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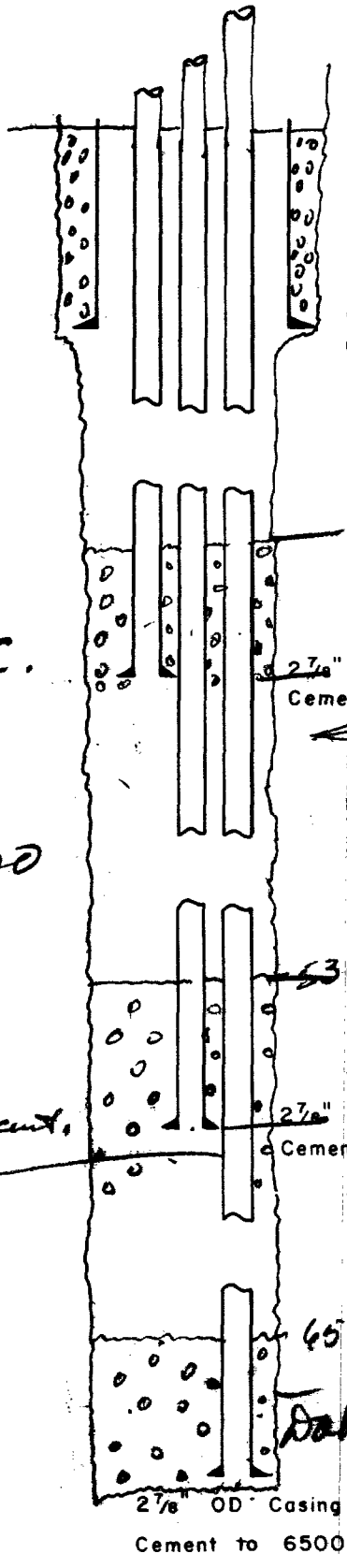


PC: 2500-2550
Ch: 3350-3450

9⅞ to 350'
8¾ to 5900'
6¾ to 7100'

if PC. 2700
if Ch 3600

PC or Chacra cmt - additives centralizers can be used - same as in csg

3350-3450

5850-5900

bottom cmt. 6000

Gallup

Dak 6850-7100 Dak.

DIAGRAMATIC SKETCH OF PROPOSED TRIPLE COMPLETION FOR JICARILLA WELL # 1-4

JOHNSTON AND SHEAR
ALBUQUERQUE, NEW MEXICO

APPLICATION FOR TRIPLE COMPLETION OF JICARILLA WELL # 1-4, IN PICTURED CLIFFS, GALLUP & DAKOTA FORMATIONS

RIO ARRIBA COUNTY
NEW MEXICO

JICARILLA
CONTRACT # 10

Drawn: W.H. McGahey
Approved: R. Phillips

Scale: 400' = 1"
Date: 2-3-60

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. 2
CASE NO. 1911

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

March 11,1960

Mr. Burns Errebo
P. O. Box 466
Albuquerque, New Mexico

Dear Mr. Errebo:

On behalf of your client, Johnston and Shear, we enclose two copies of Order R-1629 in Case 1911, issued by the Oil Conservation Commission this date.

Very truly yours,

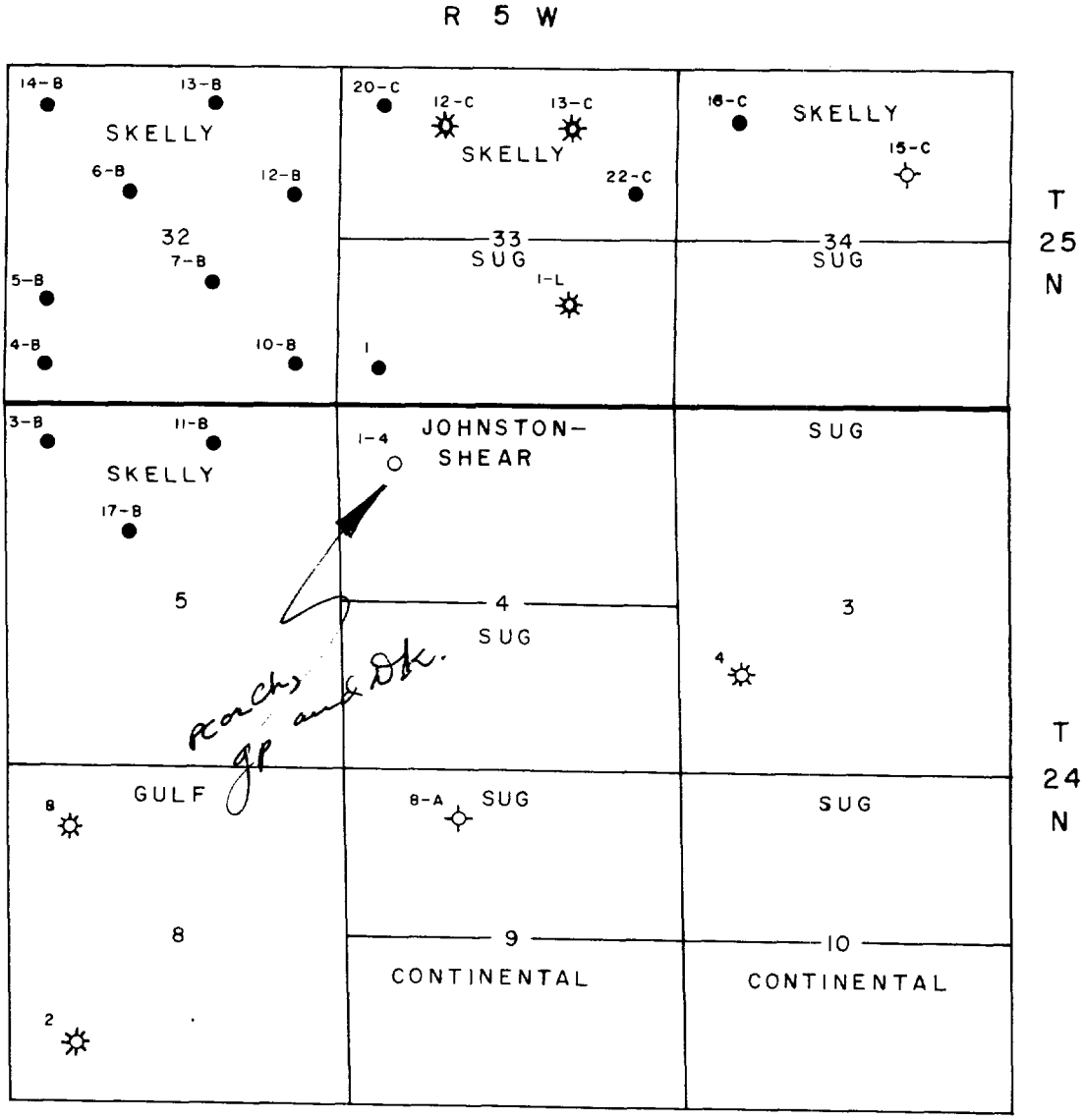
A. L. PORTER, Jr.
Secretary-Director

ir/

Enclosures: (2)

ccc
Carter Haston

COPY



LOCATION AND OWNERSHIP PLAT FOR
FOR JICARILLA WELL # 1-4 IN
SEC. 4, T 24 N – R 5 W

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Cappel EXHIBIT NO. 1
CASE NO. 1911

JOHNSTON AND SHEAR
ALBUQUERQUE, NEW MEXICO

APPLICATION FOR TRIPLE COMPLETION
OF JICARILLA WELL # 1-4, IN
NW/4 NW/4 SEC. 4, T 24 N – R 5 W

RIO ARRIBA COUNTY
NEW MEXICO

JICARILLA
CONTRACT # 10

Drawn: W.H. McGahey
Approved: R. Phillips

Scale: 1" = 3000
Date: 2-3-60

Case 1911

NUCLEAR ORIENTOR JOB REPORT

Operating Base: Pampa

Prepared By: B. J. McEver

Customer: Texaco, Incorporated

Date: 1-25'60

Field: Frass - Atoka

Well: Anna Frass E-2

Bore Hole Size: 7-7/8"

Casing Size & Wt.: 2-7/8" O.D. 6-25#

No of Strings: 2

Depth of Each: 8448' (Short String)
8850' (Long String)

Total Depth: 8850'

Gun Type and Size: 1-7/8" Sidewinder

Shooting Zone: 8306' - 16' (Short String)
8810' - 8795' (Long String)

Number Perforations: 20 Short
30 Long

No. Sinker Bars Run: 1

Running Speed: 10 ft. per min. for logging collars

Sensitivity: 0.8

Time Constant: Step. 6

Casing Collars: 8242 - 8215 - 8204-1/2

Type Cam Rach (Check One): No. One ____X____ No. Two _____

Ring Dia. of Friction Springs on Cam Rack: 2-7/8" Centralizer: 2-5/8"

No Rotations to obtain 360°: Made only ten steps.

(Attach a copy of log with position well was shot noted on it.)

Remarks: (include anything unusual such as suspected position of casing in the well, how the casing was run, strapped together or individual, trouble, etc.)

Casing run individually.
Casing compound 60 was placed in thread dope of four collars of Short String. This did not show on Long String PFC.

NUCLEAR ORIENTOR JOB REPORT

Operating Base: Okla. City

Prepared By: D. S. McHee

Customer: Carter Oil Co.

Date: 1/9/59

Field: No. Dover

Well: C.H. Moery #1

Bore Hole Size: 7 7/8"

Casing Size & Wt.: 2 7/8" 6 1/2#

No. of Strings: Two

Depth of Each: 7254 & 6573'

Total Depth: 7254'

Gun Type and Size: 1 7/8" Sidewinder

Shooting Zone: 6490' to 6509'

Number Perforations: 24

No. Sinker Bars Run: None on 1st run
One on 2nd run

Running Speed: Appox. 100 ft/min.

Sensitivity:

Time Constant:

Casing Collars:

Type Cam Rack (Check one): No. One Rewor Mod #1 #1 with offset pawl No. Two

Ring Dia. of Friction Springs on Cam Rack: 3" Centralizer: 2½"

No. Rotations to obtain 360°: 14 on 1st run; didn't go thru complete cycle on second run.

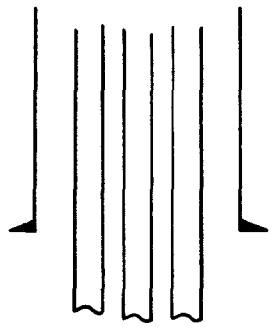
(Attach a copy of log with position well was shot noted on it.)

Remarks: (Include anything unusual such as suspected position of casing in the well, how the casing was run, strapped together or individual, trouble, etc.)

Casing was run individually.

Both strings of casing were filled with fresh water

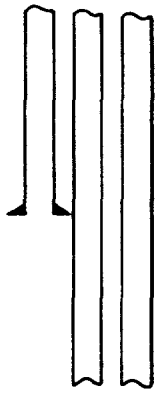
Customer representatives: John Daly
Pete Chambers
Paul McDaniel



10¾" OD Casing at 200'
Cement to surface.

Ojo Alamo
2450-2500 cover P.C.

2500
9 7/8 hole.



2⅞" OD Casing at 3100',
Cement to 2500'.

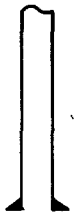
MV -

5300
5550-5900

2⅞" OD Casing at 5960', 4 3/4 hole
Cement to 5300'

6500 Greenhorn
600 above top Perf.

6 3/4 hole



2⅞" OD Casing at 7100',
Cement to 6500'.

DIAGRAMATIC SKETCH OF PROPOSED TRIPLE COMPLETION FOR JICARILLA WELL # 1-4

ILLEGIBLE

JOHNSTON AND SHEAR
ALBUQUERQUE, NEW MEXICO

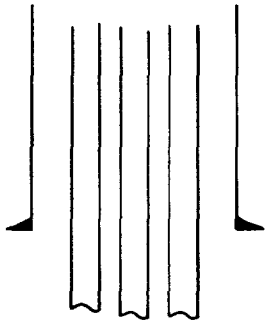
APPLICATION FOR TRIPLE COMPLETION OF JICARILLA WELL # 1-4, IN PICTURED CLIFFS, GALLUP & DAKOTA FORMATIONS

RIO ARRIBA COUNTY
NEW MEXICO

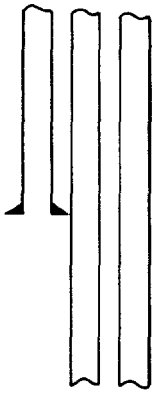
JICARILLA
CONTRACT # 10

Drawn: W.H. McGahey
Approved: R. Phillips

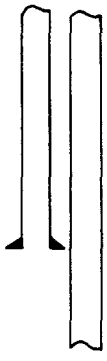
Scale: 400' = 1"
Date: 2-3-60



10¾" OD Casing at 200',
Cement to surface.



2⅞" OD Casing at 3100',
Cement to 2500'.



2⅞" OD Casing at 5900',
Cement to 5300'.

2⅞" OD Casing at 7100',
Cement to 6500'.

DIAGRAMATIC SKETCH OF PROPOSED TRIPLE COMPLETION FOR JICARILLA WELL # 1-4

JOHNSTON AND SHEAR
ALBUQUERQUE, NEW MEXICO

APPLICATION FOR TRIPLE COMPLETION OF JICARILLA WELL # 1-4, IN PICTURED CLIFFS, GALLUP & DAKOTA FORMATIONS

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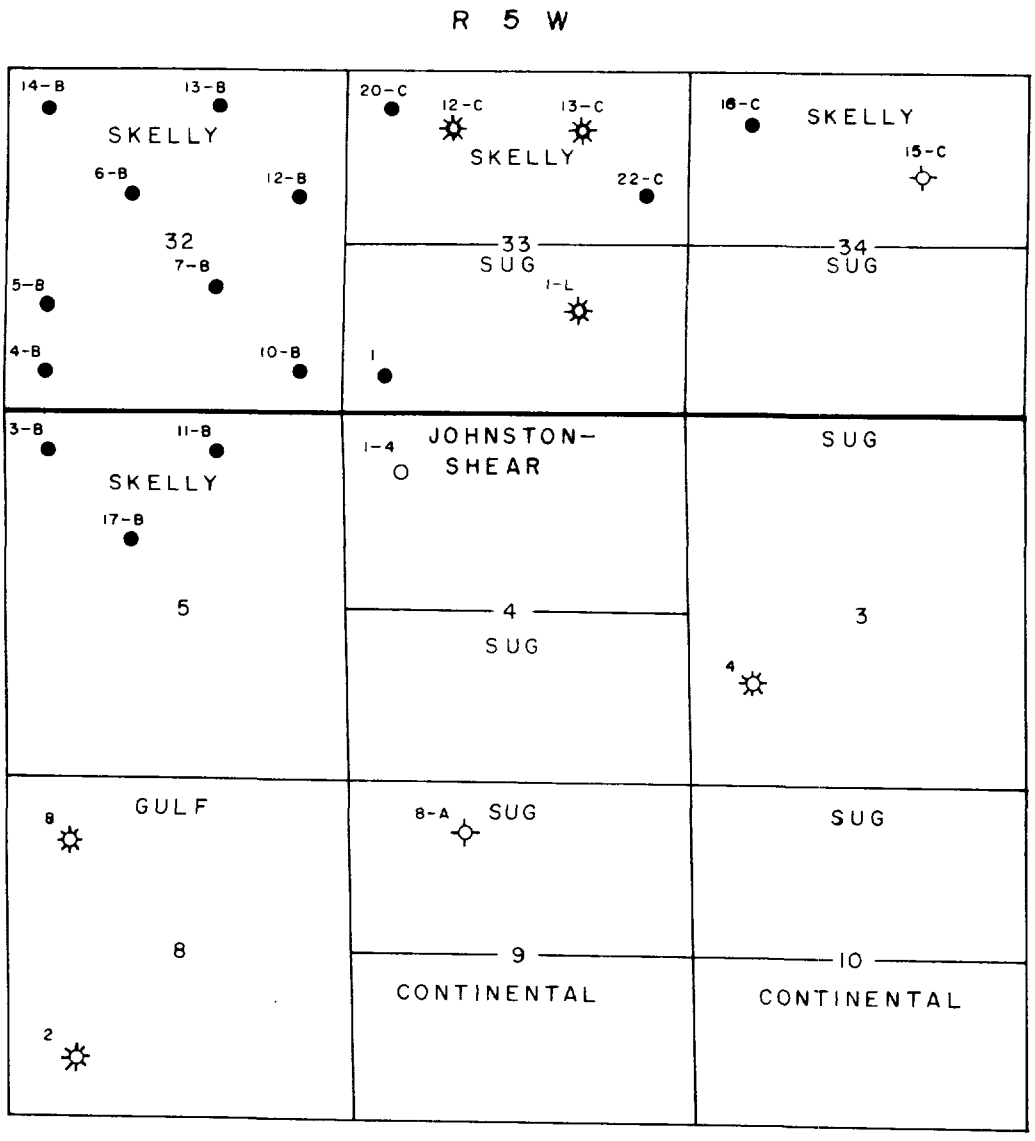


LOCATION AND OWNERSHIP PLAT FOR FOR JICARILLA WELL # 1-4 IN SEC. 4, T 24 N – R 5 W

JOHNSTON AND SHEAR
ALBUQUERQUE, NEW MEXICO

APPLICATION FOR TRIPLE COMPLETION OF JICARILLA WELL # 1-4, IN NW/4 NW/4 SEC. 4, T 24 N – R 5 W

RIO ARRIBA COUNTY
NEW MEXICO

JICARILLA
CONTRACT # 10

Drawn: W.H. McGahey
Approved: R. Phillips

Scale: 1" = 3000
Date: 2-3-60

SKELLY OIL COMPANY

TULSA, OKLAHOMA

PRODUCTION DEPARTMENT
C. L. BLACKSHER, VICE PRESIDENT
W. P. WHITMORE, GENERAL MANAGER

February 15, 1960

Case No. 1911
Hearing: February 25, 1960

Johnston and Shear
Aspen Drilling Company
3010 Monte Vista Blvd., N.E.
Albuquerque, New Mexico

Gentlemen:

This is to advise that we have no objection to your proposed Multiple Zone "Slim Hole" Completion for your Jicarilla Well No. 1-4, located in the NW/4 of Section 4, Township 24N, Range 5W, Rio Arriba County, New Mexico, which will offset Skelly's Jicarilla "B" Lease. In looking over your proposal, we note that you will cement surface casing at 200' to surface; the casing at 3100' with cement to 2500'; casing at 5900' with cement to 5300'; and casing at 7100' with cement to 6500'. It is our suggestion that the Commission should require you to cover both the Pictured Cliffs and Chacra Zones with cement when cementing the casing, and we presume that your proposal will do this.

Yours very truly,

(Signed) GEORGE W. SELINGER

George W. Selinger

GWS/gl

cc: Oil Conservation Commission
State of New Mexico
Post Office Box 871
Santa Fe, New Mexico

Mr. P. E. Cosper

COLLAR LOCATOR

Locates collars and records them at the surface to insure correct depth for perforating operation.

NUCLEAR ORIENTOR *

Scans the well bore in the zone of interest and records at the surface the location of adjacent strings of casing. Confirms final positioning of perforator prior to shooting.

ROTATOR

Turns the Orientor and Perforator assembly in the zone of interest. Operated by raising or lowering the tool. Friction springs anchor the Rotator in the casing.

PERFORATOR

Any small diameter gun suitable for the application may be used. Lane-Wells offers a complete line of the deepest penetrating, small diameter guns available.

*Trademark of Lane-Wells Company.

For more information about Directional Perforating ask your Lane-Wells representative or write to:

LANE-WELLS COMPANY

A Division of Dresser Industries, Inc.

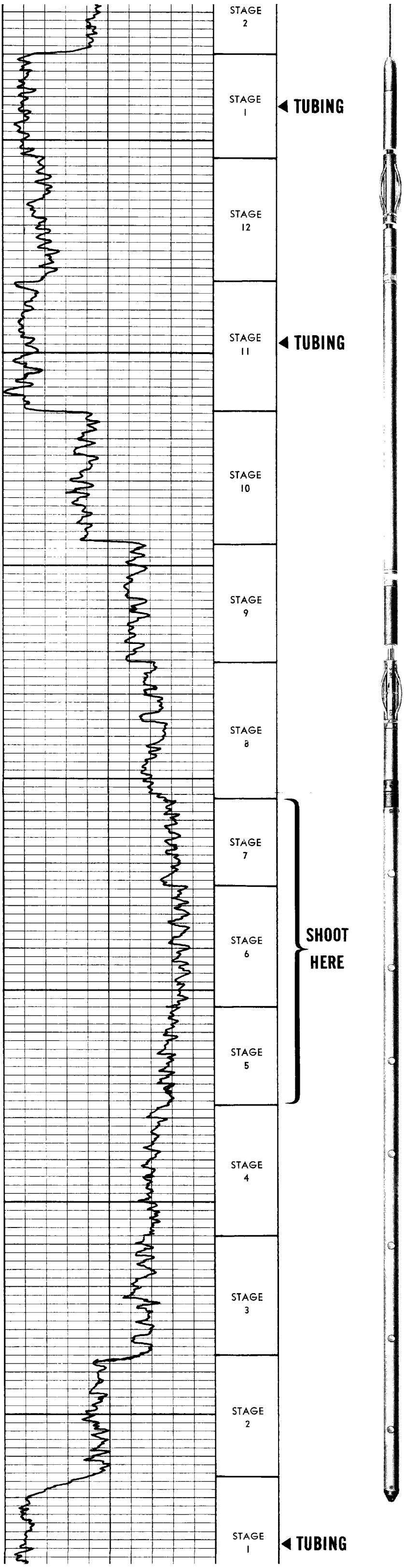
P. O. BOX 1407
HOUSTON 1, TEXAS

SHOOT HERE

BE[illegible]RE
OIL [illegible] SE
CA[illegible]

. . . POSITIVE,

PERFORATING FOR MULTIPLE STRING COMPLETIONS



Lane-Wells Directional Perforator makes it possible to perforate a single string in a multiple string, tubingless completion on a single run in the well. This combination device locates collars to insure correct depth of perforations, locates the other strings of casing at the shooting depth, orients the perforator to perforate away from the other strings, and perforates the desired zone all on one run.

Run by a standard Lane-Wells perforating-logging unit on a standard conductor line the Directional Perforator consists of a Collar Locator, a Nuclear Orientor, a Rotator, and a Perforator. A surface recorder records the location of collars and the location of other casing strings. The entire operation is conducted only in the casing to be perforated. No radioactive substances are injected or mechanical device placed in any other casing strings. The other strings are not disturbed in any way and can be kept on production, if desired, during the entire operation.

The Collar Locator picks collars on the trip into the well. When the zone of interest is reached, the Nuclear Orientor scans the zone to locate the position of the other casing strings. This scanning is carried out in stages during which the Orientor indicates the presence or absence of casing in a narrow zone immediately in front of the gun. These indications are recorded visually at the surface.

At the completion of the scanning of a stage, the Orientor and Perforator are rotated to the next stage. This is done by raising or lowering the tool. Only three inches of travel up or down the hole is required for the Rotator to move the Orientor to the next scanning stage.

The scanning by stages operation is continued around the pipe for at least two complete revolutions. This insures a double check of the location of the other casing strings in relation to the string to be perforated. The Perforator is then positioned positively by the same Rotator to shoot only in the safe zone away from the other strings. This positioning is double checked with the Nuclear Orientor before firing.