

INTERIM DIRECTIVE

ID 94-2

8 March 1994

TO: All Oil and Gas Operators

REVISIONS TO OIL AND GAS WELL SPACING ADMINISTRATION

BACKGROUND

The oil and gas well spacing regulations and policy have received considerable review and some significant changes are appropriate. Extensive consultation with the Canadian Association of Petroleum Producers, the Small Explorers and Producers Association of Canada, and the Alberta Department of Energy has taken place.

The Energy Resources Conservation Board (the Board) will implement the changes summarized in the following paragraphs and in Attachments 1 through 3 on 1 April 1994.

"FIRST WELL" IN A POOL

The optimum geologic location to drill the "first well" into a pool is often outside the existing target area. The Board receives many applications to change target areas for "first wells". Most operators apply prior to drilling to ensure on-target status and to avoid an off-target penalty that may result from subsequent pool development. These applications can alert competitors to the possible play and intervention may be filed resulting in long and costly delays. This, in effect, penalizes the company that takes the initiative to explore for a new pool. Accordingly, it is considered appropriate to establish a policy that recognizes those companies willing to take the risk associated with drilling exploratory wells.

Effective 1 April 1994 the Board will not impose an off-target penalty on the 'first well' in a pool. This policy will be reviewed periodically to ensure that the benefits received by industry justify the administrative resources expended by the Board. Should it be evident that the policy is being abused or is unmanageable it may be rescinded or, alternately, a special charge may be introduced to deal with the resolution of such disputes. Details of the policy are described in Attachment 1 and apply to oil and gas wells.

OFF-TARGET PENALTY SURVEILLANCE

The change from prorated allowables in oil pools to an environment where rate controls are administered primarily for conservation purposes led the Board to conclude that its role in monitoring off-target wells and lease-line drainage requires revision. The current policy of automatically applying off-target penalties in Maximum Rate Limitation (MRL) administered oil pools can result in the imposition of penalties when protection of correlative rights is not an issue. Also, the increased use of holdings and miscellaneous orders to facilitate drilling of optimum geologic locations during pool development has resulted in fewer off-target wells.

Most oil wells do not have rate limitations because they are in pools subject to good production practice (GPP). The monitoring of off-target wells in GPP pools has been the responsibility of operators in the pools, with the onus on an affected party to bring equity concerns to the Board. With approximately 75 per cent of pools now on GPP, industry is presently responsible for much of the off-target surveillance.

Under the revised policy, the Board will no longer automatically apply off-target penalties, but, will require industry to monitor its respective oil and gas pools for off-target wells and bring equity concerns to the Board using the procedures and policy outlined in Attachment 2.

OFF-TARGET PENALTY DETERMINATION

Off-target penalty factors are presently calculated using the formulas outlined in Part 4 of the Oil and Gas Conservation Regulations. Part 4 contains some nine pages of off-target penalty calculations and text which are complicated and confusing to the user. The Board has replaced the current penalty calculations with simplified figures that show specific off-target areas and the assigned penalty factors. The new method to determine an off-target penalty is shown in Attachment 3, Figures 1 through 4.

It should be noted that the new method applies to wells spudded on or after 1 April 1994. Off-target wells spudded before 1 April 1994 will continue to have their off-target penalties calculated in accordance with present regulations.

The appropriate changes will be made to the Oil and Gas Conservation Regulations at a later date.

Questions regarding this interim directive should be directed to the Board's Oil Department at 297-8547.

[Original signed by]

G. Berndtsson, P.Eng.
Board Member

Attachments

**ATTACHMENT 1 TO ERCB ID 94-2
"FIRST WELL" IN A POOL POLICY**

- The "first well" policy is effective 1 April 1994 and applies to a well spudded on or after this date.
- The "first well" in an oil pool is defined as the well with the earliest spud date that is capable of oil production and that commences oil production within 6 months¹ of the spud date.
- A capable oil well is a well that is placed on production.
- The "first well" in a gas pool is defined as the well with the earliest spud date that is capable of gas production.
- A gas well is considered to be capable when it is completed and a suitable test has demonstrated to the Board's satisfaction that the well has the ability to produce gas at a commercial rate on a sustained basis.
- The establishment of the "first well" designation will be initiated when a well of competitive ownership becomes capable and a request to apply the off-target penalty is made to the Board. Note that the request to apply an off-target penalty shall contain the information which justifies the application of the penalty. Until that occurs, the off-target well will produce without penalty in accordance with the off-target well policy presented on Attachment 2.
- Upon a request to apply an off-target penalty, the Board will review pool delineation utilizing all available relevant information such as geological and pressure data. Where the well in question is deemed to be the "first well" in the pool, the off-target penalty will not be applied.
- In the event that a well does not qualify for "first well" status, the well will be subject to an off-target penalty effective the first day of the month following the date a request is received by the Board to apply the penalty.
- Where pools containing a well with "first well" status are coalesced, only one well will retain its "first well" status. However, the new pool will not be reviewed for "first well" status until a request is made to apply an off-target penalty. Until then, all wells with "first well" status will produce without penalty.

¹ Where a well is not capable, within 6 months because it is required to comply with unique or area specific regulations, an extension may be requested.

ATTACHMENT 2 TO ERCB ID 94-2 OFF-TARGET WELL SURVEILLANCE

Effective 1 April 1994, industry will be responsible for off-target well surveillance. After this date, an off-target penalty factor will be applied to a new well being placed on production only upon successful request from a competitive operator. This shift to industry will require operators to monitor mineral leases offsetting their lands for off-target wells. Specifically, industry is required to make the initial assessment as to whether a well is off-target, and if off-target, whether application of an off-target penalty is warranted. To do this, an operator needs to know the following information:

- vertical well: the coordinates of the well's surface location,
- deviated or horizontal well: the coordinates of the well's surface and bottomhole locations,
- the well spacing for the area of interest,
- the general guidelines the Board will be following in applying an off-target penalty, and
- directional survey information, if applicable.

Information on well coordinates, well spacing orders, spud date, and Pool status (MRL/GPP) is available from the Board's information Services. Also, a daily listing of new wells licensed is available at the main floor reception desk.

PROCEDURE FOR INITIATING AN OFF-TARGET PENALTY

- Using the well's surface and bottomhole coordinates and applicable well spacing orders, determine if the well is outside its designated target area.
- Using the following general guidelines, determine whether an off-target penalty should be applied.
- If application of an off-target penalty is warranted, submit a letter to the Board, with a copy to the operator of the off-target well, requesting that an off-target penalty be applied.

GUIDELINES FOR APPLYING OFF-TARGET PENALTY

The Board will apply the following general guidelines in determining if an off-target penalty should be applied:

1. Where the well is off-target towards a competitor's land containing a well producing from the same pool, application of the off-target penalty would be automatic.
2. Where the well is off-target away from a competitor's lands containing a well producing from the same pool, the off-target penalty would not normally be applied.
3. An off-target penalty factor for a well would not normally be initiated by a operator who is in a second, third, or fourth line offset drilling spacing unit (DSU) without substantiating data proving inequitable drainage.

4. Notwithstanding points 2 and 3, the Board may apply the off-target penalty where a well has gained access to a reservoir as a result of its off-target location.
5. The base rate for an off-target oil well will take into account the allowable administration of the pool. Where the pool is on MRL administration, the penalty factor would be applied to the well's MRL. In GPP oil pools, the Board would consider the capabilities of the off-target well, wells in the immediate area, and possibly other wells in the pool. Both parties will be provided with an opportunity to table input regarding the appropriate well rate.
6. For a gas well, the off-target penalty will be applied against its Q_{max} , as defined in section 10.300 of the Oil and Gas Conservation Regulations.
7. Operators are reminded that normally only one well may be produced from each pool in a DSU. Failure to comply with this requirement will result in the assignment of overproduction plus any overproduction penalties to the DSU.

ATTACHMENT 3 TO ERCB ID 94-2
OFF-TARGET PENALTY DETERMINATION

Wells spudded after 1 April 1994 shall have the off-target penalty factors determined in accordance with the attached figures. Please note that the numbers defining the width of the off-target bands represent subsurface distances normally calculated at porosity top of the producing horizon, for vertical wells. For directionally drilled and horizontal wellbores the actual location of the wellbore in the producing horizon is considered.

Please note, a DSU does not include the area of any provincial road allowance.

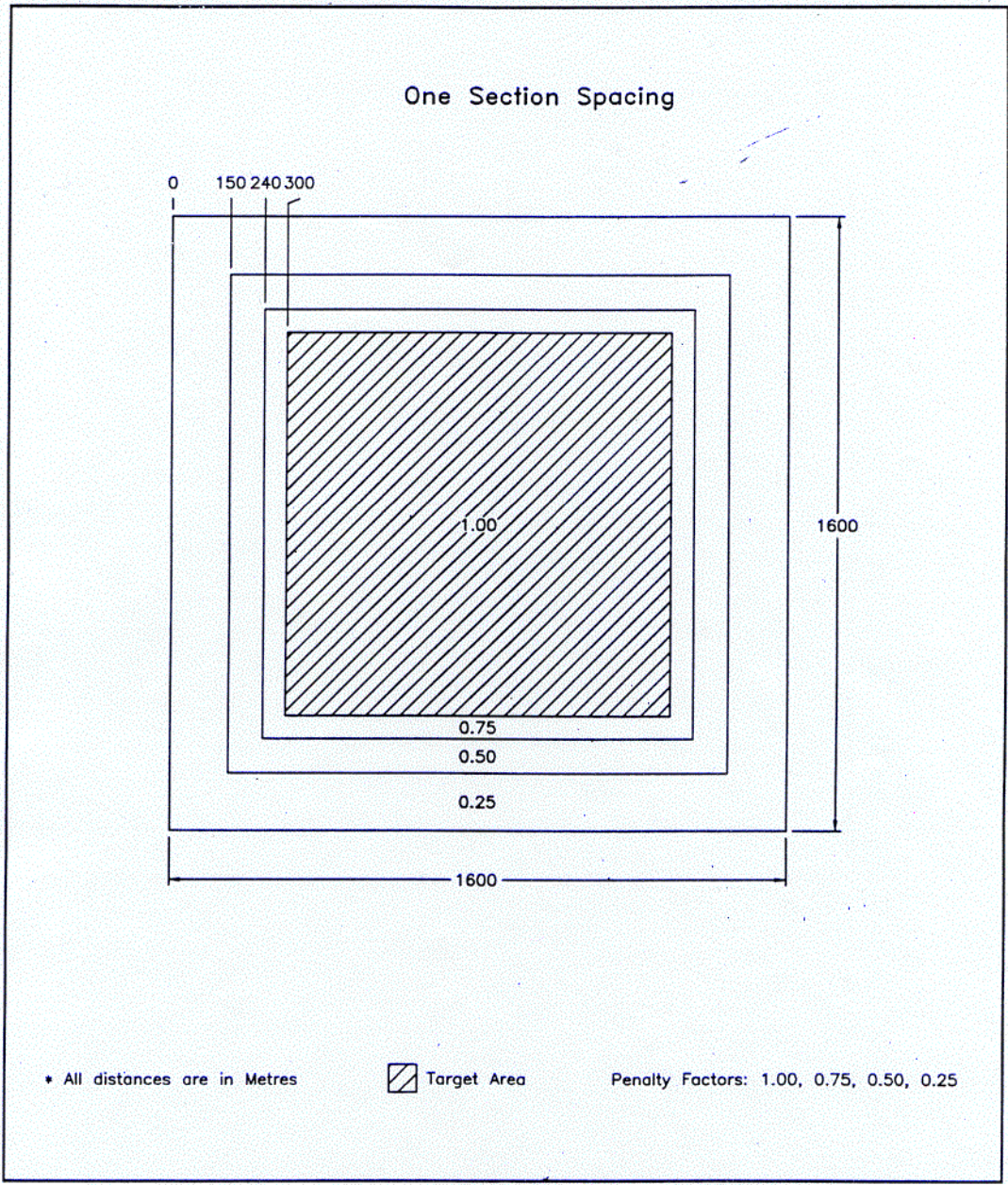


Figure 1
OFF-TARGET PENALTY FACTORS

Effective: 1 April 1994

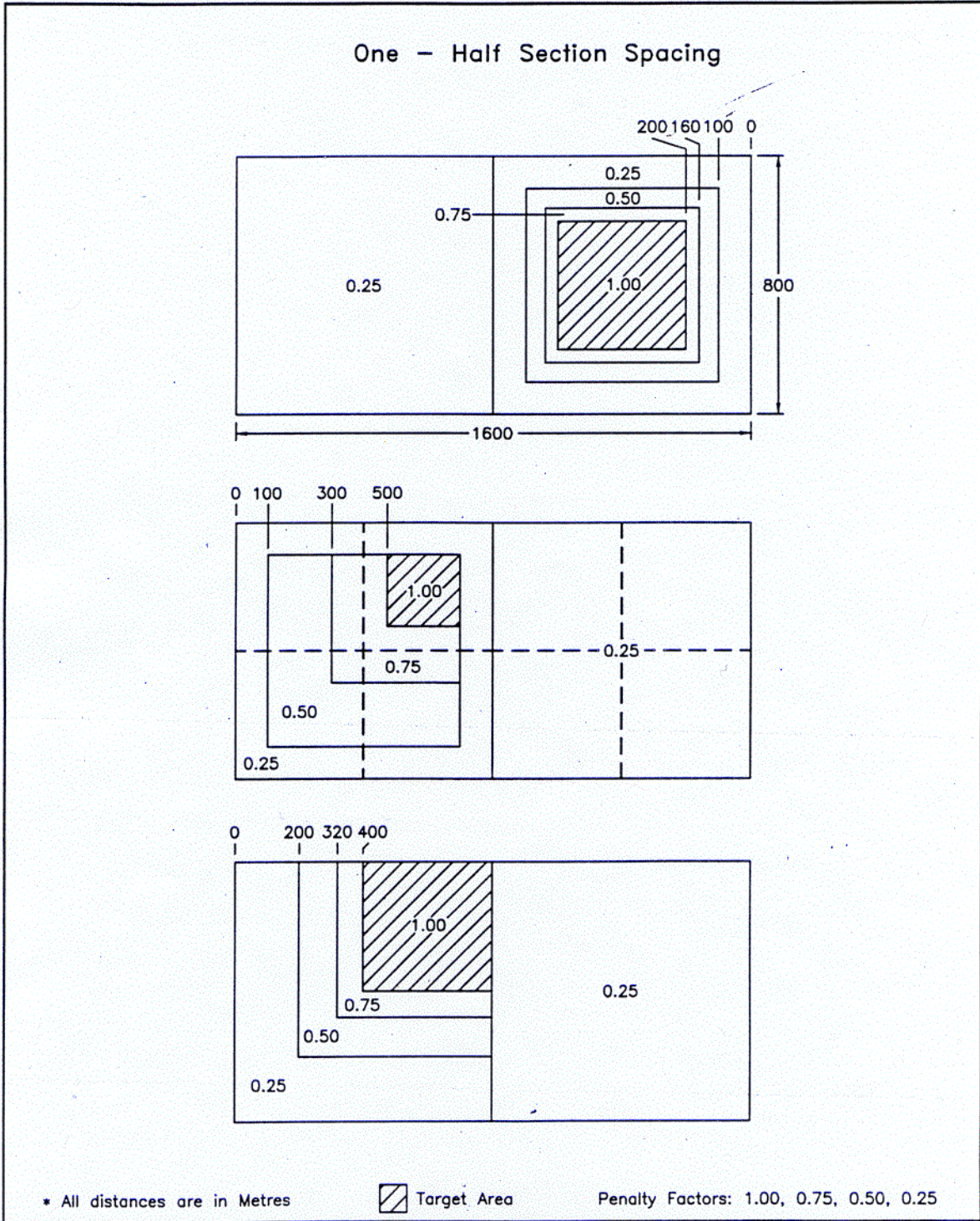


Figure 2
OFF-TARGET PENALTY FACTORS

Effective: 1 April 1994

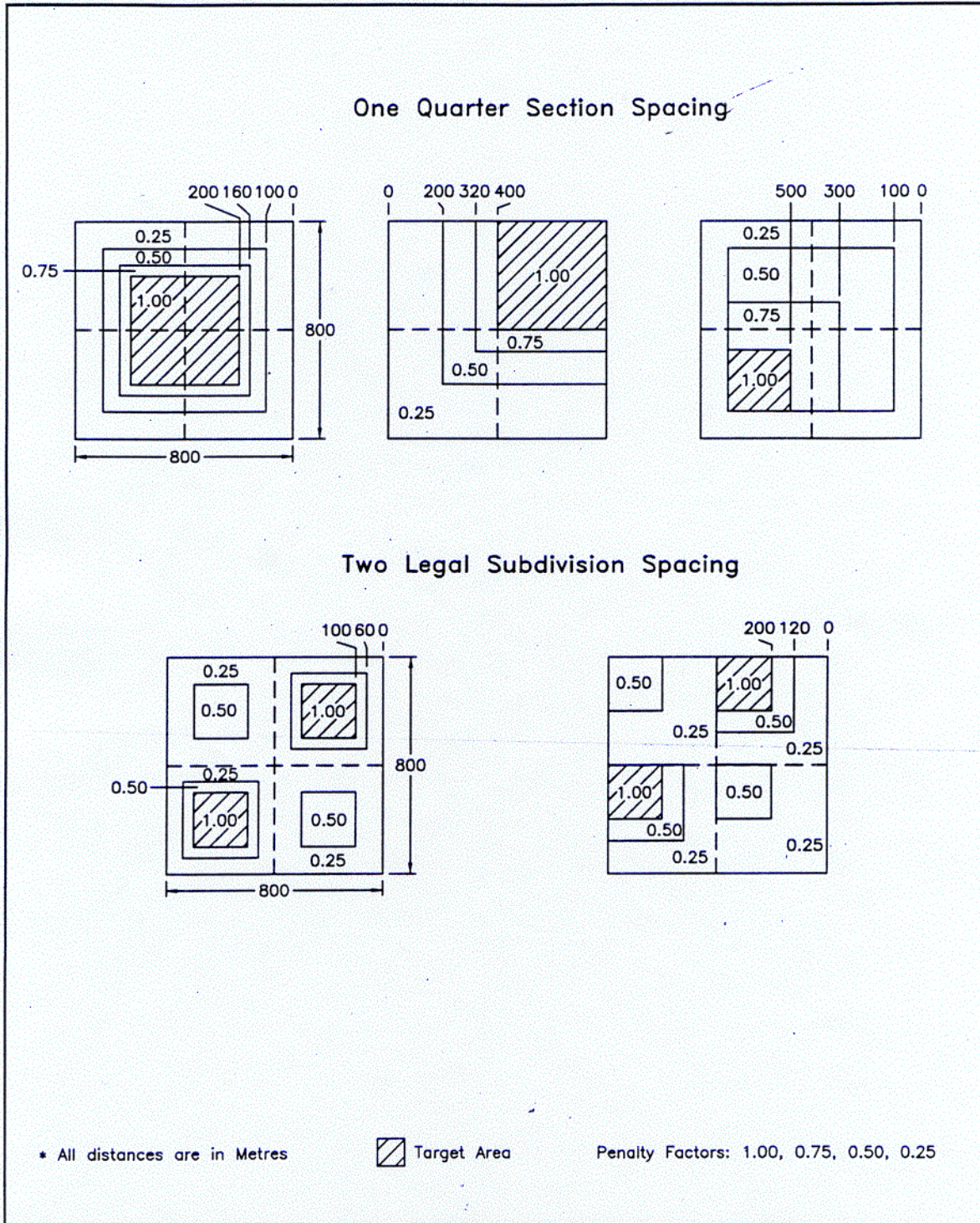


Figure 3
OFF-TARGET PENALTY FACTORS

Effective: 1 April 1994

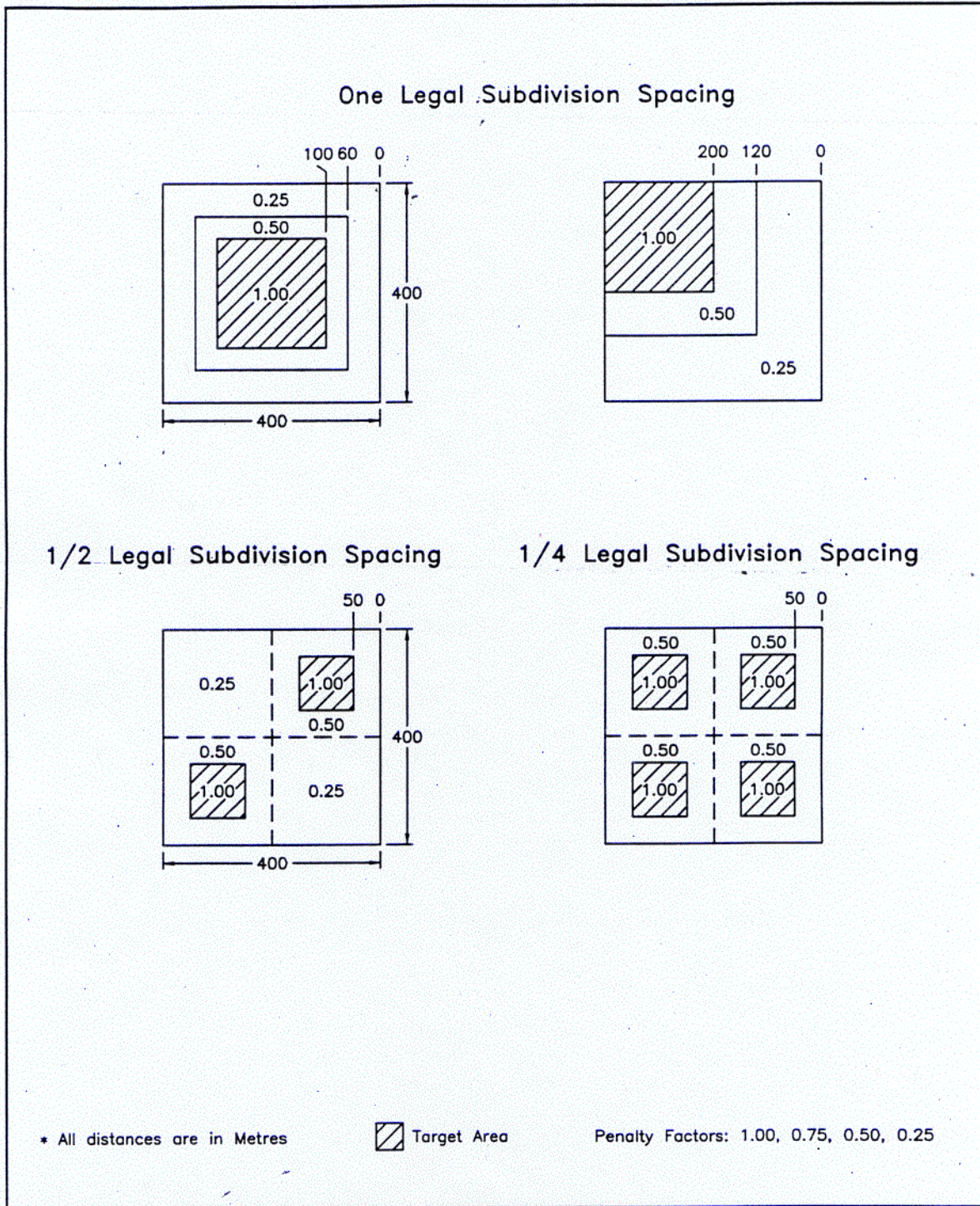


Figure 4
OFF-TARGET PENALTY FACTORS

Effective: 1 April 1994