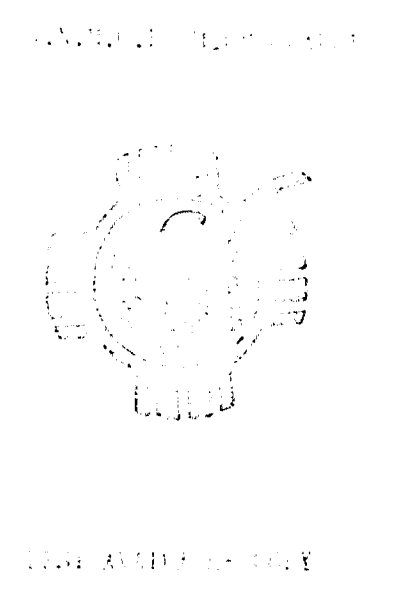
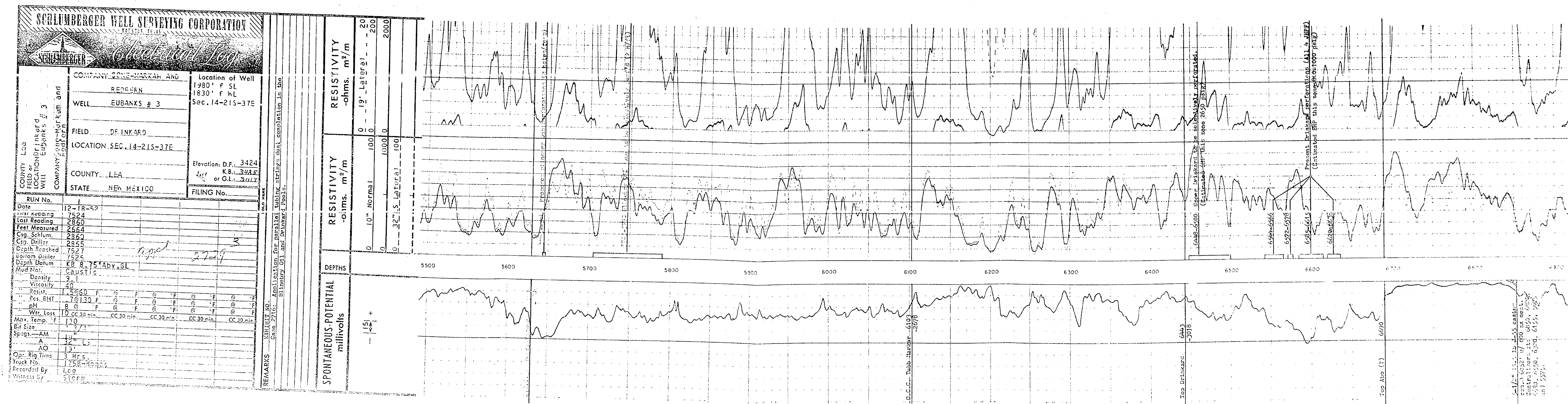


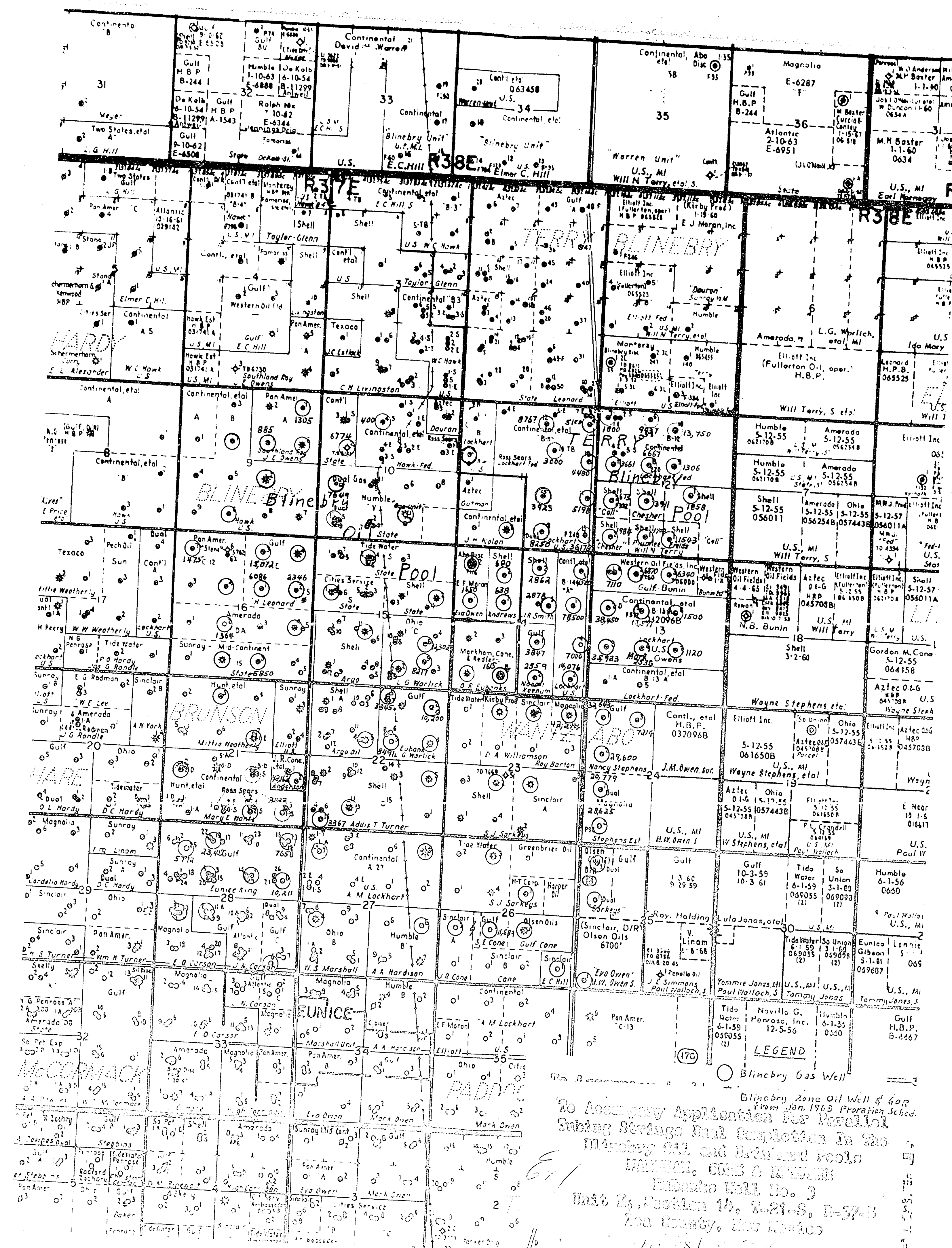
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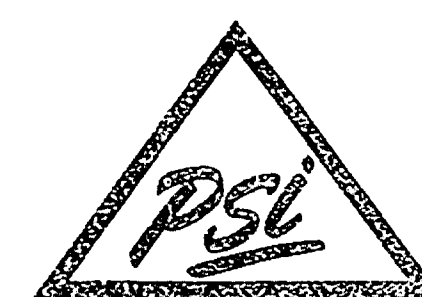
2716

Large Exhibits









CECIL HORNE WIRE LINE SERVICE
W. Broadview Place - Tel. 226-3000
HOURS: NEW MAXIMUM

Flow Control

P&G DIVISION BANNER CO. 1901-1902, 1903





COMPLETE SUB-SURFACE FLOW CONTROL SYSTEMS

The increasing complexity of multiple-zone completions has created a need for sub-surface equipment specifically engineered to act as an integrated system for zone isolation and flow control. PSI Flow Control Products and the Baker line of Production Packers form this complete sub-surface system for reliable single- and multiple-zone completions.

PSI FLOW CONTROL EQUIPMENT. Shown in this catalog is a complete line of PSI equipment for controlling flow from tubing to annulus and within the tubing. The index page at right will lead you to products for virtually every sub-surface control operation, as well as necessary equipment for related jobs.

BAKER PRODUCTION PACKERS. The critical job of zone isolation demands a variety of specialized packers. As the major manufacturer of both drillable and retrievable production packers, Baker leads the industry in continuous research and years of experience. There is a Baker packer or combination of packers for every well requirement—from the simplest single-zone to the most complex multiphase completion.

The true picture of what the Baker-PSI system means can be better understood if this PSI Catalog is used along with the "Completion and Production" section of a current Baker Catalog.

For additional information, consult your nearest Baker representative or your local PSI dealer, or write:

PSI DIVISION BAKER OIL TOOLS, INC.
P.O. BOX 22321, DALLAS 22, TEXAS

PSI

Type "1"

Non-ported

Sealing

Wells

Product No. 801-01

Type "2"

SL-2

Sealing

Wells

Product No. 810-02

Type "4"

Non-ported

Sealing

Wells

Product No. 831-01

Baker

Model "C"

Single-Stop

Production

Sealing

Wells

Product No. 711-01

Model "D"

Double-Stop

Production

Sealing

Wells

Product No. 733-01

Model "E"

Double-Stop

Production

Sealing

Wells

Product No. 755-01

Model "F"

Double-Stop

Production

Sealing

Wells

Product No. 777-01

Model "G"

Double-Stop

Production

Sealing

Wells

Product No. 799-01

Model "H"

Double-Stop

Production

Sealing

Wells

Product No. 821-01

Model "I"

Double-Stop

Production

Sealing

Wells

Product No. 843-01

Model "J"

Double-Stop

Production

Sealing

Wells

Product No. 865-01

Model "K"

Double-Stop

Production

Sealing

Wells

Product No. 887-01

Model "L"

Double-Stop

Production

Sealing

Wells

Product No. 909-01

Model "M"

Double-Stop

Production

Sealing

Wells

Product No. 931-01

Model "N"

Double-Stop

Production

Sealing

Wells

Product No. 953-01

Model "O"

Double-Stop

Production

Sealing

Wells

Product No. 975-01

Model "P"

Double-Stop

Production

Sealing

Wells

Product No. 997-01

Model "Q"

Double-Stop

Production

Sealing

Wells

Product No. 1019-01

Model "R"

Double-Stop

Production

Sealing

Wells

Product No. 1041-01

Model "S"

Double-Stop

Production

Sealing

Wells

Product No. 1063-01

Model "T"

Double-Stop

Production

Sealing

Wells

Product No. 1085-01

Model "U"

Double-Stop

Production

Sealing

Wells

Product No. 1107-01

Model "V"

Double-Stop

Production

Sealing

Wells

Product No. 1129-01

Model "W"

Double-Stop

Production

Sealing

Wells

Product No. 1151-01

Model "X"

Double-Stop

Production

Sealing

Wells

Product No. 1173-01

Model "Y"

Double-Stop

Production

Sealing

Wells

Product No. 1195-01

Model "Z"

Double-Stop

Production

Sealing

Wells

Product No. 1217-01

Model "AA"

Double-Stop

Production

Sealing

Wells

Product No. 1239-01

Model "AB"

Double-Stop

Production

Sealing

Wells

Product No. 1261-01

Model "AC"

Double-Stop

Production

Sealing

Wells

Product No. 1283-01

Model "AD"

Double-Stop

Production

Sealing

Wells

Product No. 1305-01

Model "AE"

Double-Stop

Production

Sealing

Wells

Product No. 1327-01

Model "AF"

Double-Stop

Production

Sealing

Wells

Product No. 1349-01

Model "AG"

Double-Stop

Production

Sealing

Wells

Product No. 1371-01

Model "AH"

Double-Stop

Production

Sealing

Wells

Product No. 1393-01

Model "AI"

Double-Stop

Production

Sealing

Wells

Product No. 1415-01

Model "AJ"

Double-Stop

Production

Sealing

Wells

Product No. 1437-01

Model "AK"

Double-Stop

Production

Sealing

Wells

Product No. 1459-01

Model "AL"

Double-Stop

Production

Sealing

Wells

Product No. 1481-01

Model "AM"

Double-Stop

Production

Sealing

Wells

Product No. 1503-01

Model "AN"

Double-Stop

Production

Sealing

Wells

Product No. 1525-01

Model "AO"

Double-Stop

Production

Sealing

Wells

Product No. 1547-01

Model "AP"

Double-Stop

Production

Sealing

Wells

Product No. 1569-01

Model "AQ"

Double-Stop

Production

Sealing

Wells

Product No. 1591-01

Model "AR"

Double-Stop

Production

Sealing

Wells

Product No. 1613-01

Model "AS"

Double-Stop

Production

Sealing

Wells

Product No. 1635-01

Model "AT"

Double-Stop

Production

Sealing

Wells

Product No. 1657-01

Model "AU"

Double-Stop

Production

Sealing

Wells

Product No. 1679-01

Model "AV"

Double-Stop

Production

Sealing

Wells

Product No. 1701-01

Model "AW"

Double-Stop

Production

Sealing

Wells

Product No. 1723-01

Model "AX"

Double-Stop

Production

Sealing

Wells

Product No. 1745-01

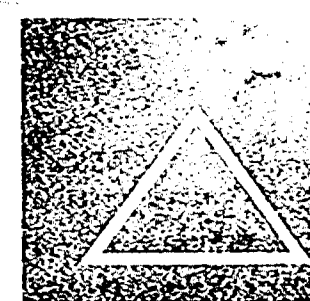
Model "AY"

Double-Stop

Production

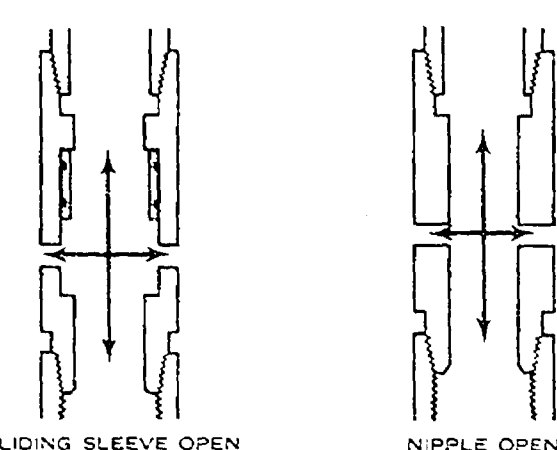
Sealing

Wells</



TUBING TO ANNULUS FLOW CONTROL EQUIPMENT

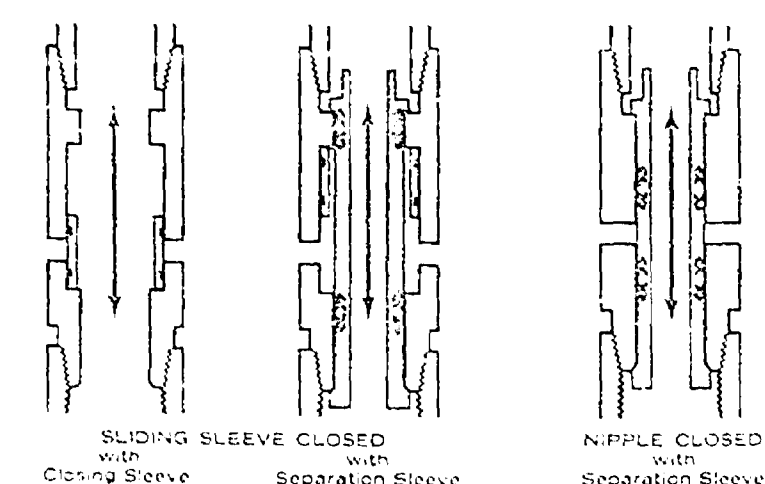
OPEN
TUBING
TO
ANNULUS



SLIDING SLEEVE OPEN

NIPPLE OPEN

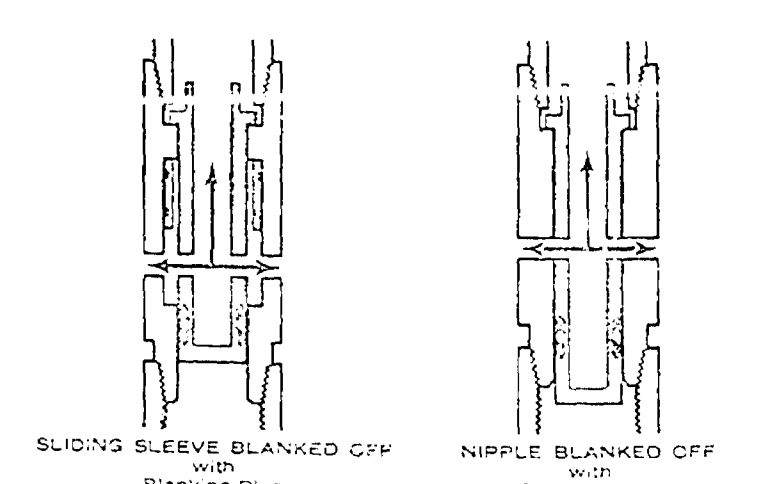
CLOSE
TUBING
TO
ANNULUS



SLIDING SLEEVE CLOSED

NIPPLE CLOSED

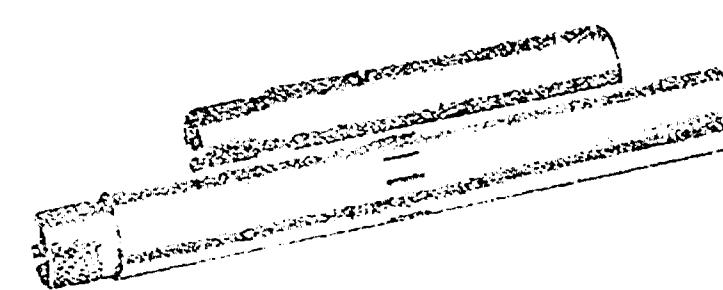
BLANK
TUBING
TO
ANNULUS



SLIDING SLEEVE BLANKED ON

NIPPLE BLANKED OFF

SLIDING SLEEVES | PORTED NIPPLES | SEPARATION SLEEVES | BLANKING PLUGS



SLIDING SLEEVES AND PORTED SEATING NIPPLES

Sliding sleeves and ported seating nipples are used to isolate the tubing string at predetermined points to provide control of the flow between the tubing and the casing annulus.

These products must be installed to perform as follows:

1. Sealing the annulus with wellbore fluid and casing fluid, followed by isolation of the tubing string.
2. Isolating the casing of a dual completion system.
3. Taking the pressure of each zone separately through the tubing.
4. Picking off the annulus through the tubing.
5. Raising the well by circulating without disturbing the position of the well connections.
6. Varying the flow pattern of a dual completion.



SEPARATION SLEEVES

The Separation Sleeve has a sliding sleeve that can be closed to isolate the tubing string from the casing annulus. The sleeve can be closed by using the sliding sleeve or by using the separation sleeve.

The Separation Sleeve can be closed by using the sliding sleeve or by using the separation sleeve.

When maximum flow is needed, sliding sleeves are closed. On the other hand, if maximum annular and casing of the ports is required, the sliding sleeves are closed and the separation sleeves are closed.



BLANKING PLUGS

The tubing string is sealed by the use of a Blanking Plug. The plug is designed to seal the tubing string at predetermined points to provide control of the flow between the tubing and the casing annulus.

The tubing string is sealed by the use of a Blanking Plug. The plug is designed to seal the tubing string at predetermined points to provide control of the flow between the tubing and the casing annulus.

For additional information on Blanking Plugs, see Page 9.



TUBING TO ANNULUS FLOW CONTROL EQUIPMENT

COMMON FEATURES

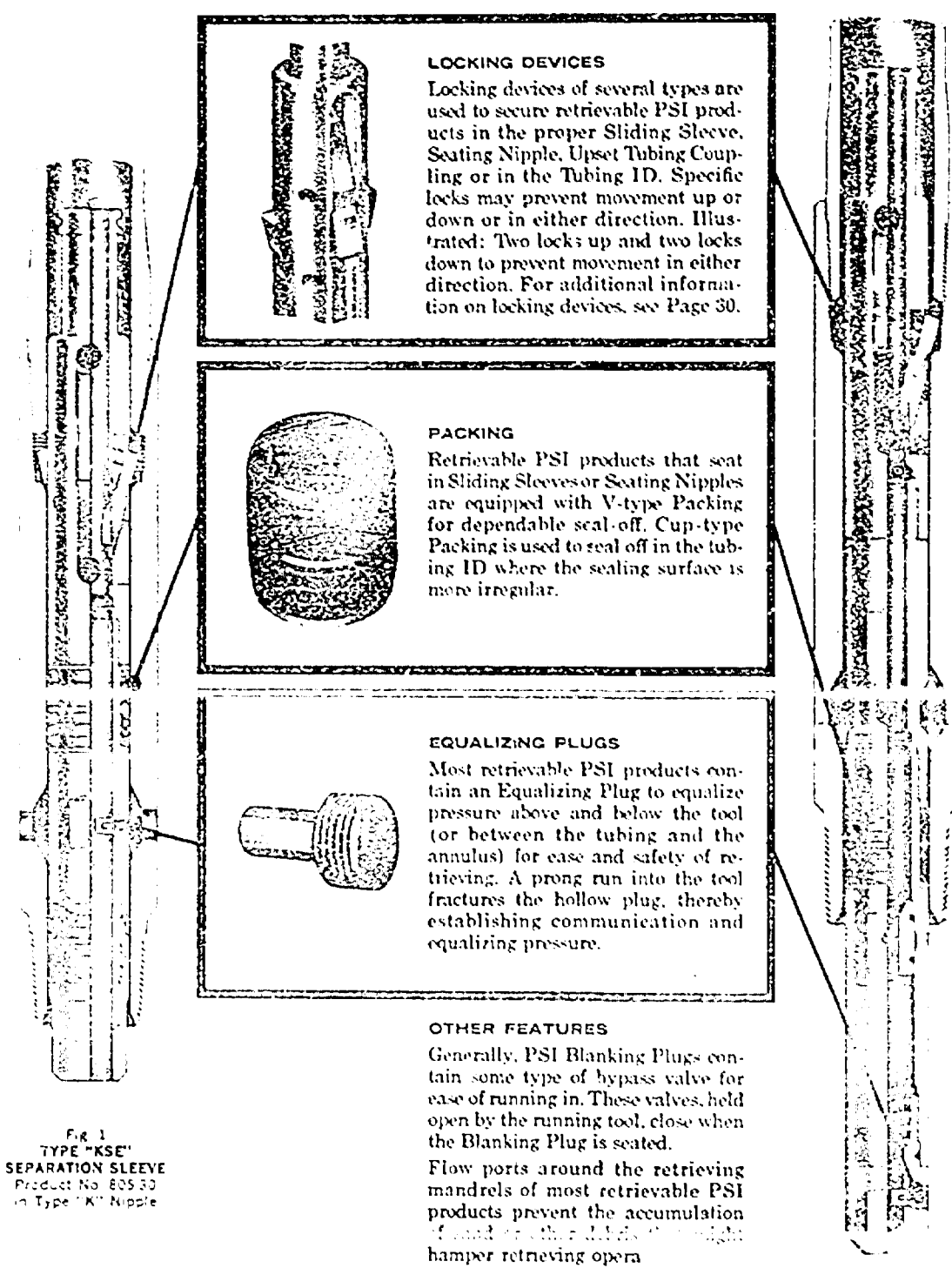
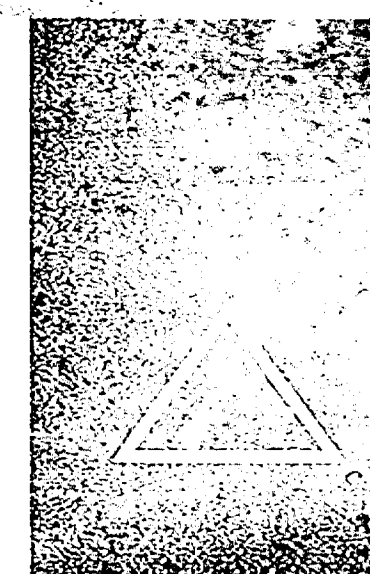


FIG. 1
SEPARATION SLEEVE
1 1/2" x 1 1/2" x 1 1/2"

FIG. 2
EVALUATING PLUG
1 1/2" x 1 1/2" x 1 1/2"



SLIDING SLEEVES

FLOW CONTROL EQUIPMENT

SIMPLE POSITIVE CONTROL
With a FSI Sliding Sleeve, establishing or closing of tubing-to-annulus communication is simple, dependable and quick. This is the only type of product that makes it possible to close the ports without leaving any obstruction in the tubing ID once the shifting operation is completed.

PROTECTED CLOSING SLEEVE
The area in which the Closing Sleeve moves is recessed so that there is no danger of opening or closing the ports by mistake while running another tool through a FSI Sliding Sleeve.

ALTERNATE SAFETY CLOSURE
In addition to the built-in Closing Sleeve (which contains special heavy-duty seals) an alternate method of closing the ports is available with FSI Sliding Sleeves. A Separation Sleeve can be sealed in the Sliding Sleeve if required.

SLEEVE ITSELF ACCEPTS ACCESSORIES
Most FSI Sliding Sleeves are designed to act as independent units or to accept accessories without the need of additional casing nipples. Smooth sealing bore are provided in both the upper and lower ends of FSI Sliding Sleeves to enable them to accept Separation Sleeves (Page 6 and 7), Working Plugs (Page 6) or Equalizing Check Valves (Page 22).

RUN IN TANDEM
As many as three FSI Sliding Sleeves may be run in tandem without affecting their ability to accept accessories. Naturally, any number of Sliding Sleeves may be run in tandem if no need for accessory products is anticipated in the upper ones.

FULL OPENING IS AVAILABLE
In each tubing size for which FSI Sliding Sleeves are made, one size Sleeve is available with a full-opening ID for maximum flow or treatment passage. FSI Sliding Sleeves are available in single- and multiple-completion as well as in single- and multiple-completion. See Page 1.



TUBING TO ANNULUS FLOW CONTROL EQUIPMENT



SLIDING SLEEVES

PSI TYPE "S" SLIDING SLEEVE

- Available in five tubing sizes: 1.660, 1.900, 2.125, 2.375 and 2.750, with four ID variations in each of these sizes except the 1.660 (Face 5).
- When more than one Sliding Sleeve is to be run in a tubing string, each sleeve must have a hole larger than any pin below it. If wire line products are to be set in the lower size.
- The setting here can be determined from the size designation. (Example: the setting 12 of Size 2 1/4 x 1 1/2 is 1 1/2 inches.)
- With the following exceptions, Sliding Sleeves have shoulders in the upper ends for setting PSI locking devices: Sizes 1.660 x 1.25, 1.900 x 1.54, 2 1/4 x 1.62, 2 1/4 x 1.91, and 2 3/4 x 2.37 (these sizes are full opening and will not accept accessories). If the Chasing Sleeve of any of these full opening sizes should lock or become stuck in the open position, the entire tool can be stampered and closed off with a PSI Type "D" Pack Off Anchor Assembly (see Page 27).
- All Sliding Sleeves are box up x pin down.
- The Chasing Sleeve is shifted either open or closed with a standard shifting tool.

- At 1000-foot intervals and close off all PSI Sliding Sleeves except Sizes 1.660 x 1.25, 1.900 x 1.54, 2 1/4 x 1.62, and 2 3/4 x 2.37 (full opening sizes).
- Set in the Sliding Sleeve with the N₂G₂ rating on the shoulder at the top of the Sleeve and the Locking Plug latched at the bottom.
- Two sets of V-type Packing (see to seal off above ports and one below, both pressure from either direction).
- Run and retrieved on wire line.
- Equalizing Plug for equalizing pressure in the tubing and the casing annulus (in ports in the Sleeve).
- Run with a "D" Pulling Tool and retrieved with a standard overboard.

- Available to seal in and blank off all PSI Sliding Sleeves except Sizes 1.660 x 1.25, 1.900 x 1.54, 2 1/4 x 1.62, 2 1/4 x 1.91, and 2 3/4 x 2.37 (full opening sizes).
- "Type V" Locking Device (Set in the Sliding Sleeve with the N₂G₂ rating on the shoulder at the upper end of the Sleeve and the Locks latched under the pin and of the tubing joint above the Sleeve).
- A series of V-type Packing (see to seal off above ports, seal off below the ports).
- Run and retrieved on wire line.
- Equalizing Plug for equalizing pressure in the tubing above and below the tool.
- Plugger to prevent acid accumulation that might make it impossible to fracture the Equalizing Plug.
- Run with V-type running tools and pulled with a "V" Pulling Tube on a standard overboard.

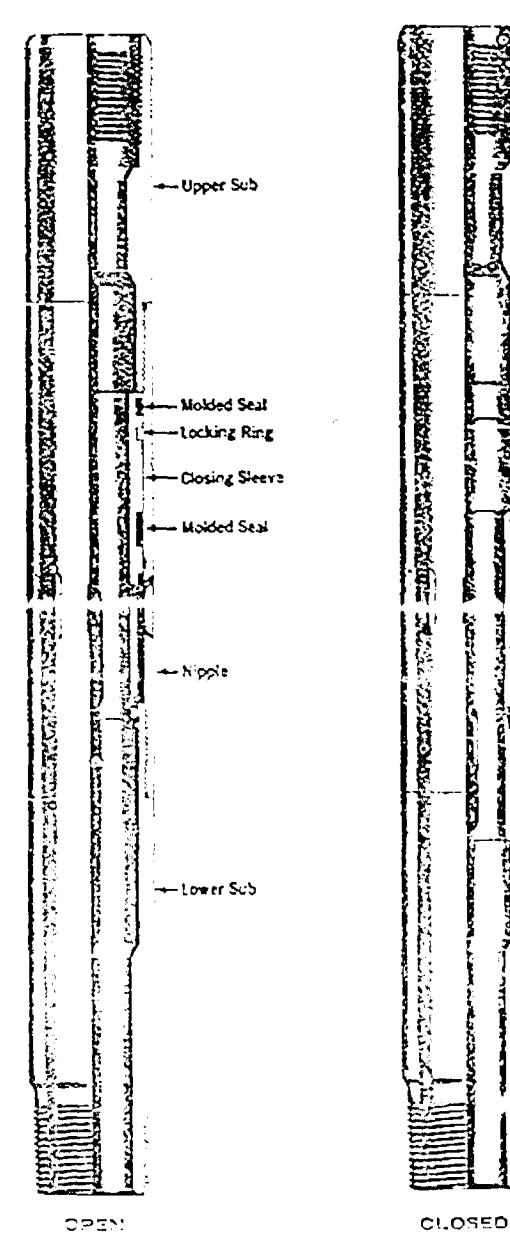


Fig. 1. PSI TYPE "S" SLIDING SLEEVE Product No. 810-02

TUBING TO ANNULUS FLOW CONTROL EQUIPMENT



SEPARATION SLEEVES-BLANKING PLUGS For Sliding Sleeves

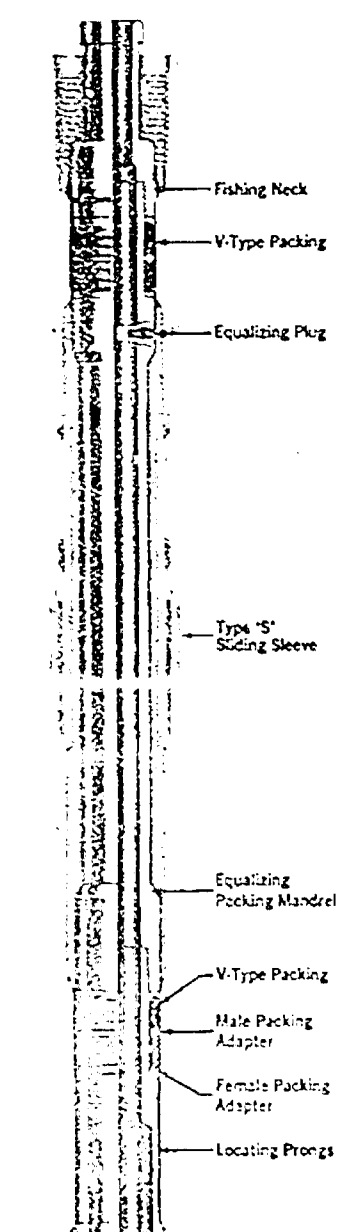


Fig. 2. PSI TYPE "S" SEPARATION SLEEVE Product No. 810-02

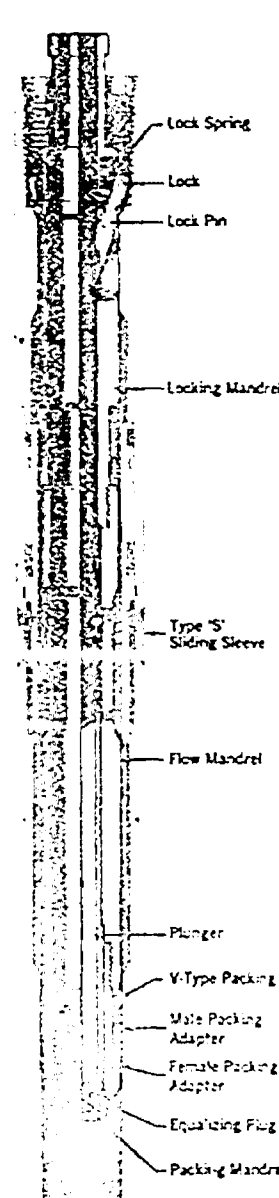
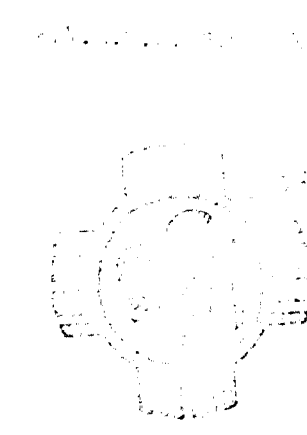


Fig. 3. PSI TYPE "S" BLANKING PLUG Product No. 810-02





*Size 0.900 x 1.43 is the same product as Size 2.0 x 0.5 x 1.43.
 *Size 0.700 x 1.50 is the same product as Size 2.0 x 0.5 x 0.50.

*In this size only, a Type "V" Locking Device is used instead of the "U" common to sizes 3/400 x 1.37 - 2.7 x 1.33.



FLOW CONTROL EQUIPMENT

PSI Ported Seating Nipples are available in a variety of designs to perform specific jobs. Some are virtually full-opening with no obstructions in the ID; some have shoulders in the upper end for seating PSI locking devices, and some have this shoulder in the lower end. The type "H" is a special series of parallel seating nipples. Specific nipples are discussed on Pages 10 through 14.

Although PSI Ported Sealing Nipples are simple in design, they are precision machined. The smooth ID sealing surface provides maximum reliability of seal-off between the nipple and any of the variety of retrievable products that can be seated in it. It is this smooth ID that makes it possible to design the necessary products with dependable V-type Packing.

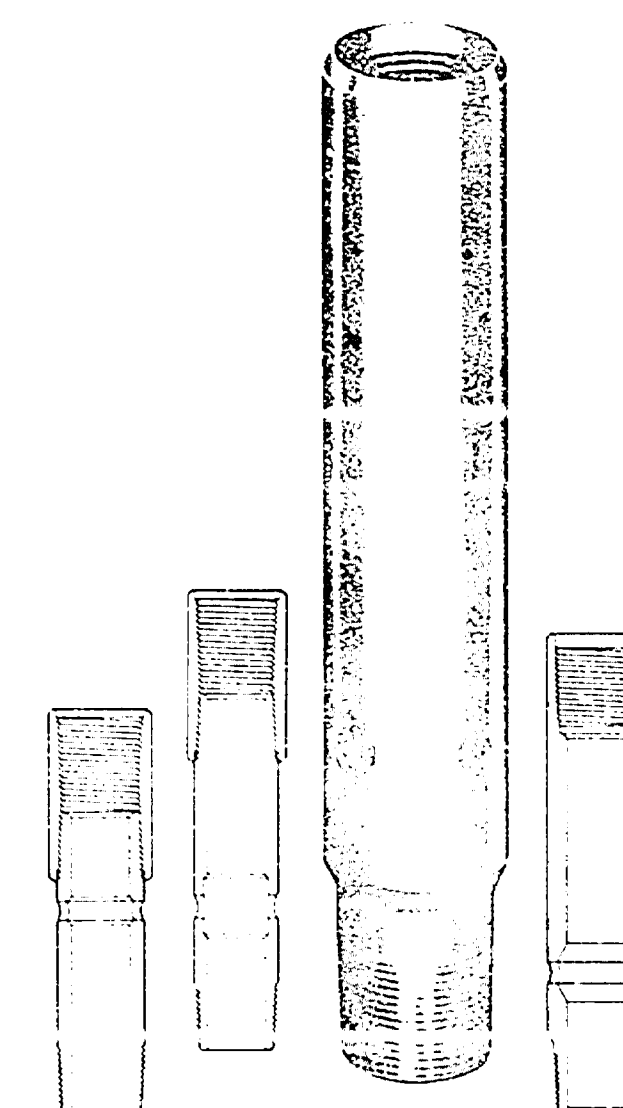
Since the products used with PSI Ported Scenting Nipples are generally retrievable, they can be readdressed when necessary. This not only means a longer useful life for the nipple-necessory combination, but also makes it possible to change the type of accessory product seated in a nipple at any time. Typical products available for use with PSI Ported Scenting Nipples are Separation Closures, Blocking Blocks, Tasting Valves and Gasolators.

The number of PSI Ported Seating Nipples that can be run on a tubing string is virtually unlimited. The ID of each nipple must be noted carefully, however, since the accessories that seat in a large ID will not pass through the smaller nipples. To determine which accessory products will seat in any given nipple, see Page 32.

LARGE ID AVAILABLE

obstructed ID for maximum flow or instrument passage. However, even with this large ID, these nipples will accept accessory products (Page 12). Comparably large ID Non-Ported Seating Nipples are described on Page 18.

For a partial list of the operations in which PSI Ported Sealing Nipples may be used, see Page 3.



TUBING TO ANNULUS FLOW CONTROL EQUIPMENT **TYPE A PORTED SEATING NIPPLES**

PSI TYPE "A" PORTED SEATING NIPPLE Product No. 800-01

- Available in sizes 1.800 x 1.43, 2 1/2 x 1.75, 2 1/2 x 1.81, 2 1/2 x 1.75 and 2 1/2 x 1.81.
- Notch seating shoulder in the upper end.
- Accepts PSI Type "V" and "V" Locking Device.
- Double pin nipples supplied with coupling.
- Flow ports near the upper end of the nipple.

PSI TYPE "AVE" SEPARATION SLEEVE Product No. 805-01

- Available to seal in and close off the ports of sizes 1.800 x 1.43, 2 1/2 x 1.75, 2 1/2 x 1.81, 2 1/2 x 1.75 and 2 1/2 x 1.81.
- Type "V" Locking Device (Notch prevents down and movement and Fringe that latch under the lower end of the Nipple prevent upward movement).
- Two sets of V-type Packing cone to seal off down ports and one below hold pressure from either direction.
- Equalizing Plug (Value in 1.800 size) for equalizing pressure in the tubing and the casing annulus via the ports in the Nipple.
- Run on wire line with a Type "DV" Running Tool and retrieved with a standard overhaul.

PSI TYPE "AVE" SEPARATION SLEEVE Product No. 805-02

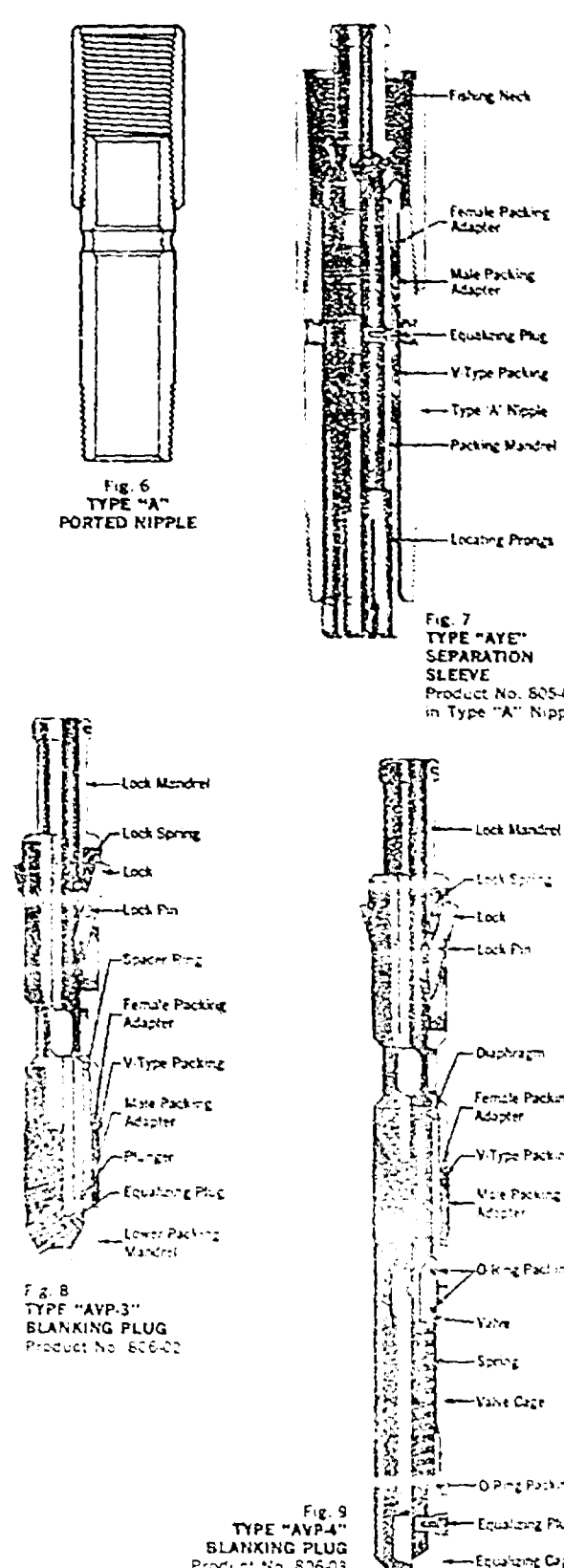
- Same as "AVE" except that it has no equalizing feature.

PSI TYPE "APV" BLANKING PLUG Product No. 806-01

- Available to seal in and close off the tubing below. Type "A" Ported Seating Nipples in sizes 2 1/2 x 1.75, 2 1/2 x 1.81, 2 1/2 x 1.75 and 2 1/2 x 1.81. Will also seal in Type "B" and "B-4" Non-Ported Seating Nipples in sizes 2 1/2 x 1.75, 2 1/2 x 1.81, and 2 1/2 x 1.75 as well as Type "E" Non-Ported Seating Nipples in sizes 2 1/2 x 1.81.
- Type "V" Locking Device (two locks up, Notch down).
- One set of V-type Packing holds pressure from either direction.
- Equalizing Plug for equalizing pressure.
- Bypass Valve (spring actuated) that is held open by the running tool and seals off once the Plug is seated. This valve can also be opened to equalize pressure above and below the tool.
- Rubber Diaphragm to prevent sand from settling around the Equalizing Plug. The Diaphragm opens to pass a running tool or an equalizing plug.
- Run on wire line with a Type "V" or "V" Running Tool and retrieved with a Type "V" Pulling Tube attached to a standard overhaul.

PSI TYPE "APV" BLANKING PLUG Product No. 806-02

- Available for the same nipples and in the same sizes as the Type "APV" above plus size 1.800 x 1.43.
- Similar to Type "APV" except that it has a Plug-in to protect the Equalizing Plug and has no Bypass Valve.
- Run on wire line with a Type "V" or "V" Running Tool and retrieved with a Type "V" Pulling Tube attached to a standard overhaul.



TUBING TO ANNULUS FLOW CONTROL EQUIPMENT **TYPE C PORTED SEATING NIPPLES**

PSI TYPE "C" PORTED SEATING NIPPLE Product No. 800-10

- Available in sizes 1.800 x 1.43, 2 1/2 x 1.75, 2 1/2 x 1.81, 2 1/2 x 1.75 and 2 1/2 x 1.81.
- Notch seating shoulder in the upper end.
- Slightly less than full opening ID (Nipple because of the notch seating shoulder).
- Accepts PSI Type "V" Locking Device.
- Double pin nipples supplied with coupling.
- Flow ports near the center of the nipple.

PSI TYPE "C" PORTED SEATING NIPPLE Product No. 800-11

- Available in sizes 2 1/2 x 1.75 (Minimum ID is 1.621 and 2 1/2 x 2.25 (Minimum ID is 1.60).
- Similar to Type "C" except that it has an additional notch shoulder in the lower end so that it will accept accessories that have been designed to pass through regular Type "C" Nipples.

PSI TYPE "C" SEPARATION SLEEVE Product No. 805-10

- Available to seal in and close off the ports of sizes 1.800 x 1.43, 2 1/2 x 1.75, 2 1/2 x 1.81, 2 1/2 x 1.75 and 2 1/2 x 2.25.
- Type "V" Locking Device (two locks up and Notch down) is set on the shoulder of the Nipple and lock against the pin end of the tubing joint above.
- Two sets of V-type Packing cone in and off above ports and one below hold pressure from either direction.
- Equalizing Plug for equalizing pressure in the tubing and the casing annulus via the ports in the Nipple.
- Run on wire line with a Type "V" or "V" Running Tool and retrieved with a Type "V" Pulling Tube attached to a standard overhaul.

PSI TYPE "C" SEPARATION SLEEVE Product No. 805-11

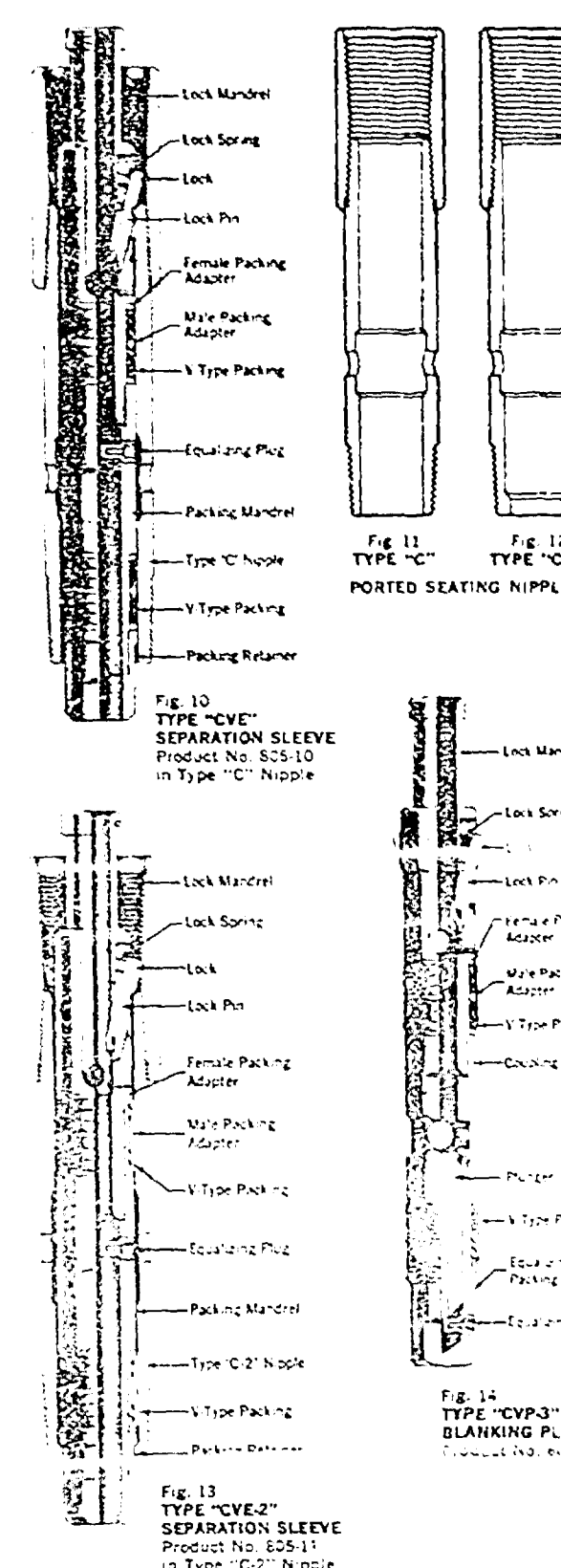
- Available to seal in and off in size 2 1/2 x 1.75 and 2 1/2 x 2.25 Type "C" Ported Seating Nipples.
- Other characteristics similar to Type "C".

PSI TYPE "CVP" BLANKING PLUG Product No. 806-20

- Available to seal in and close off the tubing below size 1.800 x 1.43, 2 1/2 x 1.75, 2 1/2 x 1.81 or 2 1/2 x 2.25 Type "C" Ported Seating Nipples.
- Type "V" Locking Device (two locks up, Notch down).
- Two sets of V-type Packing hold pressure from either direction.
- Equalizing Plug for equalizing pressure in the tubing above and below the tool.
- Flange to prevent accumulation of sand that might make it impossible to fracture the Equalizing Plug.
- Run on wire line with a Type "V" or "V" Running Tool and retrieved with a Type "V" Pulling Tube attached to a standard overhaul.

PSI TYPE "CVP" BLANKING PLUG Product No. 806-19

- Same as "CVP" except it seals in "C" Nipples.





TUBING TO ANNULUS FLOW CONTROL EQUIPMENT

TYPE K PORTED SEATING NIPPLES
(FULL-OPENING, SELECTIVE)

PSI TYPE "K" PORTED SEATING NIPPLE Product No. 800-30

- Available for 2" tubing with two ID variations: 2" x 1.81 and 2" x 1.87. Other sizes on request.
- For use where maximum ID and more than one nipple are necessary.
- Nearly full-opening size 2" x 1.87 is 1/8" less than tubing drift diameter and size 2" x 1.81 is only 1/16" less.
- An. number can be run in a tubing string without affecting the running and seating of necessary products in each. (provided no size 2" x 1.81 is run above a size 2" x 1.87 in which accessories are to be seated.)
- Has one V-Packing.
- Large flow ports near lower end.
- Accepts PSI Type "W" Locking Devices. (Have no shoulder for seating Nettle type lugs.)
- Can be run below Type "E" Non-Ported Seating Nipples, which have removable ID's.

PSI TYPE "KSE" SEPARATION SLEEVE Product No. 800-30

- Available in two sizes: its cut in and close off the ports of 2" x 1.81 or 2" x 1.87 Type "K" Ported Seating Nipples.
- Type "K" Locking Device to prevent movement in either direction.
- This sets of V-type Packing seal pressure from either direction - one to seal off above the ports and the other below.
- Equalizing Plug for equalizing pressure in the tubing and the casing annulus - via the ports in the Ported Seating Nipples.
- Run on wire line with a Type "W" Running Tool and retrieved with a Type "W" Pulling Probe attached to a standard overhook.

PSI TYPE "KSP" BLANKING PLUG Product No. 800-30

- Available in two sizes: its cut in and close off the tubing below 2" x 1.81 or 2" x 1.87 Type "K" Ported Seating Nipples.
- Type "K" Locking Device to prevent movement in either direction.
- One set of V-type Packing seals off below the ports and holds pressure from either direction.
- Equalizing Plug for equalizing pressure in the tubing above and below the tool.
- Bladder diaphragm to prevent and accumulation around the Equalizing Plug. The diaphragm will open to pass a running tool or an equalizing probe.
- By-pass Valve - held open by the running tool - for ease of running in.
- Run on wire line with a Type "W" Running Tool and retrieved with a Type "W" Pulling Probe attached to a standard overhook.

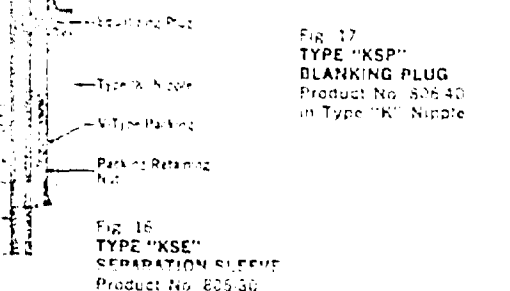
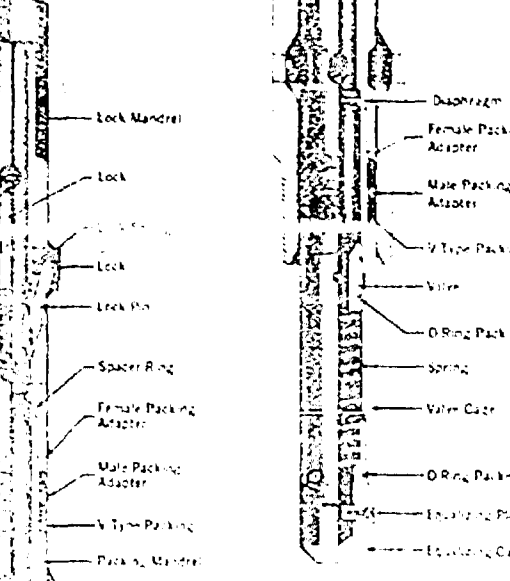
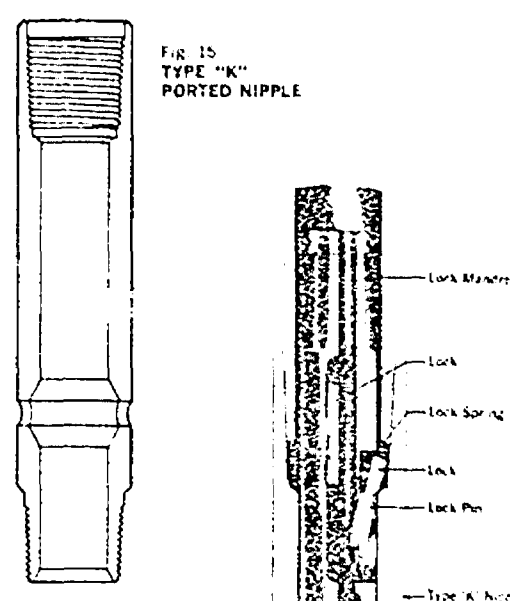


Fig. 20
Type K
Ported Seating Nipple

Fig. 21
Type KSE
Separation Sleeve

Fig. 22
Type KSP
Blanking Plug

Fig. 23
Type K
Ported Seating Nipple

Fig. 24
Type KSE
Separation Sleeve

Fig. 25
Type KSP
Blanking Plug

Fig. 26
Type K
Ported Seating Nipple

Fig. 27
Type KSE
Separation Sleeve

Fig. 28
Type KSP
Blanking Plug

Fig. 29
Type K
Ported Seating Nipple

Fig. 30
Type KSE
Separation Sleeve

Fig. 31
Type KSP
Blanking Plug

Fig. 32
Type K
Ported Seating Nipple

Fig. 33
Type KSE
Separation Sleeve

Fig. 34
Type KSP
Blanking Plug

Fig. 35
Type K
Ported Seating Nipple

Fig. 36
Type KSE
Separation Sleeve

Fig. 37
Type KSP
Blanking Plug

Fig. 38
Type K
Ported Seating Nipple

Fig. 39
Type KSE
Separation Sleeve

Fig. 40
Type KSP
Blanking Plug

Fig. 41
Type K
Ported Seating Nipple

Fig. 42
Type KSE
Separation Sleeve

Fig. 43
Type KSP
Blanking Plug

Fig. 44
Type K
Ported Seating Nipple

Fig. 45
Type KSE
Separation Sleeve

Fig. 46
Type KSP
Blanking Plug

Fig. 47
Type K
Ported Seating Nipple

Fig. 48
Type KSE
Separation Sleeve

Fig. 49
Type KSP
Blanking Plug

Fig. 50
Type K
Ported Seating Nipple

Fig. 51
Type KSE
Separation Sleeve

Fig. 52
Type KSP
Blanking Plug

Fig. 53
Type K
Ported Seating Nipple

Fig. 54
Type KSE
Separation Sleeve

Fig. 55
Type KSP
Blanking Plug

Fig. 56
Type K
Ported Seating Nipple

Fig. 57
Type KSE
Separation Sleeve

Fig. 58
Type KSP
Blanking Plug

Fig. 59
Type K
Ported Seating Nipple

Fig. 60
Type KSE
Separation Sleeve

Fig. 61
Type KSP
Blanking Plug

Fig. 62
Type K
Ported Seating Nipple

Fig. 63
Type KSE
Separation Sleeve

Fig. 64
Type KSP
Blanking Plug

Fig. 65
Type K
Ported Seating Nipple

Fig. 66
Type KSE
Separation Sleeve

Fig. 67
Type KSP
Blanking Plug

Fig. 68
Type K
Ported Seating Nipple

Fig. 69
Type KSE
Separation Sleeve

Fig. 70
Type KSP
Blanking Plug

Fig. 71
Type K
Ported Seating Nipple

Fig. 72
Type KSE
Separation Sleeve

Fig. 73
Type KSP
Blanking Plug

Fig. 74
Type K
Ported Seating Nipple

Fig. 75
Type KSE
Separation Sleeve

Fig. 76
Type KSP
Blanking Plug

Fig. 77
Type K
Ported Seating Nipple

Fig. 78
Type KSE
Separation Sleeve

Fig. 79
Type KSP
Blanking Plug

Fig. 80
Type K
Ported Seating Nipple

Fig. 81
Type KSE
Separation Sleeve

Fig. 82
Type KSP
Blanking Plug

Fig. 83
Type K
Ported Seating Nipple

Fig. 84
Type KSE
Separation Sleeve

Fig. 85
Type KSP
Blanking Plug

Fig. 86
Type K
Ported Seating Nipple

Fig. 87
Type KSE
Separation Sleeve

Fig. 88
Type KSP
Blanking Plug

Fig. 89
Type K
Ported Seating Nipple

Fig. 90
Type KSE
Separation Sleeve

Fig. 91
Type KSP
Blanking Plug

Fig. 92
Type K
Ported Seating Nipple

Fig. 93
Type KSE
Separation Sleeve

Fig. 94
Type KSP
Blanking Plug

Fig. 95
Type K
Ported Seating Nipple

Fig. 96
Type KSE
Separation Sleeve

Fig. 97
Type KSP
Blanking Plug

Fig. 98
Type K
Ported Seating Nipple

Fig. 99
Type KSE
Separation Sleeve

Fig. 100
Type KSP
Blanking Plug

Fig. 101
Type K
Ported Seating Nipple

Fig. 102
Type KSE
Separation Sleeve

Fig. 103
Type KSP
Blanking Plug

Fig. 104
Type K
Ported Seating Nipple

Fig. 105
Type KSE
Separation Sleeve

Fig. 106
Type KSP
Blanking Plug

Fig. 107
Type K
Ported Seating Nipple

Fig. 108
Type KSE
Separation Sleeve

Fig. 109
Type KSP
Blanking Plug

Fig. 110
Type K
Ported Seating Nipple

Fig. 111
Type KSE
Separation Sleeve

Fig. 112
Type KSP
Blanking Plug

Fig. 113
Type K
Ported Seating Nipple

Fig. 114
Type KSE
Separation Sleeve

Fig. 115
Type KSP
Blanking Plug

Fig. 116
Type K
Ported Seating Nipple

Fig. 117
Type KSE
Separation Sleeve

Fig. 118
Type KSP
Blanking Plug

Fig. 119
Type K
Ported Seating Nipple

Fig. 120
Type KSE
Separation Sleeve

Fig. 121
Type KSP
Blanking Plug

Fig. 122
Type K
Ported Seating Nipple

Fig. 123
Type KSE
Separation Sleeve

Fig. 124
Type KSP
Blanking Plug

Fig. 125
Type K
Ported Seating Nipple

Fig. 126
Type KSE
Separation Sleeve

Fig. 127
Type KSP
Blanking Plug

Fig. 128
Type K
Ported Seating Nipple

Fig. 129
Type KSE
Separation Sleeve

Fig. 130
Type KSP
Blanking Plug

Fig. 131
Type K
Ported Seating Nipple

Fig. 132
Type KSE
Separation Sleeve

Fig. 133
Type KSP
Blanking Plug

Fig. 134
Type K
Ported Seating Nipple

Fig. 135
Type KSE
Separation Sleeve

Fig. 136
Type KSP
Blanking Plug

Fig. 137
Type K
Ported Seating Nipple

Fig. 138
Type KSE
Separation Sleeve

Fig. 139
Type KSP
Blanking Plug

Fig. 140
Type K
Ported Seating Nipple

Fig. 141
Type KSE
Separation Sleeve

Fig. 142
Type KSP
Blanking Plug

Fig. 143
Type K
Ported Seating Nipple

Fig. 144
Type KSE
Separation Sleeve

Fig. 145
Type KSP
Blanking Plug

Fig. 146
Type K
Ported Seating Nipple

Fig. 147
Type KSE
Separation Sleeve

Fig. 148
Type KSP
Blanking Plug

Fig. 149
Type K
Ported Seating Nipple

Fig. 150
Type KSE
Separation Sleeve

Fig. 151
Type KSP
Blanking Plug

Fig. 152
Type K
Ported Seating Nipple

Fig. 153
Type KSE
Separation Sleeve

Fig. 154
Type KSP
Blanking Plug

Fig. 155
Type K
Ported Seating Nipple

Fig. 156
Type KSE
Separation Sleeve

Fig. 157
Type KSP
Blanking Plug

Fig. 158
Type K
Ported Seating Nipple

Fig. 159
Type KSE
Separation Sleeve

Fig. 160
Type KSP
Blanking Plug

Fig. 161
Type K
Ported Seating Nipple

Fig. 162
Type KSE
Separation Sleeve

Fig. 163
Type KSP
Blanking Plug

Fig. 164
Type K
Ported Seating Nipple

Fig. 165
Type KSE
Separation Sleeve

Fig. 166
Type KSP
Blanking Plug

Fig. 167
Type K
Ported Seating Nipple

Fig. 168
Type KSE
Separation Sleeve

Fig. 169
Type KSP
Blanking Plug

Fig. 170
Type K
Ported Seating Nipple

Fig. 171
Type KSE
Separation Sleeve

Fig. 172
Type KSP
Blanking Plug

Fig. 173
Type K
Ported Seating Nipple

Fig. 174
Type KSE
Separation Sleeve

Fig. 175
Type KSP
Blanking Plug

Fig. 176
Type K
Ported Seating Nipple

Fig. 177
Type KSE
Separation Sleeve

Fig. 178
Type KSP
Blanking Plug

Fig. 179
Type K
Ported Seating Nipple

Fig. 180
Type KSE
Separation Sleeve

Fig. 181
Type KSP
Blanking Plug

Fig. 182
Type K
Ported Seating Nipple

Fig. 183
Type KSE
Separation Sleeve

Fig. 184
Type KSP
Blanking Plug

Fig. 185
Type K
Ported Seating Nipple

Fig. 186
Type KSE
Separation Sleeve

Fig. 187
Type KSP
Blanking Plug

Fig. 188
Type K
Ported Seating Nipple

Fig. 189
Type KSE
Separation Sleeve

Fig. 190
Type KSP
Blanking Plug

Fig. 191
Type K
Ported Seating Nipple

Fig. 192
Type KSE
Separation Sleeve

Fig. 193
Type KSP
Blanking Plug

Fig. 194
Type K
Ported Seating Nipple

Fig. 195
Type KSE
Separation Sleeve

Fig. 196
Type KSP
Blanking Plug

Fig. 197
Type K
Ported Seating Nipple

Fig. 198
Type KSE
Separation Sleeve

Fig. 199
Type KSP
Blanking Plug

Fig. 200
Type K
Ported Seating Nipple

Fig. 201
Type KSE
Separation Sleeve

Fig. 202
Type KSP
Blanking Plug

Fig. 203
Type K
Ported Seating Nipple

Fig. 204
Type KSE
Separation Sleeve

Fig. 205
Type KSP
Blanking Plug

Fig. 206
Type K
Ported Seating Nipple

Fig. 207
Type KSE
Separation Sleeve

Fig. 208
Type KSP
Blanking Plug

Fig. 209
Type K
Ported Seating Nipple

Fig. 210
Type KSE
Separation Sleeve

Fig. 211
Type KSP
Blanking Plug

Fig. 212
Type K
Ported Seating Nipple

Fig. 213
Type KSE
Separation Sleeve

Fig. 214
Type KSP
Blanking Plug

Fig. 215
Type K
Ported Seating Nipple

Fig. 216
Type KSE
Separation Sleeve

Fig. 217
Type KSP
Blanking Plug

Fig. 218
Type K
Ported Seating Nipple

Fig. 219
Type KSE
Separation Sleeve

Fig. 220
Type KSP
Blanking Plug

Fig. 221
Type K
Ported Seating Nipple

Fig. 222
Type KSE
Separation Sleeve

Fig. 223
Type KSP
Blanking Plug

Fig. 224
Type K
Ported Seating Nipple

Fig. 225
Type KSE
Separation Sleeve

Fig. 226
Type KSP
Blanking Plug

Fig. 227
Type K
Ported Seating Nipple

Fig. 228
Type KSE
Separation Sleeve

Fig. 229
Type KSP
Blanking Plug

Fig. 230
Type K
Ported Seating Nipple

Fig. 231
Type KSE
Separation Sleeve

Fig. 232
Type KSP
Blanking Plug

Fig. 233
Type K
Ported Seating Nipple

Fig. 234
Type KSE
Separation Sleeve

Fig. 235
Type KSP
Blanking Plug

Fig. 236
Type K
Ported Seating Nipple

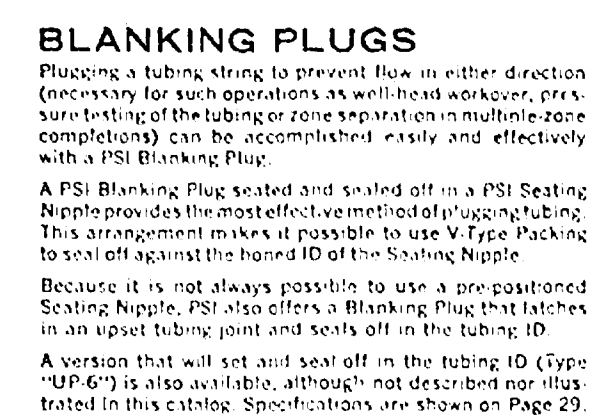
Fig. 237
Type KSE
Separation Sleeve

Fig. 238
Type KSP
Blanking Plug

Fig. 239
Type K
Ported Seating Nipple



LOCK AND SEAL IN TUBING COUPLINGS



REMOVABLE CHOKES

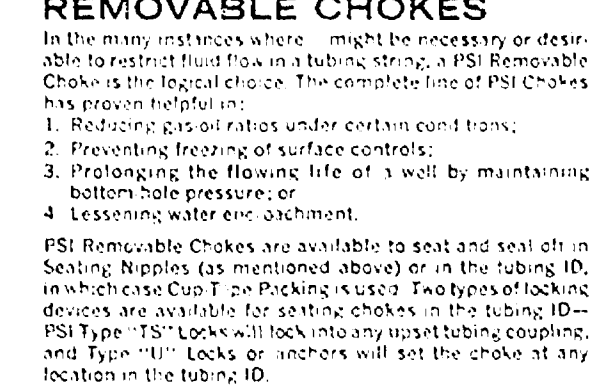
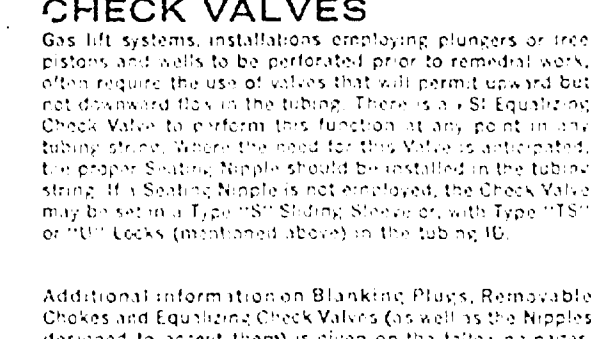


Figure 1. Schematic diagram of the experimental setup. The subject is seated in a chair, viewing a video screen. The video screen displays a target (a red dot) and a starting point (a green dot). The subject's hand is positioned at the starting point. The video screen is connected to a computer system. The computer system controls the video screen and the starting point.

EQUALIZING CHECK VALVES



TUBING FLOW CONTROL EQUIPMENT

NON-PORTED SEATING NIPPLES

PSI offers four basic types of Non-Ported Seating Nipples. Each of these Nipples is specially designed to accept one or more of the various PSI flow control products. The one outstanding feature common to all PSI Seating Nipples is the beveled ID that makes it possible to use reliable V-curve locking on the vertically products that seat in them.

TYPE E (FULL-OPENING, SELECTIVE)

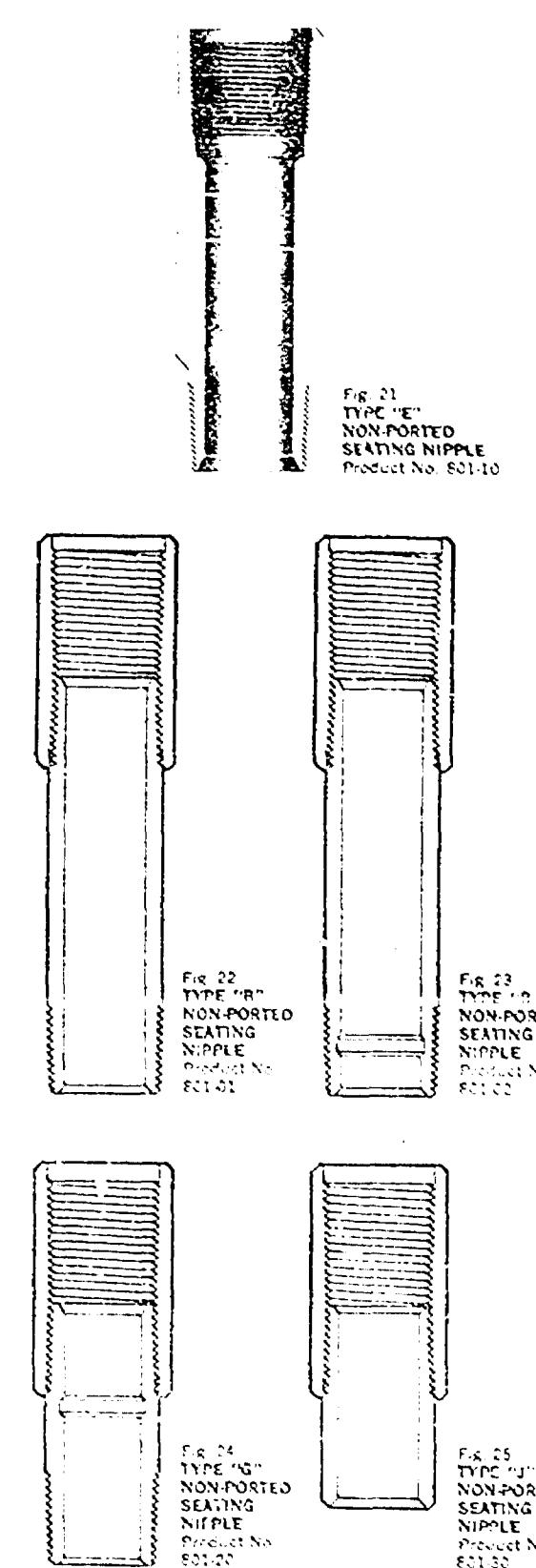
PSI TYPE "E" NON-PORTED SEATING NIPPLE Product No. 801.10
 • Available in six tubing sizes: 1.000, 1.000, 2 1/2", 2 1/2", and 3 1/2", with ID variations as follows: 1.000 x 1.25, 1.000 x 1.48, 1.000 x 1.50, 2 1/2" x 1.50, 2 1/2" x 1.56, 2 1/2" x 1.81, 2 1/2" x 1.87, 2 1/2" x 2.25, 2 1/2" x 2.50, 2 1/2" x 2.75, and 3 1/2" x 2.75.
 • For use where maximum possible ID is necessary.
 • Any number can be run in the same tubing string without affecting the running and seating of necessary products in each.
 • Accepts PSI Type "S" Locking Device.
 • Box up's Dia down.
 • Frequently run in conjunction with PSI Type "K" Bore Nipples which have comparably large IDs.

TYPES B, G, J

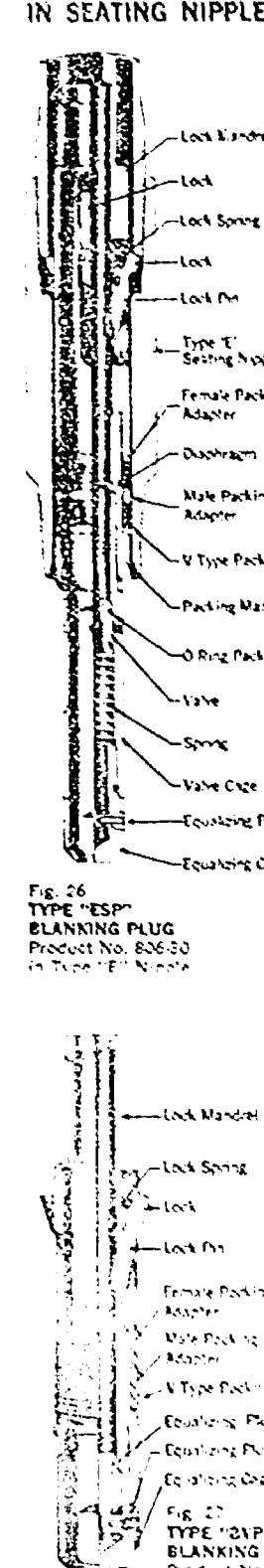
PSI TYPE "B" NON-PORTED SEATING NIPPLE Product No. 801.01
 • Available in six tubing sizes: 1.000, 1.000, 2 1/2", 2 1/2", and 3 1/2", with ID variations as follows: 1.000 x 1.25, 1.000 x 1.48, 1.000 x 1.50, 2 1/2" x 1.50, 2 1/2" x 1.56, 2 1/2" x 1.81, 2 1/2" x 1.87, 2 1/2" x 2.25, 2 1/2" x 2.50, 2 1/2" x 2.75, and 3 1/2" x 2.75.
 • Types end serve as a Note seating shoulder.
 • Accepts PSI Type "K" Locking Device.
 • Available in single or double with coupling.
 • Type "B" Non-Ported Seating Nipple, Product No. 801.02, has a groove in the inner portion of the ID for locking type locks: J-L, T, T-2, etc.

PSI TYPE "G" NON-PORTED SEATING NIPPLE Product No. 801.02
 • Available in six tubing sizes: 1.000, 1.000, 2 1/2", 2 1/2", and 3 1/2", with ID variations as follows: 1.000 x 1.25, 1.000 x 1.48, 1.000 x 1.50, 2 1/2" x 1.50, 2 1/2" x 1.56, 2 1/2" x 1.81, 2 1/2" x 1.87, 2 1/2" x 2.25, 2 1/2" x 2.50, 2 1/2" x 2.75, and 3 1/2" x 2.75.
 • Seals on Nipple by seating Type "G" Check Valve.

PSI TYPE "J" NON-PORTED SEATING NIPPLE Product No. 801.03
 • Available in six tubing sizes: 1.000, 1.000, 2 1/2", 2 1/2", and 3 1/2", with ID variations as follows: 1.000 x 1.25, 1.000 x 1.48, 1.000 x 1.50, 2 1/2" x 1.50, 2 1/2" x 1.56, 2 1/2" x 1.81, 2 1/2" x 1.87, 2 1/2" x 2.25, 2 1/2" x 2.50, 2 1/2" x 2.75, and 3 1/2" x 2.75.
 • Seals on Nipple by seating Type "J" Check Valve.



LOCK AND SEAL IN SEATING NIPPLE



TUBING FLOW CONTROL EQUIPMENT

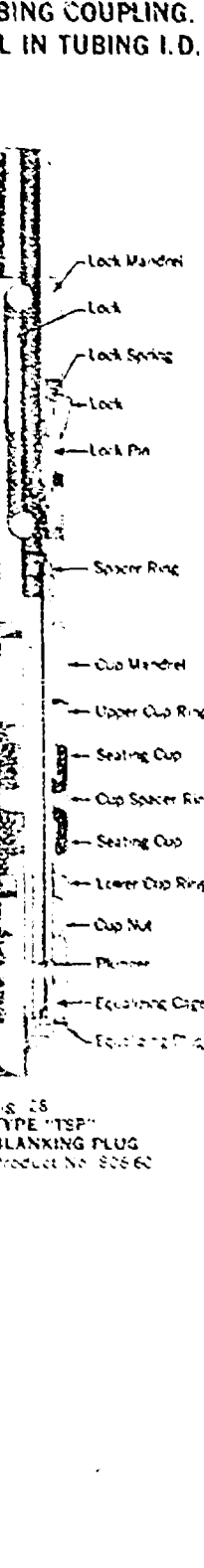
BLANKING PLUGS

PSI TYPE "ESP" BLANKING PLUG Product No. 806.00
 • Available to seat in and blank off the tubing of Type "E" Non-Ported Nipples in sizes 1.000 x 1.48, 1.000 x 1.50, 2 1/2" x 1.50, 2 1/2" x 1.56, 2 1/2" x 1.81, 2 1/2" x 1.87, 2 1/2" x 2.25, and 2 1/2" x 2.50.
 • Type "S" Locking Device to prevent movement in either direction.
 • One set of V-type Packing holds pressure from either direction.
 • Equalizing Plug for equalizing pressure above and below the Seating Nipple.
 • Rubber Plug/Bag to prevent sand from settling around the Equalizing Plug. The Plug/Bag will open to pass a running tool or an equalizing plug.
 • Spring loaded Bypass Valve, held open by the running plug, for ease of running in.
 • Run and retrieved with a Type "S" Running Tool and a Type "S" Pulling Probe with a standard overbait.

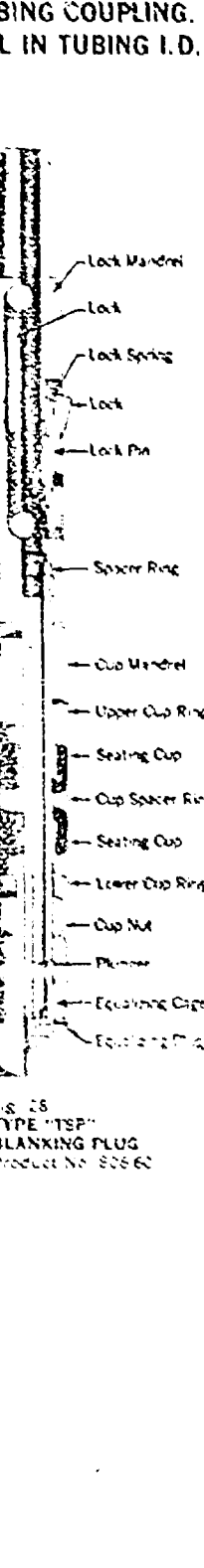
PSI TYPE "BPP" BLANKING PLUG Product No. 806.01
 • Available to seat in and blank off the tubing below Type "B" Non-Ported Seating Nipples in sizes 1.000 x 1.25, 1.000 x 1.48, 1.000 x 1.50, 2 1/2" x 1.50, 2 1/2" x 1.56, 2 1/2" x 1.81, 2 1/2" x 1.87, 2 1/2" x 2.25, 2 1/2" x 2.50, and 3 1/2" x 2.75.
 • Can also be used with Type "K" and "C" Ported Nipples and with Type "E" Non-Ported Nipples (see Page 82 for details).
 • V-type Packing holds pressure from either direction.
 • Equalizing Plug for equalizing pressure above and below the tool.
 • Plug to prevent sand from settling around the Equalizing Plug.
 • Run with Type "K" or "C" Running Tool and pulled with a V-Pulling Tube attached to a standard overbait.

PSI TYPE "TSP" BLANKING PLUG Product No. 806.02
 • Available to lock in an external upset tubing coupling and seal off in the ID of tubing sizes 1.000, 2 1/2", 2 1/2", and 3 1/2".
 • For use only in external upset tubing coupling and seal off in the ID of tubing sizes 1.000, 2 1/2", 2 1/2", and 3 1/2".
 • Type "S" Locking Device to prevent movement in either direction.
 • One Type Packing holds pressure from either direction.
 • Equalizing Plug for equalizing pressure above and below the tool.
 • Plug to prevent sand from settling around the Equalizing Plug. Also with the Type "TSP" Product No. 806.01, with equalizing below as shown in Fig. 80. and Type "TSP" Product No. 806.01, with equalizing above as shown in Fig. 80.
 • Run with a Type "TSP" or "TSP" Running Tool and retrieved with a Type "S" Pulling Probe attached to standard overbait.

LOCK IN TUBING COUPLING



LOCK IN TUBING I.D.





TUBING FLOW CONTROL EQUIPMENT

CHOKES

PSI TYPE "S" BEAM
The PSI Type "S" Beam is a threaded beam that is made to be incorporated into a locking and sealing device to provide a down hole choke. In some cases the beam is secured directly into the parent's "v" or in other cases an adapter is required.

PSI TYPE "T" BEAM
The Type "T" Beam Assembly consists of a spring loaded beam inside a Flow Cage. The spring loaded beam can be held open by a running tool for fluid bypass during running in and can be opened to equalize pressure prior to retrieving.

PSI TYPE "ESS" REMOVABLE CHOKES Product No. 807-10
• Availability shown in Seal-In Guide on Page 32.
• Type "S" Beam.
• Type "S" Locking Device to prevent movement in either direction.
• One set of V-type Packing holds pressure from either direction.

PSI TYPE "ESS" REMOVABLE CHOKES Product No. 807-11
• Same as "ESS" except that it has a "T" Beam.

PSI TYPE "BVS" REMOVABLE CHOKES Product No. 807-01
• Availability shown in Seal-In Guide on Page 32.
• Type "S" Beam.
• Type "V" Locking Device to prevent movement in either direction.
• V-type Packing holds pressure from either direction.

PSI TYPE "BVS" REMOVABLE CHOKES Product No. 807-02
• Same as "BVS" except that it has a "T" Beam.

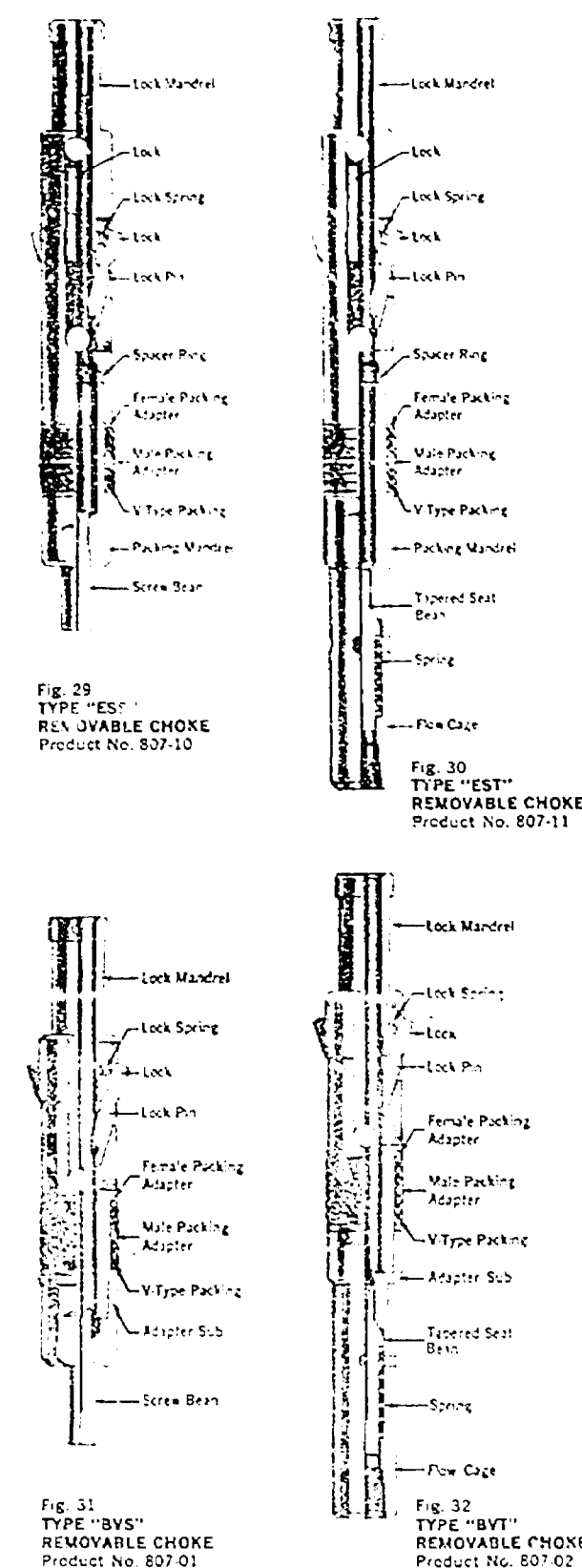
PSI TYPE "TSB" REMOVABLE CHOKES Product No. 807-20
• Locks in operation of 25' or 25' EUI tubing.
• Type "S" Beam.
• Type "TS" Locking Device to prevent movement in either direction.
• Cap-type Packing holds pressure from below.
• Run using Type "TS" or "TS-2" Running Tool and retrieved with a Type "TS" Pulling Probe attached to a standard coupler.

PSI TYPE "TSB" REMOVABLE CHOKES Product No. 807-21
• Same as "TSB" except that it has a "T" Beam.

PSI TYPE "US" REMOVABLE CHOKES Product No. 807-30
• Available for use in 2 1/2" and 2 3/4" tubing.
• Type "S" Beam.
• Cap-type Packing holds pressure from below.

PSI TYPE "US" REMOVABLE CHOKES Product No. 807-31
• Same as "US" except that it has a "T" Beam.

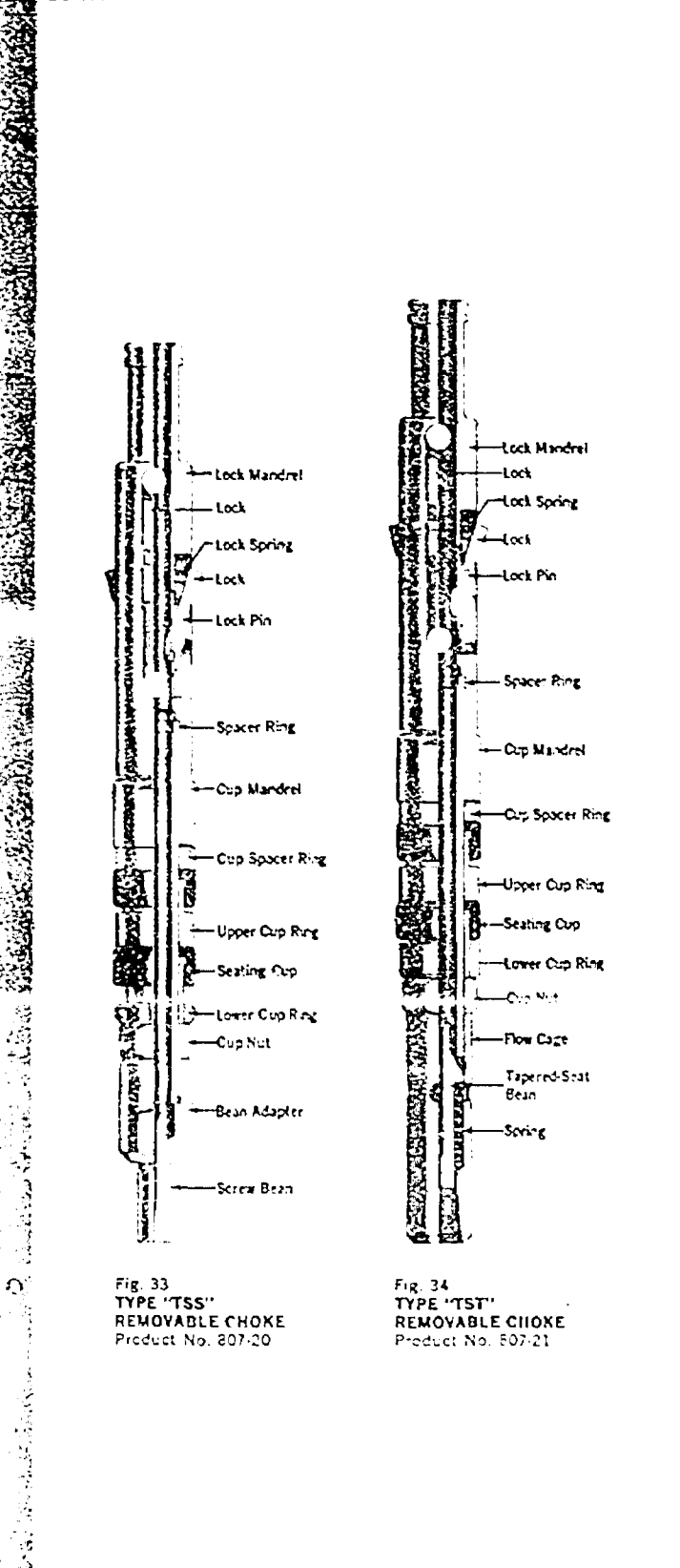
LOCK AND SEAL IN SEATING NIPPLE



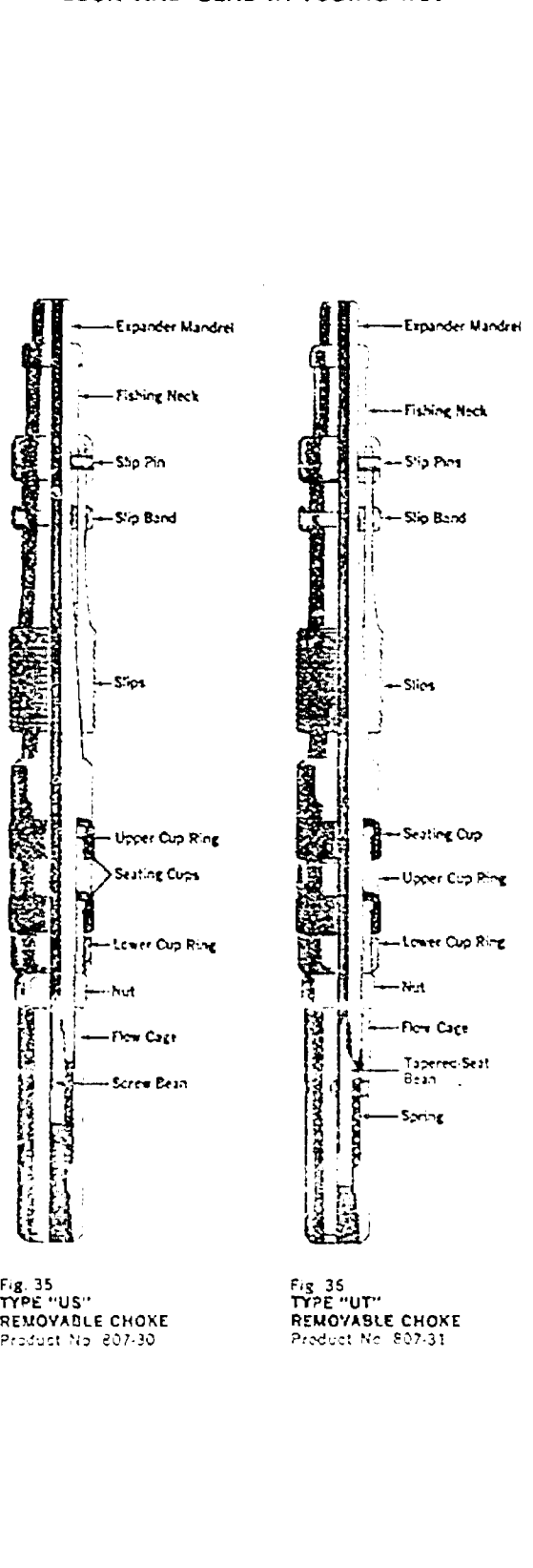
TUBING FLOW CONTROL EQUIPMENT

CHOKES

LOCK IN TUBING COUPLING, SEAL IN TUBING I.D.



LOCK AND SEAL IN TUBING I.D.





TUBING FLOW CONTROL EQUIPMENT

EQUALIZING CHECK VALVES

PSI TYPE - "ESV"
EQUALIZING CHECK VALVE Product No. 809-10
• Available to check downward flow while seated and sealed off in Type "E" Non Packed Nipples and other Sealing Nipples as shown in Seat-In Guide on Page 32.
• Ball-type Check Valve.
• Type "ES" Locking Device to prevent movement in either direction.
• One set of V-type Packing holds pressure from either direction.
• Equalizing Plug for equalizing pressure.

PSI TYPE - "SV"
EQUALIZING CHECK VALVE Product No. 809-01
• Available to check downward flow while seated and sealed off in Type "H" 2-in. Packed Nipples and other Sealing Nipples as shown in Seat-In Guide on Page 32.
• Ball-type Check Valve.
• Type "VS" Locking Device to prevent movement in either direction.
• One set of V-type Packing holds pressure from either direction.
• Equalizing Plug for equalizing pressure.

PSI TYPE - "SP-2"
EQUALIZING CHECK VALVE Product No. 809-31
• Available to check downward flow while seated and sealed off in Type "S" Sliding Sleeves and various Sealing Nipples. For sizes exceeding this Check Valve, see the Seat-In Guide on Page 32.
• Ball-type Check Valve.
• Not a Locking Device.
• One set of V-type Packing (will factor up).
• Equalizing Sleeve for ease of pulling.

PSI TYPE - "TSV"
EQUALIZING CHECK VALVE Product No. 809-20
• Available to check downward flow while locked in an external upset tubing coupling and packed off in the ID of tubing sizes 2 1/4 and 2 1/2.
• Ball-type Check Valve.
• Type "TS" Locking Device to prevent movement in either direction.
• One set of V-type Packing holds pressure from either direction.
• Equalizing Plug for equalizing pressure.

PSI TYPE - "D" PACK-OFF
EQUALIZING CHECK VALVE Product No. 809-40
• Available to check downward flow while packed off in the ID of tubing in size 2 1/4 and 2 1/2.
• Ball-type Check Valve.
• Locked on a proprietary Collar Stop or Threading Stop.
• Packed off by jarring down. A Sealing Element is locked on by expanding metal for reliability of seal.
• Equalizing Sleeve for ease of pulling.

LOCK AND SEAL IN SEATING NIPPLE

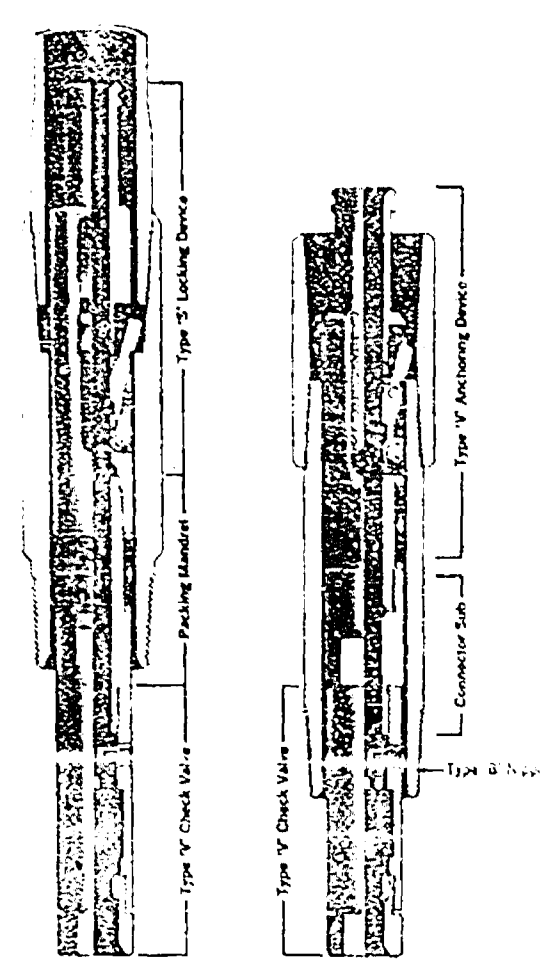


Fig. 37
PSI TYPE - "ESV"
EQUALIZING
CHECK VALVE
Product No. 809-10
Type "ES" Locking Device

Fig. 38
PSI TYPE - "SV"
EQUALIZING
CHECK VALVE
Product No. 809-01
Type "VS" Locking Device

LOCK AND SEAL IN SEATING NIPPLE OR SLIDING SLEEVE

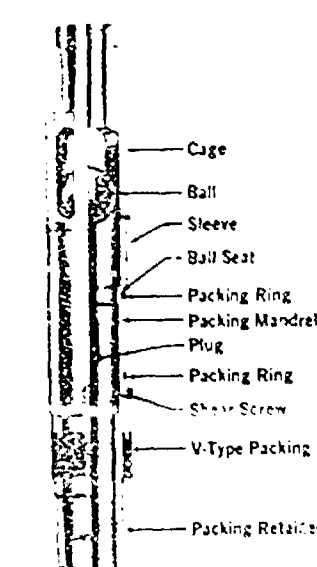


Fig. 39
PSI TYPE - "SP-2"
EQUALIZING
CHECK VALVE
Product No. 809-31

TUBING FLOW CONTROL EQUIPMENT

EQUALIZING CHECK VALVES



LOCK IN TUBING COUPLING, SEAL IN TUBING I.D.



Fig. 40
PSI TYPE - "TSV"
EQUALIZING
CHECK VALVE
Product No. 809-20

LOCK AND SEAL IN TUBING I.D.

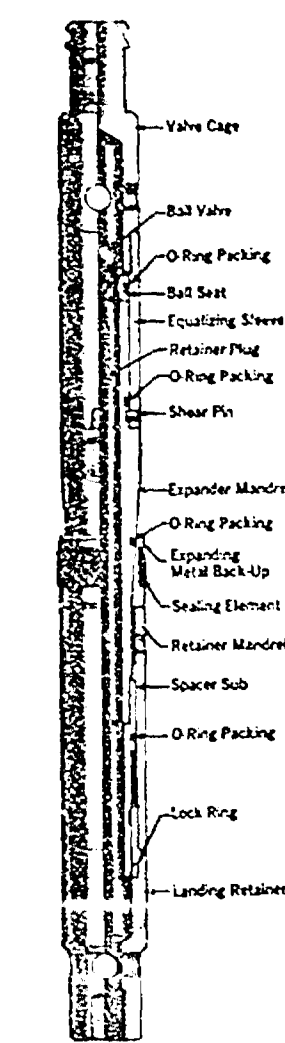
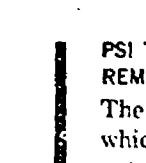


Fig. 41
PSI TYPE - "D"
EQUALIZING
CHECK VALVE
Product No. 809-40

ACKNOWLEDGMENTS

*Strongly recommend: 1. Use the following information to help you select the right type of fire extinguisher for your needs. 2. Use the following information to help you select the right type of fire extinguisher for your needs. 3. Use the following information to help you select the right type of fire extinguisher for your needs.



RUNNING AND RETRIEVING
The Tubing Stop is run using a PSI Type "DV" Running Tool and is set and released from the running tool simultaneously by jarring down. The Pack-Off Assembly is then run on a PSI Type "DJ" Running Tool, and it too is set and released from the running tool by jarring down. The Pump Landing Shoe is seated last. This equipment is retrieved (once the pump and Pump Landing Shoe have been pulled) by using a PSI Type "TDJ" Pulling Tool for the Pack-Off Assembly and a standard overshot for the Tubing Stop.

This unique expanding-type Packing utilizes a metal-to-metal backup to prevent extrusion of the rubber sealing element and, thereby, assure dependable performance in

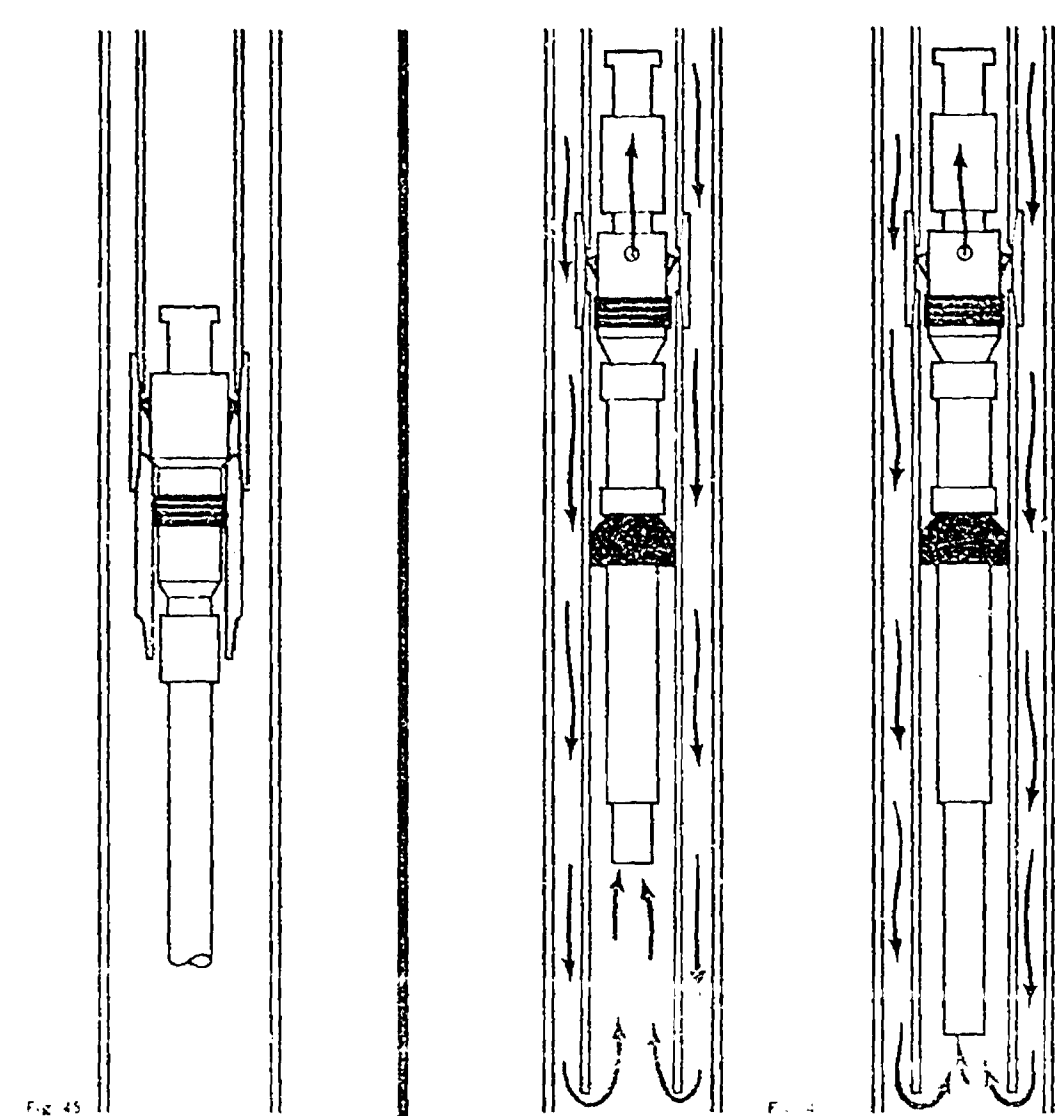
ALTERNATE LANDING SHOE AND RECEIVING NIPPLE
Ordinarily the V-type Packing used to seal off between the Landing Shoe and the Pack-Off Assembly provides sufficient friction to keep the Landing Shoe in place, even when pumping is first started. An alternate Landing Shoe and Receiving Nipple portion of the Pack-Off Assembly is available, however, if a more positive method of retaining the Shoe is desired. Locating Pro-

Ordinarily the V-type Packing used to seal off between the Landing Shoe and the Pack-Off Assembly provides sufficient friction to keep the Landing Shoe in place.

• Additional information on the PSI Type "DY" Running Tool, as well as other PSI Running and Pulling Tools, is shown on Pages 30 and 31.

MISCELLANEOUS FLOW CONTROL EQUIPMENT

EXTENSION HANGER-SAND WASHING TOOL



PSI EXTENSION HANGERS

The PSI Type "U-2" Extension Hanger (Product No. 888-21) is used to bind permanent-type well completion extension pipe in the tubing for such operations as cementing and fracturing, etc. It requires a Type "U-2" or "U-2S" Setting Nipple. The PSI Type "U-2S" Extension Hanger (Product No. 888-21S) will lock in an external upset tubing coupling and seal off in the tubing (1).

PSI TYPE "V-2" SAND WASHING TOOL

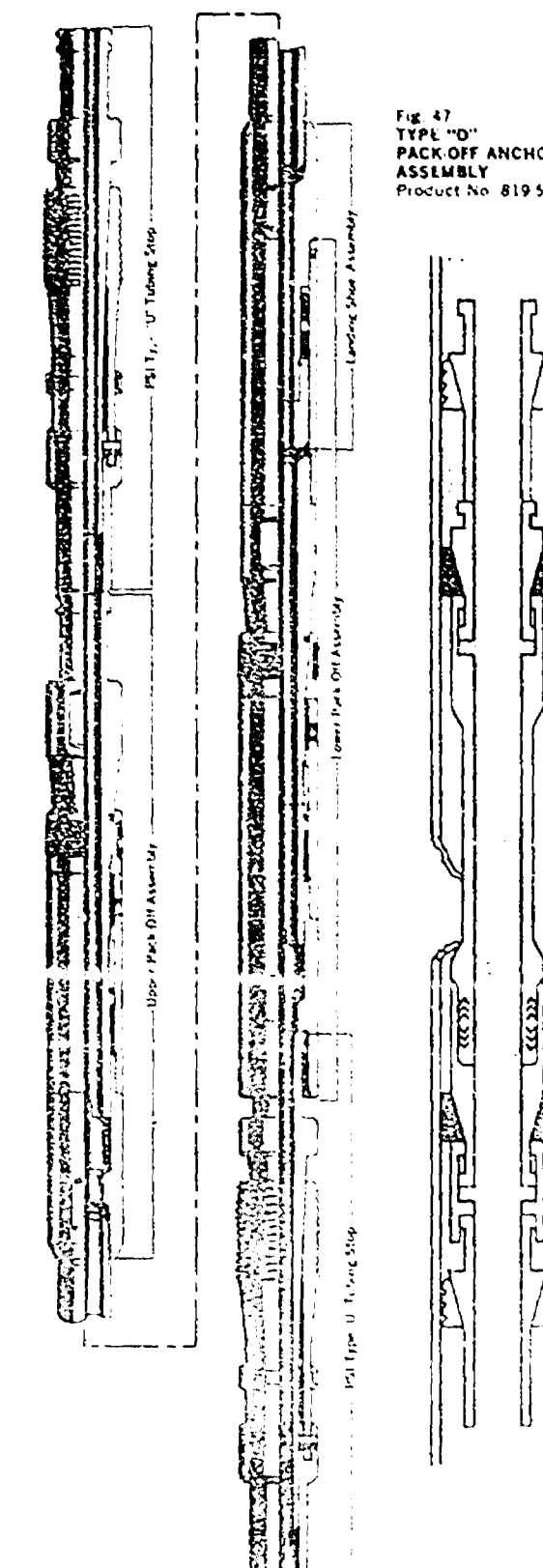
Product No. 891-30

The PSI Type "V-2" Sand Washing Tool is used with an Extension Hanger, a Seal Mandrel Assembly, and extension pipe coated with telescoping joints as shown above. The entire assembly is run in until the extension pipe (with telescoping joints collapsed) rests on the sand. It is then raised until the Hanger locks against a coupling.

The washing operation is accomplished by pumping into the casing annulus and washing the sand up the tubing. When the end of the travel of the telescoping joints is reached, the assembly is lowered to the well coupling and the operation is repeated. Lifting down will retract the Hanger locks and allow the assembly to be retrieved.

MISCELLANEOUS FLOW CONTROL EQUIPMENT

PACK-OFF ANCHOR ASSEMBLY



PSI TYPE "D" PACK-OFF ANCHOR ASSEMBLY Product No. 819-50

The PSI Type "D" Pack-Off Anchor Assembly is a retrievable, standard-type pack-off device that can be installed and packed off in tubing ID. With it, holes caused by corrosion, perforating or mechanical failure can be isolated easily and quickly without pulling the tubing string.

The complete Anchor Assembly consists of a Tubing Stop at the bottom, a Lower Pack-Off Assembly, a Landing Shoe Assembly, Spacer Tubing, an Upper Pack-Off Assembly, and a Tubing Stop at the top.

RUNNING AND RETRIEVING

A PSI Type "U" Tubing Stop is run on a PSI Type "DY" Running Tool and set in the tubing below the point that is to be isolated. The Lower Pack-Off Assembly is run on a PSI Type "DY" Running Tool landed on the Tubing Stop and packed off by jarring down. If desired, the Tubing Stop and the Lower Pack-Off Assembly can be run simultaneously. The Landing Shoe Assembly, Spacer Tube and Upper Pack-Off Assembly are then run on a PSI Type "DY" Running Tool. With the Landing Shoe seated in the Receiving Nipple of the Lower Pack-Off Assembly, the Upper Pack-Off Assembly is set by jarring down. A second PSI Type "U" Tubing Stop is used to anchor the entire assembly against upward movement.

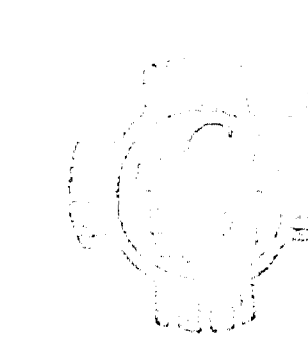
The equipment is retrieved in reverse sequence by using a standard anchor for all components except the Lower Pack-Off Assembly, which is retrieved with a PSI Type "TD" Pulling Tool. The "DY" Running Tool and the "TD" Pulling Tool are shown on Page 25.

COMPONENT DETAILS

- PSI Tubing Stops are anchoring devices that can be locked anywhere in a tubing string. They are illustrated and described on Page 25.
- The Upper and Lower Pack-Off Assemblies are of the same type described on Page 25.
- The unique expanding-type Packing provides dependable pack-off in wells of any depth. The operation of this portion of the product, including the metal-to-metal locking, is described on Page 25.
- The nature of the Landing Shoe in the Lower Pack-Off Assembly is described on Page 25. These two components of the Type "D" Pack-Off Anchor Assembly are held securely together by the Type "U" Tubing Stop that is the upper portion of the entire Assembly.
- The length of the Spacer Tubing depends on the amount needed to bridge the hole.

RUNNING AND RETRIEVING TOOLS

Additional information on the Type "DY" Running Tool is shown on Page 25.



MISCELLANEOUS FLOW CONTROL EQUIPMENT

STOPS, TUBING PLUGS, COUPON HOLDER

PSI TYPE "C" COLLAR STOP Product No. 804-01

Used to prevent tools from accidentally passing out the end of a tubing string, this stop, when locked in an external upset tubing coupling, is rugged enough to withstand any ordinary impact.

- Available for 1000, 250, 2 1/2, or 3 1/2 tubing.
- Run with an "R-1" Running and Pulling Tool (with Running Tube) and retrieved with an "S-2" Pulling Probe on an "R-1" Running and Pulling Tool.

PSI TYPE "U" TUBING STOP Product No. 804-10

An anchoring device that can be locked anywhere in a tubing string by jarring the expander mounted under the stop, causing them to grip the tubing ID. The "U" Tubing Stop can be used to catch tools dropped in the tubing or as an anchoring device for each PSI tool in the "Type 10" Plug Off Anchor Assembly on Page 27.

- Available for 1000, 250, 2 1/2, or 3 1/2 tubing.
- Run using a Type "D" Running Tool and retrieved with a standard overbore.

NOTE: A PSI Rubber Spring may be used with either the Type "C" or Type "U" Stop to help cushion impacts.

PSI TYPE "P" CIRCULATING PLUGGING ASSEMBLY Product No. 806-38

Used with a PSI Locking Device and Sealing Assembly to seal in and plug off the tubing in a flowing well to permit tool operations as wellhead operations.

- Available for tubing sizes 1000, 250, and 2 1/2.
- Calculating Valve makes it possible to calculate at any time without loss of the plugging feature.
- Equalizing Valve for equalizing pressure.

PSI TYPE "B" CORROSION COUPON HOLDER Product No. 803-12

Stainless steel, locks in any external upset tubing joint held in external upset in the tubing flowstream.

- Consists of two parts: the tubing flowstream.
- Available for 1000, 250, 2 1/2, and 3 1/2 tubing.
- Run with Type "R-1" Running and Pulling Tool (with Running Tube) and retrieved with Type "S-2" Pulling Probe on a Type "B-1" Running and Pulling Tool.

PSI TYPE "V" EXPENDABLE TUBING PLUG Product No. 819-01

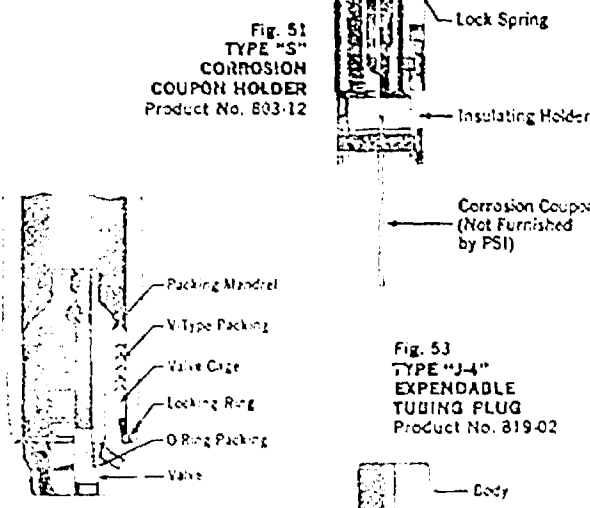
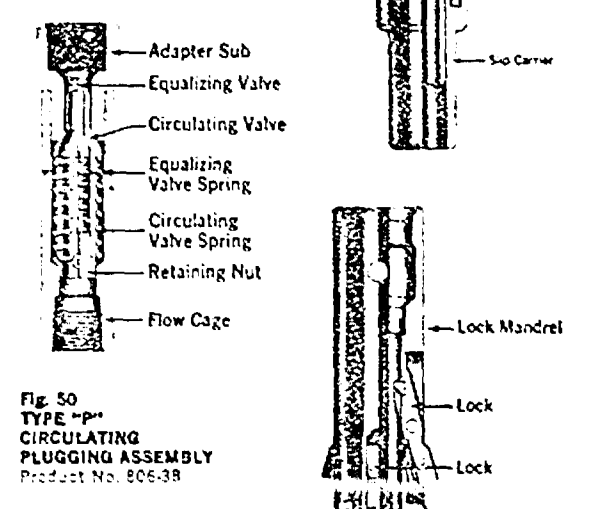
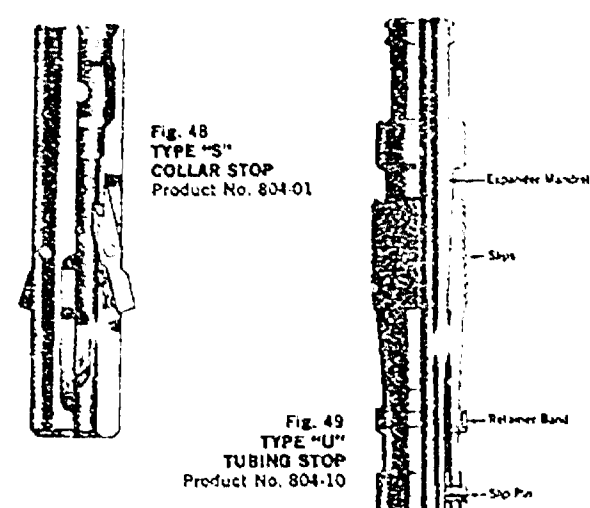
Used to plug off the tubing below a PSI Type "B" or "J" Sealing Nipple so that a tubing string can be run or pulled under pressure.

- Available for PSI Type "B" or "J" Nipples in sizes 1000, 250, 2 1/2, and 3 1/2.
- One set of V-type Tooling (Facing down).
- Oppose Valve held open by the running tool.
- Run on wire line with a PSI Type "J" Running Tool.

PSI TYPE "L" EXPENDABLE TUBING PLUG Product No. 819-02

Placed in the bottom of a PSI Type "B-4" Nipple before running in to prevent flow into the tubing.

- Available for PSI Type "B-4" Nipples in sizes 1000, 250, 2 1/2, and 3 1/2.



TUBING I.D. EQUIPMENT

SPECIFICATION GUIDE AND DIMENSIONAL DATA

The data shown below are those that have proven most reliable. All data are subject to change.

TYPE	PRODUCT NAME	SIZE	MAX. LEN.	MAX. WGT.	MAX. WGT. PER FT.	MAX. WGT. PER FT.	MAX. WGT. PER FT.	MAX. WGT. PER FT.	MAX. WGT. PER FT.
PRODUCTS THAT LOCK IN AN EXTERNAL UPSET TUBING COUPLING AND SEAL IN THE TUBING I.D.									
1	Collar Stop	1000	110.00	24	2.4	—	—	—	—
2	Collar Stop	250	110.00	24	2.4	—	—	—	—
3	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
4	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
5	Collar Stop	1000	110.00	24	2.4	—	—	—	—
6	Collar Stop	250	110.00	24	2.4	—	—	—	—
7	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
8	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
9	Collar Stop	1000	110.00	24	2.4	—	—	—	—
10	Collar Stop	250	110.00	24	2.4	—	—	—	—
11	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
12	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
13	Collar Stop	1000	110.00	24	2.4	—	—	—	—
14	Collar Stop	250	110.00	24	2.4	—	—	—	—
15	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
16	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
17	Collar Stop	1000	110.00	24	2.4	—	—	—	—
18	Collar Stop	250	110.00	24	2.4	—	—	—	—
19	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
20	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
21	Collar Stop	1000	110.00	24	2.4	—	—	—	—
22	Collar Stop	250	110.00	24	2.4	—	—	—	—
23	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
24	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
25	Collar Stop	1000	110.00	24	2.4	—	—	—	—
26	Collar Stop	250	110.00	24	2.4	—	—	—	—
27	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
28	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
29	Collar Stop	1000	110.00	24	2.4	—	—	—	—
30	Collar Stop	250	110.00	24	2.4	—	—	—	—
31	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
32	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
33	Collar Stop	1000	110.00	24	2.4	—	—	—	—
34	Collar Stop	250	110.00	24	2.4	—	—	—	—
35	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
36	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
37	Collar Stop	1000	110.00	24	2.4	—	—	—	—
38	Collar Stop	250	110.00	24	2.4	—	—	—	—
39	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
40	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
41	Collar Stop	1000	110.00	24	2.4	—	—	—	—
42	Collar Stop	250	110.00	24	2.4	—	—	—	—
43	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
44	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
45	Collar Stop	1000	110.00	24	2.4	—	—	—	—
46	Collar Stop	250	110.00	24	2.4	—	—	—	—
47	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
48	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
49	Collar Stop	1000	110.00	24	2.4	—	—	—	—
50	Collar Stop	250	110.00	24	2.4	—	—	—	—
51	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
52	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
53	Collar Stop	1000	110.00	24	2.4	—	—	—	—
54	Collar Stop	250	110.00	24	2.4	—	—	—	—
55	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
56	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
57	Collar Stop	1000	110.00	24	2.4	—	—	—	—
58	Collar Stop	250	110.00	24	2.4	—	—	—	—
59	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
60	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
61	Collar Stop	1000	110.00	24	2.4	—	—	—	—
62	Collar Stop	250	110.00	24	2.4	—	—	—	—
63	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
64	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
65	Collar Stop	1000	110.00	24	2.4	—	—	—	—
66	Collar Stop	250	110.00	24	2.4	—	—	—	—
67	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
68	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
69	Collar Stop	1000	110.00	24	2.4	—	—	—	—
70	Collar Stop	250	110.00	24	2.4	—	—	—	—
71	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
72	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
73	Collar Stop	1000	110.00	24	2.4	—	—	—	—
74	Collar Stop	250	110.00	24	2.4	—	—	—	—
75	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
76	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
77	Collar Stop	1000	110.00	24	2.4	—	—	—	—
78	Collar Stop	250	110.00	24	2.4	—	—	—	—
79	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
80	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
81	Collar Stop	1000	110.00	24	2.4	—	—	—	—
82	Collar Stop	250	110.00	24	2.4	—	—	—	—
83	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
84	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
85	Collar Stop	1000	110.00	24	2.4	—	—	—	—
86	Collar Stop	250	110.00	24	2.4	—	—	—	—
87	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
88	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
89	Collar Stop	1000	110.00	24	2.4	—	—	—	—
90	Collar Stop	250	110.00	24	2.4	—	—	—	—
91	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
92	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
93	Collar Stop	1000	110.00	24	2.4	—	—	—	—
94	Collar Stop	250	110.00	24	2.4	—	—	—	—
95	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
96	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—
97	Collar Stop	1000	110.00	24	2.4	—	—	—	—
98	Collar Stop	250	110.00	24	2.4	—	—	—	—
99	Collar Stop	2 1/2	110.00	24	2.4	—	—	—	—
100	Collar Stop	3 1/2	110.00	24	2.4	—	—	—	—

PRODUCTS THAT LOCK AND SEAL IN THE TUBING I.D.									
1	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
2	Check Valve	250	110.00	24	2.4	—	—	—	—
3	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
4	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
5	Check Valve	1000	110.00	24	2.4	—	—	—	—
6	Check Valve	250	110.00	24	2.4	—	—	—	—
7	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
8	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
9	Check Valve	1000	110.00	24	2.4	—	—	—	—
10	Check Valve	250	110.00	24	2.4	—	—	—	—
11	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
12	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
13	Check Valve	1000	110.00	24	2.4	—	—	—	—
14	Check Valve	250	110.00	24	2.4	—	—	—	—
15	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
16	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
17	Check Valve	1000	110.00	24	2.4	—	—	—	—
18	Check Valve	250	110.00	24	2.4	—	—	—	—
19	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
20	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
21	Check Valve	1000	110.00	24	2.4	—	—	—	—
22	Check Valve	250	110.00	24	2.4	—	—	—	—
23	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
24	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
25	Check Valve	1000	110.00	24	2.4	—	—	—	—
26	Check Valve	250	110.00	24	2.4	—	—	—	—
27	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
28	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
29	Check Valve	1000	110.00	24	2.4	—	—	—	—
30	Check Valve	250	110.00	24	2.4	—	—	—	—
31	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
32	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
33	Check Valve	1000	110.00	24	2.4	—	—	—	—
34	Check Valve	250	110.00	24	2.4	—	—	—	—
35	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
36	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
37	Check Valve	1000	110.00	24	2.4	—	—	—	—
38	Check Valve	250	110.00	24	2.4	—	—	—	—
39	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
40	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
41	Check Valve	1000	110.00	24	2.4	—	—	—	—
42	Check Valve	250	110.00	24	2.4	—	—	—	—
43	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
44	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
45	Check Valve	1000	110.00	24	2.4	—	—	—	—
46	Check Valve	250	110.00	24	2.4	—	—	—	—
47	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
48	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
49	Check Valve	1000	110.00	24	2.4	—	—	—	—
50	Check Valve	250	110.00	24	2.4	—	—	—	—
51	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
52	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
53	Check Valve	1000	110.00	24	2.4	—	—	—	—
54	Check Valve	250	110.00	24	2.4	—	—	—	—
55	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
56	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
57	Check Valve	1000	110.00	24	2.4	—	—	—	—
58	Check Valve	250	110.00	24	2.4	—	—	—	—
59	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
60	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
61	Check Valve	1000	110.00	24	2.4	—	—	—	—
62	Check Valve	250	110.00	24	2.4	—	—	—	—
63	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
64	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
65	Check Valve	1000	110.00	24	2.4	—	—	—	—
66	Check Valve	250	110.00	24	2.4	—	—	—	—
67	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
68	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
69	Check Valve	1000	110.00	24	2.4	—	—	—	—
70	Check Valve	250	110.00	24	2.4	—	—	—	—
71	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
72	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
73	Check Valve	1000	110.00	24	2.4	—	—	—	—
74	Check Valve	250	110.00	24	2.4	—	—	—	—
75	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
76	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
77	Check Valve	1000	110.00	24	2.4	—	—	—	—
78	Check Valve	250	110.00	24	2.4	—	—	—	—
79	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
80	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
81	Check Valve	1000	110.00	24	2.4	—	—	—	—
82	Check Valve	250	110.00	24	2.4	—	—	—	—
83	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
84	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
85	Check Valve	1000	110.00	24	2.4	—	—	—	—
86	Check Valve	250	110.00	24	2.4	—	—	—	—
87	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
88	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
89	Check Valve	1000	110.00	24	2.4	—	—	—	—
90	Check Valve	250	110.00	24	2.4	—	—	—	—
91	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
92	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
93	Check Valve	1000	110.00	24	2.4	—	—	—	—
94	Check Valve	250	110.00	24	2.4	—	—	—	—
95	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
96	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—
97	Check Valve	1000	110.00	24	2.4	—	—	—	—
98	Check Valve	250	110.00	24	2.4	—	—	—	—
99	Check Valve	2 1/2	110.00	24	2.4	—	—	—	—
100	Check Valve	3 1/2	110.00	24	2.4	—	—	—	—

LOCKING DEVICES AND RUNNING TOOLS



PSI TYPE "S" TANDUM LOCKING DEVICE Product No. 803.10
The PSI Type "S" Tandem Locking Device is used to lock retrievable wire line products in PSI Type "R" Ported Sealing Nipples or Type "S" Non-Ported Sealing Nipples. Movement either up or down is prevented by four locks (two facing up and two facing down) that seat between the top of the sealing bore of the nipple and the end of the tubing joint above. Under each lock there is a spring that tends to hold the lock in the open position. The inner end of each lock protrudes into the ID of the Locking Device so that a running or pulling tool inserted into the device forces the lock to pivot and bring the outer end into a recess in the body. Because the Type "S" Locking Device has no external protrusions to prevent downward movement until the running tool is removed, this device can be run through any number of nipples or couplings before it is set at the selected point.

The "S" Locking Device has a large ID for maximum flow through the tool, and ports are provided at the upper end to direct flow around the outside of the fishing neck to prevent sanding up that might hamper retrieving operations.

A PSI Type "S" Tandem Locking Device is run on wire line with a PSI Type "S" or "TS-2" Running Tool. The device is retrieved with a PSI Type "S" Pulling Probe attached to a standard overshot.

If the Locking Device should become disengaged from the running tool, the downfacing locks will catch in the first external upset tubing coupling and prevent further drop.

PSI TYPE "TS" TUNING LOCKING DEVICE Product No. 803.20
Basically the same as the Type "S" described above, the Type "TS" Locking Device is used to lock retrievable wire line products in the coupling of external upset tubing. This device is run with a Type "TS" or "TS-2" Running Tool and retrieved with an "S" Pulling Probe attached to a standard overshot.

PSI TYPE "V" LOCKING DEVICE Product No. 803.40
The PSI Type "V" Locking Device is used to lock retrievable wire line products in PSI Type "R", "C", "H", "H", or "K" Sealing Nipples.

Movement either up or down is prevented by a No. 8 shoulder that seats on the upper end of the sealing bore of the nipple and two up-facing locks that catch under the end of the tubing joint above.

The Type "V" Device has a large ID for maximum flow through the tool, and ports at the upper end direct flow around the outside of the fishing neck to prevent sand accumulation that might hamper retrieving. A PSI Type "V" Locking Device is run on wire line with a Type "V" or "V-1" Running Tool. The device is retrieved with a PSI Type "V" Pulling Probe attached to a standard overshot.

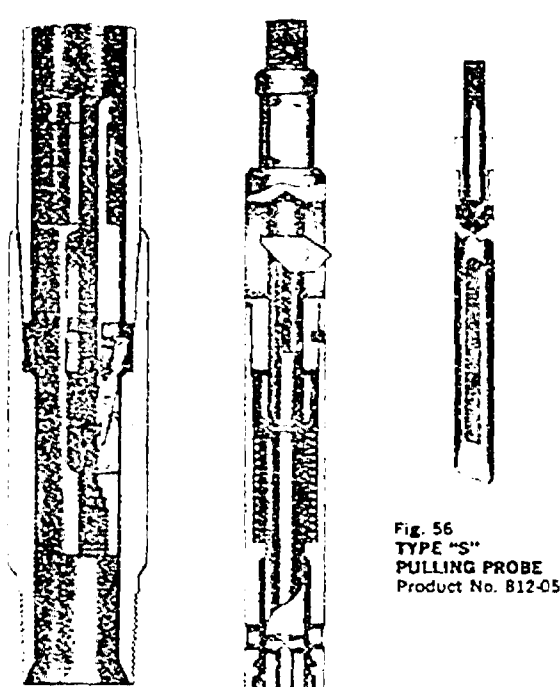


Fig. 34
TYPE "S"
TANDUM
LOCKING DEVICE
Product No. 803.10

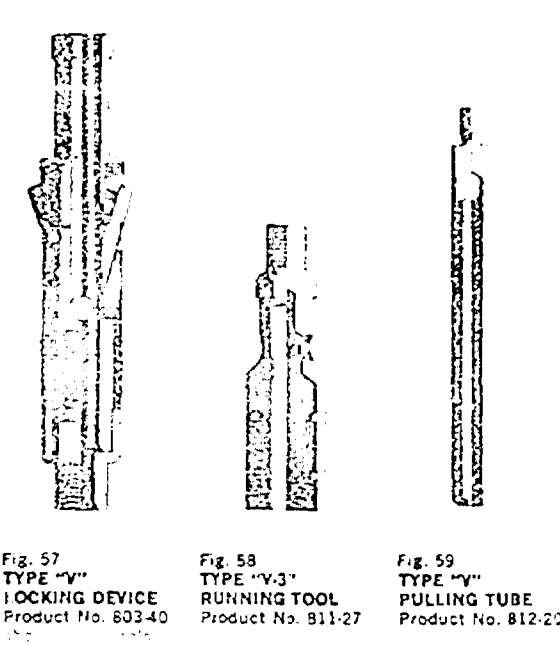


Fig. 35
TYPE "TS"
TUNING
LOCKING DEVICE
Product No. 803.20



Fig. 36
TYPE "V"
LOCKING DEVICE
Product No. 803.40



Fig. 37
TYPE "R-1"
RUNNING AND
PULLING TOOL
Product No. 811.00



Fig. 38
TYPE "R-2"
RUNNING AND
PULLING TOOL
Product No. 811.05



Fig. 39
TYPE "S-2"
PULLING PROBE
Product No. 811.15

LOCKING DEVICES AND RUNNING TOOLS

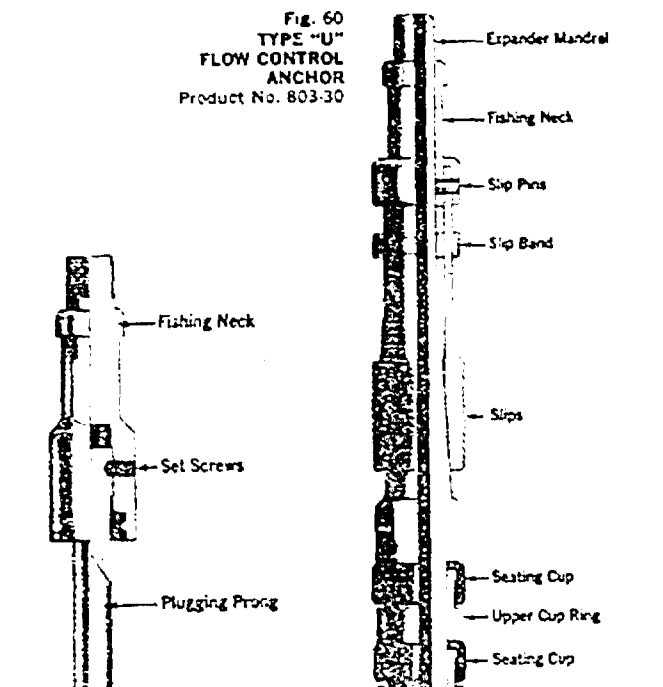


Fig. 40
TYPE "U"
FLOW CONTROL
ANCHOR
Product No. 803.30

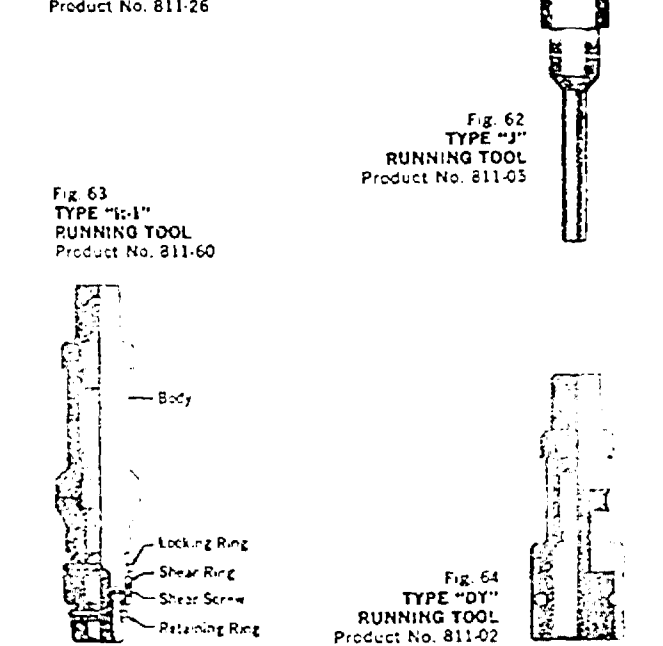


Fig. 41
TYPE "R-1"
RUNNING AND
PULLING TOOL
Product No. 811.00



Fig. 42
TYPE "R-2"
RUNNING AND
PULLING TOOL
Product No. 811.05



Fig. 43
TYPE "S-2"
PULLING PROBE
Product No. 811.15



Fig. 44
TYPE "V-2"
RUNNING TOOL
Product No. 811.25



Fig. 45
TYPE "J"
RUNNING TOOL
Product No. 811.05

Fig. 46
TYPE "JY"
RUNNING TOOL
Product No. 811.02

PSI TYPE "U" FLOW CONTROL ANCHOR Product No. 803.30
The PSI Type "U" Flow Control Anchor is used to anchor retrievable wire line products in the tubing ID. Movement is prevented by wickered clips that are forced out against the tubing ID by the tapered Expander Mandrel. The upper portion of this anchor has a fishing neck for use with standard running and retrieving tools, and the lower portion includes two parking cups to seal off against pressure from below.

The PSI Type "U" Flow Control Anchor is generally a part of such retrievable wire line products as the PSI Type "US" Removable Choke or the PSI Type "UT" Removable Choke.

* Available to seat and seal off in the ID of 2 1/8" or 2 1/2" tubing.

MISCELLANEOUS PSI RUNNING AND PULLING TOOLS
PSI TYPE "R-1" RUNNING AND PULLING TOOL Product No. 811.00
The PSI Type "R-1" Running and Pulling Tool is used with the Running Tube to run a PSI Type "S" Collar Stop or a PSI Type "S" Corrosion Coupon Holder (see Page 29).

The PSI Type "R-2" Pulling Probe is attached to a PSI Type "R-1" Running and Pulling Tool to retrieve the Type "S" Collar Stop or the Type "S" Corrosion Coupon Holder.

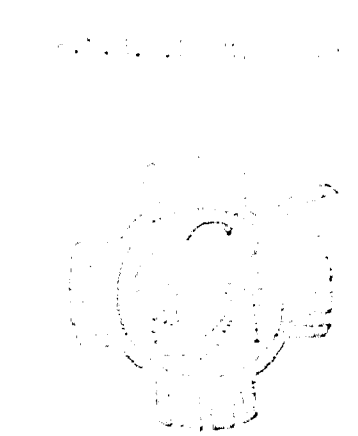
* Available to run and retrieve wire line products in 1.900, 2 1/8" or 2 1/2" tubing.

PSI TYPE "V-2" RUNNING TOOL Product No. 811.25
The PSI Type "V-2" Running Tool is used to run a PSI Type "V-1" Extension Hanger (see Page 26).

* Available to run Extension Hangers in Sizes 1.900 x 1.43, 2 1/8 x 1.56, 2 1/8 x 1.81, 2 1/8 x 2.25 and 2 1/8 x 2.75.

PSI TYPE "J" RUNNING TOOL Product No. 811.05
The PSI Type "J" Running Tool is used to land a PSI Type "JT" Expandable Tubing Plug (see Page 28) in a Sealing Nipple. The Seat-In Guide on Page 28 fits the Nipples in which this product can be seated.

PSI TYPE "JY" RUNNING TOOL Product No. 811.02
The PSI Type "JY" Running Tool is designed for use with wire line tools that are sized primed to the running tool with tangential shear pins and are set by jarring downward. It can be used with any 2 1/8" tool, equipped with a standard fishing neck.





SEAT-IN GUIDE •

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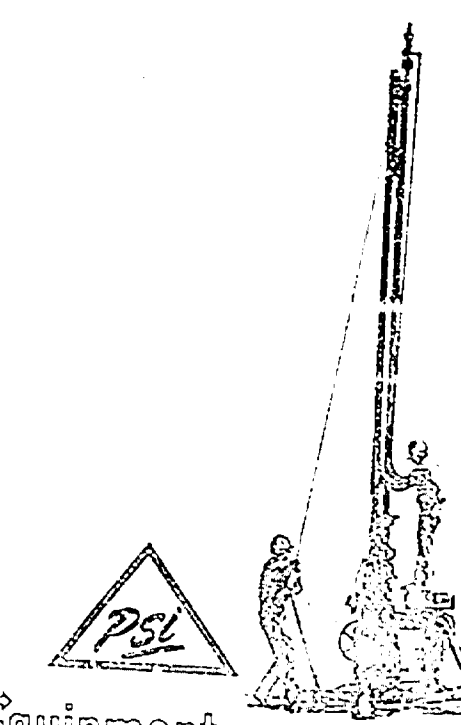
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PRODUCT INDEX

PRODUCT	PRODUCT NO.	PAGE	PRODUCT	PRODUCT NO.	PAGE	UNIT	PRICE
Jack			Spade				
Type "A" (Push Out)	800-20	21	See Shovels and Paving Tools				
Type "C" (Push Out)	800-21	21	Remounting Tools				
After Guard Assembly	819-50	27	See Chisels, Remountable				
Blanking Pliers			Trimming				
Type "A" (Push Out)	600-02	10	Rolling Bars and "C" Tools	812-00	20	1/2	1.40
Type "A-V" (Push Out)	600-10	11	Pulling Tools and "C" Tools	812-10	21	1/2	1.40
Type "B" (Push Out)	600-11	11	Rolling Bars and "C" Tools	812-20	20	1/2	1.40
Type "C" (Push Out)	600-12	11	Pulling Tools and "C" Tools	812-30	21	1/2	1.40
Type "C-V" (Push Out)	600-13	11	Rolling Bars and "C" Tools	811-60	21	1/2	1.40
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Type "E" (Push Out)	600-15	11	Rolling Bars and "C" Tools	811-80	21	1/2	1.40
Type "F" (Push Out)	600-16	11	Pulling Tools and "C" Tools	811-90	21	1/2	1.40
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Type "H" (Push Out)	600-18	11	Pulling Tools and "C" Tools	811-10	21	1/2	1.40
Type "I" (Push Out)	600-19	11	Rolling Bars and "C" Tools	811-20	21	1/2	1.40
Type "J" (Push Out)	600-20	11	Pulling Tools and "C" Tools	811-30	21	1/2	1.40
Type "K" (Push Out)	600-21	11	Rolling Bars and "C" Tools	811-40	21	1/2	1.40
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For further information on PSI products and the name of your local
PSI Wire Line Dealer, contact your nearest Baker Representative or write:
PSI DIVISION BAKER OIL TOOLS, INC.
2663 FREEDWOOD DRIVE - P.O. BOX 20317
DALLAS 20, TEXAS
Telephone: FLEETWOOD 2-3971



Flow Control Equipment
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