STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

7/16/96

GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

R-10314

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC _____
DHC _____
NSL _____
NSP _____
SWD _____
WFX _____
PMX X

Gentlemen:

I have examined the application for the:

Southwest Royalties Inc Farnsworth A #1-P 13-26-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☒ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☒ no
* Amend Injection Interval Order # R-10314

II. Operator: Southwest Royalties, Inc.

Address: P. O. Box 11390; Midland, TX 79702

Contact party: Matthew Doffer Phone: 915 686-9927 or 800 433-7945

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Matthew Doffer Title Petroleum Engineer

Signature: Matthew Doffer Date: 7-10-96

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

ATTACHMENT TO FORM C-108
APPLICATION FOR AUTHORIZATION TO INJECT
SOUTHWEST ROYALTIES, INC.
FARNSWORTH A #1
EDDY COUNTY, NEW MEXICO

VII Proposed Operation

The Farnsworth A #1 well will be used to inject produced water, for pressure maintenance, from other wells on the Farnsworth lease via a closed disposal system.

Proposed average injection rate and pressure: 10,000 BWPD @ Vacuum.

Proposed maximum injection rate and pressure: 12,000 BWPD @ 100 psi.

VIII Geological Data

This produced water will be injected into the Yates-Seven Rivers formation which is located from 2714' to 3417'. The Yates-Seven Rivers formation consists mostly of sand and lime.

The source of underground drinking water in the are is the Ogallala formation (base at ±200').

XII I have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIV PROOF OF NOTICE

A COPY OF THE APPLICATION TO INJECT HAS BEEN FURNISHED TO THE FOLLOWING BY CERTIFIED MAIL.
MAILED 7-11-96.

SURFACE OWNER

JAY & CARY ANTHONY, et al
P. O. BOX 398
JAL, NM 88252

LEASE HOLDERS WITHIN ONE-HALF MILE

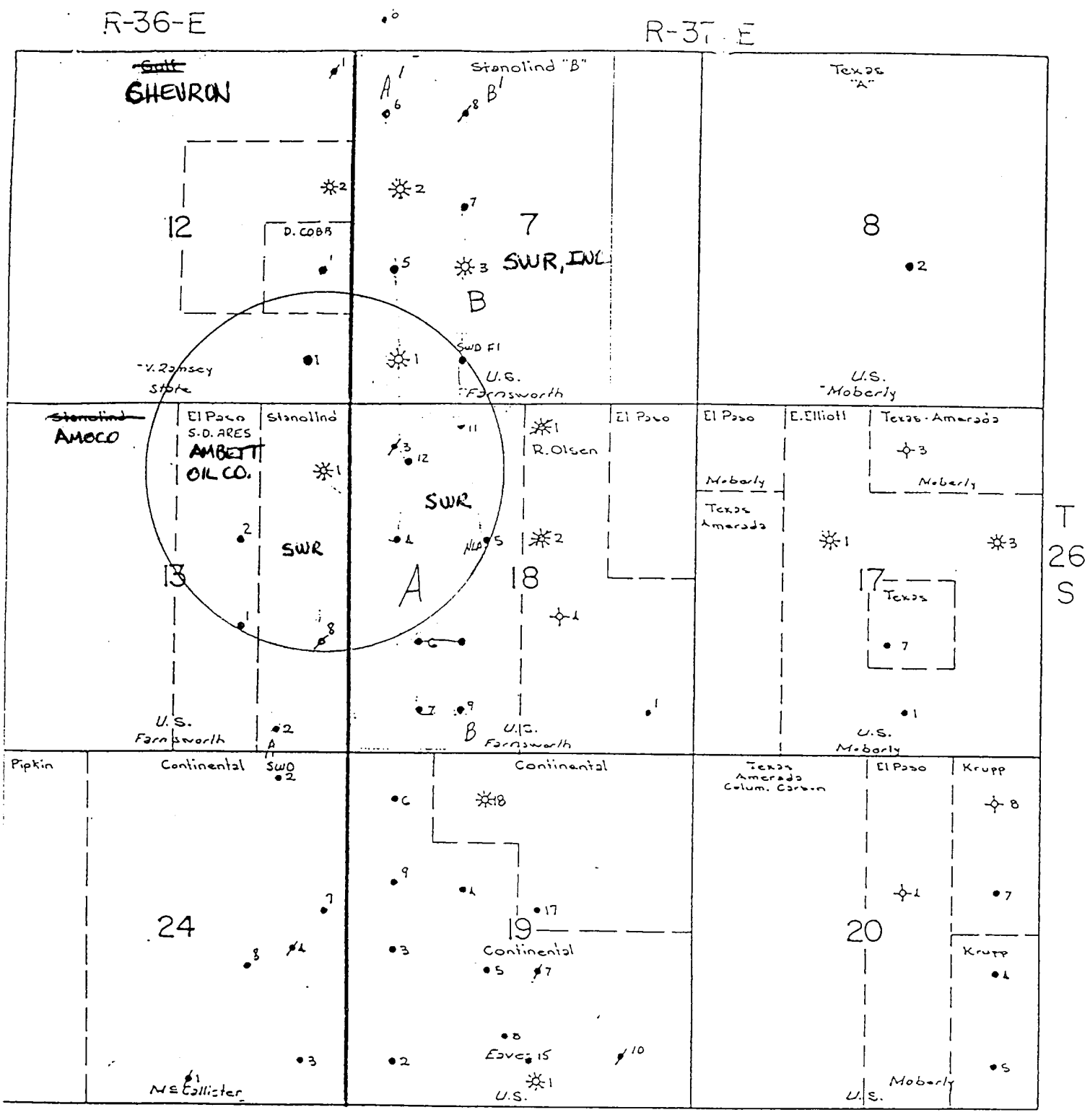
AMBETT OIL CO.
P. O. BOX 755
HOBBS, NEW MEXICO 88241

AMOCO
P. O. BOX 4072
ODESSA, TEXAS 79760

CHEVRON
P. O. BOX 1150
15 SMITH RD.
MIDLAND, TEXAS 79702

D. (DALTON) COBB
P. O. BOX 50670
MIDLAND, TX 79710
683-6116


Received
Hours



SOUTHWEST ROYALTIES, INC.

~~HAL J. RASMUSSEN OPERATING, INC.~~

FARNSWORTH A-1

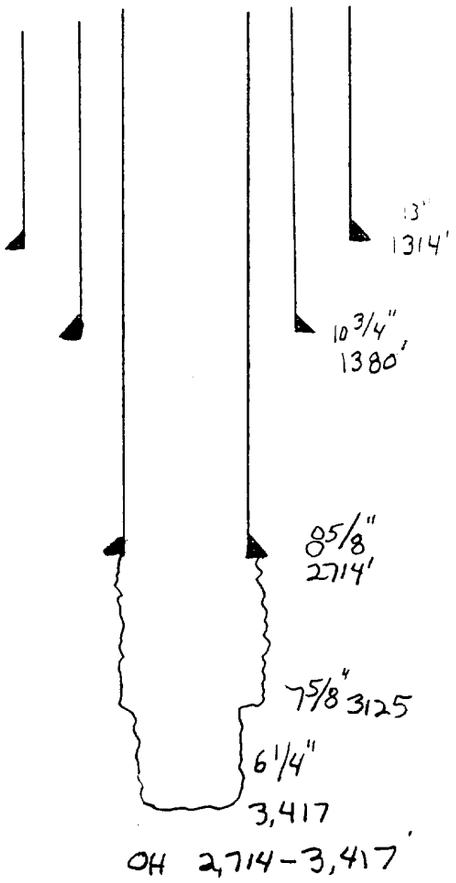
SEC. 13-T26S-R36E

LEA COUNTY, NM

Southwest Royalties, Inc.	Farnsworth A	API 30 0250 9854
OPERATOR	LEASE	

1	990' FNL & 330' FEL	13	26S	36E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 13 " Cemented with 75 sx.

TOC Surface feet determined by circulation

Hole size 17-1/2"

Intermediate Casing

Size 10-3/4 " Cemented with Mudded sx.

TOC - feet determined by

Hole size 12-1/4

Long string

Size 8-5/8 " Cemented with 60 sx.

TOC 2050 feet determined by calculation

Hole size 9-7/8

Total depth 2714'

Injection interval

2714 feet to 3417 feet

(perforated or open-hole, indicate which)

Tubing size 4-1/2" lined with Plastic Coated (material) set in a

Baker Model AD-1 (Tension) (brand and model) packer at 2670 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Yates Seven Rivers

2. Name of Field or Pool (if applicable) Scarborough Yates Seven Rivers

3. Is this a new well drilled for injection? [ ] Yes [X] No

If no, for what purpose was the well originally drilled? oil

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

No other perforations

Produced through OH intervals between 2714'-3125'

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. No known underlying oil & gas zones.

No known overlying oil & gas zones.

GAMMA RAY

RADIATION INTENSITY INCREASES

CASING & COLLAR LOG DEPTH

NEUTRON

RADIATION INTENSITY INCREASES

8 5/8"

2700

2800

2900

3000

Wells In Area of Review

Application For Authorization To Inject

~~HAL J RASMUSSEN OPERATING, INC.~~
SOUTHWEST ROYALTIES, INC.

FARNSWORTH B-1

660' FSL & 660' FWL — Section 7 T26S R37E

Type: oil — Date Drilled: 4/34

Total Depth: 2980'

Casing Record:

Size	Depth	Sacks Cement
13"	505	210
8 5/8	2830'	425

Completion:

5/34 OH 2830'-2980'.

12/65 INPE

4/94 Proposed WO. Put on submersible pump.

FARNSWORTH #1 SWD

660' FSL & 1660' FWL — Section 7 T26S R37E

Type: SWD — Date Drilled: 10/65

Total Depth: 3029'

Casing Record:

Size	Depth	Sacks Cement
8 5/8	357	200
5 1/2	3029	150

Completion

FARNSWORTH A-3

680' FNL & 660' FWL — Section 18 T26S R37E

Type: P&A — Date plugged: 8/64

P&A operations:

1. spotted 25 sx across perfs @ 3122-28'.
2. cut & pulled 7" casing from approx. 1600'.
3. spotted 30 sx cement plug in and out of 7" casing stub @ 1600'.
4. cut & pulled 9 5/8" casing from approx. 1200'.
5. spotted 30 sx cement in and out of 9 5/8" stub @ 1200'.
6. spotted 30 sx cement plug in and out of 13 3/8" shoe at 482'.
7. spotted 10 sx cement plug at surface & erected P&A marker.

FARNSWORTH A-4

1980' FNL & 660' FWL — Section 18 T26S R37E

Type: oil — Date Drilled: 3/36

Total Depth: 3205'

Casing Record:

Size	Depth	Sacks Cement
13"	510'	300
9 5/8"	2645'	700
7"	3028'	125
5 1/2" T.L. 2884'	TD 3200'	150

4/36 PBTD 2975'. Perfs @ 2946-49

2/38 put on gas lift

10/45 drilled out cement plug. PBTD 3030'.

8/48 PB w/ cmt to 3019'. Perf @ 2996-3004'. sqz perfs. Perf @ 2950-70'.

1/56 Deepen to 3200'. Run 316' 5½" liner to TD. Perf @ 3162-84'. Sqz perfs. Set BP @ 3195'. Perf @ 2755'-2865'.

11/65 Set CIBP @ 2995'. Perf @ 2987-93'. POP

1994 Shut-in

FARNSWORTH A-5

1980' FNL & 1980' FWL

Section 18 T26S R37E

Type: oil

Date Drilled: 8/37

Total Depth: 3146'

CASING RECORD:

SIZE	DEPTH	SACKS CEMENT
15½"	49'	40
10¾"	502'	200
7"	2785'	400

Completion:

9/37 PBTD 3134'

6/52 INPE

5/82 SI

FARNSWORTH A-8

1650' FSL & 330' FEL — Section 13 T26S R36E

Type: P & A — Date Drilled: 2/63

Date Plugged: 7/63 — Total Depth: 3306'

Casing Record:

Size	Depth	Sacks Cement
8 5/8"	329	100
4 1/2"	3306	200

Plugging Record:

1. spotted 25 sx cement plug across perfs @ 3080-97'
2. pulled 4 1/2" casing from 2530'.
3. spotted 25 sx plug in and out of stub.
4. spotted 25 sx plugs @ 1290' and 329'
5. spotted 10 sx cement plug at surface & installed marker.

FARNSWORTH A-11

330' FNL & 1660' FWL

Section 18 T26S R37E

Type: oil

Date Drilled: 10/65

Total Depth: 3318'

CASING RECORD:

Size	Depth	Sacks Cement
8 5/8	372	200
5 1/2	3318	270

10/65 Perf @ 3204'-08'. Sqz perfs. PBTD 3071'
Perf @ 3041'-45'.

11/65 Add perfs @ 3024'-32'.

5/70 Set RBP @ 3019. Perf @ 2869'-3016' & test. POOH w/ RBP.
Rerun tbg & pkr. Set @ 3020'.

2/90 POP

1994 Shut-in

FARNSWORTH A-12

890' FNL & 890' FWL — Section 18 - T26S - R37E

Type: oil — Date Drilled: 1/79

Total Depth: 3350'

Casing Record:

Size	Depth	Sacks Cement
9 5/8"	1133	700
7"	3350	950

Completion:

1/79 Perf @ 3181'-89'. INPE

2/79 set CIBP @ 3148'. Perf @ 3081-87.'

3/79 set CIBP @ 3060'. Perf @ 2989-94'. INPE

4/79 SI

1/85 set CIBP @ 2960'. Perf @ 2743'-2911'.

5/89 spotted cement plug. tagged @ 2623'.

partial plug & abandon.

5/90 drilled cement to 2870'. Acidize & Frac. perfs @ 2743'-848'.

5/94 SI. Proposed workover & put back on production.

El Paso Natural Gas #1

1980' FSL & 1650' FEL — Section 13 T26S R36E

Type: oil — Date Drilled: 12/62

Total Depth: 3259'

Casing Record:

Size	Depth	Sacks Cement
8 5/8	352	200
4 1/2	4699	450

Completion:

12/62 Perf @ 3206-10.

El Paso Natural Gas #2

1980' FNL & 1650' FEL — Section 13 T26S R36E

Type: oil — Date Drilled: 1/63

Total Depth: 3371'

Casing Record:

Size	Depth	Sacks Cement
8 5/8	374	375
5 1/2	3371	125

3/63 Perf @ 3322-26'. Set CIBP @ 3300'.

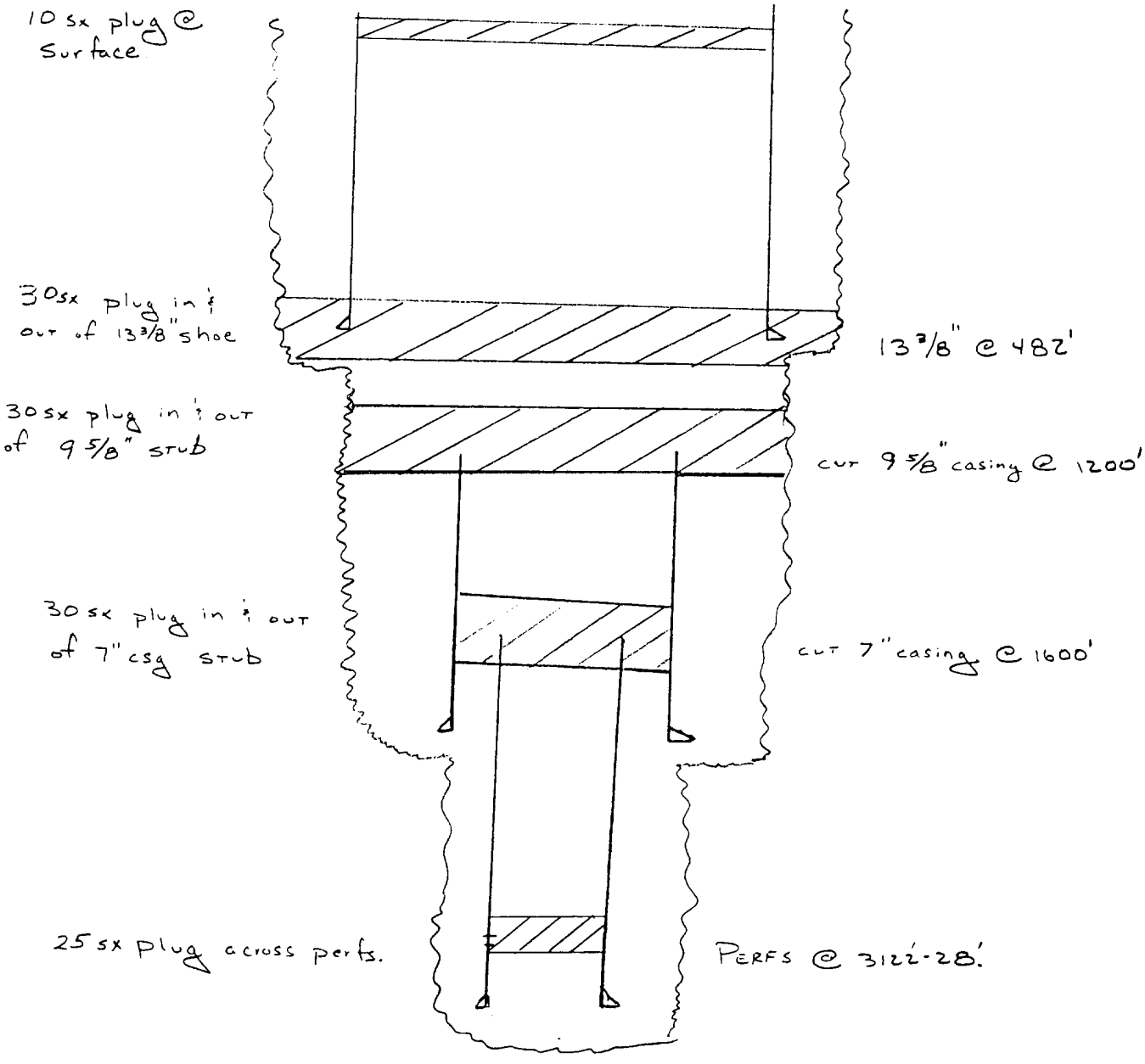
Perf @ 3165-77.

10/71 Set CIBP @ 3150'.

Perf @ 3116'-30'.

IRNSWORTH A-3

680' FNL & 660' FWL
Section 18 - T26S - R37E

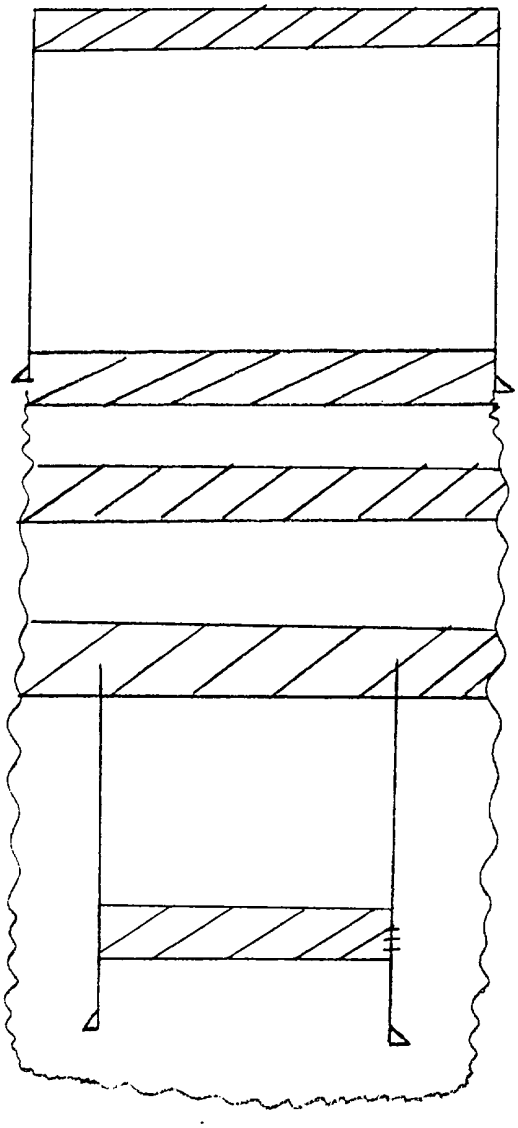


P & A 8/64

FARNSWORTH A-8

1650' FSL & 330' FEL

Section 13-T26S-R36E



P & A : 7/63