

WELL NAMING AND NUMBERING

STANDARDS

Minerals Management Service (MMS) uses four distinct names or numbers to uniquely identify each well completion. They are:

- **American Petroleum Institute (API) well number.**
- **Producing interval code.**
- **OCS lease number/well and completion name.**
- **Well name suffix.**

For offshore Federal operations, the MMS District Offices assign the API well number and producing interval code and approve the well name and suffix in accordance with these procedures and standards.

Both the API well number and producing interval code are used to uniquely identify well completions in information systems. The well name and its suffix are frequently relied upon for well completion identification in documents and communications not related to automated information processing.

This document includes detailed instructions and examples for assigning API well numbers, producing interval codes, well and completion names, and well name suffixes for all wellbores.

API WELL NUMBER

The MMS identifies each wellbore with a unique, permanent **API well number**. This API number is assigned to an original wellbore when **Form MMS-123, "Application For Permit To Drill (APD)"** (OMB Control Number 1010-0044), is approved. Incremented, sequential **wellbore (WB) codes** are assigned to each subsequent wellbore (sidetrack, bypass, redrill, or well deepening) with **Form MMS-124, "Sundry Notices and Reports on Well"** (OMB Control Number 1010-0045). This WB code was previously called the **sidetrack (ST) code** but has been renamed the **WB code** to reflect the fact that the code will apply to all subsequent wellbores drilled after the original hole, including sidetracks, bypasses, redrills, and well deepenings.

The standard format 12-digit API well number is structured as follows:

<u>State Code</u>	<u>County Code</u>	<u>Sequence Code</u>	<u>WB Code</u>
99	999	99999	99

- **State Code**

State codes are two digits. The standard API state or pseudostate codes must be used.

- **County Code**

County codes are three digits. The standard API county or pseudocounty codes must be used.

- **Sequence Code**

Sequence codes are five digits. For OCS wells, these numbers are assigned by the MMS to identify the original wellbore. The numbers are assigned sequentially from 1 to 60,000 for each county or pseudocounty.

- **WB Code**

WB codes are two digits. The original hole is identified using a WB code of "00." For each and every sidetrack, bypass, redrill, well deepening, or other wellbore drilled after the original hole, the WB code is incremented and assigned sequentially.

- A **wellbore** is defined, for the purposes of these standards, as any new borehole purposely or unintentionally kicked off or extended from an existing wellbore. This category includes drilled wellbores commonly referred to as sidetracks, bypasses, redrills, and well deepenings. (See Figures 1 and 2.)
- WB codes in the range **70-79** are reserved for **historical** sidetracks, bypasses, redrills, and well deepenings which, for whatever reason, were not previously assigned WB codes. (See Figure 3.)

The 70-79 series WB codes will also be used to number future wellbores which for some unforeseen

reason do not initially receive WB codes. In these cases the 70 series WB code assigned will be permanent and will not be renumbered later.

Existing API numbers, including WB codes, already assigned will not be changed. The 70-79 series of WB codes will be used only to identify sidetracks, bypasses, redrills, well deepenings, and other such wellbores which were not initially assigned a unique API number with a WB code.

Additional details of assigning API well numbers are found in the **"API Well Number and Standard State and County Numeric Codes Including Offshore Waters, API Bulletin D12A"** published in January 1979. This appendix includes changes from and supercedes some parts of these API standards.

If an API number has not been assigned or cannot be found by the operator or MMS for an Outer Continental Shelf (OCS) well, MMS assigns a temporary sequence number between 85,000 and 90,000 to be used by the operator until the permanent number is found or assigned by the appropriate District Office.

PRODUCING INTERVAL CODE

The **producing interval code**, sometimes referred to as the completion code, is a 3-character standard format code (**ANN** where **A** = an alpha character and **N** = a numeric character) assigned by the MMS when **Form MMS-125, "Well Summary Report"** (OMB Control Number 1010-0046), is accepted. The numeric portion is uniquely and permanently related to a specific completion zone or producing configuration within a wellbore.

- The 3-character producing interval code is a separate identifier and is not part of the 12-digit API number. However, it does complete the well number for reporting purposes.
- The first character (alpha) of the code is assigned based upon the number of tubing strings in the wellbore which are capable of production. For example, a producing interval code of "S01" indicates a single tubing string; "D01" indicates a dual completion. **(See Figures 4 through 6.)**

Note: In the case of a tubingless or other completion where production from one reservoir flows through a tubing string and that from another reservoir through the annulus, the

first alpha character of the producing interval codes will be **D**. In this case, this does not signify the presence of two tubing strings but indicates there are two separate production streams with the annulus acting as a tubing string. (See Figure 7.)

- The second and third characters (numeric) of the code relate to a specific reservoir or producing configuration and are assigned sequentially beginning with the number "01" for the first reservoir completed within a wellbore, followed by consecutively increasing numbers assigned to successive completed reservoirs. For example, a producing interval code of "S01" indicates the first reservoir completed in the well; "S02" indicates the second reservoir completed. If, however, additional perforations are added to an "S01" completion in the same reservoir, the producing interval code remains "S01" since the completion is still producing from the same reservoir or commingled situation.

The components of the producing interval code are as follows:

<u>1st Character</u> (Indicates No. of Tubing Strings)	<u>2nd and 3rd Characters</u> (Indicates Reservoir Completed)
Borehole - X	01 through 99
Single - S	
Dual - D	
Triple - T	
Quadruple - Q	
Quintuple - V	

A producing interval code of "X01" must be used when reporting only the wellbore, such as in the following cases:

- Reporting an active or inactive drilling well.
- Reporting a wellbore in which all completions have been abandoned but the wellbore itself has not been abandoned (e.g., temporary abandonment).
- Reporting a wellbore which has been permanently abandoned.

Largely due to new technology, special completions and producing situations exist which require exceptional naming and numbering guidelines. In part, these cases are addressed by reserving and using blocks of producing interval codes for well completion

identification purposes. These reserved producing interval code ranges are identified as follows:

<u>Producing Interval Code</u>	<u>Reserved For</u>
• 01-19	All " routine " producing completions not included in any of the following groups.
• 21-39	All completions which involve the combined production of unit and nonunit hydrocarbons in a single tubing string. (See Figure 8.)
• 41-59	All completions that cross lease lines. (See Figure 9.)
• 61-79	All " capacity " completions. (See Figure 10.) A capacity completion is defined as a completion with two or more tubing strings producing or capable of producing from the same reservoir.
• 81-99	Unassigned.

**COMPLETIONS INVOLVING
DOWNHOLE COMMINGLING OF PRODUCTION
FROM SEPARATE RESERVOIRS**

- Downhole commingling of production from separate reservoirs involves producing the separate zones through a common tubing string. (See **Figures 11 and 12.**)

**COMPLETIONS INVOLVING COMBINED PRODUCTION OF UNIT
AND NONUNIT HYDROCARBONS**

- Combined production of unit and nonunit production through a single tubing string is indicated by using the appropriate producing interval codes between **21 and 39.** (See **Figure 8.**)
- This producing interval code is approved with **Form MMS-125, "Well Summary Report."**

COMPLETIONS THAT CROSS LEASE LINES

- If the perforated interval of a well completion crosses a lease or unit line, two separate completion records are established, one in each lease or unit. (See Figure 9.)
- Producing interval codes are assigned from the range **41 through 59**, with the second digit maintaining the sequence of all completions, crossing the lease line or not, in the wellbore. For example, if an initial completion in a wellbore crosses a lease line, the producing interval codes for the two completion records are S41 and S51. If the first two single completions in a wellbore are located on one lease (S01 and S02) and the third completion crosses the lease line, the two records established for this third completion are designated S43 and S53.
- The API number, well name, and well name suffix are identical for each completion record. The differing lease numbers and producing interval codes will distinguish the two records.
- Production and test data are allocated based on criteria specified by MMS (e.g., percentage of perforated interval or total reserves located in each lease) and will be reported separately. These producing interval codes will be approved with **Form MMS-125, "Well Summary Report."**

CAPACITY COMPLETIONS (CAP)

- A **capacity completion** is defined as a completion with two or more tubing strings producing or capable of producing from the same reservoir.
- Capacity completions are identified using appropriate producing interval codes from the range **61 through 79**. For example, an initial capacity dual completion has the producing interval codes D01 and D61. (See Figure 10.)
- Production and test data are reported separately for each tubing string. This producing interval code is approved with **Form MMS-125, "Well Summary Report."**

OCS LEASE NUMBER/WELL AND COMPLETION NAME

The OCS lease number/well and completion name serve as identification keys for OCS wellbores and completions.

- The wellbore name (**AANN** where **A** = an alpha character and **N** = a numeric character) is established with the approval of **Form MMS-123, "Application For Permit To Drill (APD)."** The individual well completion name is approved with **Form MMS-125, "Well Summary Report,"** when the wellbore is completed by adding a single alpha character to the end of the wellbore name (**AANNNA**).
- Well and completion names are designated with a 6-character (**AANNNA**) identifying nomenclature accepted and approved by the MMS (e.g., A001, JA002D, etc.). For a well or completion name not located at a platform (e.g., Well No. 1), the first two alpha characters are blank (001).
- Well and completion names are approved in a format that can indicate the offshore platform name (**A001**), the sequence in which the well was drilled, and, for multiple completions, the specific tubing string (**A001D**).

WELL NAME SUFFIX

The well name suffix is an internal extension to the well name and is approved to further indicate the number of times a new wellbore has been drilled. These new wellbores include sidetracks, bypasses, redrills, and well deepenings.

- The well name suffix is a 4-character standard format identifier (**WBNN** where **WB** is the specific alpha designation used consistently in all well name suffixes and **N** = a numeric character) which is incremented for any drilling of a new hole, including sidetracks, bypasses, redrills, well deepenings, and abandoned portions of wellbores (e.g., WB01, WB02, etc.).
- The well name suffix is accepted and approved on **Form MMS-125, "Well Summary Report."**
- In cases where no API number has been assigned to a certain historical wellbore, the wellbore code (11th and 12th digits of the API number) will not correspond to the well name suffix for all wellbores subsequently drilled.

NEW WELLBORE TYPES

Advances in drilling technology have resulted in the appearance of several new wellbore types which present unique well naming and numbering problems. These new wellbore types are:

- **Horizontal wells**
- **Multilateral wells**
- **Downhole splitter wells**
- **Spoke wells**

HORIZONTAL WELLS

- A **horizontal well** is defined as a well whose angle of deviation is 75 degrees or greater for more than four consecutive directional survey points. **(See Figure 13.)**

MULTILATERAL WELLS

- A **multilateral well** is a well with two or more tubing strings, usually but not necessarily drilled and completed horizontally or highly directionally, sharing common surface casing. **(See Figure 14.)**
- The 10-digit portion of the API well number is the same for all related wellbores sharing common surface casing. An original or initial pilot hole not related to any previous wellbore has a WB code of "00."
- A horizontal or lateral well drilled as a sidetrack from an original hole has a WB code of "01." Each lateral associated with the wellbore has a unique WB code assigned sequentially (e.g., 01, 02, etc.).
- If each lateral wellbore is initially set up as a single completion, the producing interval code is the same for each initial completion, S01. **(See Figure 14.)** However, if one lateral is initially set up as a single completion and the other as a dual completion, the producing interval codes will be S01 and D01/D02, respectively.
- The well name (e.g., A001, 002, etc.) is the same for all lateral wellbores.

The well name suffix (e.g., WB01, WB02, etc.) is incremented for each sidetrack, bypass, redrill, and well deepening associated with a multilateral well.

DOWNHOLE SPLITTER WELLS

- A **downhole splitter well** is defined as two or more wells drilled, cased, and completed within a single wellbore allowing independent production and individual access to each well. (See Figure 15.)
- The 10-digit portion of the API well number for each downhole splitter well is separate and distinct. An original downhole splitter well has a WB code of "00." A wellbore drilled as a sidetrack from an original splitter hole has a WB code of "01."
- Each splitter wellbore has a different well name.
- The well name suffix is incremented for each new wellbore drilled from the original wellbore (sidetrack, bypass, redrill, or well deepening).

SPOKE WELLS

- A **spoke well** is a special wellbore type involving extensions drilled from a horizontal or highly directional well and presents unique well naming and numbering problems. There are currently no such wells in the OCS, and this document will not address the naming and numbering of spoke wells at this time. Establishing such conventions for these well types will be the subject of a future MMS/industry effort.

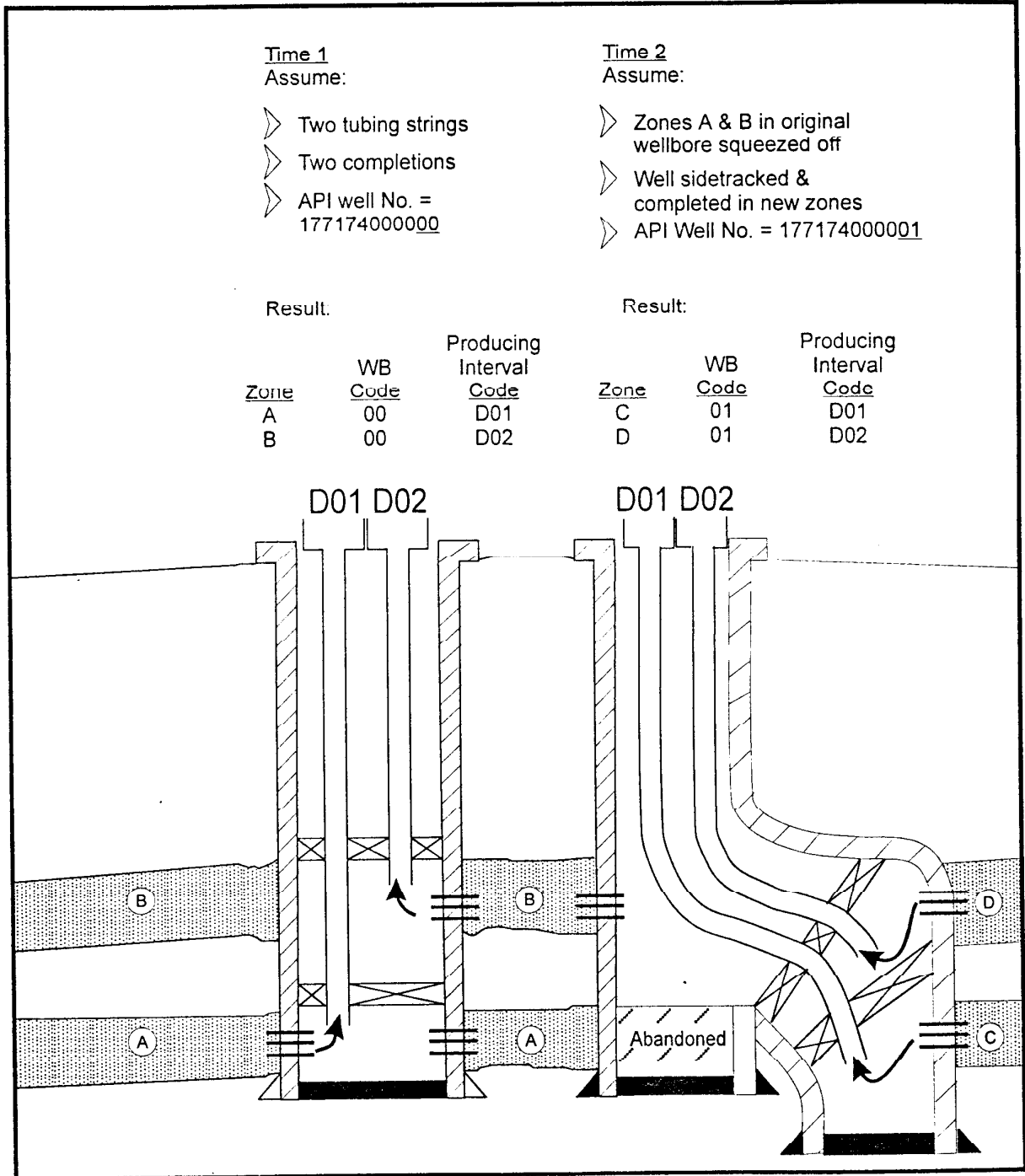
WELL NAMING AND NUMBERING EXAMPLES

The following examples demonstrate the correct use of the well naming and numbering standards:

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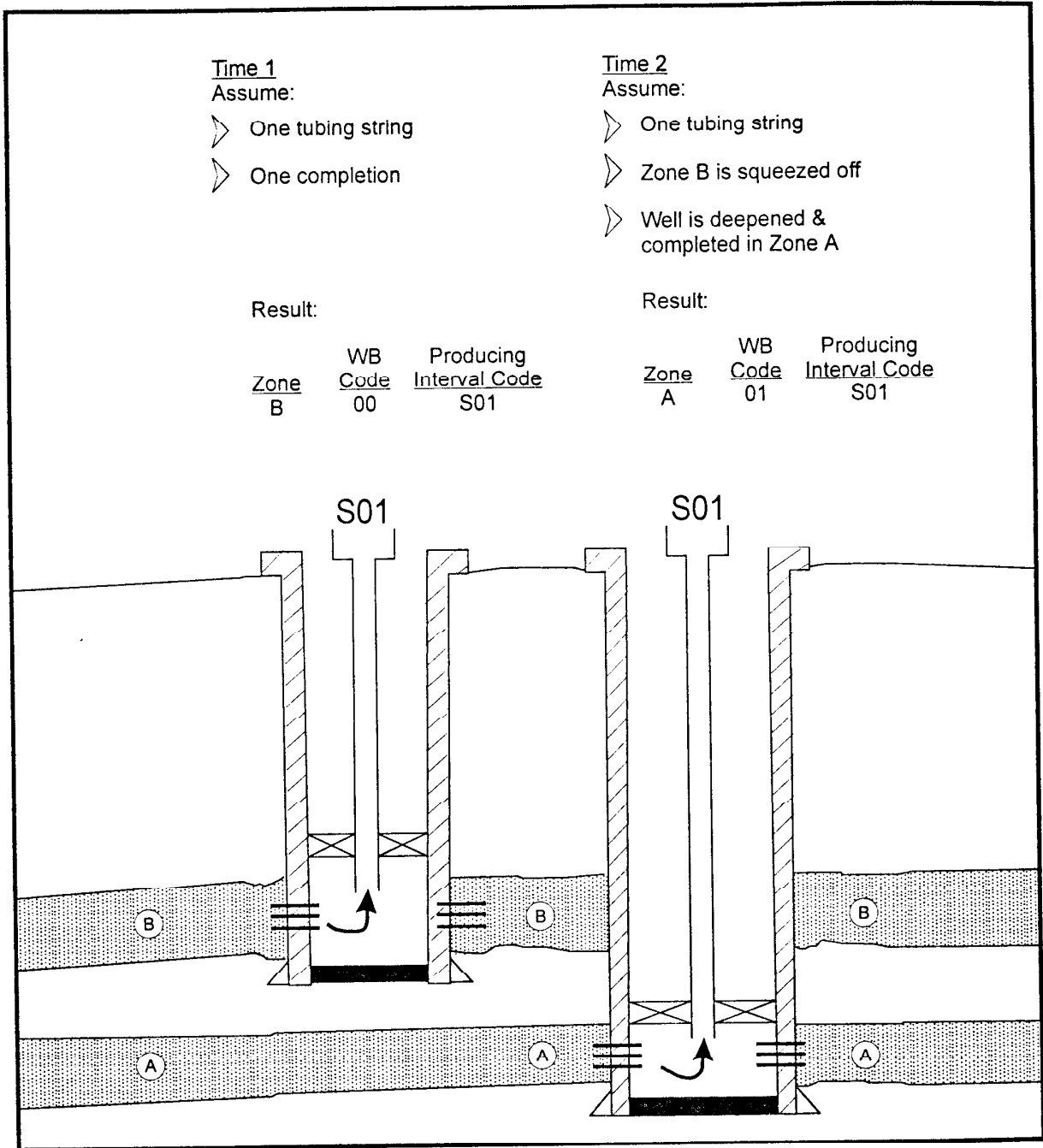
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Sidetrack Well



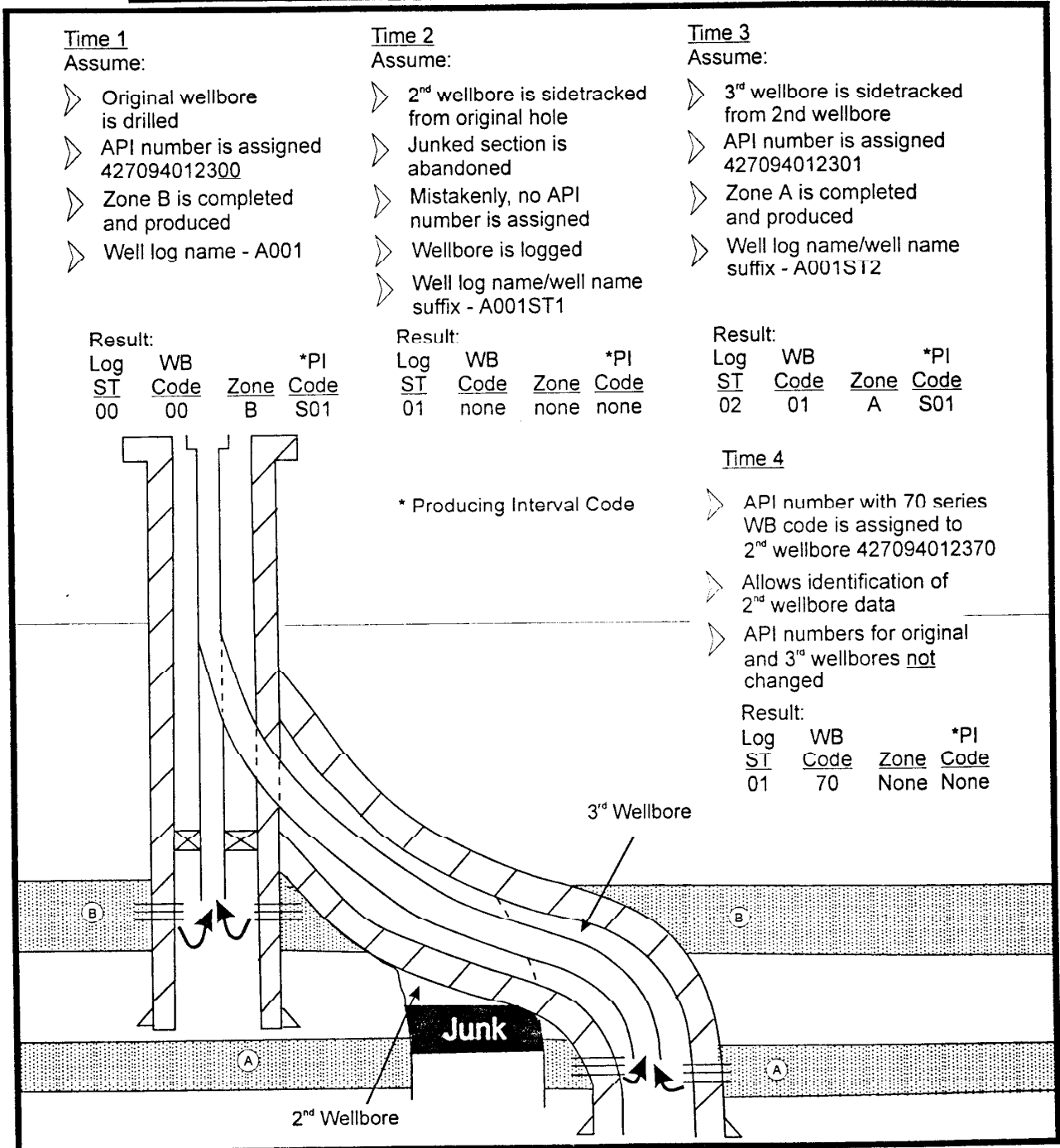
*Note: Since a sidetrack creates a unique API Well No. all completions are assigned new producing interval codes independent of original wellbore.

Well Deepened



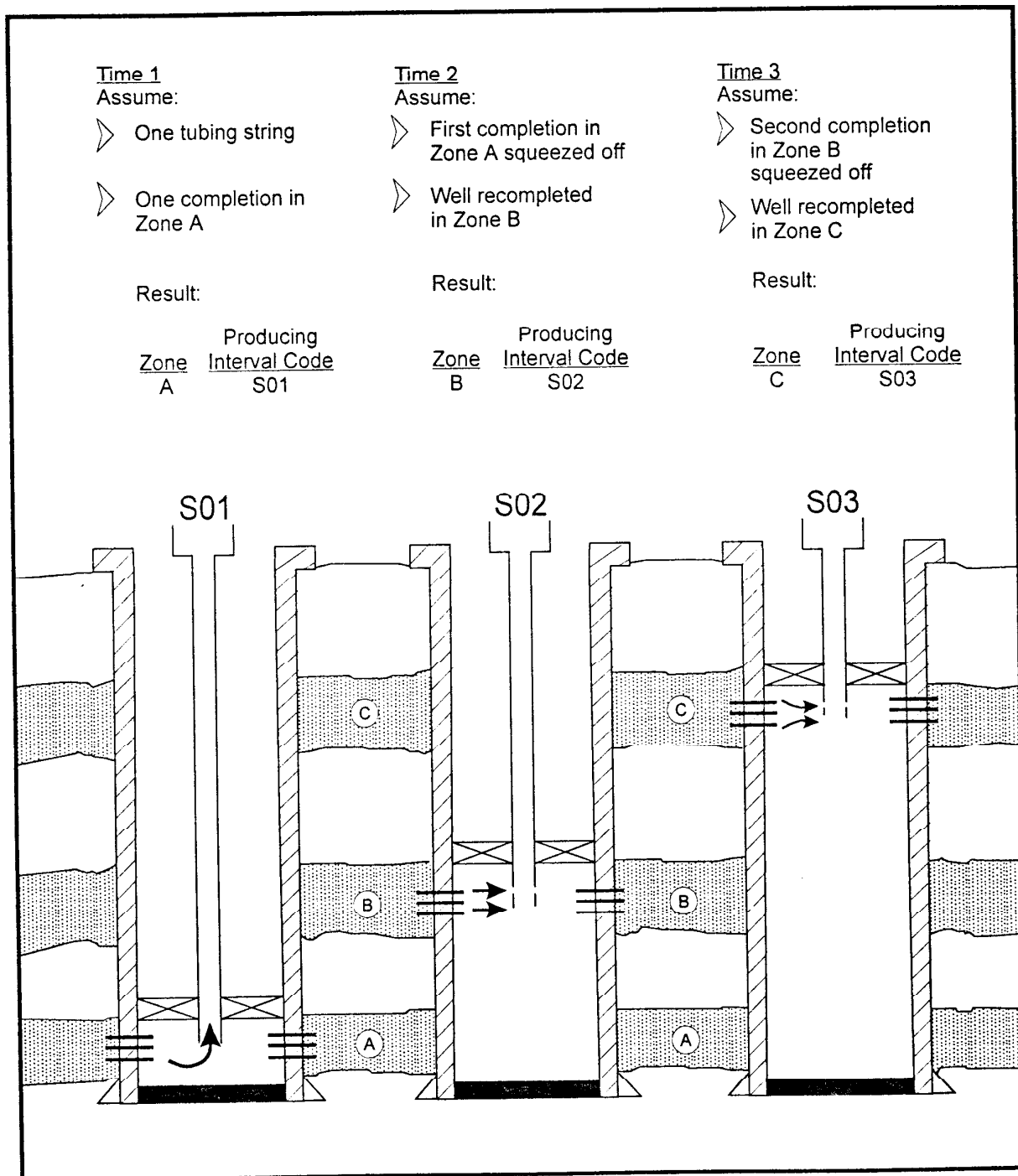
*Note: In this example, the well is initially completed and later deepened and recompleted in another zone. The API number WB code is incremented to 01. The producing interval code remains S01.

Historical Wellbore With No API Number Assigned

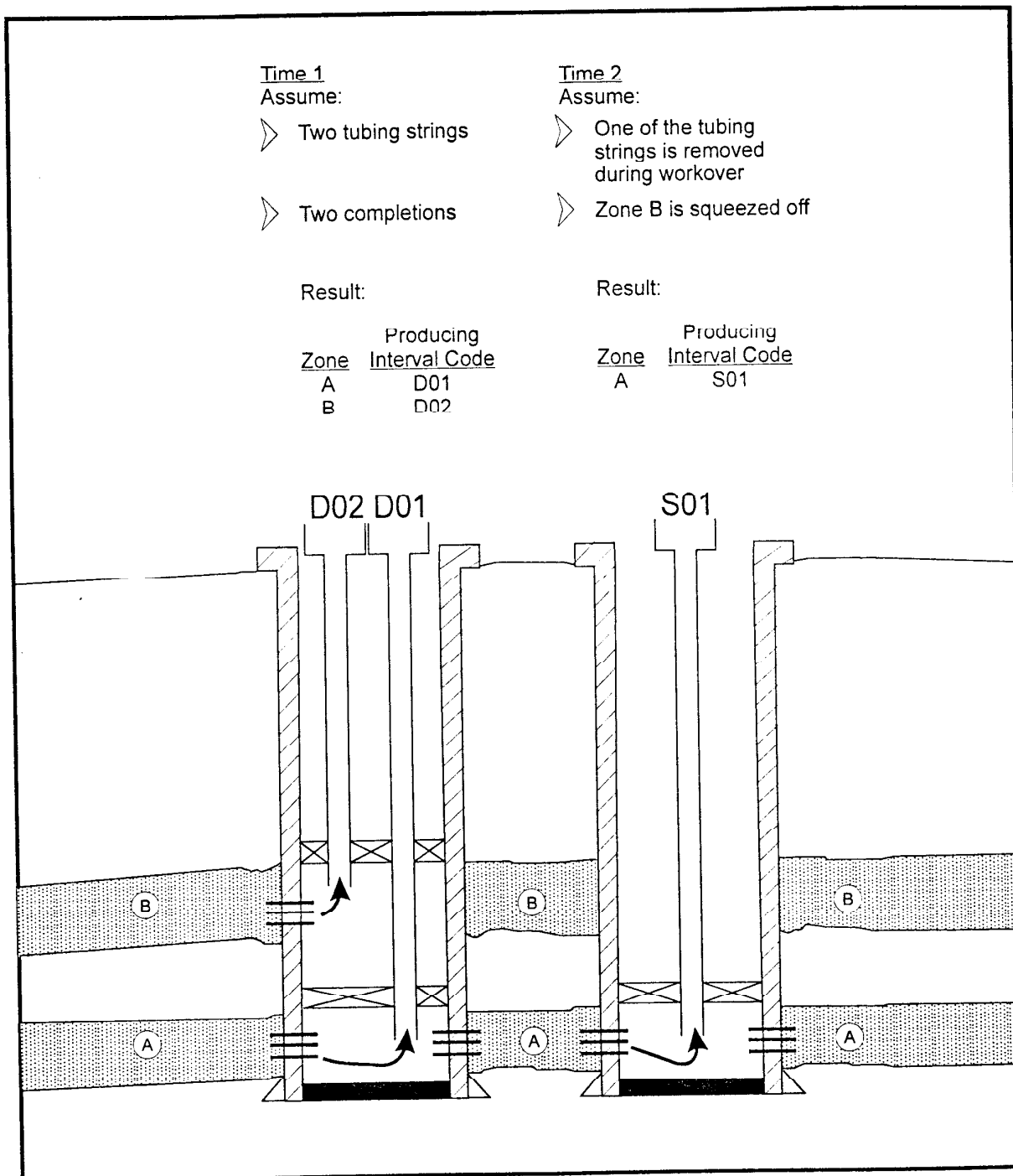


Note: Historical sidetracks, bypasses, well deepenings, etc., that were not initially assigned an API number can be assigned an API number with a 70 series WB code at a later time, so that any wellbore data can be identified. API numbers already assigned will not be changed.

Recompleting A Well

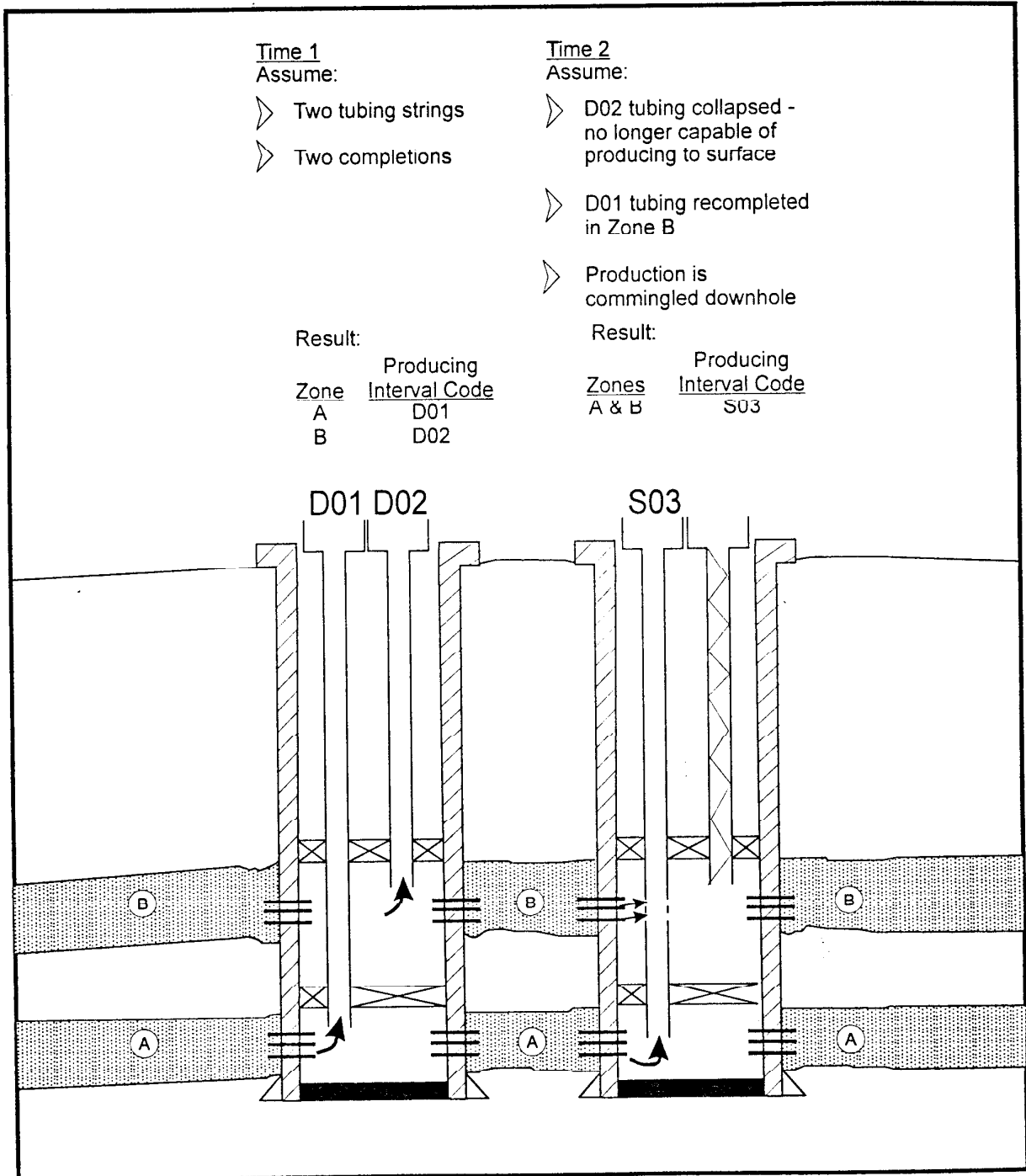


Workover



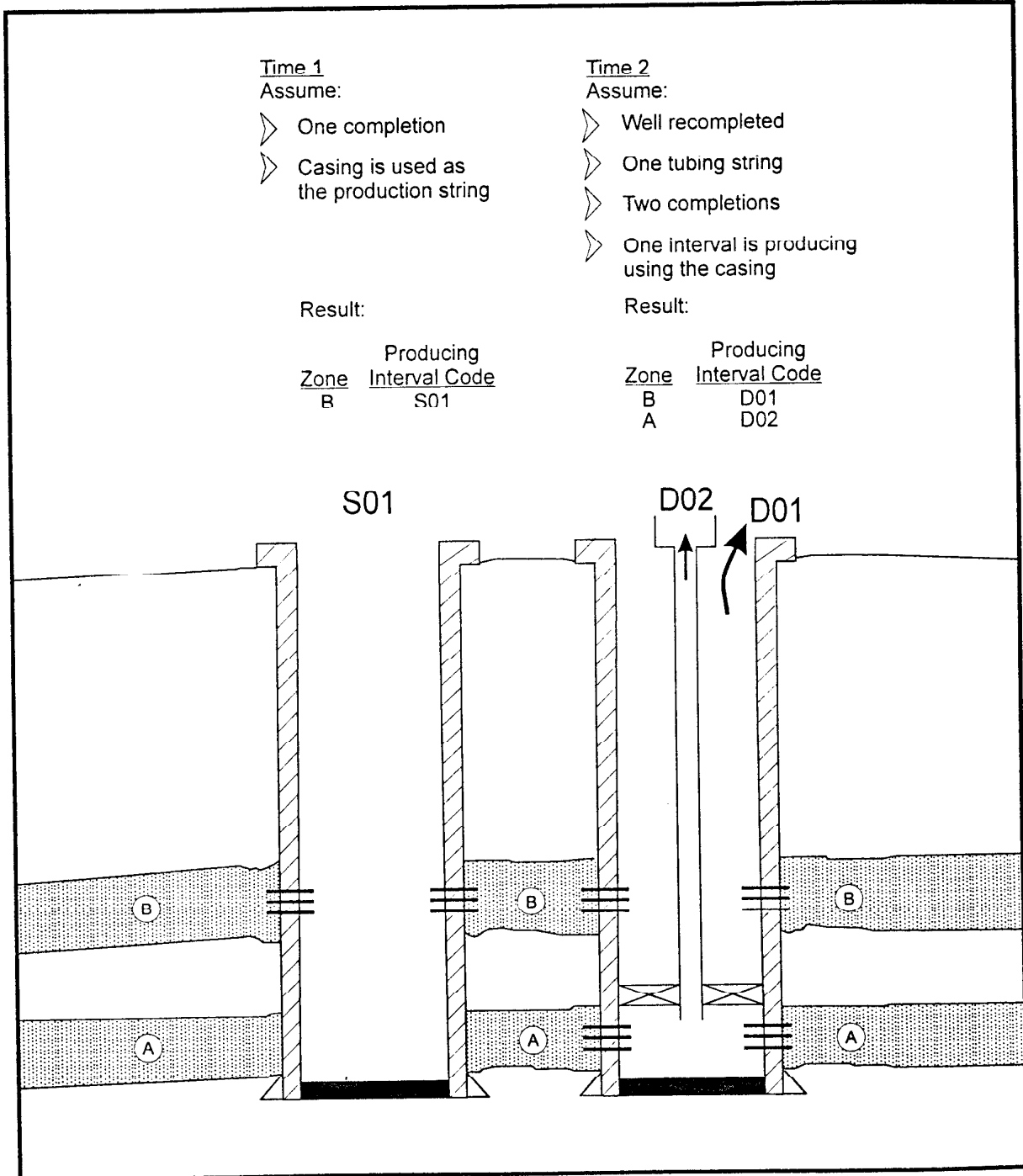
*Note: The D02 completion must be reported as abandoned (status code = 15) on the OGOR-A in the same month that the S01 completion begins reporting.

Collapsed Tubing String

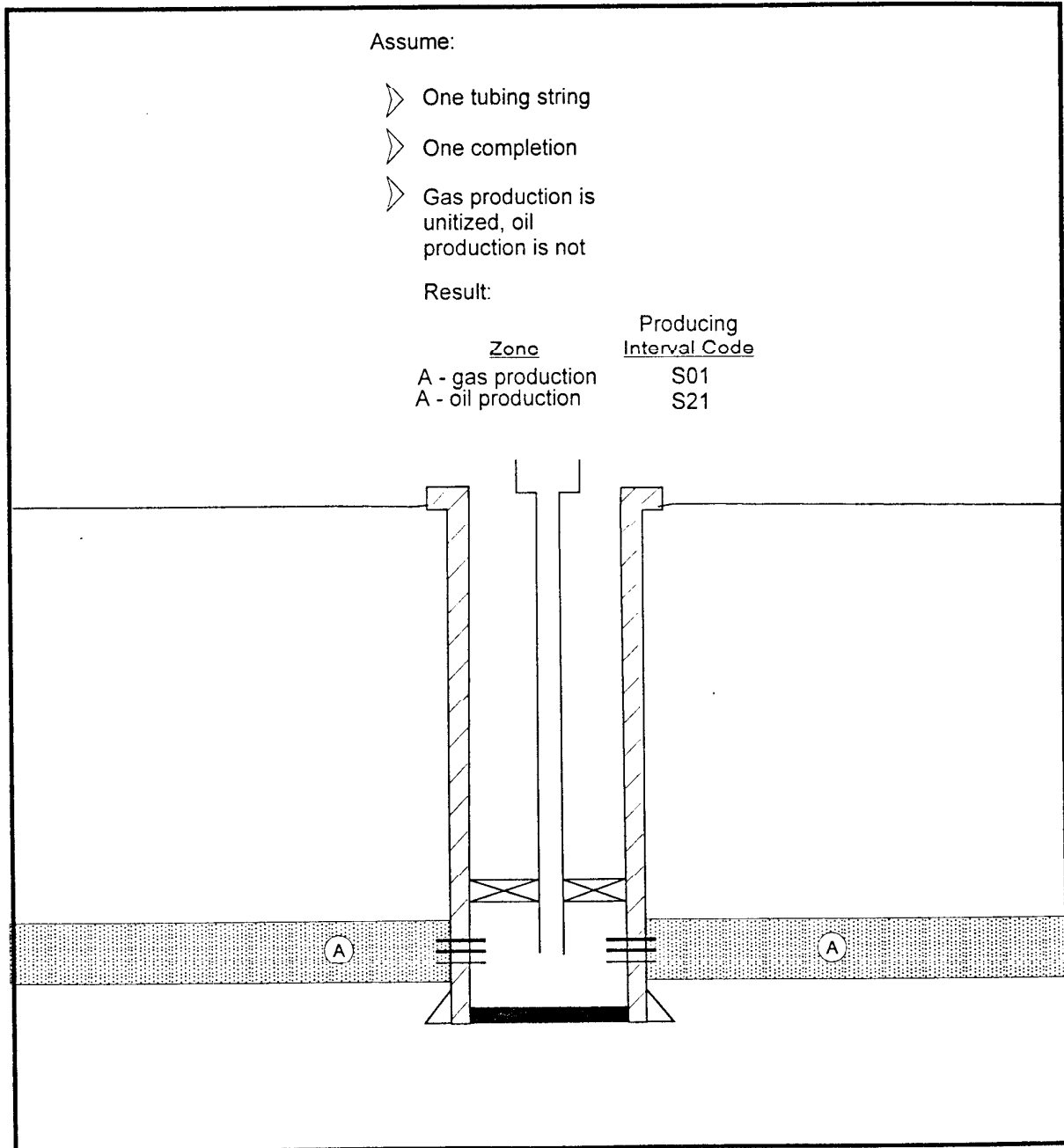


*Note: The D01 & D02 must be reported as completion abandoned (status code = 15) on the OGOR - A in the same month that the S03 begins reporting.

Tubingless Completion



Unit and Non - Unit Production Combined



*Note: Gas production would be reported on unit OGOR - A; oil production would be reported separately on lease OGOR - A

Completion That Crosses Lease Line

Assume:

- ▷ Directional or horizontal well is completed with the perforated interval crossing a lease line.

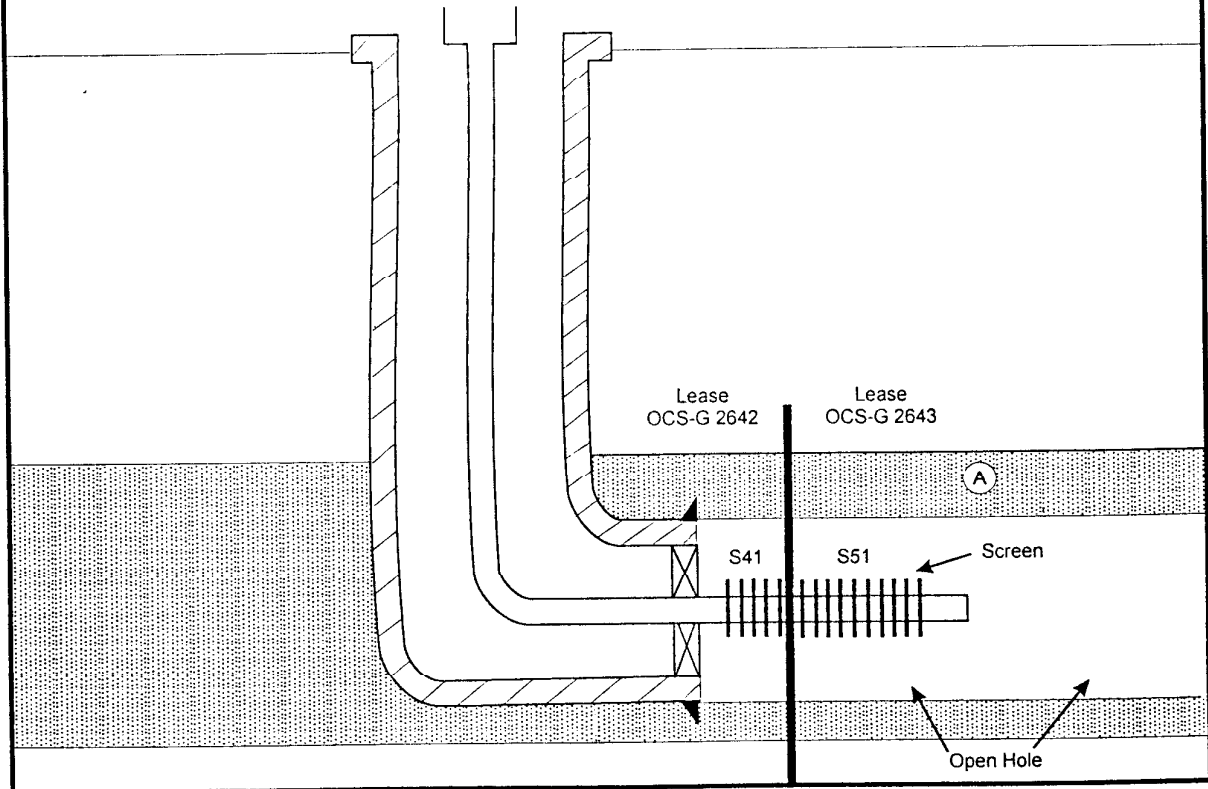
Result:

Two completion records set up, one for each lease.

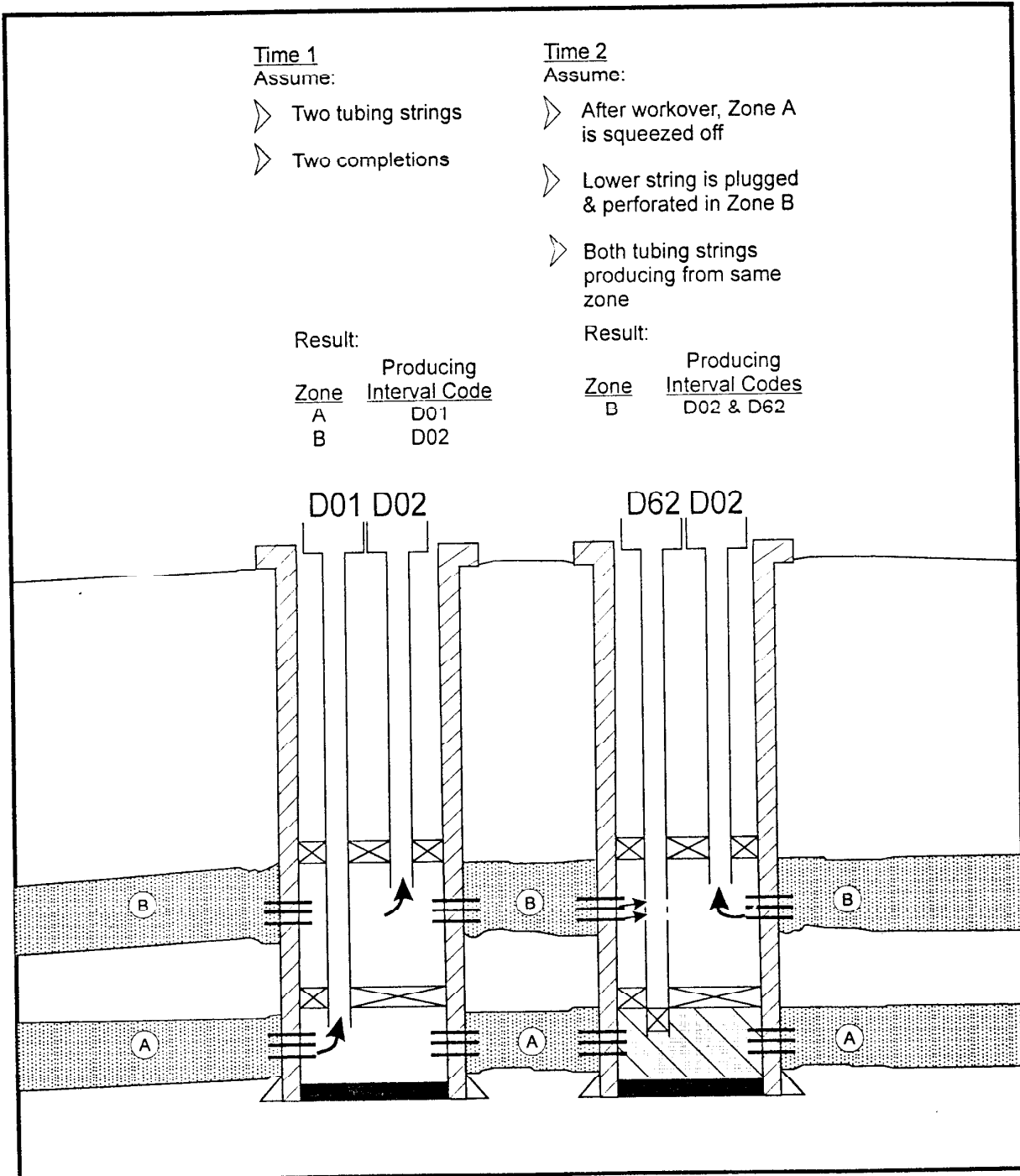
API number, including WB code, and well name suffix will be the same for both records.

Producing interval codes will be S41 and S51.

Production and test data will be allocated to each lease based on method specified by MMS.



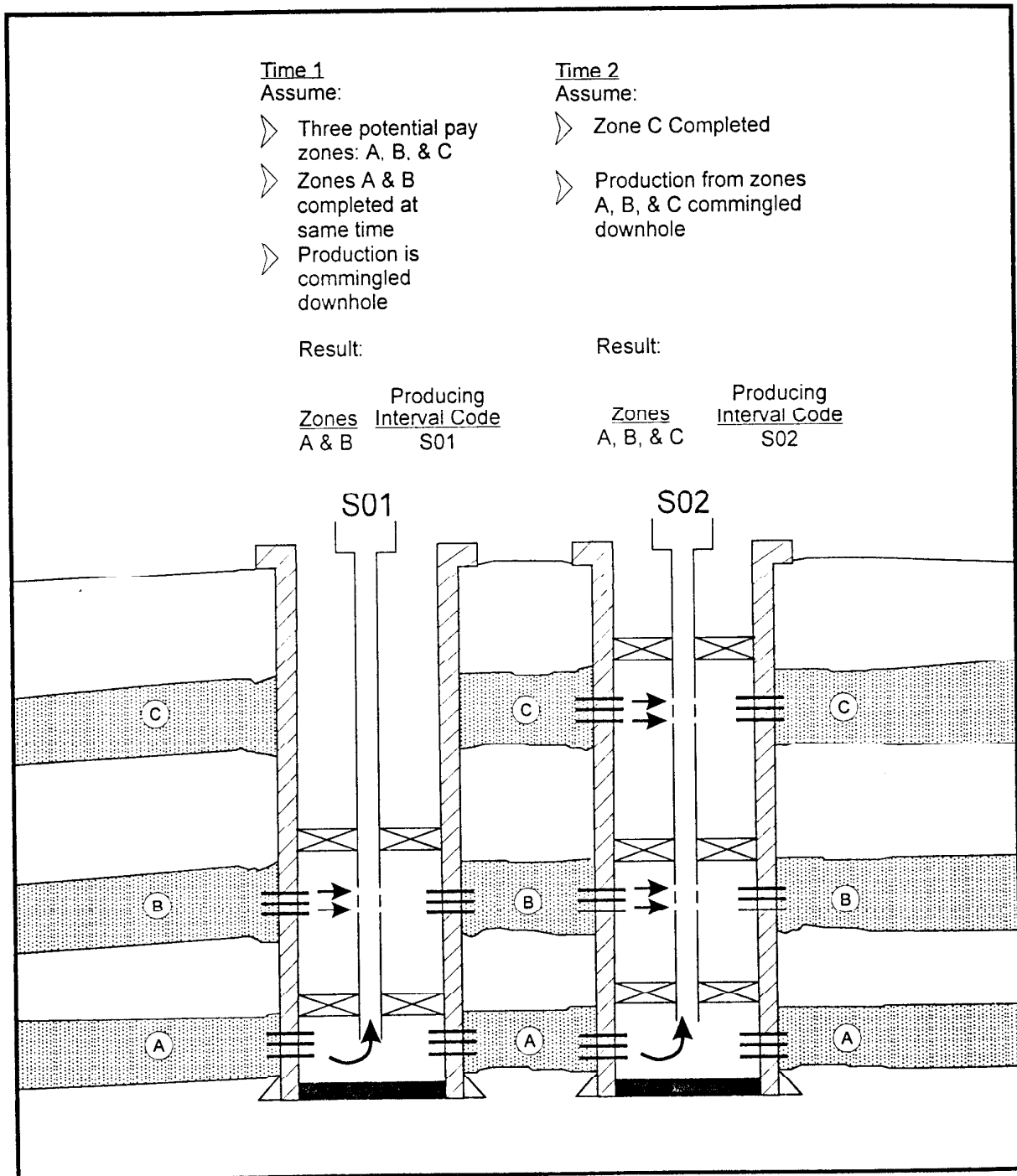
Capacity Well



*Note: The D01 completion must be reported as a completion abandoned (status code 15) on the OGOR-A in the same month that the D02 and D62 completions begin reporting.

Downhole Commingling

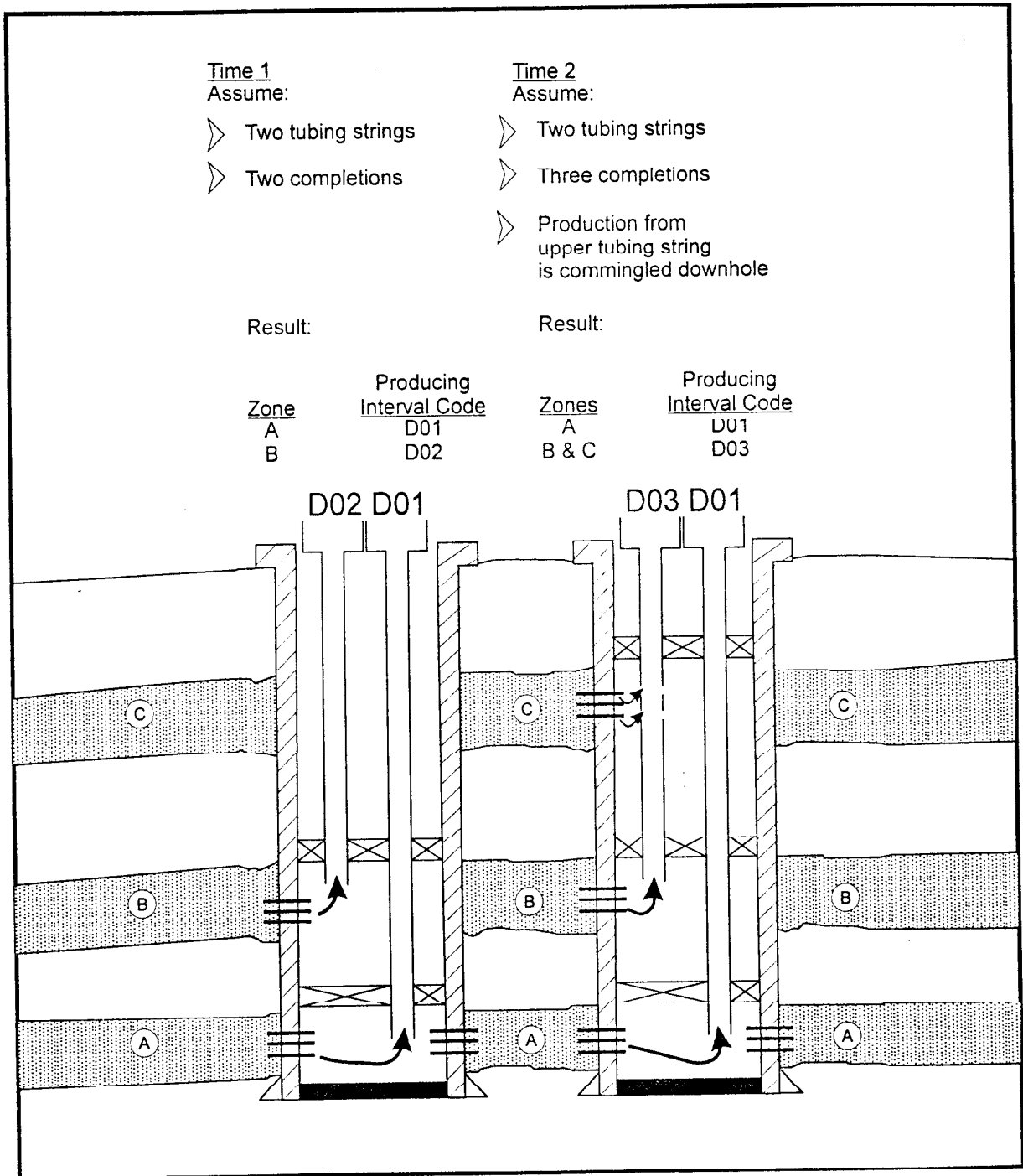
Single Tubing String



*Note: The S01 must be reported as a completion abandoned (status code = 15) on the OGOR - A in the same month that the S02 begins reporting.

Downhole Commingling

Dual Completion



*Note: The D02 must be reported as a completion abandoned (status code = 15) on the OGOR - A in the same month that the D03 begins reporting.

Horizontal Well

Assume:

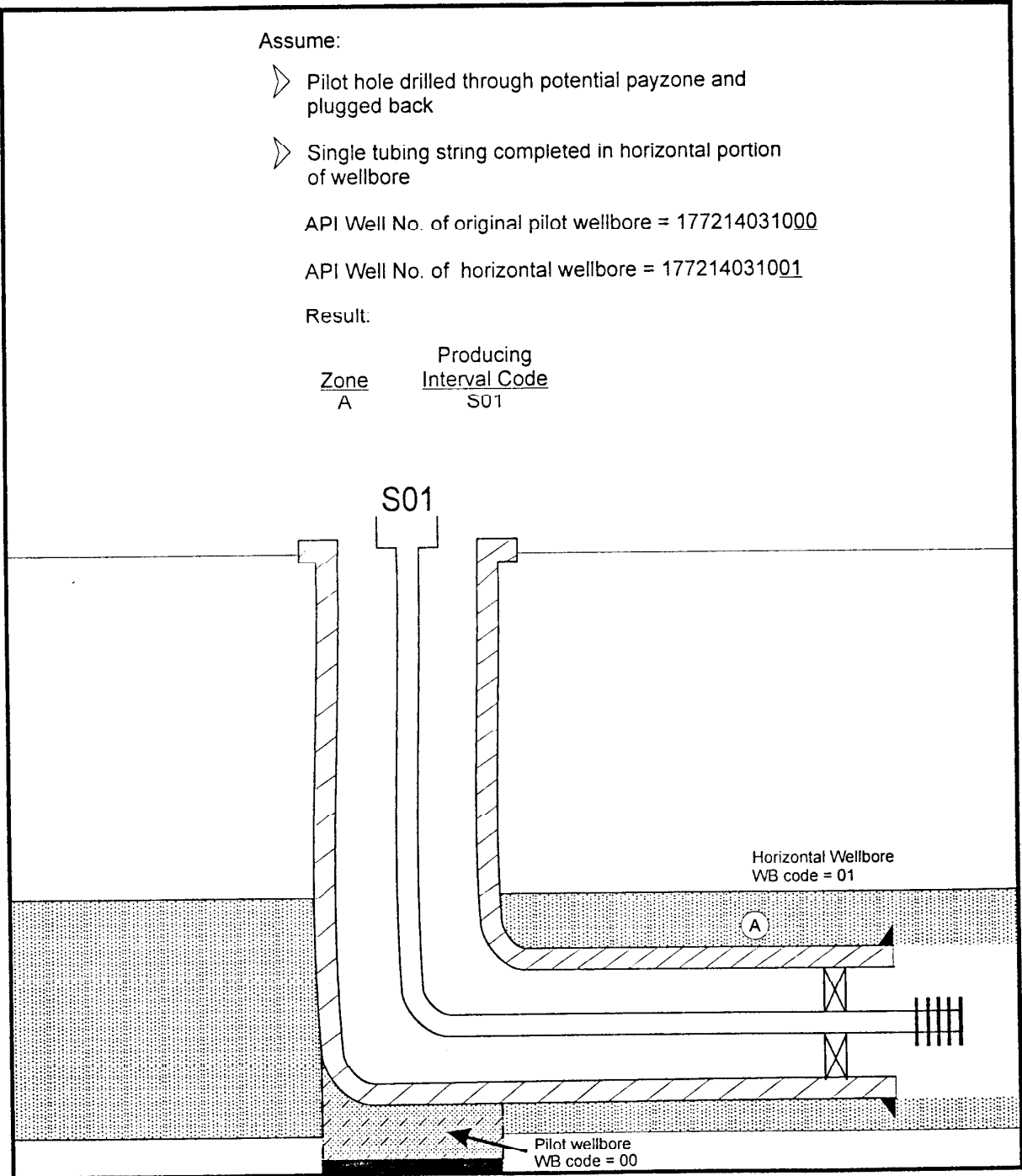
- Pilot hole drilled through potential payzone and plugged back
- Single tubing string completed in horizontal portion of wellbore

API Well No. of original pilot wellbore = 177214031000

API Well No. of horizontal wellbore = 177214031001

Result:

<u>Zone</u>	<u>Producing Interval Code</u>
A	S01



*Note: Pilot wellbore is reported as plugged and abandoned (status code = 16) on the OGOR-A.

Multilateral Well

Assume:

- Single tubing string completed in horizontal part of each lateral
- One completion in Zone A and one completion in Zone B

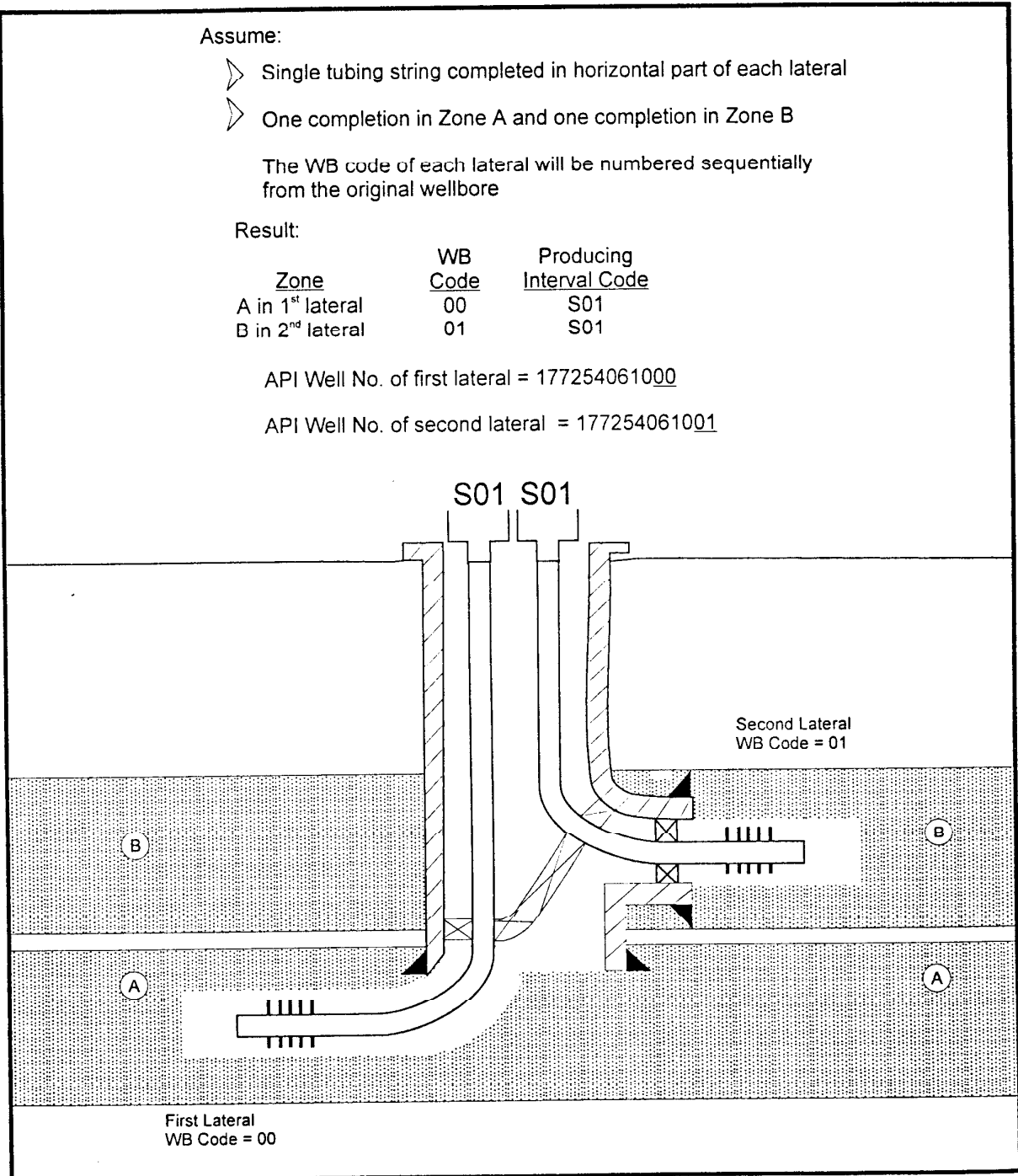
The WB code of each lateral will be numbered sequentially from the original wellbore

Result:

Zone	WB Code	Producing Interval Code
A in 1 st lateral	00	S01
B in 2 nd lateral	01	S01

API Well No. of first lateral = 177254061000

API Well No. of second lateral = 177254061001



*Note: Both laterals are open to production. The producing interval codes of S01 are unique to each wellbore segment.

Downhole Splitter Well

Assume:

- Single tubing string in each wellbore completed in horizontal position of well
- Since each wellbore has separate production casing & trees at surface, API Well No. of each wellbore will be numbered separately.
- WB code remains 00 for each wellbore.
- Each splitter well has a different well name (eg., A-1 and A-2).

Result:

API Well No. of first wellbore drilled = 177244021000
First wellbore, Zone A - S01

API Well No. of second wellbore drilled = 177244021100
(or next available API well number)
Second wellbore, Zone A - S01

