STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Noel Reynolds

Address: c/o A. R. Kendrick, Box 516, Aztec, New Mexico 87410

Contact party: A. R. Kendrick Phone: (505) 334-2555

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 R-2975.

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: A. R. Kendrick Title Agent

Signature: A R Kendrick Date: July 28, 1983

* 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.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

A. R. "Al" Kendrick

P. O. Box 516 • Aztec, New Mexico 87410 • (505) 334-2555

July 28, 1983

Oil Conservation Division
Box 2088
Santa Fe, New Mexico 87501

Re: Application for Authorization to Inject

Noel Reynolds
Ann Injection #1
750' FNL 430' FEL
Sec. 33, T18N, R3W

Noel Reynolds
Darla Injection #1
1750' FNL 1230' FEL
Sec. 33, T18N, R3W

Gentlemen:

Enclosed are two Application for Authority to Inject for the subject wells in the South San Luis-Mesaverde Oil Pool in Sandoval County, New Mexico.

Twenty-one wells have been drilled in this quarter section since 1956. The cumulative production from the pool has been reported as 361 barrels as of January 1, 1983. We believe that this evidence shows that there is oil in place and an apparent lack of reservoir energy to move the oil to the well bores.

It is our desire to salvage the oil from the reservoir by introducing the needed reservoir energy through the proposed injection wells.

If there are questions, please contact me.

Yours very truly,

A. R. Kendrick

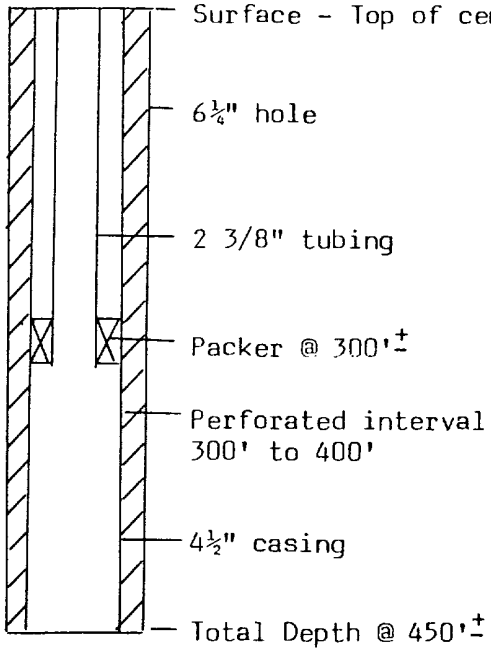
Encls.

INJECTION WELL DATA SHEET

OPERATOR Noel Reynolds WELL Ann Injection #1

LOCATION 750' FNL 430' FEL Sec. 33, T18N, R3W Sandoval COUNTY

SCHEMATIC



TUBULAR DATA

Surface casing None

Intermediate casing None

Production casing 4½" set @ 453 '

cemented with 40 sx. TOC surface

determined by observation

Hole size 6¼"

Total Depth 453'

Tubing size 2 3/8" lined with unlined set in a Larking (model unknown)

packer set @ 300' ± .

OTHER DATA:

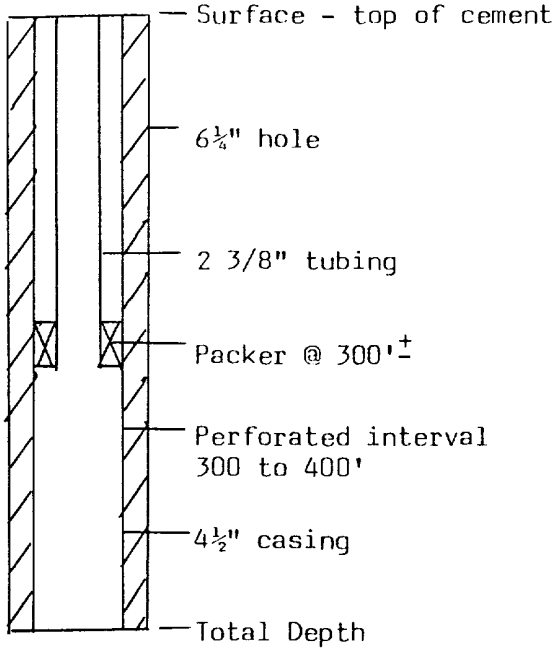
1. Name of injection formation Mesaverde formation (Menefee section)
2. Name of field or pool South San Luis-Mesaverde Oil Pool
3. Is this well drilled for injection? Yes
4. Has this well ever been perforated in another zone? No
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area None

INJECTION WELL DATA SHEET

OPERATOR Noel Reynolds WELL Darla Injection #1

LOCATION 1750' FNL 1230' FEL Sec. 33, T18N, R3W Sandoval COUNTY

SCHEMATIC



TUBULAR DATA

Surface casing None

Intermediate casing None

Production casing 4½" set @ 450' ±

Cemented with 40 sx. TOC surface

Determined by observation

Hole size 6¼"

Total Depth 450' ±

Tubing size 2 3/8" lined with unlined set in a Unknown at this time packer set @ 300'±.

OTHER DATA:

1. Name of injection formation Mesaverde formation (Menefee section)
2. Name of field or pool South San Luis-Mesaverde Oil pool
3. Is this well drilled for injection Yes
4. Has this well ever been perforated in another zone? No
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area None

R 3 W

T 18 N

T 17 N

19 20 21 22 23

30 29 28 27 26

31 32 33 34 35

6 5 4 3 2

7 8 9 10 11

HUGHES & ROLLINS 1 - Rollins TD 1503

JENKIN & MCQUEEN 1-Gortner TD 3435

G & R OIL 1- Harvey TD 1265

F.B. UMBARGER Gortner TD 1051 TD 1284

C.B. HARVEY 1 - Fed TD 913

ROLLINS & DODGEN 1 TD 1305

J. HARVEY ST. - 4 TD 1375

REYNOLDS 1- Torreon TD 1064

J. HARVEY Gortner 3 TD 1094

TORREON San Luis Fed 5 TD 1379

NOEL REYNOLDS 2 - Torreon 6-A TD 1040

PET. DEV. 1-San Luis Fed TD 1031

J. MYERS 3-Harvey A TD 606

N. REYNOLDS 1- Torreon TD 1050

C. HARVEY 1-A1 TD 7301

1-A TD 938

4-Harvey A TD 928

K.L. RISING 5 - Fed TD 1000

REYNOLDS 1- Harvey TD 1023

J. MYERS 1-King TD 926

1X-King TD 945

J. HARVEY 2A - Harvey Fed TD 910

E.W. CANNEDY 3-Gortner TD 840

WOOSLEY 1 - Fed TD 990

J. MYERS 1 - Fed TD 920

ROLLINS & DODGEN TD 560 TD 512 TD 540 TD 584 TD 239 TD 520

B. DODGEN Yon Yon-Hay

K. RISING Fed-28

EL PAM 3 - Myra TD 935

W.W. HOLMES 1 - Rorex - Fed TD 1220

W.W. HOLMES 1 - Holmes A TD 1270

J. HARVEY 1 E-X TD 20

TENNECO 4 - Torreon Core Test TD 1150

A.H. STOWE Timmy Fed. TD 920 TD 600 TD 605

EL PAM Myra TD 520 TD 560 TD 520

TENNECO 6 Torreon Core Test

B. FRANKLIN 2 TD 1264

STOWE Fed - 1 TD 1010

EL PAM 1 - Demos TD 550

RUTH ROSS 2 - So. San Luis TD. 400

TENNECO 7 - Torreon C. T. TD 1150

Ann-1 TD 1010 Ann-2 TD 550 Ann-6 Ann-1 (Inj.) Ann-5 TD 450 Ann-4 Ann-15 Fed 33 Ann-3 TD 378 Ann-14 TD 3382 EK-17 Ann-18 Ann-10 TD 387 TD 360 Ann-11 Dorla TD 432 Ann-9 TD 350 Fed-2 TD 820 Dorla-1 TD 353 Dorla-8 TD 410 Dorla-3 TD 450 Ann-13 TD 500

Hughes Rollins TD 1800

PUBLIC PET. 1 - Franklin TD 520

TENNECO 2 - Torreon Core Test TD. 987

C. GOAD 8 - Gala TD 4075

GOLA OIL TD 380 TD 600 TD 600 TD 600 TD 600 TD 410

TENNECO 1 - Torreon Core Test TD 1603

H.B. BROWNING 1 TD. 703

BRINKERHOFF 1 - Gabezon TD 7975

LEGEND

- OIL WELL
- P & A OIL WELL
- P & A WELL
- ABANDONED LOCATION
- INSUF. COMPL. INFORMATION
- WATER INJECTION WELL
- WATER SUPPLY WELL

WELL LOCATION MAP

T17 & 18N, R3W N. M. P. M.

SANDOVAL CO, NEW MEX.

SCALE 1" = 1000'

PREPARED FOR —
Noel Reynolds
Farmington, N.M.

DATA SHEET - SUPPLEMENT TO C-108

V. See attached Map.

VI. See attached Well Tabulation Sheet.

VII. Operation Data

1. Injection
   A. Injection Rates
      Average = 60 BWPD
      Maximum = 100 BWPD
   B. Proposed Volume = 100,000 Barrels
2. System is open.
3. Proposed pressures
   A. Maximum = 70 until step/rate tests are completed
   B. Average = 50 until step/rate tests are completed
4. Source of injection fluid
   The water source well is located 1224' FNL 968' FEL of Section 33, T18N, R3W, (on the lease) and is producing water from the Point Lookout section of the Mesaverde formation. Compatability seems to be good.
5. Not applicable.

VIII. The geology of the area. The reservoir is a series of sand bars of near-shore marine deposition intermingled with shales all of which seem to have been affected by stream bed arrangement in the immediate area. There are no known domestic water wells within one mile of the injection wells. However, all source water wnd produced water has been determined to have less than 10,000 ppm total dissolved solid.

IX. Stimulation of the reservoir in the injection wells is not anticipated.

X. Well logs have been filed with the District Office of the New Mexico Oil Conservation Division.

XI. Analysis of water from the source water well is attached.

XII. Not applicable.

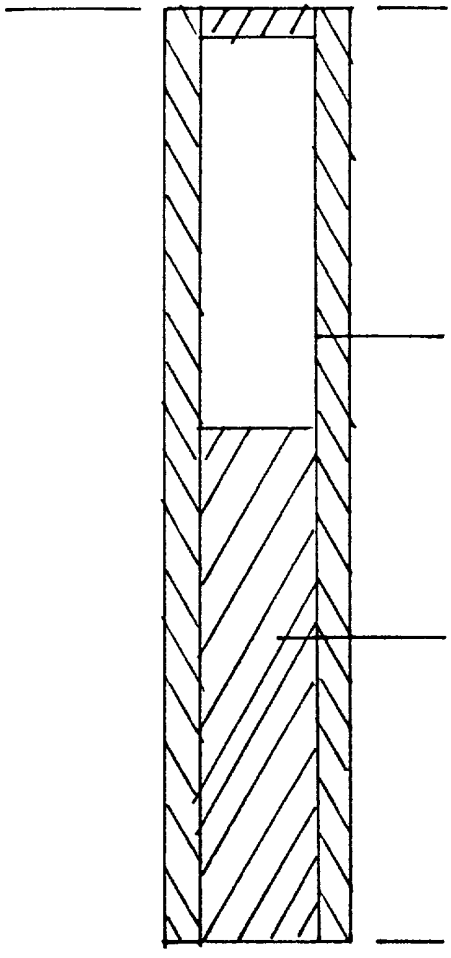
XIII. See photocopy of certified mail receipts.

WELL TABULATION SHEET

WELLS WITHIN ONE-HALF MILE OF INJECTION WELL

U	SEC	OPERATOR	WELL	LOCATION N-S	LOCATION E-W	SPUD	ELEV.	CASING SURFACE	CASING PRODUCTION	T.D.	STATUS
M	27	El PamCo, Inc.	Myra #1	330/S	330/W	11/01/65	6457G	------	4½ @ 500	500'	P&A
M	27	El PamCo, Inc.	Myra #2	330/S	990/W	10/30/65	6457G	------	4½ @ 520	520'	P&A
M	27	El PamCo, Inc.	Myra #4	990/S	330/W	11/25/65	6454G	------	4½ @ 520	520'	P&A
P	28	Arwood H. Stowe	Timmy #1	330/S	330/E	01/13/66	6471G	------	? @ 579	600'	T.A.
P	28	Arwood H. Stowe	Timmy #2	990/S	330/E	01/12/66	6476G	------	4½ @ 582	598'	T.A.
P	28	J. I. Harvey	Terry Federal #1	500/S	1100/E	12/01/60	6695G	8 5/8 @ 32	5½ @ 905	920	P&A
P	28	Arwood H. Stowe	Timmy #3	Re-entry of above well - no further information							
A	33	Noel Reynolds	Ann #1	326/N	1086/E	08/30/65	6520G	------	2 7/8 @ 620	1010'	T.A.
A	33	Noel Reynolds	Ann #2	354/N	420/E	09/05/65	6502G	------	2 7/8 @ 472	550'	T.A.
A	33	Noel Reynolds	Ann #3	902/N	576/E	10/02/63	6488G	8 5/8 @ 30	5½ @ 347	430'	Producer
A	33	Noel Reynolds	Ann #4	1029/N	1020/E	09/22/65	6474G	------	2 7/8 @ 400	430'	P&A
A	33	Noel Reynolds	Ann #5	994/N	321/E	09/12/65	6507G	------	4½ @ 440	450'	T.A.
A	33	Noel Reynolds	Ann #6	694/N	667/E	09/26/65	6503G	------	2 7/8 @ 442	450'	T.A.
A	33	Noel Reynolds	Ann #9	1301/N	824/E	10/09/65	6474G	------	2 7/8 @ 445	550'	T.A.
A	33	Noel Reynolds	Ann #15	1029/N	1016/E	06/27/76	6474G	------	5 9/16 @ 330	362'	T.A.
A	33	Entrada Corp.	Federal #1-33	990/N	990/E	11/03/57	6460DF	16 @ 30	-----	880'	P&A
A	33	Entrada Corp.	Federal #2-33	990/N	915/E	06/15/58	6464DF	8 5/8 @ 21	-----	401'	P&A
B	33	Noel Reynolds	Ann #10	665/N	1652/E	10/18/65	6478G	------	2 7/8 @ 450	450'	P&A
B	33	Ellsberry et al	Ann #17	621/N	1988/E	06/22/76	6470G	------	5 9/16 @ 320	360'	T.A.
B	33	Arwood H. Stowe	Ann #18	655/N	1662/E	02/12/77	6478G	------	5 9/16 @ 310	387'	T.A.
C	33	Arwood H. Stowe	Ann #14	660/N	1980/E	07/28/67	6459G	8 5/8 @ 100	-----	3382'	T.A.
G	33	J. I. Harvey	Federal #2	1650/N	1650/E	09/29/59	6590	6½ @ 30	-----	820'	P&A
G	33	Arwood H. Stowe	Ann #13	2619/N	1902/E	?	6440	------	4½ @ 450	500'	No records
G	33	Arwood H. Stowe	Ann #11	1376/N	1580/E	?	6480	------	-----	1010'	P&A
H	33	Noel Reynolds	Darla #1	1670/N	1014/E	10/15/79	6604G	8 5/8 @ 30	5½ @ 330	353'	Producer
H	33	Noel Reynolds	Darla #3	2297/N	1154/E	09/20/65	6461G	------	2 7/8 @ 400	450'	Producer
H	33	Noel Reynolds	Darla #7	1342/N	1166/E	09/30/65	6501G	------	2 7/8 @ 432	450'	Producer
H	33	Noel Reynolds	Darla #8	1986/N	649/E	11/18/65	6439G	------	-----	410'	T.A.
H	33	Noel Reynolds	Darla #16	1765/N	1001/E	06/29/76	6448G	------	5 9/16 @ 260	335'	Producer
J	33	Levi A. Hughes	Hughes-Rollins#1	2060/S	1485/E	10/15/61	6540G	10 3/4 @ 34	-----	1094'	P&A
D	34	El PamCo, Inc.	Demas #1	347/N	336/W	11/15/65	6640G	------	4½ @ 550	550'	P&A
D	34	Ruth Ross	So. San Luis #2	976/N	385/W	12/31/80	6480G	8 5/8 @ 40	-----	400'	P&A
D	34	Tenneco Oil Co.	Torreon Core #7	910/N	1190/W	08/04/67	6466G	8 5/8 @ 51	-----	1150	P&A
A	33	Noel Reynolds	Water Well #1	1224/N	968/E	09/??/65	6467G	7 @ ??	4½ @ 800	1001'	Water Well

El PamCo, Inc.
Myra #1
M-27-18N-3W



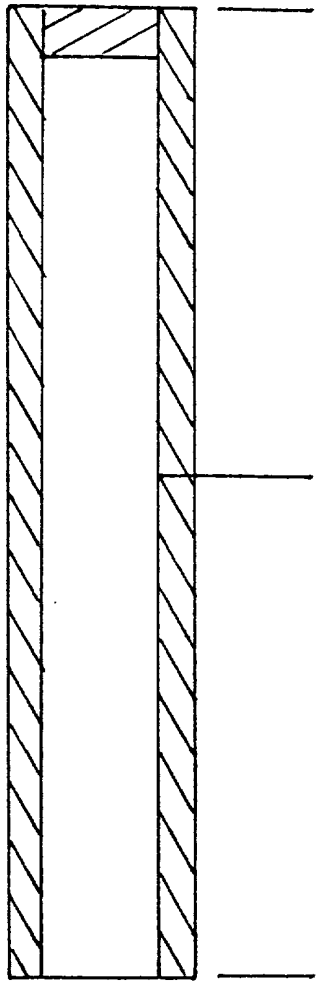
Surface plug 0' to 30'

4½" casing @ 500' in 6¼" hole
cement circulated

Bottom plug 250' to 500'

T.D. 500'

El PamCo, Inc.
Myra #2
M-27-18N-3W

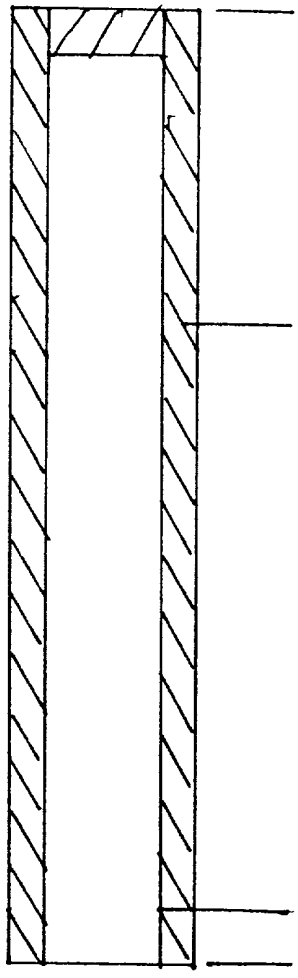


Surface plug 0' to 30'

4½" casing in 6¼" hole set @ 520'
cement circulated

T.D. 520'

El PamCo, Inc.
Myra #4
M-27-18N-3W



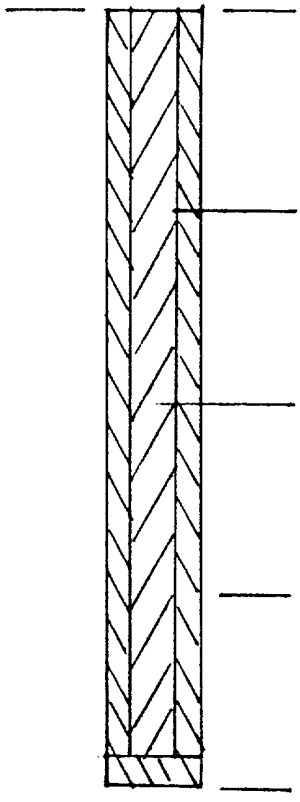
Surface plug 0' to 30'

4½" casing in 6¼" hole w/45 sx - circulated.

4½" casing @ 520'

T.D. 520'

Noel Reynolds
Ann #4
A-33-18N-3W



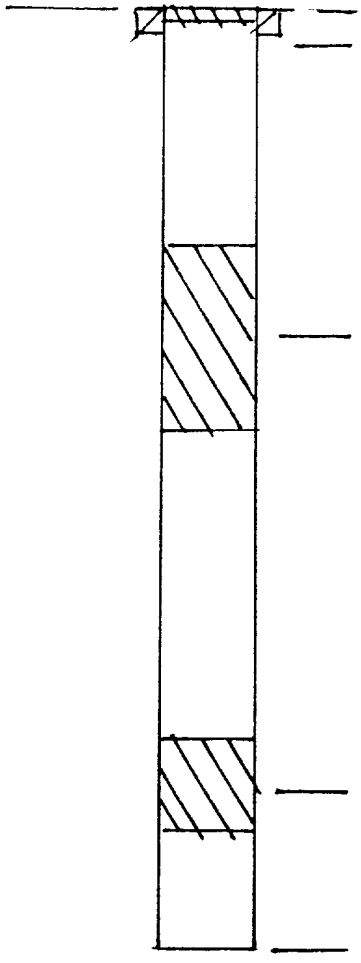
2 7/8" casing @ 400' cement circulated

Plugged from bottom to top with cement

Perforations: 318-323'
365-370'
398-400'

T.D. 430'

Entrada Corporation
Federal #1-33
A-33-18N-3W



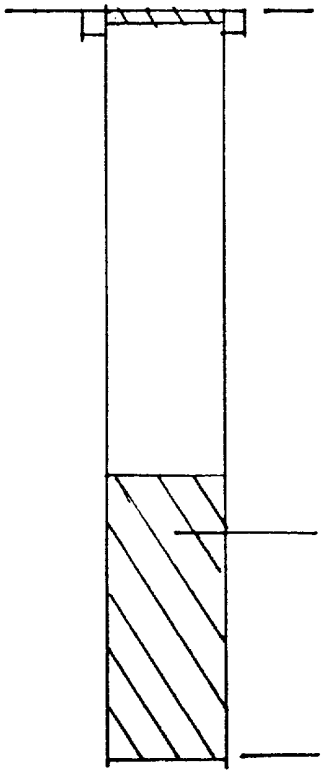
Surface plug 0' to 10'
16" casing @ 30'.

Intermediate plug 250-450'

Bottom plug 780-880'

T.D. 910'

Entrada Corporation
Federal #2-33
A-33-18N-3W

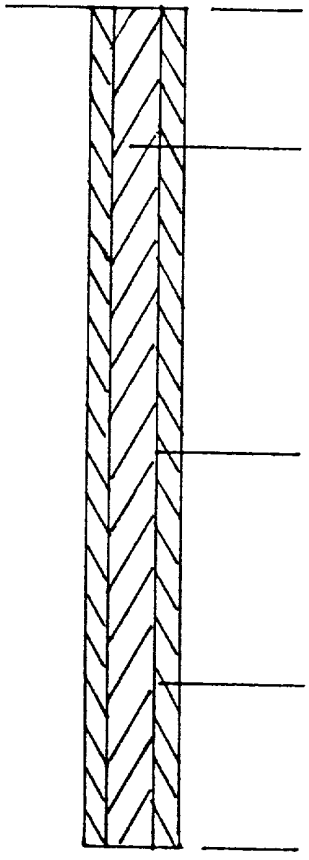


Surface plug 0' to 10'
8 5/8" casing @ 21'

Bottom plug 250-401'

T.D. 401'

Noel Reynolds
Ann #10
B-33-18N-3W



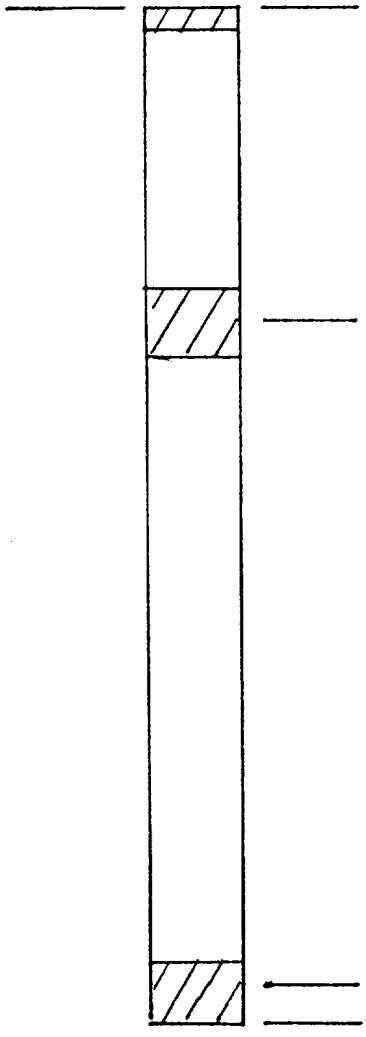
Plugged by filling with cement from bottom to top

2 7/8" casing set @ 450' in 5¼" hole
cement circulated

Perforated 369-379'

T.D. 450'

Levi A. Hughes
Hughes Rollins #1
J-33-18N-3W



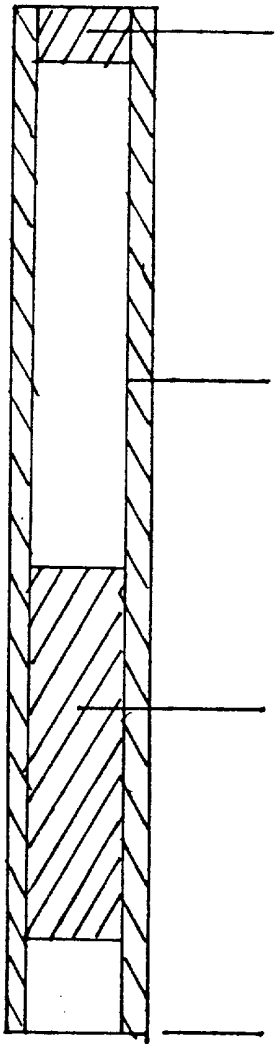
Surface plug 0' to 36'

Intermediate plug 300' to 354'

Bottom plug 1058' to T.D.

Total Depth 1094'

El PamCo, Inc.
Demas #1
D-34-18N-3W



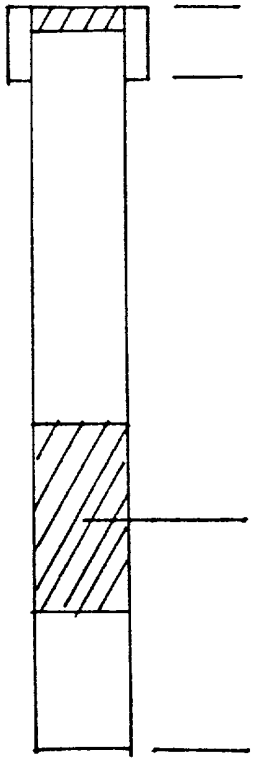
Surface plug 0' to 30'

4½" casing @ 550' cement circulated

Bottom plug 300' to 500'

T.D. 550'

Ruth Ross
South San Luis #2
D-34-18N-3W



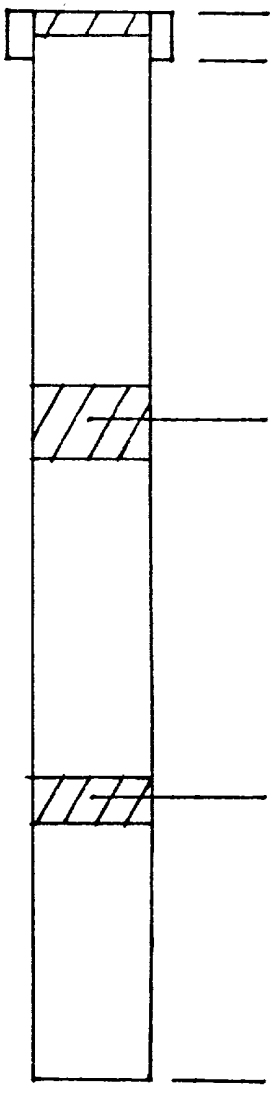
Surface plug

8 5/8" @ 40' cement circulated

Bottom plug 225' to 325'

T.D. 400'

Tenneco Oil Company
Torreon Core Test #7
D-34-18N-3W



Surface plug and marker

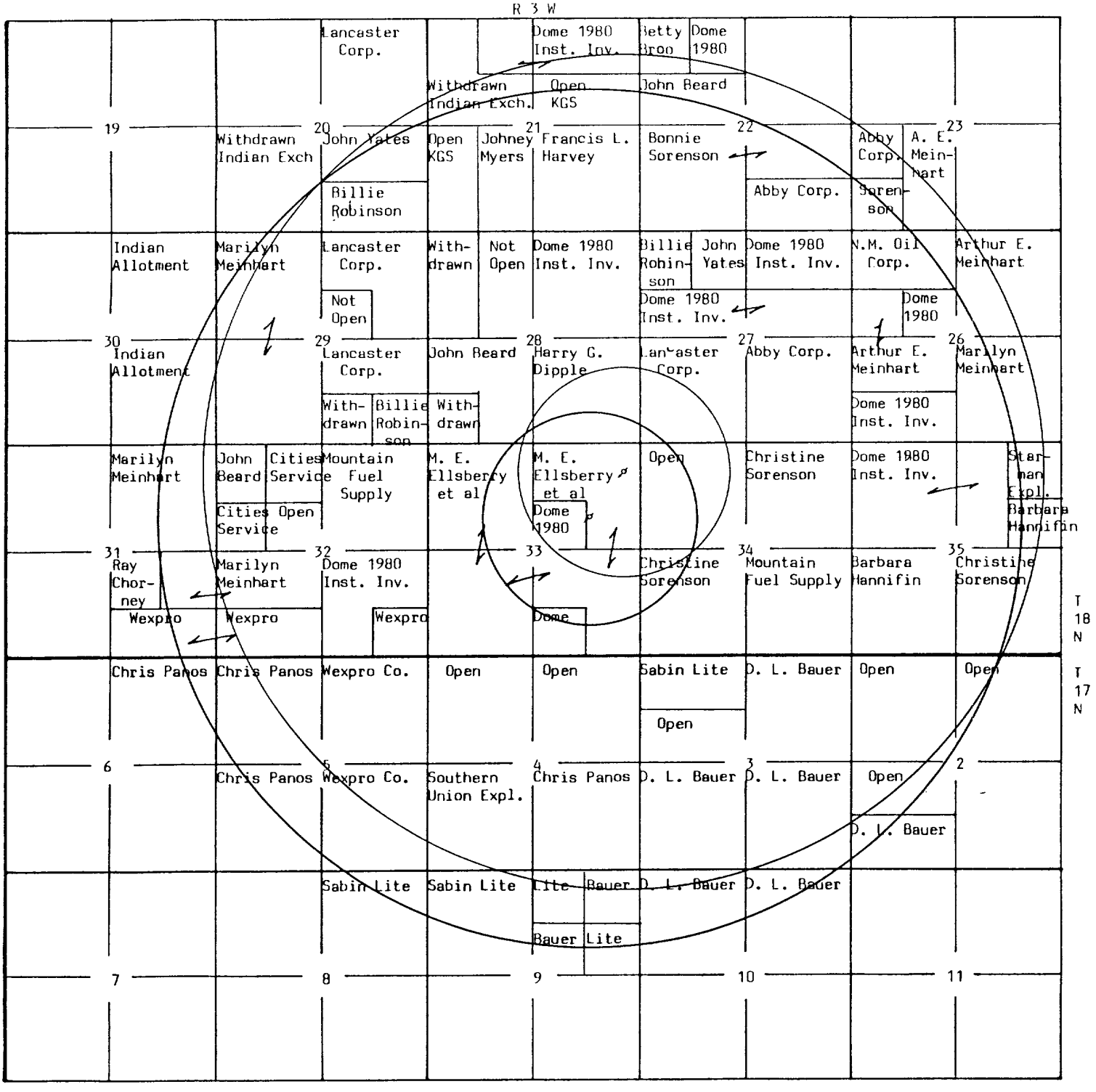
8 5/8" @ 51' cement circulated

Intermediate plug 400' to 480'

Bottom plug 820' to 870'

T.D. 1150'

LEASE OWNERSHIP MAP



LEASE OWNERS

Abby Corporation
Box 2143
Roswell, New Mexico 88201

D. L. Bauer
215 Security Life Building
Denver, Colorado 80202

* John Beard
United Founders Life Tower
Oklahoma City, OK 73112

Betty L. Broo
325 Wilder Avenue
Yuba City, CA 95991

Raymond Chorney
401 Lincoln Tower Building
Denver, CO 80295

Cities Service Company
Box 300
Tulsa, OK 74102

* Harry G. Dipple
802 Capital National Bank Building
Houston, TX 77012

* Dome 1980 Institutional Investors, Ltd.
1625 Broadway
Denver, CO 80202

**M. E. Ellsberry et al
8330 Harry Hines Blvd.
Dallas, TX 75235

Barbara Hannifin
Box 182
Roswell, NM 88201

Francis L. Harvey
Box 2185
Santa Fe, NM 87501

* Lancaster Corporation
Box 8439
Denver, CO 80201

Sabin Lite
115 Soth LaSalle Street
Chicago, IL 60603

Arthur E. Meinhart
1645 Court Place
Denver, CO 80202

Marilyn Meinhart
1 Belleview Place
Littleton, CO 80121

Mountain Fuel Supply Co.
Box 11368
Salt Lake City, UT 84139

Johney M. Myers
901 Zuni Drive
Farmington, NM 87401

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Box 8279
Salt Lake City, UT 84108

Billie Robinson
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Bonnie Sorenson
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* Christine Sorenson
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Southern Union Exploration Co. of Tex.
Suite 400
1217 Main Street
Dallas, TX 75202

Starman Exploration Corporation
Box 19698
Las Vegas, NV 89119

Wexpro Company
Box 11070
Salt Lake City, UT 84147

John A. Yates
207 South 4th Street
Artesia, NM 88210

New Mexico Oil Corporation
Box 1714
Roswell, NM 88201

* Leases within one-half mile
** Source of Farmout for this operation

UNICHEM INTERNATIONAL

601 NORTH LEECH P.O.BOX1499

HOBBS, NEW MEXICO 88240

COMPANY : NOEL REYNOLDS
DATE : 7-19-83
FIELD,LEASE&WELL : TORREON
SAMPLING POINT: FRESH WATER WELL
DATE SAMPLED : 7-15-83

SPECIFIC GRAVITY = 1.001
TOTAL DISSOLVED SOLIDS = 2233
PH = 9.29

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	.4	8.0
MAGNESIUM	(MG)+2	2.6	31.6
SODIUM	(NA),CALC.	27.4	631.
ANIONS			
BICARBONATE	(HCO3)-1	20	1220.
CARBONATE	(CO3)-2	5.4	162.
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	0	0
CHLORIDES	(CL)-1	5.0	179.
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		6.9
BARIUM	(BA)+2	.01	.7
MANGANESE	(MN)	NOT RUN	

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	2.50
CALCIUM CARBONATE SCALING	LIKELY
SULFATE INDEX	-19.
CALCIUM SULFATE SCALING	UNLIKELY