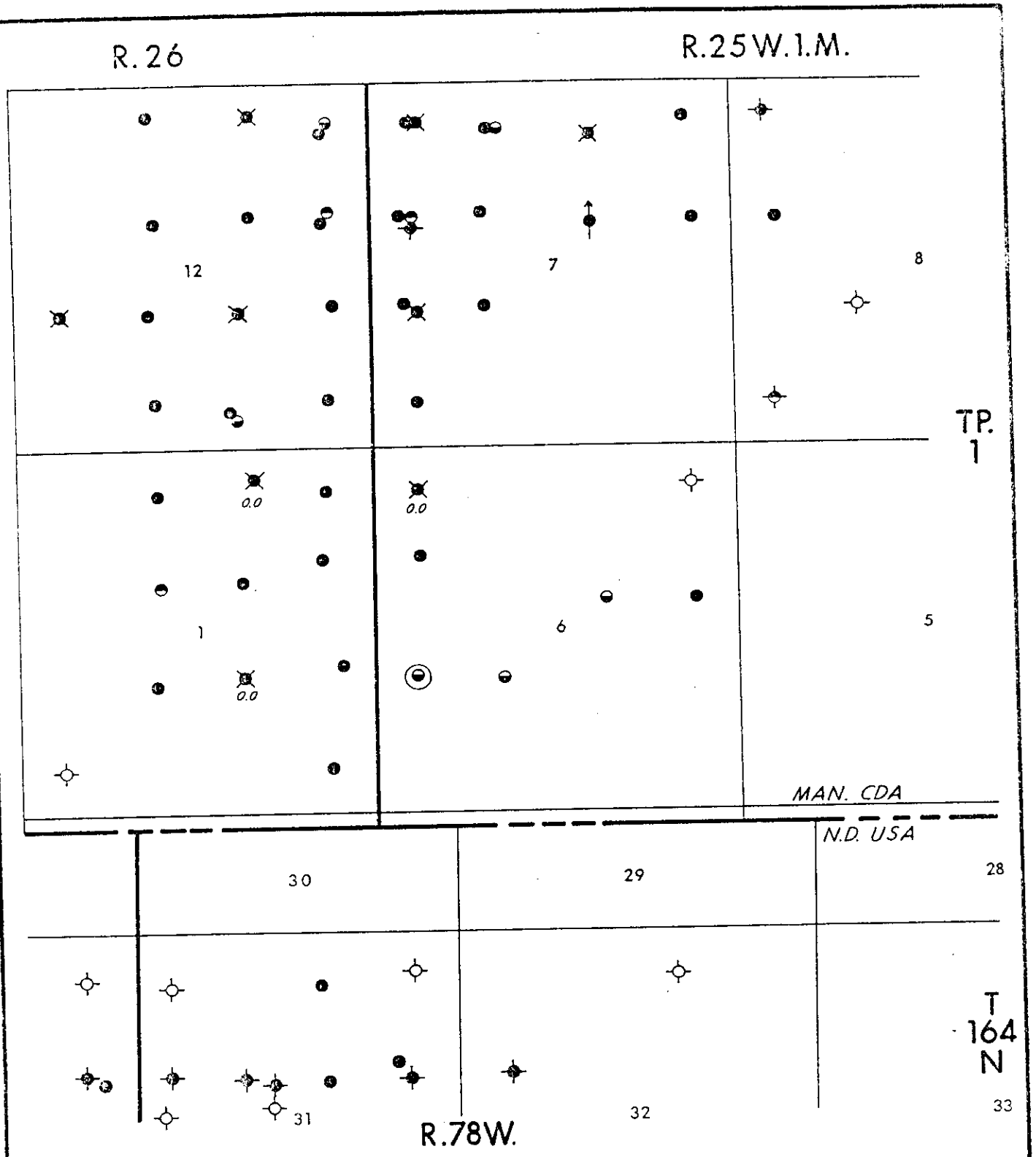
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

Schedule "E"(i) Attachment 3

OMEGA HYDROCARBONS LTD

Current Oil/Water Production Rates
Offsetting Well 6-3-2-26W.1.M.(m^3/d)

Scale: 1:25,000		Date: NOV. 16, 1987	
Geology: R.B.		Contour Interval:	
Revised		File:	Drafting: PAB



- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

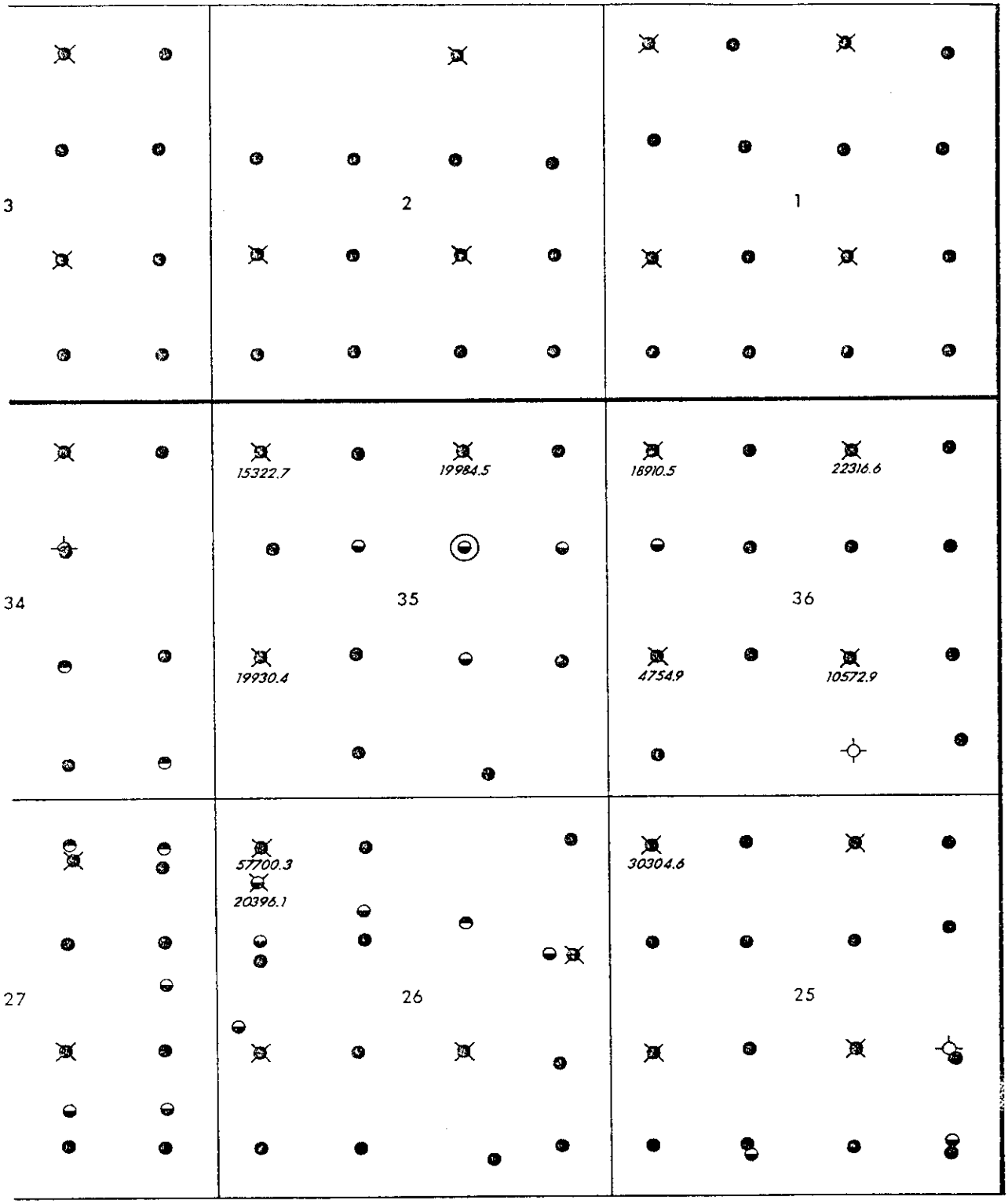
Schedule "E" (i) Attachment 4

OMEGA HYDROCARBONS LTD.

Cumulative Water Injection to Sept.'87
Offsetting Well 5-6-1-25W.1.M. (m^3)

Scale: 1: 25,000	Date: NOV. 16, 87
Geology: R. B.	Contour Interval:
Revised:	File: Drafting: PAB

R.26W.1.M.



- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

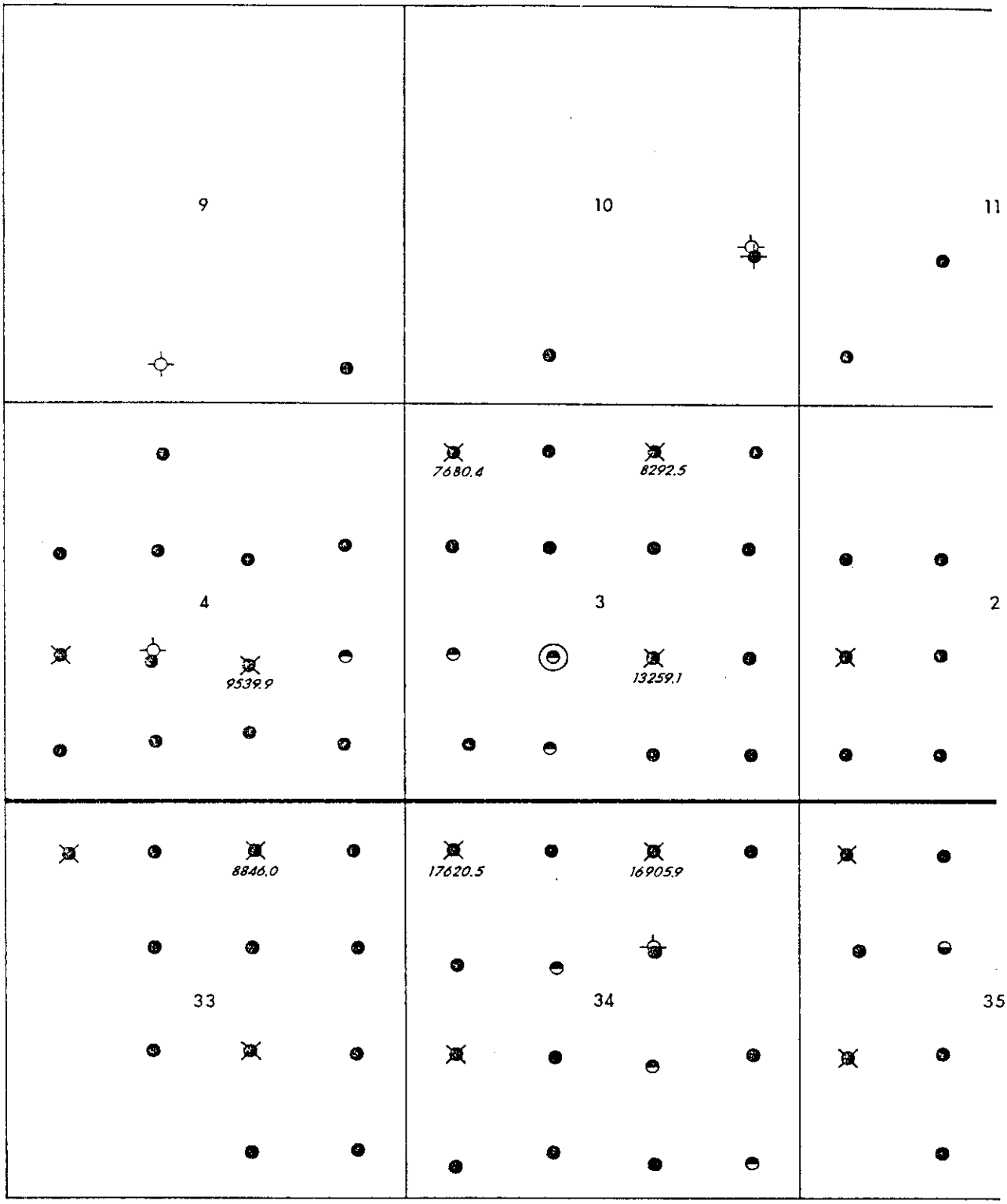
Schedule "E" (i) Attachment 5

OMEGA HYDROCARBONS LTD.

Cumulative Water Injection to Sept.'87
Offsetting 10-35-1-26W.1.M. (m^3)

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: R.B.	Contour Interval:
Revised:	File: Drafting: P.A.B.

R. 26W.1.M.



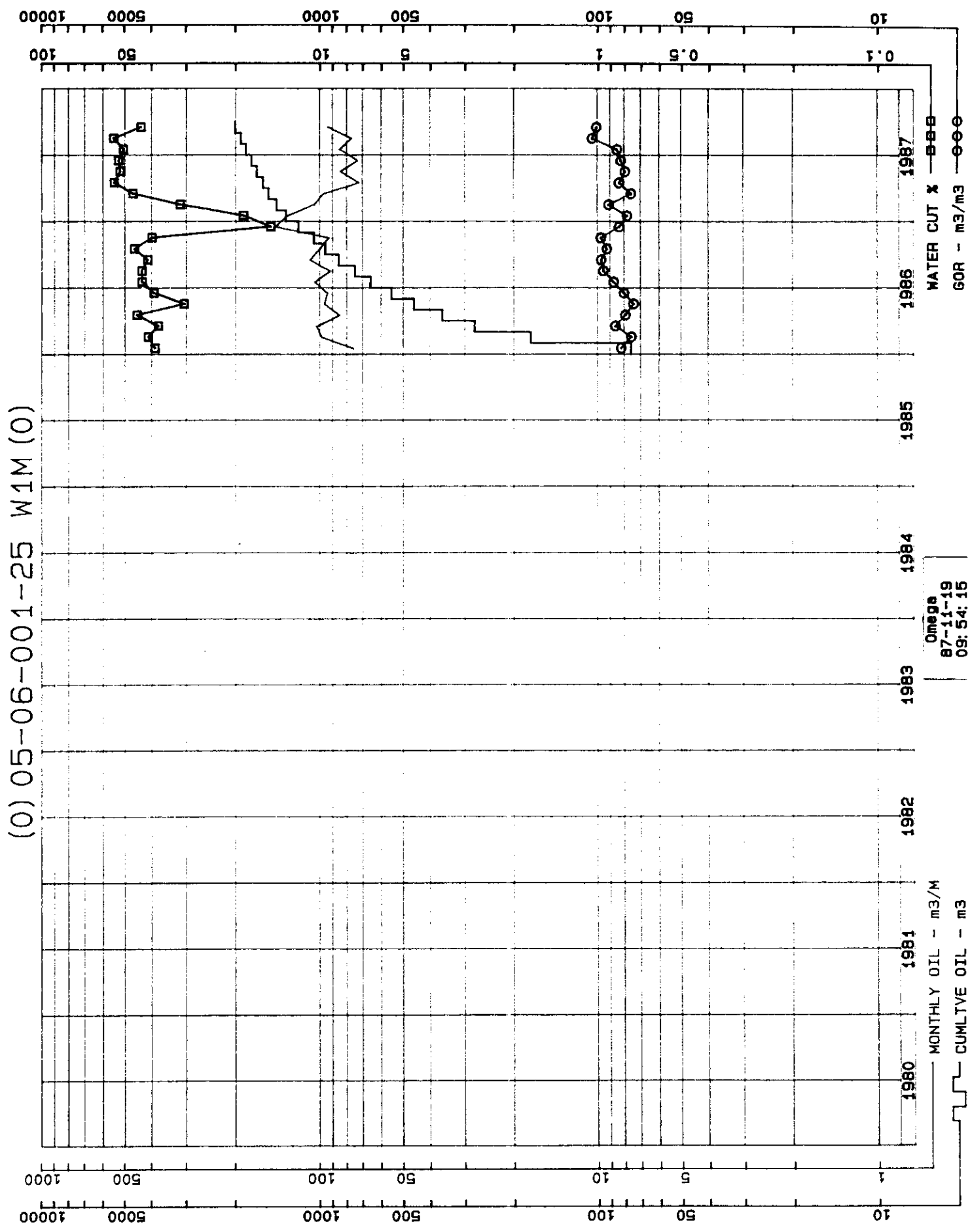
- SPEAR FISH OIL WELL
- UPPER ALIDA(MC 3b) WELL
- LOWER ALIDA(MC3a) WELL
- TILSTON(MC1) WELL
- WATER INJECTION WELL
- WATER SOURCE WELL
- SUSPENDED WELL
- ABANDONED WELL

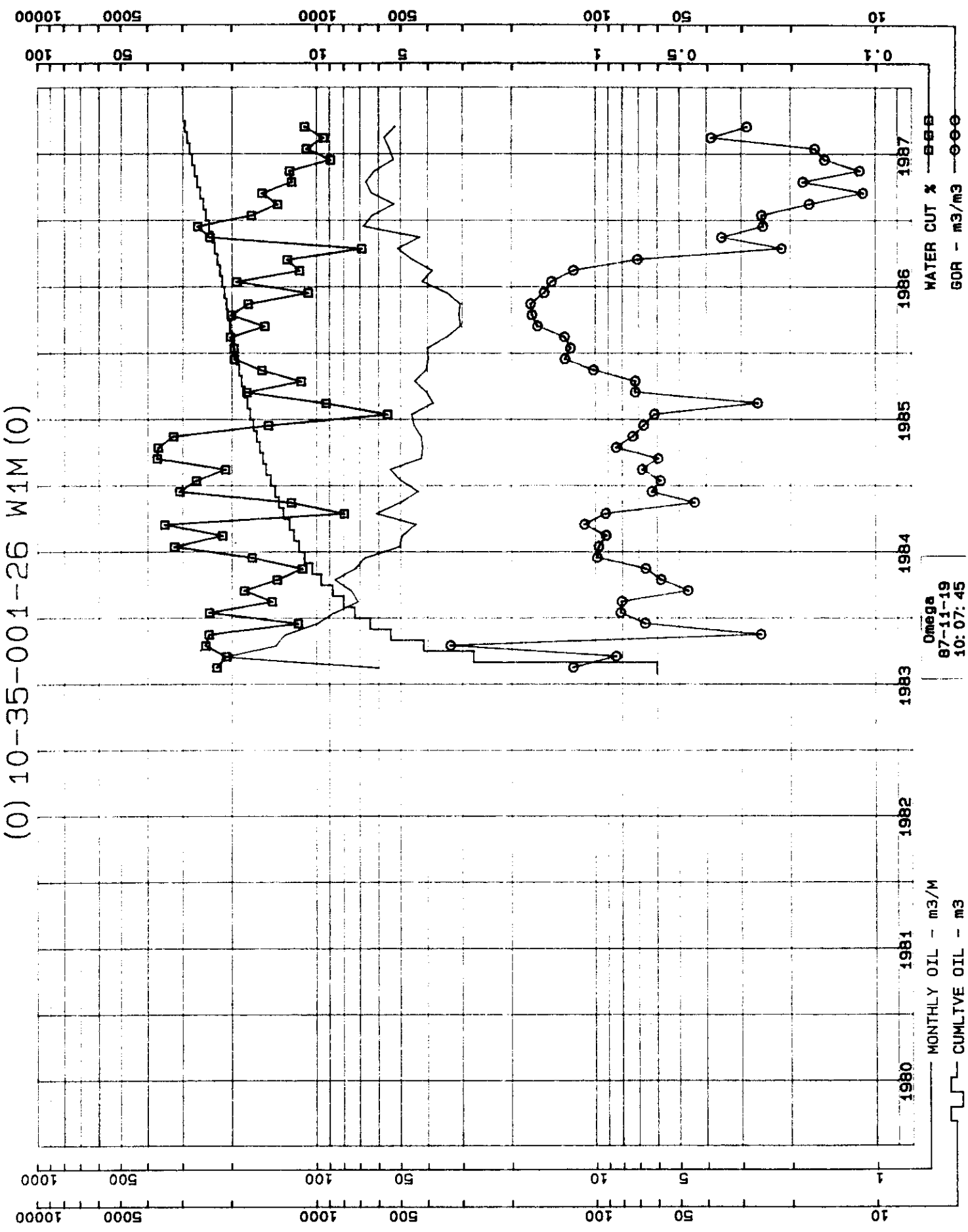
Schedule "E" (i) Attachment 6

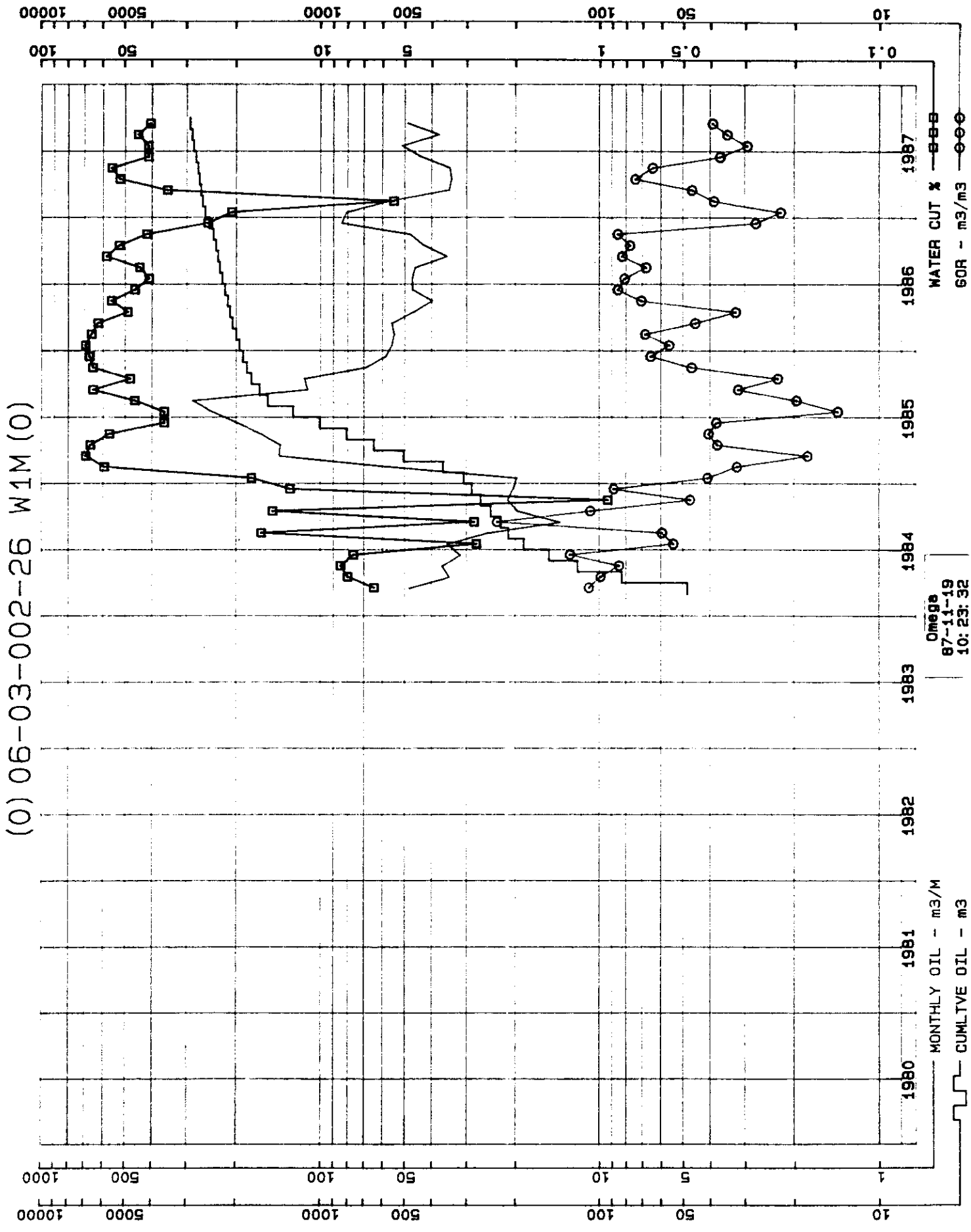
OMEGA HYDROCARBONS LTD.

Cumulative Water Injection to Sept.'87
Offsetting Well 6-3-2-26W.1.M. (m^3)

Scale: 1:25,000	Date: NOV. 16, 1987
Geology: R.B.	Contour Interval:
Revised:	File: Drafting: PAB


(0) 05-06-001-25 W1M (0)
WATER CUT % —BBB
GOR - m3/m3 —000
MONTHLY OIL - m3/M
CUMLTVE OIL - m3
Omega
87-11-19
09:54:15
1987
1986
1985
1984
1983
1982
1981
1980
10000
5000
1000
500
100
50
10
5
1
0.5
0.1


(0) 10-35-001-26 W1M (0)
WATER CUT % ---
GOR - m3/m3 ---
MONTHLY OIL - m3/M
CUMLTVE OIL - m3
Omega
87-11-19
10:07:45
1980
1981
1982
1983
1984
1985
1986
1987
10
50
100
500
1000
5000
10000
0.1
0.5
1
5
10
50
100
500
1000
5000
10000


(0) 06-03-002-26 W1M (0)
WATER CUT % —
GOR - m3/m3 —
MONTHLY OIL - m3/M
CUMLTVE OIL - m3
Omega
87-11-19
10:23:32
1987
1986
1985
1984
1983
1982
1981
1980

* * * STORE * * *
OMEGA PRODUCTION DATA BASE
WELL (0)05-06-001-25 W1M(0)

Omega
87-11-12
12:47:15

FIELD 1
POOL 3
BLOCK 99
ACCTG 4099

PROVINCE MAN.
WORKING INTEREST 100.00000%
ON PROD 1986-01-12
ON INJN NOT ON YET

LAND#1 0
LAND#2 0
LAND#3 0

MONTH	HOURS	OIL m3/M	WATER m3/M	GAS km3/M	OIL m3/d	WATER m3/d	FLUID m3/d	WATER CUT %	WOR	GOR m3/m3	I.WATER m3/M	I.GAS km3/M	CUM.OIL m3	CUM.WAT m3	CUM.GAS km3	C.I.WAT m3	C.I.GAS km3
1986-01	474	75.6	48.4	6.2	3.8	2.5	6.3	39.0	0.64	82	0.0	0.0	75.6	48.4	6.2	0.0	0.0
1986-02	672	98.2	68.8	7.4	3.5	2.5	6.0	41.2	0.70	75	0.0	0.0	173.8	117.2	13.6	0.0	0.0
1986-03	705	102.4	62.6	8.8	3.5	2.1	5.6	37.9	0.61	86	0.0	0.0	276.2	179.8	22.4	0.0	0.0
1986-04	684	84.6	70.0	6.7	3.0	2.5	5.4	45.3	0.83	79	0.0	0.0	360.8	249.8	29.1	0.0	0.0
1986-05	580	96.0	42.3	7.1	4.0	1.8	5.7	30.6	0.44	74	0.0	0.0	456.8	292.1	36.2	0.0	0.0
1986-06	582	93.6	60.7	7.5	3.9	2.5	6.4	39.3	0.65	80	0.0	0.0	550.4	352.8	43.7	0.0	0.0
1986-07	732	104.2	80.0	9.1	3.4	2.6	6.0	43.4	0.77	87	0.0	0.0	654.6	432.8	52.8	0.0	0.0
1986-08	628	91.6	70.5	8.7	3.5	2.7	6.2	43.5	0.77	95	0.0	0.0	746.2	503.3	61.5	0.0	0.0
1986-09	702	108.5	76.8	10.5	3.7	2.6	6.3	41.4	0.71	97	0.0	0.0	854.7	580.1	72.0	0.0	0.0
1986-10	745	99.7	85.7	9.2	3.2	2.8	6.0	46.2	0.86	92	0.0	0.0	954.4	665.8	81.2	0.0	0.0
1986-11	660	92.7	61.8	9.0	3.4	2.2	5.6	40.0	0.67	97	0.0	0.0	1047.1	727.6	90.2	0.0	0.0
1986-12	744	143.9	25.4	12.0	4.6	0.8	5.5	15.0	0.18	83	0.0	0.0	1191.0	753.0	102.2	0.0	0.0
1987-01	726	130.6	30.2	10.2	4.3	1.0	5.3	18.8	0.23	78	0.0	0.0	1321.6	783.2	112.4	0.0	0.0
1987-02	665	104.4	48.3	9.5	3.8	1.7	5.5	31.6	0.46	91	0.0	0.0	1426.0	831.5	121.9	0.0	0.0
1987-03	720	96.7	84.9	7.3	3.2	2.8	6.1	46.8	0.88	75	0.0	0.0	1522.7	916.4	129.2	0.0	0.0
1987-04	675	72.0	87.0	6.0	2.6	3.1	5.7	54.7	1.21	83	0.0	0.0	1594.7	1003.4	135.2	0.0	0.0
1987-05	744	84.4	91.6	6.7	2.7	3.0	5.7	52.0	1.09	79	0.0	0.0	1679.1	1095.0	141.9	0.0	0.0
1987-06	692	73.0	81.6	6.0	2.5	2.8	5.4	52.8	1.12	82	0.0	0.0	1752.1	1176.6	147.9	0.0	0.0
1987-07	744	84.8	87.0	7.2	2.7	2.8	5.5	50.6	1.03	85	0.0	0.0	1836.9	1263.6	155.1	0.0	0.0
1987-08	730	76.7	93.7	8.0	2.5	3.1	5.6	55.0	1.22	104	0.0	0.0	1913.6	1357.3	163.1	0.0	0.0
1987-09	720	93.4	72.8	9.4	3.1	2.4	5.5	43.8	0.78	101	0.0	0.0	2007.0	1430.1	172.5	0.0	0.0

Schedule "E" (i) Attachment 10

*** S T O R E ***
OMEGA PRODUCTION DATA BASE
WELL (0)10-35-001-26 W1M(0)

Omega
87-11-12
12:47:15

FIELD 1
POOL 3
BLOCK 99
ACCTG 4428

PROVINCE MAN.
WORKING INTEREST 100.000000%
ON PROD 1983-08-28
ON INJN NOT ON YET

LAND#1 0
LAND#2 0
LAND#3 0

MONTH	HOURS	OIL m3/M	WATER m3/M	GAS km3/M	OIL m3/d	WATER m3/d	FLUID m3/d	WATER CUT %	WOR	GOR m3/m3	I.WATER m3/M	I.GAS km3/M	CUM.OIL m3	CUM.WAT m3	CUM.GAS km3	C.I.WAT m3	C.I.GAS km3
1983-08	96	60.0	17.6	7.2	15.0	4.4	19.4	22.7	0.29	120	0.0	0.0	60.0	17.6	7.2	0.0	0.0
1983-09	720	212.7	58.5	17.9	7.1	1.9	9.0	21.0	0.27	84	0.0	0.0	272.7	76.1	25.1	0.0	0.0
1983-10	666	139.7	46.2	46.2	5.0	1.7	6.7	24.9	0.33	331	0.0	0.0	412.4	120.3	71.3	0.0	0.0
1983-11	715	129.3	41.2	3.3	4.3	1.4	5.7	24.2	0.32	26	0.0	0.0	541.7	161.5	74.6	0.0	0.0
1983-12	728	99.7	13.1	6.6	3.3	0.4	3.7	11.6	0.13	66	0.0	0.0	641.4	174.6	81.2	0.0	0.0
1984-01	744	86.4	27.4	7.0	2.8	0.9	3.7	24.1	0.32	81	0.0	0.0	727.8	202.0	88.2	0.0	0.0
1984-02	696	71.0	11.9	5.7	2.4	0.4	2.9	14.4	0.17	80	0.0	0.0	798.8	213.9	93.9	0.0	0.0
1984-03	744	75.3	16.6	3.5	2.4	0.5	3.0	18.1	0.22	46	0.0	0.0	874.1	230.5	97.4	0.0	0.0
1984-04	720	66.2	13.8	5.0	2.9	0.5	3.3	13.8	0.16	58	0.0	0.0	940.3	244.3	102.4	0.0	0.0
1984-05	738	72.8	9.2	4.8	2.4	0.3	2.7	11.2	0.13	66	0.0	0.0	1033.1	253.5	107.2	0.0	0.0
1984-06	713	67.1	13.7	6.6	2.3	0.5	2.7	17.0	0.20	98	0.0	0.0	1100.2	267.2	113.8	0.0	0.0
1984-07	739	50.5	23.9	4.9	1.6	0.8	2.4	32.1	0.47	97	0.0	0.0	1150.7	291.1	118.7	0.0	0.0
1984-08	768	49.3	13.6	4.5	1.5	0.4	2.0	21.6	0.28	91	0.0	0.0	1200.0	304.7	123.2	0.0	0.0
1984-09	716	44.0	23.5	4.8	1.5	0.8	2.3	34.8	0.53	109	0.0	0.0	1244.0	328.2	128.0	0.0	0.0
1984-10	745	61.2	5.3	5.6	2.0	0.2	2.1	8.0	0.09	92	0.0	0.0	1305.2	333.5	133.6	0.0	0.0
1984-11	716	50.1	7.0	2.2	1.7	0.2	1.9	12.3	0.14	44	0.0	0.0	1355.3	340.5	135.8	0.0	0.0
1984-12	744	43.2	19.2	2.7	1.4	0.6	2.0	30.8	0.44	63	0.0	0.0	1398.5	359.7	138.5	0.0	0.0
1985-01	740	49.9	18.3	2.9	1.6	0.6	2.2	26.8	0.37	58	0.0	0.0	1448.4	378.0	141.4	0.0	0.0
1985-02	672	54.6	14.6	3.7	2.0	0.5	2.5	21.1	0.27	68	0.0	0.0	1503.0	392.6	145.1	0.0	0.0
1985-03	740	42.1	24.8	2.5	1.4	0.8	2.2	37.1	0.59	59	0.0	0.0	1545.1	417.4	147.6	0.0	0.0
1985-04	719	41.7	24.2	3.5	1.4	0.8	2.2	36.7	0.58	84	0.0	0.0	1586.8	441.6	151.1	0.0	0.0
1985-05	740	42.3	20.3	3.1	1.4	0.7	2.0	32.4	0.48	73	0.0	0.0	1629.1	461.9	154.2	0.0	0.0
1985-06	720	44.8	7.8	3.0	1.5	0.3	1.8	14.8	0.17	67	0.0	0.0	1673.9	469.7	157.2	0.0	0.0
1985-07	731	45.7	2.7	2.8	1.5	0.1	1.6	5.6	0.06	61	0.0	0.0	1719.6	472.4	160.0	0.0	0.0
1985-08	744	38.2	3.9	1.0	1.2	0.1	1.4	9.3	0.10	26	0.0	0.0	1757.8	476.3	161.0	0.0	0.0
1985-09	714	40.4	8.7	2.9	1.4	0.3	1.7	17.7	0.22	72	0.0	0.0	1798.2	485.0	163.9	0.0	0.0
1985-10	744	44.6	5.7	3.2	1.4	0.2	1.6	11.3	0.13	72	0.0	0.0	1842.8	490.7	167.1	0.0	0.0
1985-11	720	40.5	7.5	4.1	1.4	0.3	1.6	15.6	0.19	101	0.0	0.0	1883.3	498.2	171.2	0.0	0.0
1985-12	727	39.8	9.7	5.1	1.3	0.3	1.6	19.6	0.24	128	0.0	0.0	1923.1	507.9	176.3	0.0	0.0
1986-01	744	40.0	9.8	4.9	1.3	0.3	1.6	19.7	0.25	123	0.0	0.0	1963.1	517.7	181.2	0.0	0.0
1986-02	672	34.2	8.7	4.4	1.2	0.3	1.5	20.3	0.25	129	0.0	0.0	1997.3	526.4	185.6	0.0	0.0
1986-03	744	30.5	5.5	4.9	1.0	0.2	1.2	15.3	0.18	161	0.0	0.0	2027.8	531.9	190.5	0.0	0.0
1986-04	719	30.9	7.8	5.2	1.0	0.3	1.3	20.2	0.25	168	0.0	0.0	2058.7	539.7	195.7	0.0	0.0
1986-05	744	30.6	6.5	5.2	1.0	0.2	1.2	17.5	0.21	170	0.0	0.0	2089.3	546.2	200.9	0.0	0.0
1986-06	718	34.2	4.1	5.2	1.1	0.1	1.3	10.7	0.12	152	0.0	0.0	2123.5	550.3	206.1	0.0	0.0
1986-07	744	41.9	10.0	6.0	1.4	0.3	1.7	19.3	0.24	143	0.0	0.0	2165.4	560.3	212.1	0.0	0.0
1986-08	744	38.5	5.0	4.6	1.2	0.2	1.4	11.5	0.13	119	0.0	0.0	2203.9	565.3	216.7	0.0	0.0
1986-09	720	45.4	6.6	3.2	1.5	0.2	1.7	12.7	0.15	70	0.0	0.0	2249.3	571.9	219.9	0.0	0.0
1986-10	738	51.3	3.8	1.1	1.7	0.1	1.8	6.9	0.07	21	0.0	0.0	2300.6	575.7	221.0	0.0	0.0
1986-11	720	42.7	13.5	1.5	1.4	0.5	1.9	24.0	0.32	35	0.0	0.0	2343.3	589.2	222.5	0.0	0.0
1986-12	729	68.0	24.6	1.7	2.2	0.8	3.0	26.6	0.36	25	0.0	0.0	2411.3	613.8	224.2	0.0	0.0
1987-01	744	63.2	13.0	1.6	2.0	0.4	2.5	17.1	0.21	25	0.0	0.0	2474.5	626.8	225.8	0.0	0.0
1987-02	672	52.7	8.4	0.9	1.9	0.3	2.2	13.7	0.16	17	0.0	0.0	2527.2	635.2	226.7	0.0	0.0
1987-03	744	63.7	11.8	0.7	2.1	0.4	2.4	15.6	0.19	11	0.0	0.0	2590.9	647.0	227.4	0.0	0.0
1987-04	719	66.7	9.3	1.2	2.2	0.3	2.5	12.2	0.14	18	0.0	0.0	2657.6	656.3	228.6	0.0	0.0
1987-05	744	61.9	8.8	0.7	2.0	0.3	2.3	12.4	0.14	11	0.0	0.0	2719.5	665.1	229.3	0.0	0.0
1987-06	720	53.1	5.2	0.8	1.8	0.2	1.9	8.9	0.10	15	0.0	0.0	2772.6	670.3	230.1	0.0	0.0
1987-07	744	55.0	6.7	0.9	1.8	0.2	2.0	10.9	0.12	16	0.0	0.0	2827.6	677.0	231.0	0.0	0.0
1987-08	744	57.4	6.0	2.2	1.9	0.2	2.0	9.5	0.10	38	0.0	0.0	2885.0	683.0	233.2	0.0	0.0
1987-09	720	52.5	6.5	1.5	1.8	0.2	2.0	11.0	0.12	29	0.0	0.0	2937.5	689.5	234.7	0.0	0.0

Schedule "E" (i) Attachment 11

PAGE NO. 1

* * * STORE * * *
OMEGA PRODUCTION DATA BASE
WELL (0)06-03-002-26 W1M(0)

Omega
87-11-12
12:47:15

FIELD 1
POOL 2
BLOCK 99
ACCTG 4528

PROVINCE MAN.
WORKING INTEREST 100.00000%
ON PRDN 1984-03-03
ON INJN NOT ON YET

LAND#1 0
LAND#2 0
LAND#3 0

MONTH	HOURS	OIL m3/M	WATER m3/M	GAS km3/M	OIL m3/d	WATER m3/d	FLUID m3/d	WATER CUT %	WOR	GOR m3/m3	I.WATER m3/M	I.GAS km3/M	CUM.OIL m3	CUM.WAT m3	CUM.GAS km3	C.I.WAT m3	C.I.GAS km3
1984-03	674	48.0	3.3	5.2	1.7	0.1	1.8	6.4	0.07	108	0.0	0.0	48.0	3.3	5.2	0.0	0.0
1984-04	648	34.5	3.0	3.4	1.3	0.1	1.4	8.0	0.09	99	0.0	0.0	82.5	6.3	8.6	0.0	0.0
1984-05	665	36.7	3.4	3.1	1.3	0.1	1.4	8.5	0.09	84	0.0	0.0	119.2	9.7	11.7	0.0	0.0
1984-06	671	31.5	2.6	4.0	1.1	0.1	1.2	7.6	0.08	127	0.0	0.0	150.7	12.3	15.7	0.0	0.0
1984-07	741	35.2	1.0	1.9	1.1	0.0	1.2	2.8	0.03	54	0.0	0.0	185.9	13.3	17.6	0.0	0.0
1984-08	768	25.3	4.9	1.5	0.8	0.2	0.9	16.2	0.19	59	0.0	0.0	211.2	18.2	19.1	0.0	0.0
1984-09	708	13.8	0.4	3.2	0.5	0.0	0.5	2.8	0.03	232	0.0	0.0	225.0	18.6	22.3	0.0	0.0
1984-10	745	19.6	3.4	2.1	0.6	0.1	0.7	14.8	0.17	107	0.0	0.0	244.6	22.0	24.4	0.0	0.0
1984-11	560	21.3	0.2	1.0	0.9	0.0	0.9	0.9	0.01	47	0.0	0.0	265.9	22.2	25.4	0.0	0.0
1984-12	744	20.4	3.0	1.8	0.7	0.1	0.8	12.8	0.15	88	0.0	0.0	286.3	25.2	27.2	0.0	0.0
1985-01	740	19.7	4.2	0.8	0.6	0.1	0.8	17.6	0.21	41	0.0	0.0	306.0	29.4	28.0	0.0	0.0
1985-02	584	56.4	82.3	1.8	2.3	3.4	5.7	59.3	1.46	32	0.0	0.0	362.4	111.7	29.8	0.0	0.0
1985-03	740	140.1	314.8	2.5	4.5	10.2	14.8	69.2	2.25	18	0.0	0.0	502.5	426.5	32.3	0.0	0.0
1985-04	719	138.7	276.7	5.2	4.6	9.2	13.9	66.6	1.99	37	0.0	0.0	641.2	703.2	37.5	0.0	0.0
1985-05	740	163.7	215.7	6.6	5.3	7.0	12.3	56.9	1.32	40	0.0	0.0	804.9	918.9	44.1	0.0	0.0
1985-06	720	198.2	112.3	7.5	6.6	3.7	10.4	36.2	0.57	38	0.0	0.0	1003.1	1031.2	51.6	0.0	0.0
1985-07	729	243.5	137.7	3.4	8.0	4.5	12.5	36.1	0.57	14	0.0	0.0	1246.6	1168.9	55.0	0.0	0.0
1985-08	740	285.9	244.0	5.6	9.3	7.9	17.2	46.0	0.85	20	0.0	0.0	1532.5	1412.9	60.6	0.0	0.0
1985-09	714	110.9	207.2	3.5	3.7	7.0	10.7	65.1	1.87	32	0.0	0.0	1643.4	1620.1	64.1	0.0	0.0
1985-10	744	114.0	104.4	2.6	3.7	3.4	7.0	47.8	0.92	23	0.0	0.0	1757.4	1724.5	66.7	0.0	0.0
1985-11	720	68.9	129.2	3.2	2.3	4.3	6.6	65.2	1.88	46	0.0	0.0	1826.3	1853.7	69.9	0.0	0.0
1985-12	718	58.4	119.1	3.8	2.0	4.0	5.9	67.1	2.04	65	0.0	0.0	1884.7	1972.8	73.7	0.0	0.0
1986-01	744	55.5	125.4	3.1	1.8	4.0	5.8	69.3	2.26	56	0.0	0.0	1940.2	2098.2	76.8	0.0	0.0
1986-02	619	54.4	105.5	3.7	2.1	4.1	6.2	66.0	1.94	68	0.0	0.0	1994.6	2203.7	80.5	0.0	0.0
1986-03	744	55.5	93.0	2.5	1.8	3.0	4.8	62.6	1.68	45	0.0	0.0	2050.1	2296.7	83.0	0.0	0.0
1986-04	719	46.5	44.4	1.5	1.6	1.5	3.0	48.8	0.95	32	0.0	0.0	2096.6	2341.1	84.5	0.0	0.0
1986-05	744	39.8	50.6	2.8	1.3	1.6	2.9	56.0	1.27	70	0.0	0.0	2136.4	2391.7	87.3	0.0	0.0
1986-06	716	46.9	40.1	4.0	1.6	1.3	2.9	46.1	0.86	85	0.0	0.0	2183.3	2431.8	91.3	0.0	0.0
1986-07	744	47.0	32.6	3.8	1.5	1.1	2.6	41.0	0.69	81	0.0	0.0	2230.3	2464.4	95.1	0.0	0.0
1986-08	744	45.8	36.4	3.1	1.5	1.2	2.7	44.3	0.79	68	0.0	0.0	2276.1	2500.8	98.2	0.0	0.0
1986-09	720	35.2	49.3	2.9	1.2	1.6	2.8	58.3	1.40	82	0.0	0.0	2311.3	2550.1	101.1	0.0	0.0
1986-10	737	42.7	47.1	3.3	1.4	1.5	2.9	52.4	1.10	77	0.0	0.0	2354.0	2597.2	104.4	0.0	0.0
1986-11	720	48.0	34.4	4.1	1.6	1.1	2.7	41.7	0.72	85	0.0	0.0	2402.0	2631.6	108.5	0.0	0.0
1986-12	698	84.1	28.3	2.3	2.9	1.0	3.9	25.2	0.34	27	0.0	0.0	2486.1	2659.9	110.8	0.0	0.0
1987-01	744	80.7	21.1	1.8	2.6	0.7	3.3	20.7	0.26	22	0.0	0.0	2566.8	2681.0	112.6	0.0	0.0
1987-02	672	57.0	3.3	2.2	2.0	0.1	2.2	5.5	0.06	39	0.0	0.0	2623.8	2684.3	114.8	0.0	0.0
1987-03	744	34.6	18.8	1.6	1.1	0.6	1.7	35.2	0.54	46	0.0	0.0	2658.4	2703.1	116.4	0.0	0.0
1987-04	719	33.9	37.0	2.5	1.1	1.2	2.4	52.2	1.09	74	0.0	0.0	2692.3	2740.1	118.9	0.0	0.0
1987-05	744	34.4	43.3	2.2	1.1	1.4	2.5	55.7	1.26	64	0.0	0.0	2726.7	2783.4	121.1	0.0	0.0
1987-06	720	43.6	30.5	1.6	1.5	1.0	2.5	41.2	0.70	37	0.0	0.0	2770.3	2813.9	122.7	0.0	0.0
1987-07	744	51.1	35.8	1.5	1.6	1.2	2.8	41.2	0.70	29	0.0	0.0	2821.4	2849.7	124.2	0.0	0.0
1987-08	744	37.6	30.5	1.3	1.2	1.0	2.2	44.8	0.81	35	0.0	0.0	2859.0	2880.2	125.5	0.0	0.0
1987-09	688	48.7	33.1	1.9	1.7	1.2	2.9	40.5	0.68	39	0.0	0.0	2907.7	2913.3	127.4	0.0	0.0

Schedule "E" (i) Attachment 12

SCHEDULE "E"

(ii)

Reasons Justifying the Proposed Commingling

Marginal production potential from the Lower Amaranth formation has been identifed in each of the commingled production candidate wells. The cost of drilling for this oil potential cannot be economically justified with such limited recoverable reserves and low forecasted production rates. However, these reserves can be economically recovered using a single wellbore, dual zone, commingled production completion.

Listed below are the results of our economic studies for recovery of this marginal oil potential.

		Before Tax		After Tax	
		Payout	Rate of Return	Payout	Rate of Return
Case 1:	Drill New Well	5.1 yrs.	7.3%	4.6 yrs.	9.6%
Case 2:	Single Well, Commingled Production	0.6 yrs.	361%	0.7 yrs.	251%

The economics of drilling a new well do not meet our minimum investment criteria. However, the economics are favourable for the commingled production completion.

This application seeks approval to evaluate commingled production from three Waskada wells. Our geological studies indicate there is potential for as many as 30 commingled production wells at Waskada. The potential reserves to be recovered from these 30 wells are substantial. Without approval for commingled production, it is unlikely that these reserves will be recovered unless other economic parameters change significantly.

Comparison of depletion of one 3 one before second 3 one completed

SCHEDULE "E"

(iii)

Methods and Frequency of Measuring Production

Periodic well testing will be required which will enable us to allocate production to the proper reservoir. This testing must be accomplished in a manner which does not add significantly to either the well completion cost or to the annual well operating cost.

The proposed workover programs for each of the candidate wells are included in Schedule "D" of this application. Each program consists of four sections:

A. Lower Amaranth Completion
B. Lower Amaranth Evaluation
C. Recompletion for Commingled Production
D. Annual Testing Program

These four completion sections will enable us to measure and allocate production as follows:

1. Establish the Mission Canyon performance prior to recompleting in the Lower Amaranth.

2. Isolate the Mission Canyon, recomplete the well in the Lower Amaranth and test the well (Section A and B).

3. Recomplete the well for commingled production (Section C).

4. Production test the well monthly. Allocate production to the Mission Canyon at the rate established in Step 1. Allocate production to the Lower Amaranth based on the difference between total production and the allocated Mission Canyon production.

5. Annually, isolate the Mission Canyon and test the Lower Amaranth (Section D). Establish the Mission Canyon production rate.

6. Recomplete the well for commingled production (Section C).

7. Test the well monthly and allocate production to the Mission Canyon at the rate established in Step 5 and allocate production to the Lower Amaranth by differential.

8. Repeat Steps 5 to 7.

SCHEDULE "E"
(iv)

Effects on Conservation or the Rights of Owners

Omega submits that commingling of production from the two zones will have a beneficial impact on the conservation of crude oil. Waste would be prevented in that crude oil which exists behind pipe would now be recoverable. In the absence of commingling, this crude oil behind pipe would never be recovered and ultimately lost. Further, existing units could be vertically enlarged and new units could be established in those areas where vertical zone prospects exist. This, of course, accomplishes the more efficient and effective development and production of crude oil resources of the respective pools, resulting in improved benefits to Owners, the Province of Manitoba and Omega.

Omega further submits that commingling will have no detrimental effects on the rights of owners as a consequence of the pools being in communication through the wellbore. In each of the wells, the lessor is the owner of all petroleum, natural gas and related hydrocarbons in both of the zones, indeed, in all of the zones underlying the wells. In addition, Omega is the sole lessee and working interest holder of the petroleum, natural gas and related hydrocarbons and also operator of all the wells. Identical production operations will be employed in recovering production from both zones as those used in recovering production from a single zone; consequently commingling will result in production profiles identical to those experienced by producing the zones separately. Royalties and production taxes will be calculated on production from each zone based on the results of the tests to be conducted by Omega.

Accordingly, Omega firmly believes that commingling production from the two zones will result only in positive effects on conservation or the rights of owners under all possible circumstances from the pools being in communication through the wellbore.

no would be treated as 1 well for royalty/ tax

SCHEDULE "F"

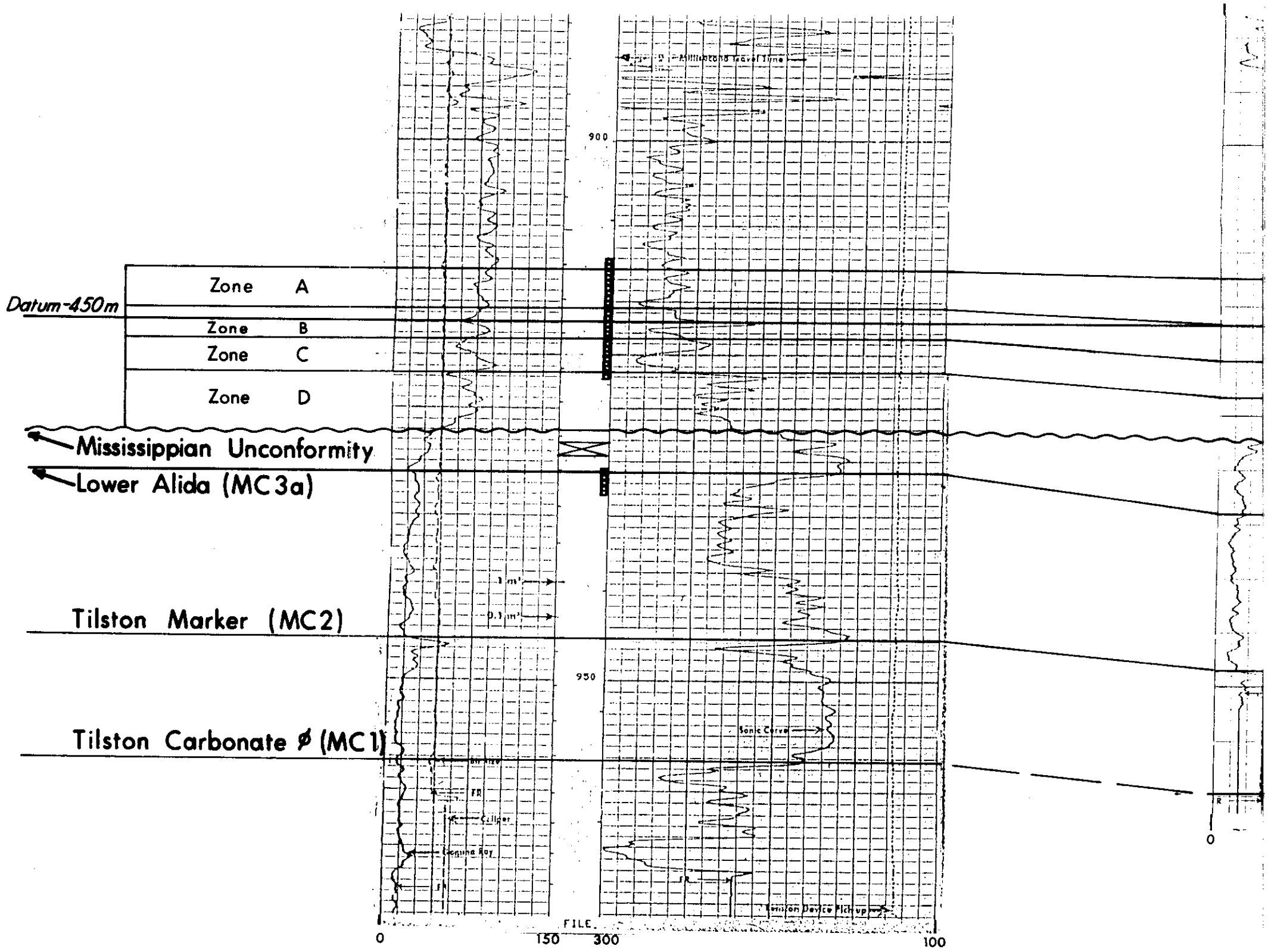
Authorized Representatives of Omega Hydrocarbons Ltd.

Name	Address	Phone	Signature
Richard Brekke David Roberts	1300 Sun Life Plaza III 112 - 4th Avenue S.W. Calgary, Alberta T2P 0H3	(403) 261-0743	

A

CHEVRON WASKADA 8-1
8-1-1-26W1.

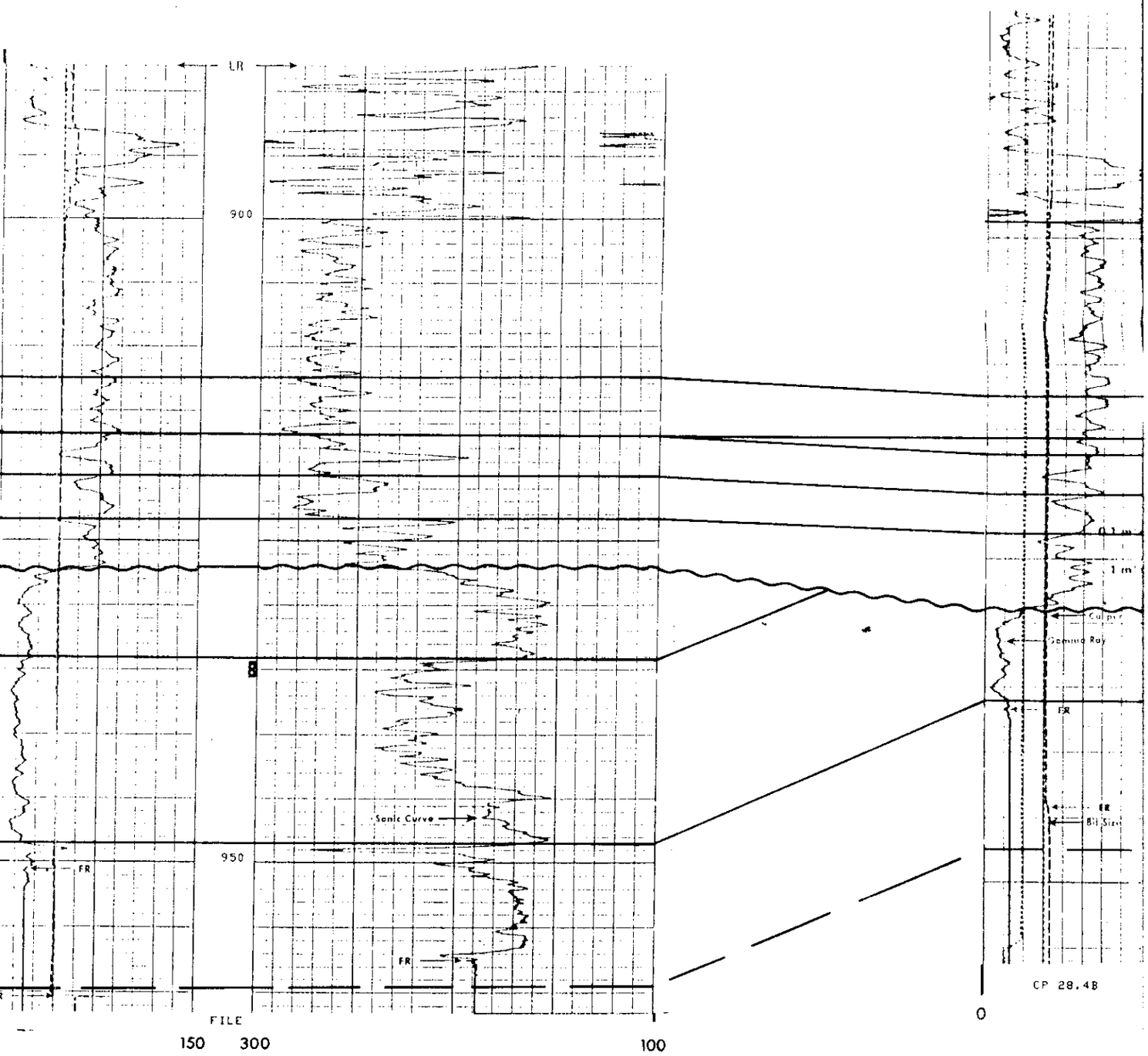
K.B. 466.9 m
R.R. Jan. 14, 1984
Lower Amaranth Producer



No Drillstem Tests Run

OMEGA WASKADA 5-6
5-6-1-25W1.

K.B. 466.8 m
R.R. Jan.1, 1986
Lower Alida Producer



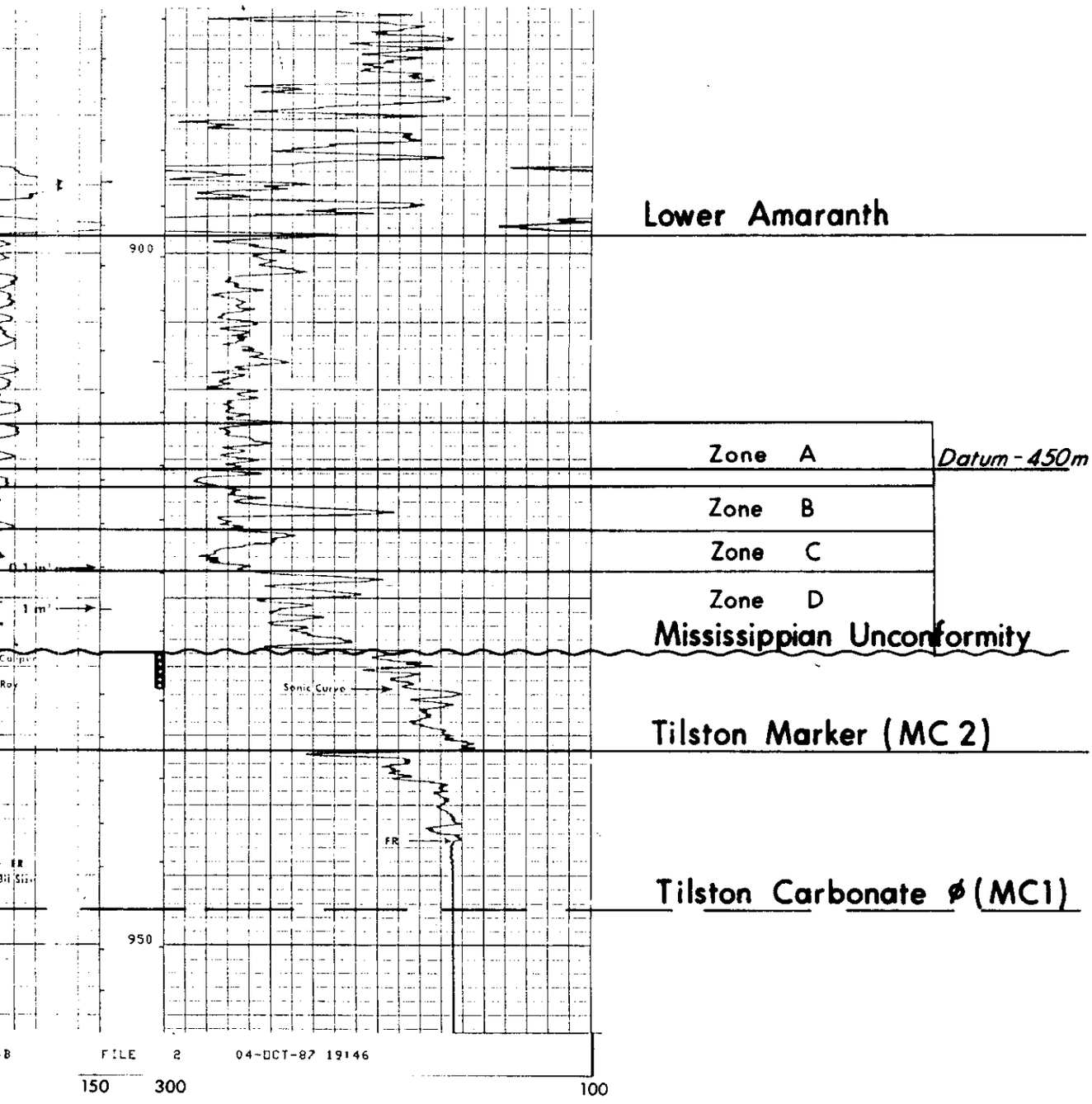
No Drillstem Tests Run

PROPOSED COMMINGLED WELL
PERFS 911m-922m

A

EGA WASKADA 6-6
6-6-1-25W1.

K.B. 466.7 m
R.R. Oct. 4, 1987
Lower Alida Producer



No Drillstem Tests Run

SCHEDULE 'C' ATTACHMENT 1d

OMEGA HYDROCARBONS LTD.

WASKADA, MN.

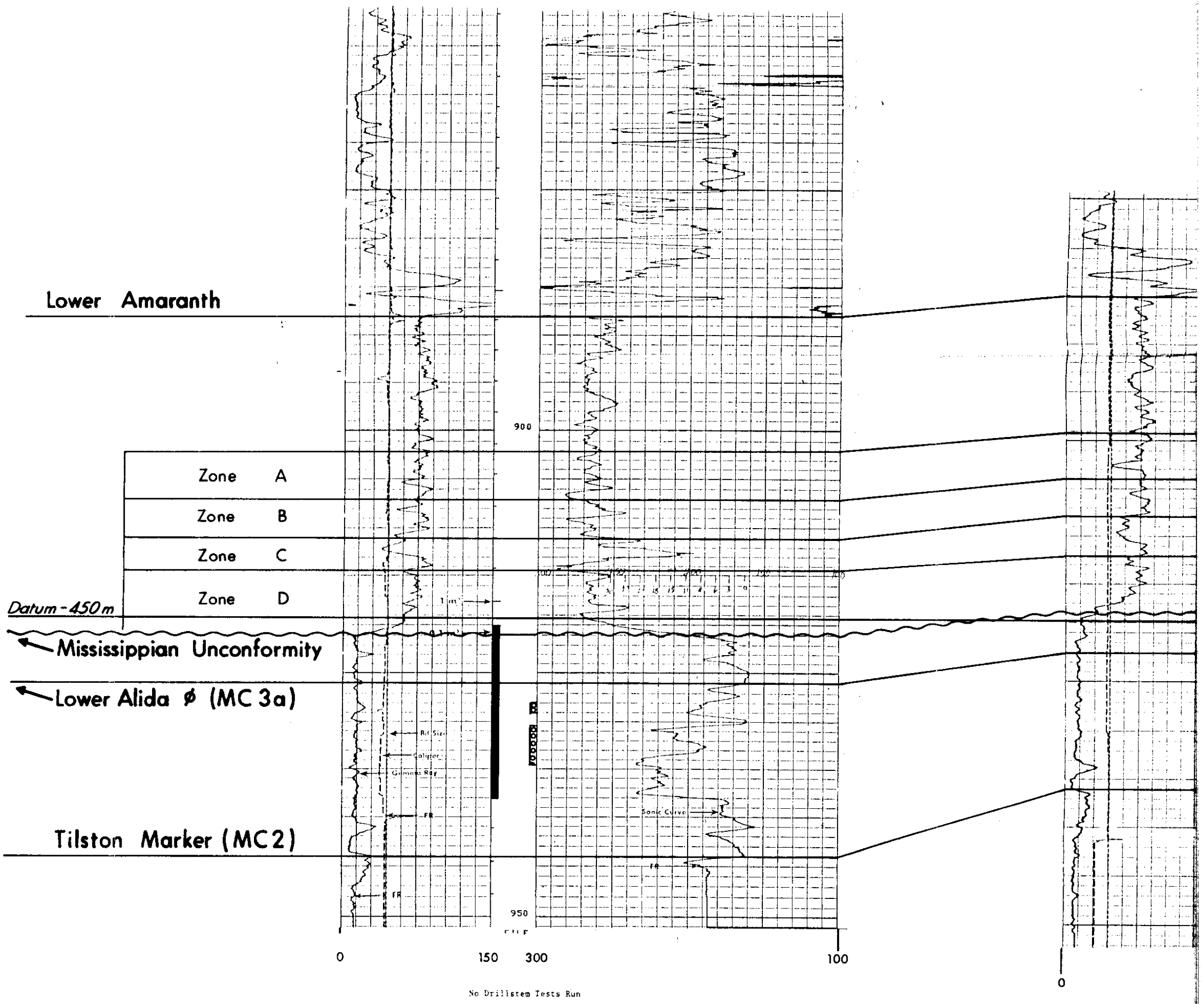
STRUCTURAL CROSS-SECTION A-A'

Scale: Schematic	Date: Nov. 16, 1987	
Geology: P. Patton	Contour Interval:	
Revised:	File:	Drafting: PAB.

B

OMEGA WASKADA 11-35
11-35-1-26W1.

K.B. 469.1 m
R.R. Aug. 20, 1983
Lower Alida Producer



No Drillstem Tests Run

OMEGA WASKADA 11-35
11-35-1-26W1.

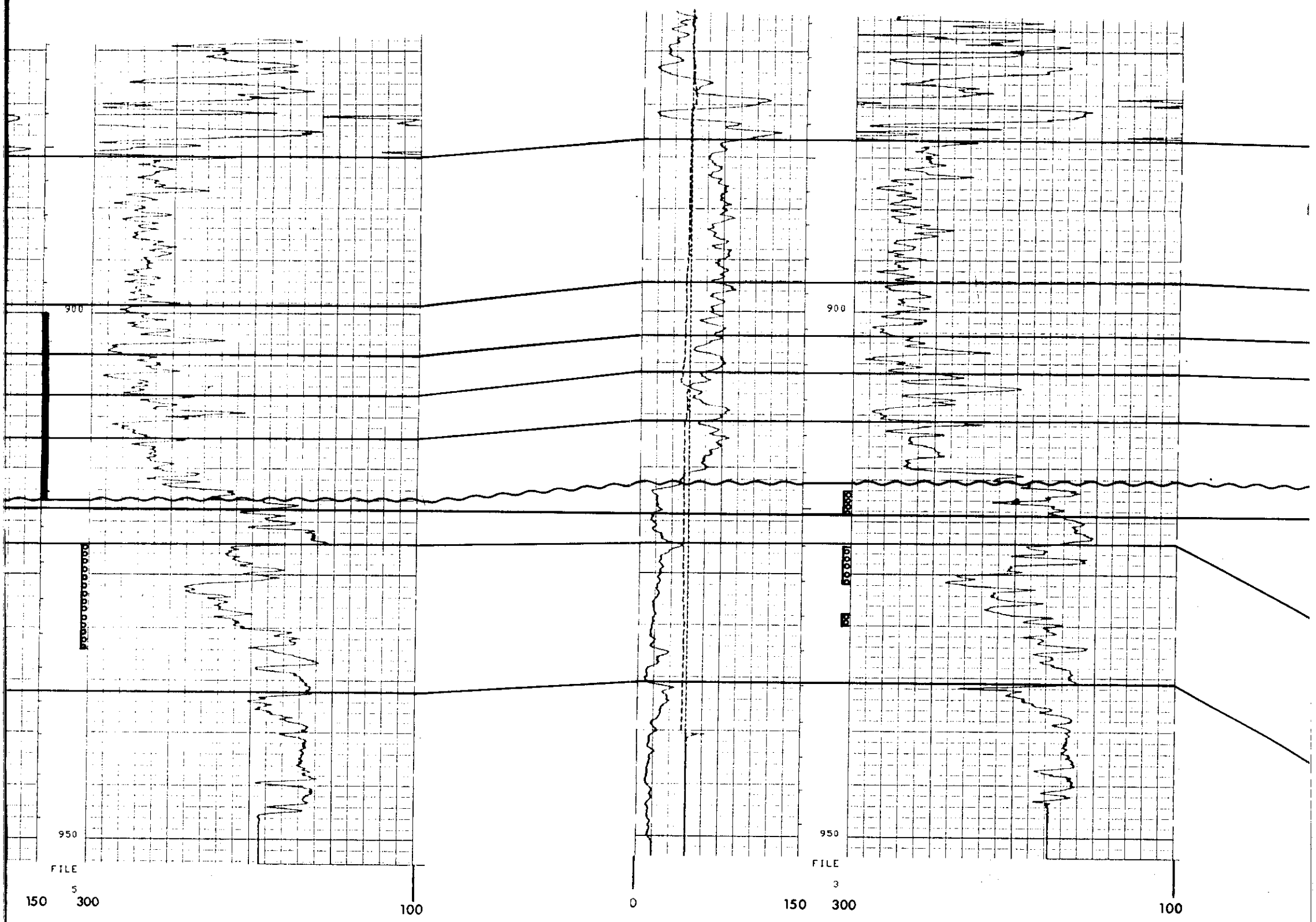
PROPOSED

MEGA WASKADA 10-35
10-35-1-26W1.

K.B. 468.9m
R.R. Aug. 5, 1983
Lower Alida Producer

OMEGA WASKADA 9-35
9-35-1-26W1.

K.B. 469.32m
R.R. Sep. 5, 1983
Lower Alida Producer



No Drillstem Tests Run

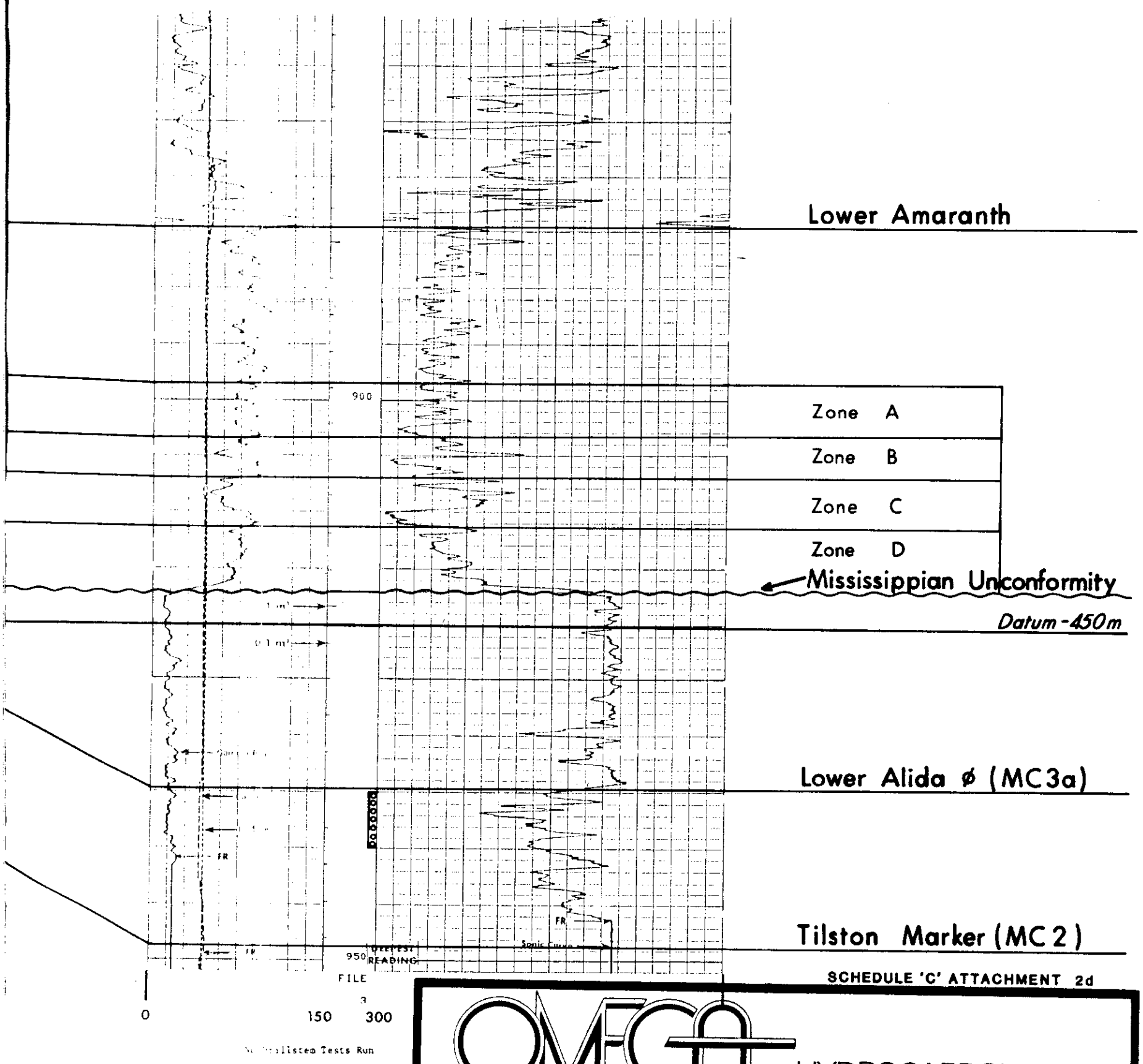
No Drillstem Tests Run

OSED COMMINGLED WELL
PERFS 900m-912m

OMEGA WASKADA 12-36
- 12-36-1—26W1.

K.B. 470.1 m
R.R. Aug. 10, 1983
Lower Alida Producer

B'



SCHEDULE 'C' ATTACHMENT 2d

OMEGA HYDROCARBONS LTD.

WASKADA, MN.

STRUCTURAL CROSS SECTION B—B'

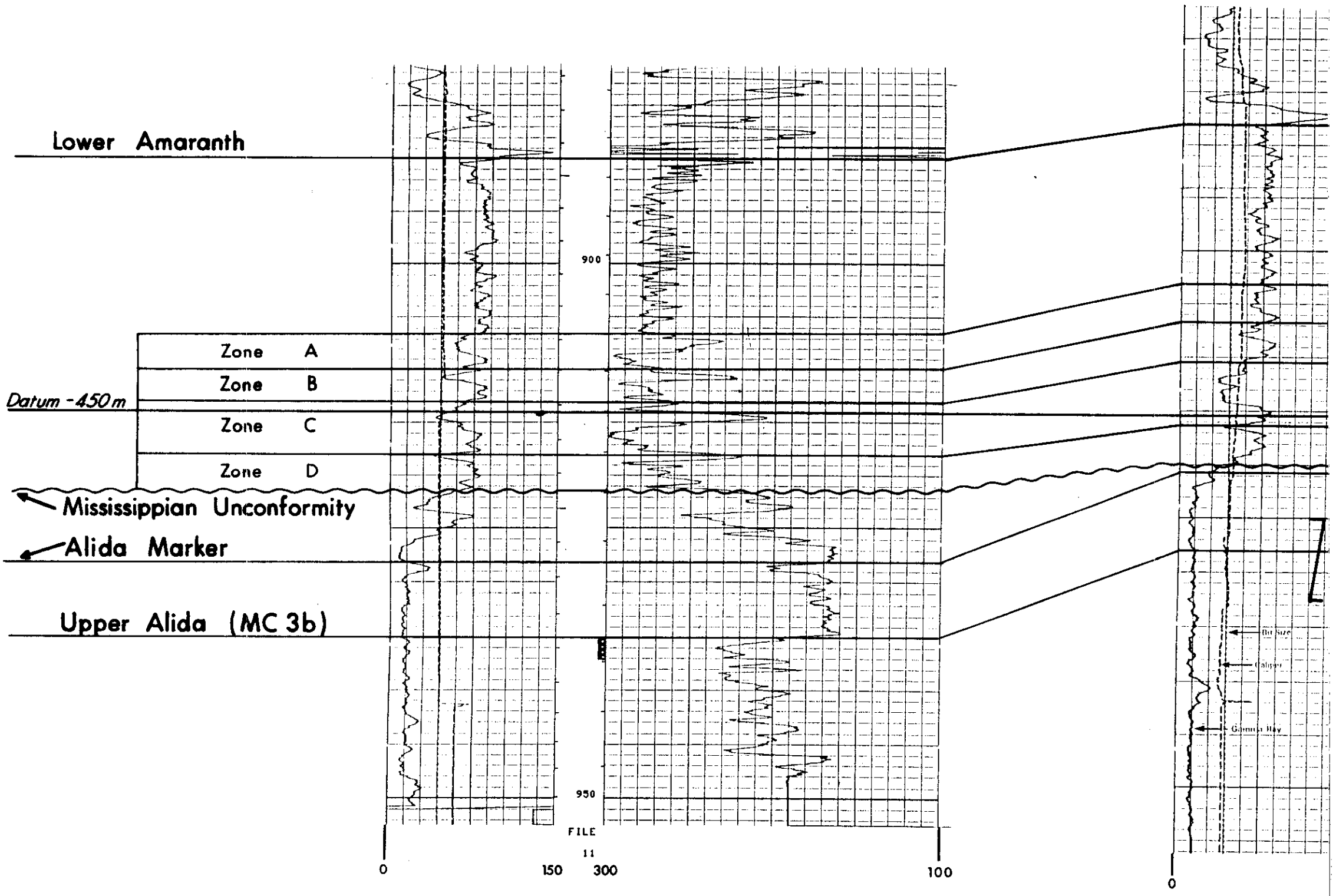
Scale: Schematic	Date: Nov. 16, 1987	
Geology: P. Patton	Contour Interval:	
Revised:	File:	Drafting: PAB.

C

OMEGA WASKADA 8-4
8-4-2-26W1.

K.B. 464.0 m
R.R. Dec. 18, 1983
Upper Alida Producer

OME

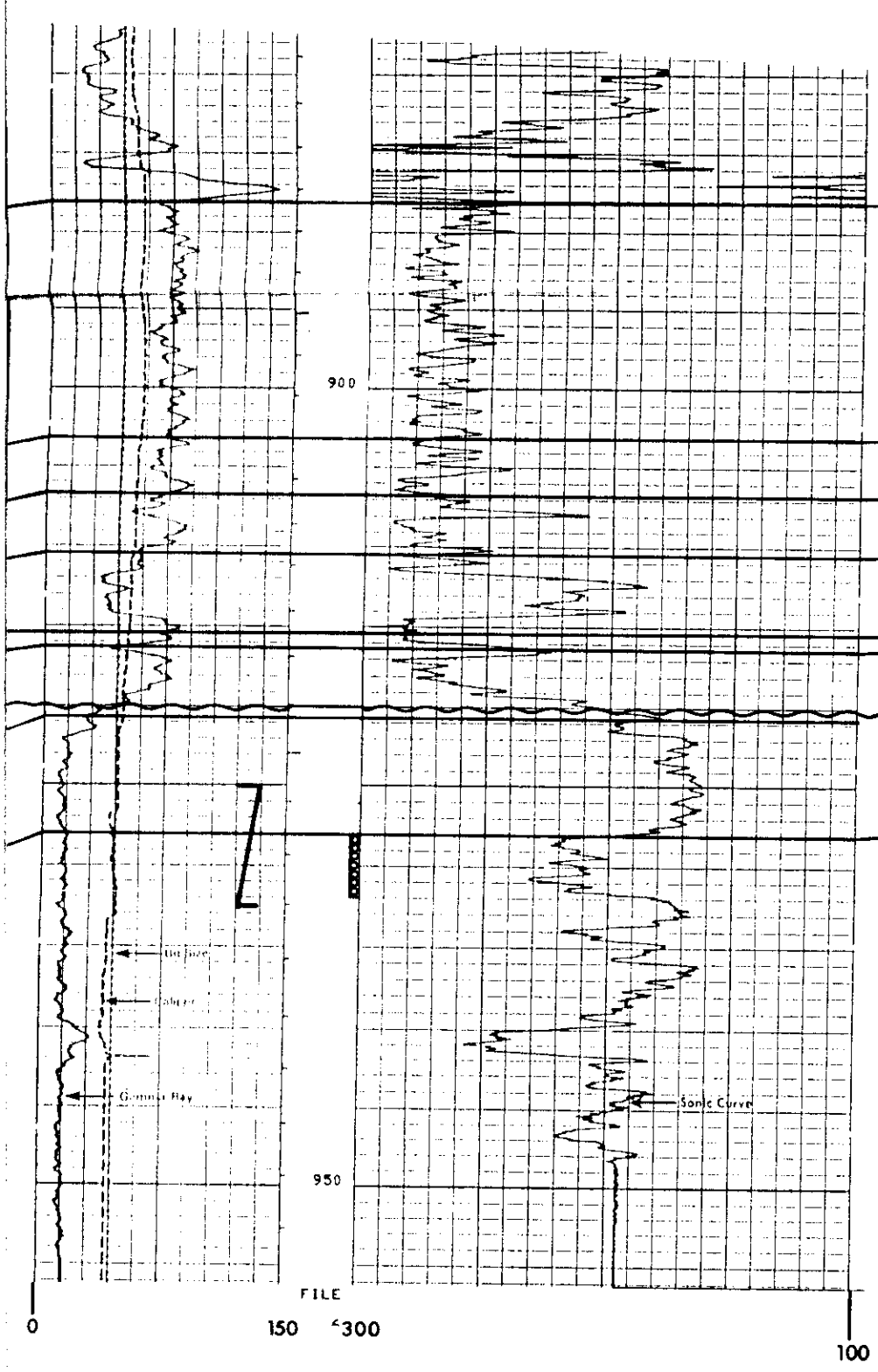


No Drillstem Tests Run

DST #1 925-
REC
HP 1

OMEGA WASKADA 5-3
5-3-2-26W1.

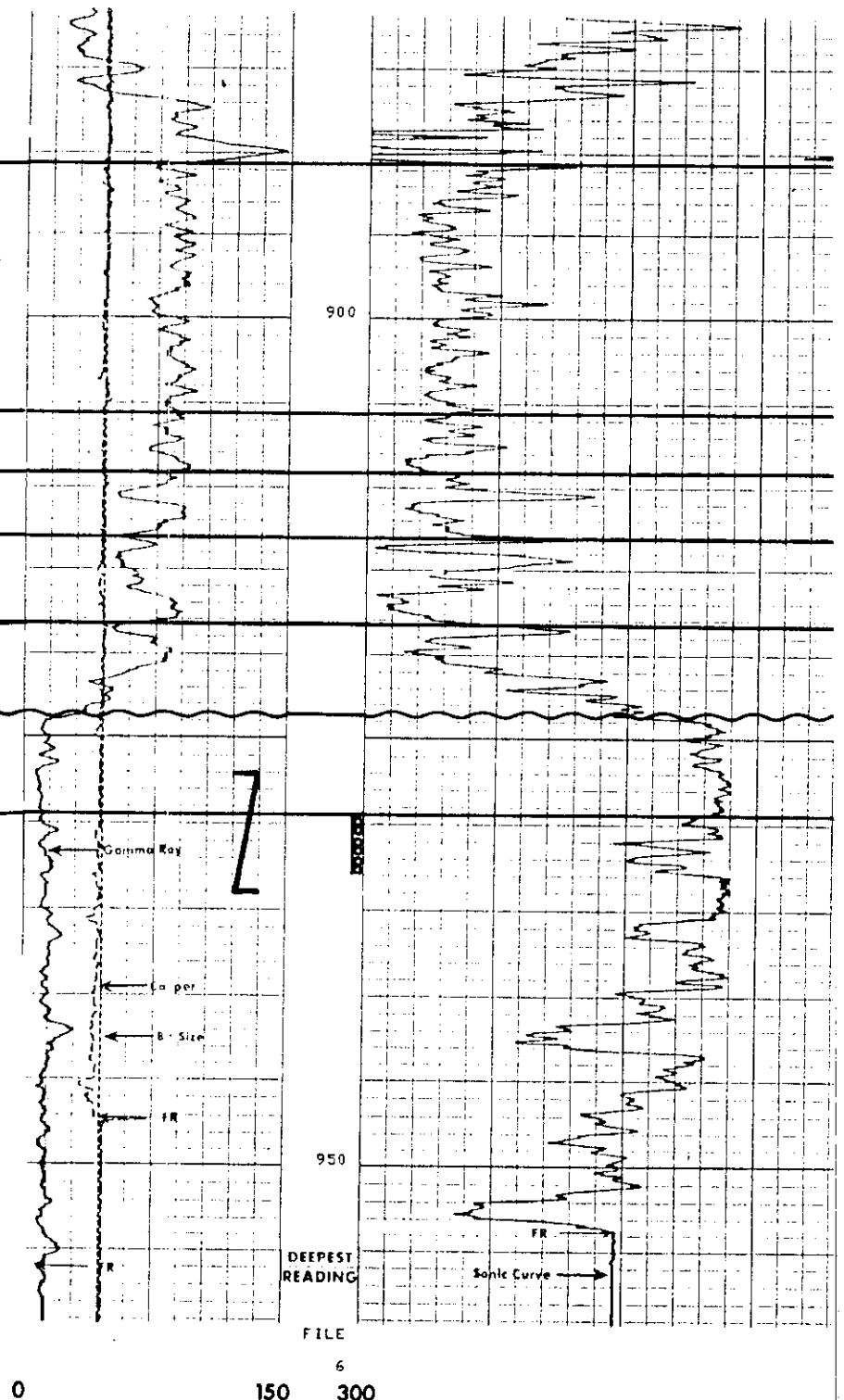
K.B. 465.4 m
R.R. Feb. 7, 1984
Upper Alida Producer



DST #1 925-932.5 (M CANYON) VO 60 SI 60/90
REC 151M OIL, 45M MC OIL, 202M OIL, 9M MC OIL
HP 10663/10663 FP 1832/3482 SIP 8115/7932

OMEGA WASKADA 6-3
6-3-2-26W1.

K.B. 468.1 m
R.R. Feb. 22, 1984
Upper Alida Producer



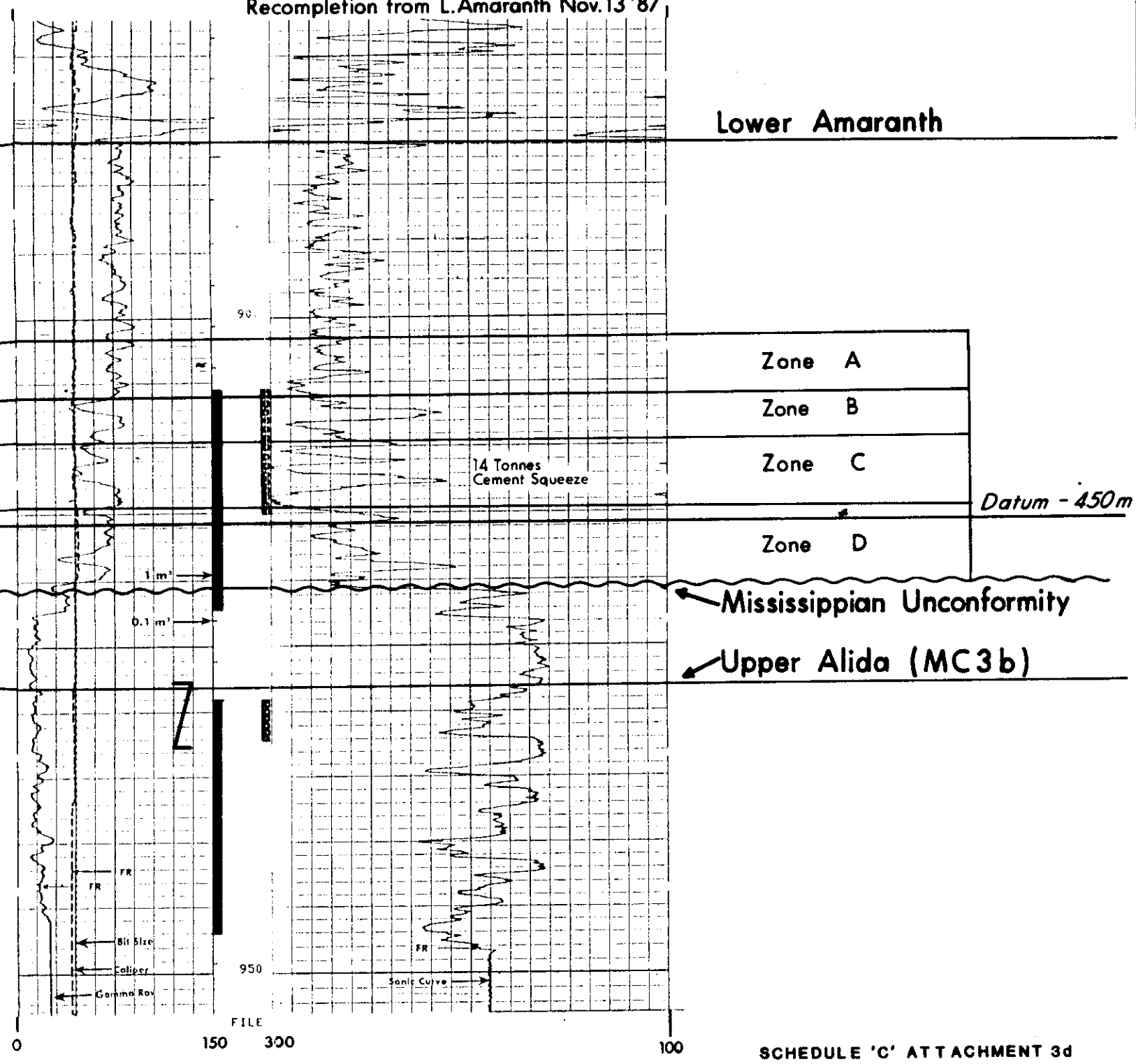
DST #1 928-934 (M CANYON) VO 60 SI 60/90
REC 50M OC MUD
HP 10724/10724 FP 463/672 SIP 8237/8237

PROPOSED COMMINGLED WELL
PERFS 906m-918m

C'

OMEGA WASKADA 3-3
3-3-2-26W1.

K.B. 465.6m
R.R. Mar. 5, 1984
Upper Alida Producer
Recompletion from L.Amaranth Nov.13 '87



SCHEDULE 'C' ATTACHMENT 3d

DST #1 927.5-932.5 (FROB) VO 60 SI 60/90 MINS.
REC 18M GCOC MUD, 70M SLI MC OIL, 36M MC OIL.
HP 10706 - 10605 FP 742-1048 SIP 8410-8136

OMEGA HYDROCARBONS LTD.

WASKADA,MN.

STRUCTURAL CROSS SECTION C-C'

Scale: Schematic	Date: Nov. 16, 1987	
Geology: P. Patton	Contour Interval:	
Revised:	File:	Drafting: PAB.