

MERIDIAN OIL

OIL COI

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February 5, 1992

Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Re: Southland Royalty Company
Shugart 'A' No. 4
Unit K, Sec 29, T18S, R31E
Eddy County, New Mexico
LC-71-029387-A

Gentlemen:

Enclosed are Form C-108 and attachments requesting authorization to convert the above referenced well to water injection for secondary recovery. Attached is proof that a copy of the application has been sent to operators within 1/2 mile and the required legal notice has been published in a local newspaper.

If other information is needed prior to your approval of our request, please contact me at (915) 688-6836.

Sincerely,



Robert L. Bradshaw
Sr. Staff Environmental Representative

RLB/cm

cc: Well file
Joe Small
OCD - Artesia
BLM - Carlsbad

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Southland Royalty Company
Address: P.O. Box 51810 Midland, Texas 79710-1810
Contact party: Robert L. Bradshaw Phone: 915 688-6836
- 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 3431
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: Robert L. Bradshaw Title Sr. Staff Environmental Rep.

Signature: Robert L. Bradshaw Date: 2-5-92

- * 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.

**Attachment to Form C-108
Southland Royalty Company
Shugart 'A' No.4**

VII.

1. Average rate/volume 500 bpd
Maximum rate/volume 1000 bpd
2. This is a closed system.
3. Average injection pressure 1700 psi.
Maximum injection pressure 2000 psi.
4. Formation water will be reinjected.
5. Formation water will be reinjected for secondary recovery.

VIII. Yates Sand of Permian Age.

Lithology - fine granulated sandstone composed of monocrystalline quartz and dolomite cementation.

Thickness: Pay zone	- 25'
Entire Yates interval	- 800'
Depth	- 2400'

No underground drinking water in the area.

- IX. Stimulation Ignite 16' stress frac tool (Servo-Dynamics) across Yates at 2538 - 2554'

- X. Log attached.

- XI. No fresh water wells within 1 mile.

- XII. This application is not for a disposal well.

INJECTION WELL DATA SHEET

Side 1

INJECTION WELL DATA SHEET

SIDE 1

Southland Royalty Company		Shugart 'A'	
OPERATOR	LEASE		
4	1650' FSL & 2310' FWL	29	18S 31E
WELL NO.	PROYACT LOCATION	SECTION	TOWNSHIP RANGE

Schematic

Please refer to attached wellbore diagrams for current and proposed configurations.

Tabular Data

Surface Casing

Size 8-5/8 " Cemented with 50 sz.
 TOC 578' feet determined by circulation
 Hole size 11"

Intermediate Casing

Size _____ " Cemented with _____ sz.
 TOC _____ feet determined by _____
 Hole size _____

Inner string

Size 5-1/2 " Cemented with 285 sz.
 TOC 2447' feet determined by temp. log
 Hole size 6-1/4"
 Total depth 3734'

Injection Interval

2538' feet to 2554' feet
 (perforated or not, indicate which)

INJECTION WELL DATA SHEET
Side 2

INJECTION WELL DATA SHEET -- SIDE 2

Tubing size 2-3/8" lined with interanl plastic coating set in a
(material)
Baker Loc-Set packer at 2500' feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Yates - perforated

2. Name of Field or Pool (if applicable) Shugart

3. Is this a new well drilled for injection? ☐ Yes ☒ No

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

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)

Queen 3220 - 3250', Penrose 3468 - 3478', Premier (Lower Penrose) 3636 - 3654',
will set CIBP at 3200'.

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

Grayburg 3750'
San Andres 3850'

Affidavit of Publication

No. 13830

STATE OF NEW MEXICO,

County of Eddy:

Gary D. Scott being duly sworn, says: That he is the Publisher of The Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of

the state of New Mexico for 1 days consecutive weeks on the same day as follows:

First Publication February 12, 1992

Second Publication _____

Third Publication _____

Fourth Publication _____

Subscribed and sworn to before me this 12th day of February 19 92

Barbara Ann Boona
Notary Public, Eddy County, New Mexico

My Commission expires September 23, 1996

Copy of Publication

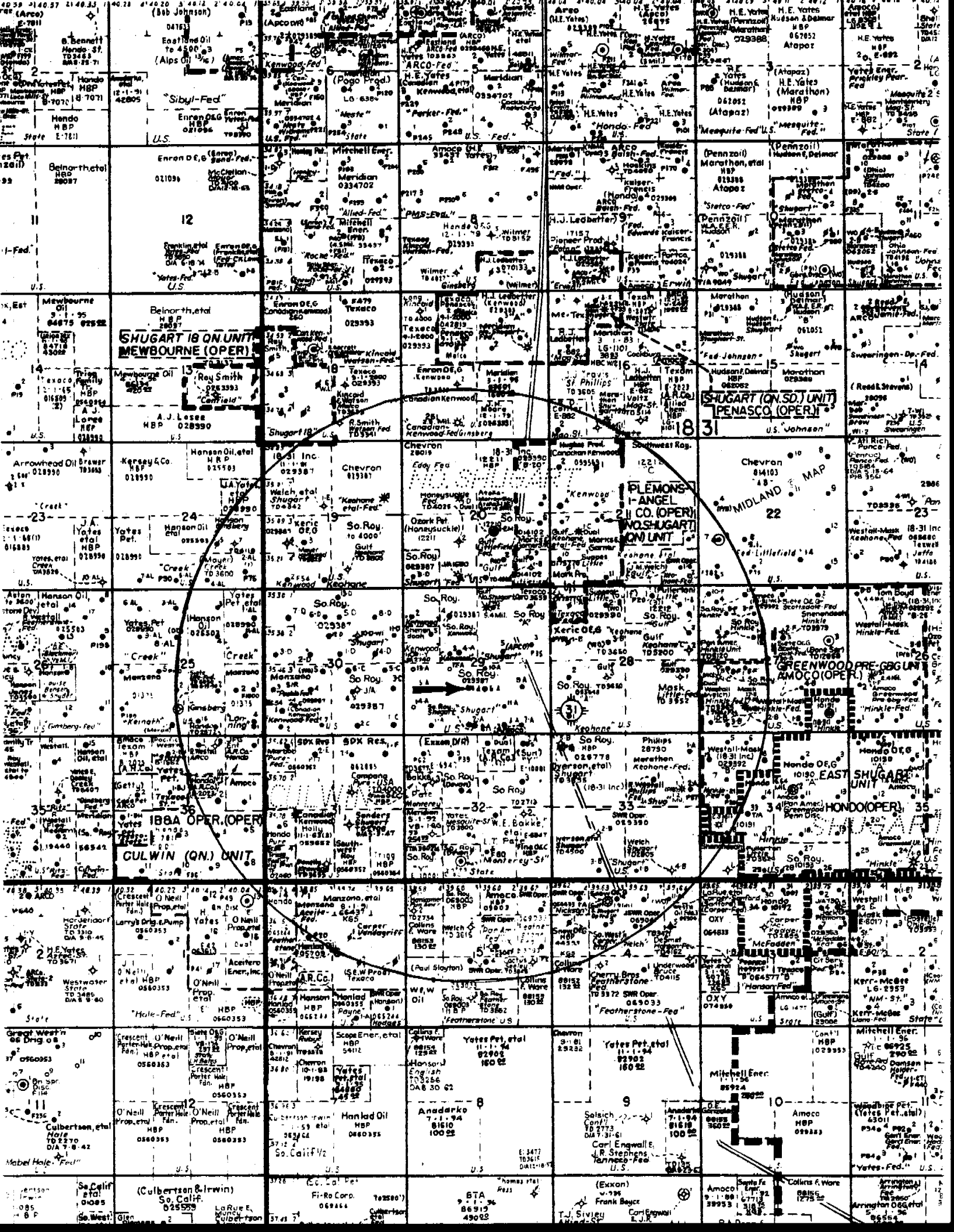
LEGAL NOTICE

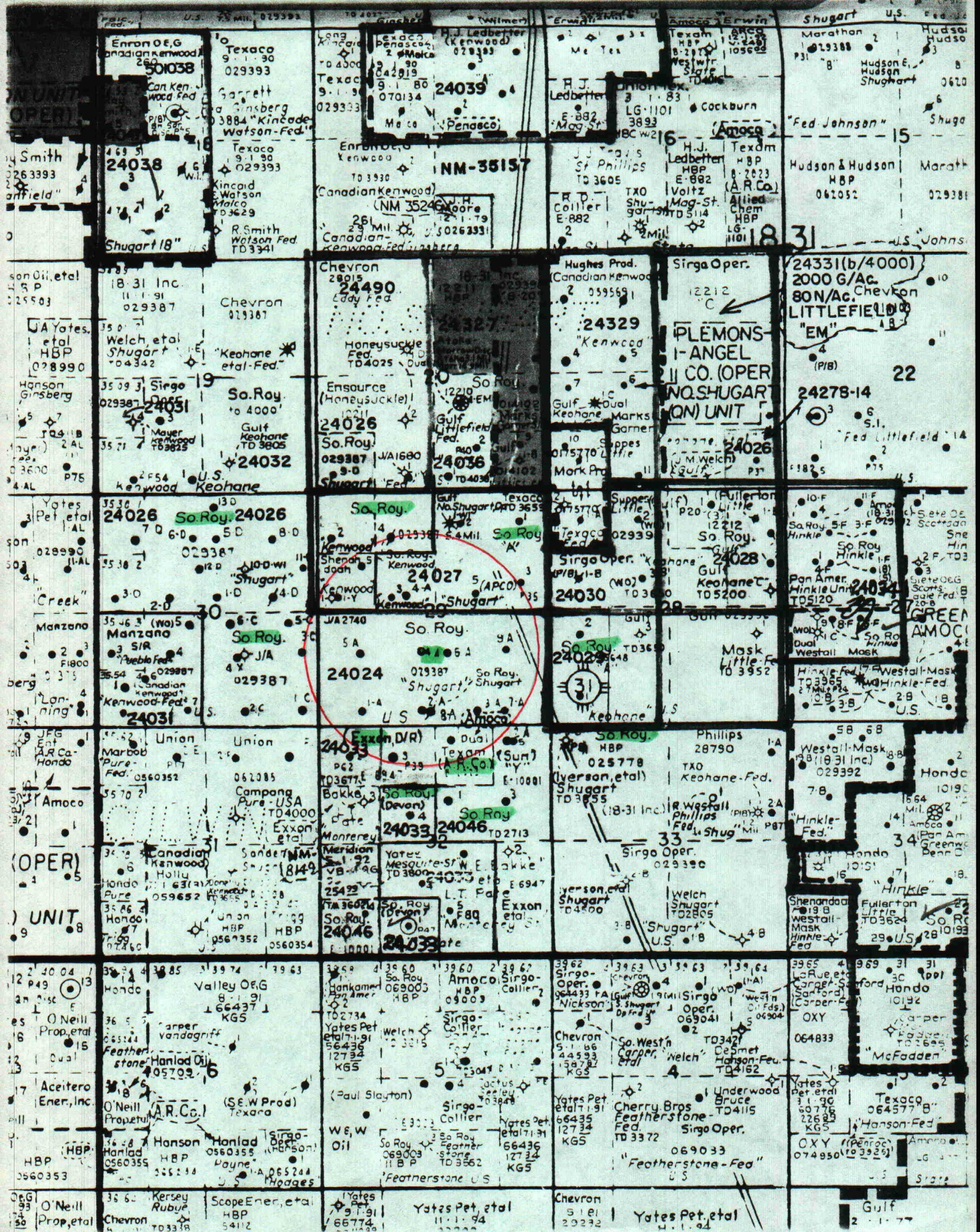
Southland Royalty proposes to convert the Shugart 'A' No. 4 to water injection for secondary recovery of oil. The well is located 1650' FSL and 2310' FWL, Section 29, T18S, R31E in Eddy County, New Mexico. Injection is proposed into the Yates Sand at 2538 - 2554' at a maximum rate of 1000 BPD and a maximum pressure of 2000 psi.

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.

Published in the Artesia Daily Press, Artesia, N.M. February 12, 1992.

Legal 13830





Meridian Oil Inc.
(Southland Royalty Company)

Application for Injection Permit
Shugart A No. 4
Shugart (Yates TRNS ON GBS) Field
Eddy County, New Mexico

AREA OF REVIEW

(See attached wellbore diagrams for well construction, depth, and record of completion)

<u>Operator</u>	<u>Well Name</u>	<u>Well Type</u>	<u>Status</u>	<u>Completion Date</u>	<u>Location Footage</u>	<u>Section</u>	<u>TWSP</u>	<u>RANGE</u>
Southland Royalty	Shugart A No. 1	Oil	Prod	Apr-1960	330 FS & 900 FWL	29	18S	31E
	" 2	Oil	Prod	Jun-1960	330 FS & 2310 FWL	29	18S	31E
	" 3	Oil	Prod	Aug-1960	330 FS & 1650 FEL	29	18S	31E
	" 5	Oil	Prod	Oct-1960	1650 FS & 990 FWL	29	18S	31E
	" 6	Oil	Prod	Mar-1961	1650 FS & 2310 FEL	29	18S	31E
	" 7	Oil	Prod	May-1961	330 FS & 990 FEL	29	18S	31E
	" 8	Oil	P&A	Jun-1961	330 FS & 2390 FWL	29	18S	31E
	" 9	Oil	Inject	Aug-1961	1650 FS & 990 FEL	29	18S	31E
	" 10	Oil	Prod	Apr-1991	2310 FS & FEL	29	18S	31E
	" 11	Oil	Prod	May-1991	990 FS & 1650 FWL	29	18S	31E
Southland Royalty	Shugart APCO A No. 3	Oil	Prod	May-1958	760 FE & 1980 FWL	29	18S	31E
	" 4	Oil	SI	Dec-1961	2310 FN & 1980 FWL	29	18S	31E
	" 5	Oil	SI	Oct-1970	2310 FN & 1680 FEL	29	18S	31E
Southland Royalty	Kenwood No. 1-Y	Oil	Prod	Aug-1963	2310 FN & 360 FWL	29	18S	31E
	" 3	Oil	SI	Feb-1964	2310 FN & 1650 FWL	29	18S	31E
	" 4	Oil	P&A	Aug-1964	990 FN & 1650 FWL	29	18S	31E
	" 5	Oil	Prod	May-1978	1650 FN & 990 FWL	29	18S	31E

<u>Operator</u>	<u>Well Name</u>	<u>Well Type</u>	<u>Status</u>	<u>Completion Date</u>	<u>Location Footage</u>	<u>Section</u>	<u>TWSP</u>	<u>RANGE</u>
Southland Royalty	Shugart C No. 3	WTW	SI	Mar-1961	1650 FS & 330 FEL	30	18S	31E
Southland Royalty	Monterey State B No. 3	OTI	SI	Mar-1960	660 FN & 1650 FWL	32	18S	31E
Energy Resources	State 32 No. 1	OTI	SI	Dec-1960	330 FN & 1980 FWL	32	18S	31E

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: ARCO Oil & GAS P.O. Box 1610 MIDLAND, TX 79702 SHUGART A #4	4. Article Number P154362225
5. Signature — Addressee X <i>[Signature]</i>	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☒ Return Receipt for Merchandise
6. Signature — Agent X	Always obtain signature of addressee or agent and DATE DELIVERED .
7. Date of Delivery FEB 6 1992	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989

★ U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: EXXON USA P.O. Box 1600 MIDLAND, TX 79702 Shugart A #4	4. Article Number P154362224
5. Signature — Addressee X	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☒ Return Receipt for Merchandise
6. Signature — Agent X <i>[Signature]</i>	Always obtain signature of addressee or agent and DATE DELIVERED .
7. Date of Delivery FEB 6 1992	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989

★ U.S.G.P.O. 1989-238-815

DOMESTIC RETURN RECEIPT

MERIDIAN OIL INC.
(Southland Royalty Co.)

Application for Injection Permit
Shugart A No. 4
Shugart (Yates 7RVRS QN Grayburg) Field
Eddy County, New Mexico

Wells in Area of Review

Completion Records

SRC Kenwood # 1-Y

1963 - Grayburg 3724-62' Frac w/ 73,000g & 120,000 lbs sd
Premier 3550-72' Frac w/ 50,000g & 60,000 lbs sd
1974 - Penrose 3390-3454' Frac w/ 24,000 lbs sd
Queen 3142-3180' Frac w/ 24,000 lbs sd

SRC Kenwood #3

1964 - Grayburg 3774-3825' Frac w/ 57,000g & 60,000 lbs sd

SRC Kenwood #4

1964 - Grayburg 3784-3817' Frac w/ 38,000g oil & 90,000 lbs
1970 - Penrose 3430-3506' Frac w/ 15,000g & 30,000 lbs sd
Queen 3200-3224' Frac w/ 15,000g & 25,000 lbs sd
1987 - P&A

SRC Kenwood #5

1978 - Grayburg 3754-84' Frac w/ 29,000g & 36,000 lbs sd
Penrose 3408-34' Frac w/ 39,000g & 48,000 lbs sd

SRC Monterey State B #3

1960 - Yates 2620-32' and Premier 3630-40'
Frac w/ 20,000g & 60,000 lbs sd
1974 - Sqz Yates w/ 100 sx
Added Queen 3204-32' Penrose 3448-64' Premier 3630-40'
Frac w/ 20,000 lbs sd

SRC New Mexico Y State #1

- 1961 - Completed with a long string and short string of csg
 - Long string Penrose & Premier
 - Short string Yates
 - Yates 2610-36' Penrose 3468-3602' Premier 3657-83'
 - Penrose & Premier fraced w/ 25,000g oil & 45,000 lbs Yates
 - fraced w/ 15,000g oil & 55,000 lbs sd
- 1972 - Convert to WIW in long string Set CIBP over Premier
- 1991 - P&A'd

SRC Shugart A #1

- 1960 - Grayburg 3657-69' and Premier 3595-3600'
 - Fraced w/ 22,000g oil & 55,000 lbs sd
- 1974 - Added Queen 3190-3216'
 - Fraced w/ 20,000g & 25,000 lbs sd
 - Added Penrose 3430-3454'
 - Fraced w/ 25,000g & 25,000 lbs sd
- 1989 - Refraced Premier & Grayburg w/ 18,000g & 39,000 lbs sd

SRC Shugart A #2

- 1960 - Premier 3616-3642'
 - Fraced w/ 12,800g oil & 25,000 lbs sd
- 1974 - Added Queen 3202-3234'
 - Fraced w/ 21,000g & 24,000 lbs sd
 - Added Penrose 3448-3470'
 - Fraced w/ 21,000g & 24,000 lbs sd

SRC Shugart A #3

- 1960 - Yates 2620-2632' Fraced w/ 37,000g & 60,000 lbs sd
- 1982 - Added more Yates 2490-2581'
 - Fraced w/ 20,000g & 46,000 lbs sd
- 1987 - Deepened to 3763' circ cement past Yates
 - Premier 3672-3743' Frac w/ 27,000g & 63,000 lbs sd
 - Penrose 3512-3520' Frac w/ 20,000g & 48,000 lbs sd
 - Queen 3259-3295' Frac w/ 21,000g & 42,000 lbs sd

SRC Shugart A #4

- 1960 - Premier 3636-3654' Frac w/ 39,000g & 60,000 lbs sd
 - Yates 2538-2554' Frac w/ 36,000g & 68,000 lbs sd
- 1971 - Add Penrose 3468-3478' Frac w/ 20,000g & 20,000 lbs sd
 - Add Queen 3220-3250' Frac w/ 20,000g & 20,000 lbs sd

SRC Shugart A #5

1960 - Yates 2540-2555' Frac w/ 36,500g & 60,000 lbs sd
1977 - Add Grayburg 3748-84' Frac w/ 21,000g & 30,000 lbs sd
Add Penrose, Premier, and Upper Grayburg 3418-3635'
Frac w/ 31,000g & 44,000 lbs sd
Add Queen 3174-3222' Frac w/ 32,000g & 34,000 lbs sd

SRC Shugart A #6

1961 - Yates 2560-2585' Frac w/ 38,000g oil & 55,000 lbs sd

SRC Shugart A #7

1960 - Yates 2638-2658' Frac 41,000g oil & 58,000 lbs sd
1982 - T&A'd due to low production 1991 - Refrac Yates w/ 15,000g &
39,000 lbs sd

SRC Shugart A #8

1961 - Yates 2590-2610' Frac w/ 42,000g oil & 54,000 lbs sd
1968 - Converted to WIW
1982 - P&A'd

SRC Shugart A #9

1961 - Grayburg 3760-74' Frac w/ 32,000g oil & 87,000 lbs sd
Premier 3700-27' Frac w/ 32,000g oil & 87,000 lbs sd
Penrose 3536-64' Frac w/ 32,000g oil & 80,000 lbs sd
Queen 3280-3326' Frac w/ 32,000g oil & 80,000 lbs sd
1966 - Set CIBP above Grayburg and Premier
Refrac Queen w/ 8,000g oil & 8,000 lbs sd
1970 - Add Yates 2571-92'
Convert to WIW

SRC Shugart A #10

1991 - Grayburg 3862-76' Frac w/ 6,000g & 18,000 lbs sd
Set CIBP at 3820'
Premier 3680-3710' Frac w/ 8,000g & 23,900 lbs sd
Set CIBP at 3650'
Penrose 3522-3589' Frac w/ 16,000g & 48,000 lbs sd
Queen 3270-3314' Frac w/ 14,000g & 43,000 lbs sd
Yates 2566-85' Frac w/ 12,000g & 27,000 lbs sd

SRC Shugart A #11

1991 - Grayburg 3873-97' Acidize w/ 1300g
Set CIBP at 3750'
Premier 3606-31' Frac w/ 11,500g & 32,000 lbs sd
Yates 2574-96' Frac w/ 6,300g & 6,000 lbs sd

SRC Shugart APCO A #3

1958 - San Andres 4086-4110' Frac w/ 6000g oil & 6000 lbs sd
Penrose 3523-47' Frac w/ 20,000g & 30,000 lbs sd
1973 - Grayburg 3756-64' Premier 3690-3718'
Frac w/ 20,000g & 20,000 lbs sd
Set cement retainer at 3623' sqz below w/ 100 sx
Only producing the Penrose formation

SRC Shugart APCO A #4

1961 - Queen 3220-36' Penrose 3470-3490'
Frac w/ 20,000g & 40,000 lbs sd
Yates 2492-98 Frac w/ 27,000 & 57,000 lbs sd
1970 - Convert to WIW

SRC Shugart APCO A #5

1970 - Queen 3270-3310' Frac w/ 15,000g & 15,000 lbs sd
Penrose 3528-3546' Frac w/ 15,000g & 15,000 lbs sd

SRC Shugart C #3

1961 - Grayburg 3640-54' Frac w/ 35,000g oil & 72,000 lbs sd
1968 - Convert to WIW
Added Penrose 3422-90'

Energy Resources State 32 #1

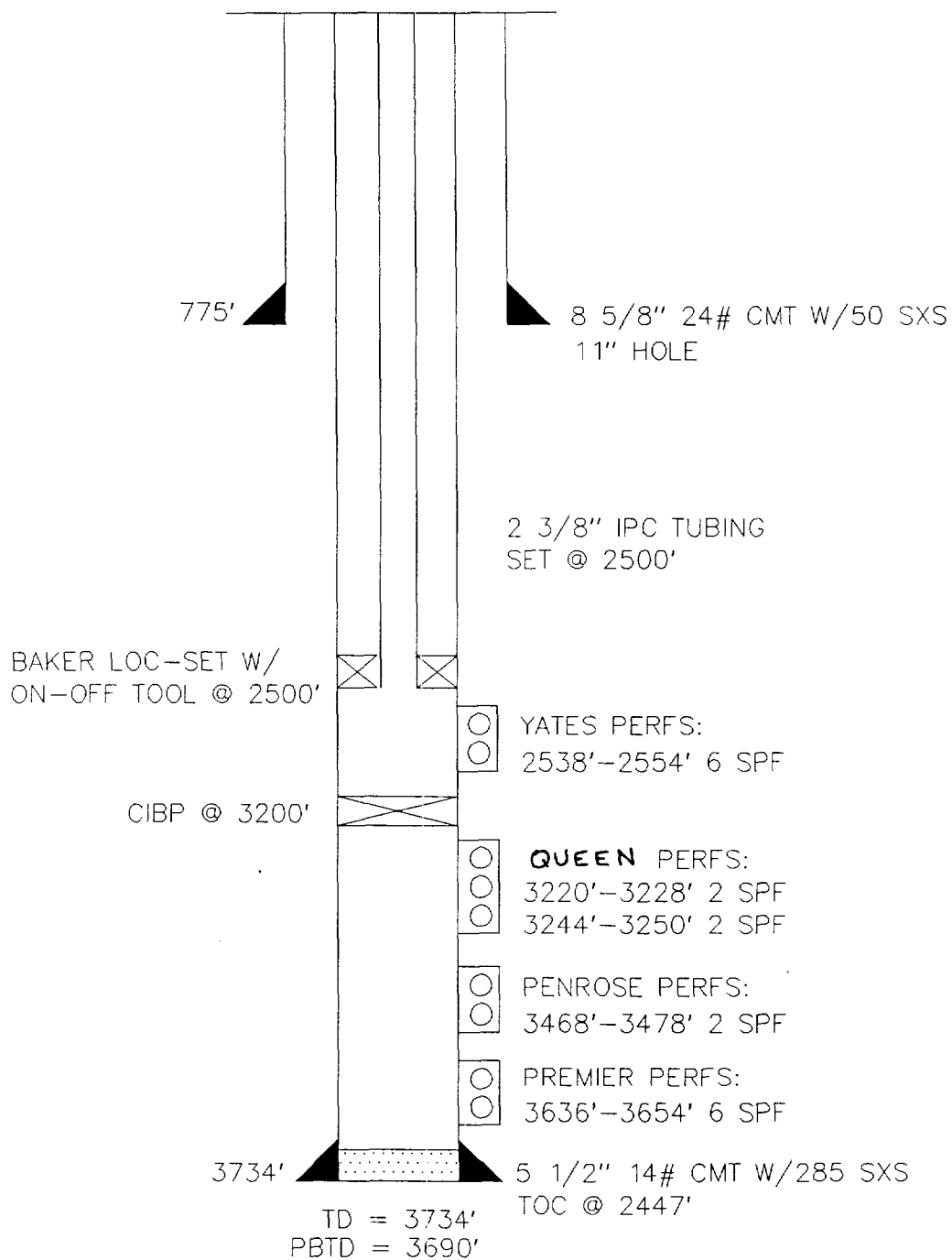
1960 - Grayburg 3649-60' Frac w/ 12,000g & 30,000 lbs sd
Penrose 3477-86' Frac w/ 14,700g & 40,000 lbs sd
Yates 2622-34' Frac w/ 25,000g & 30,000 lbs
1984 - SI

MERIDIAN OIL

JMS 9/18/91

SHUGART A No. 4
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

PROPOSED CONDITION

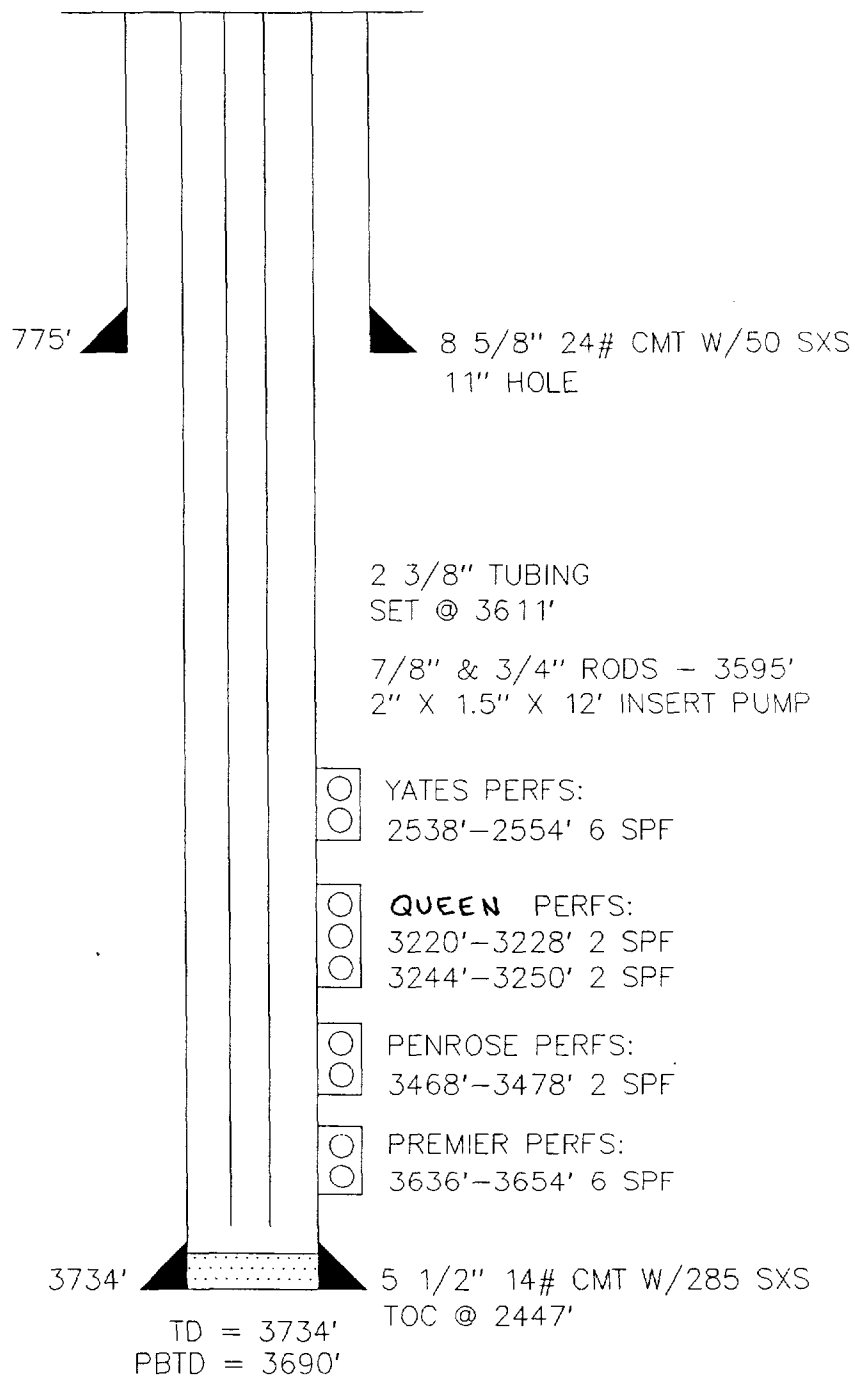


MERIDIAN OIL

JMS 9/18/91

SHUGART A No. 4
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

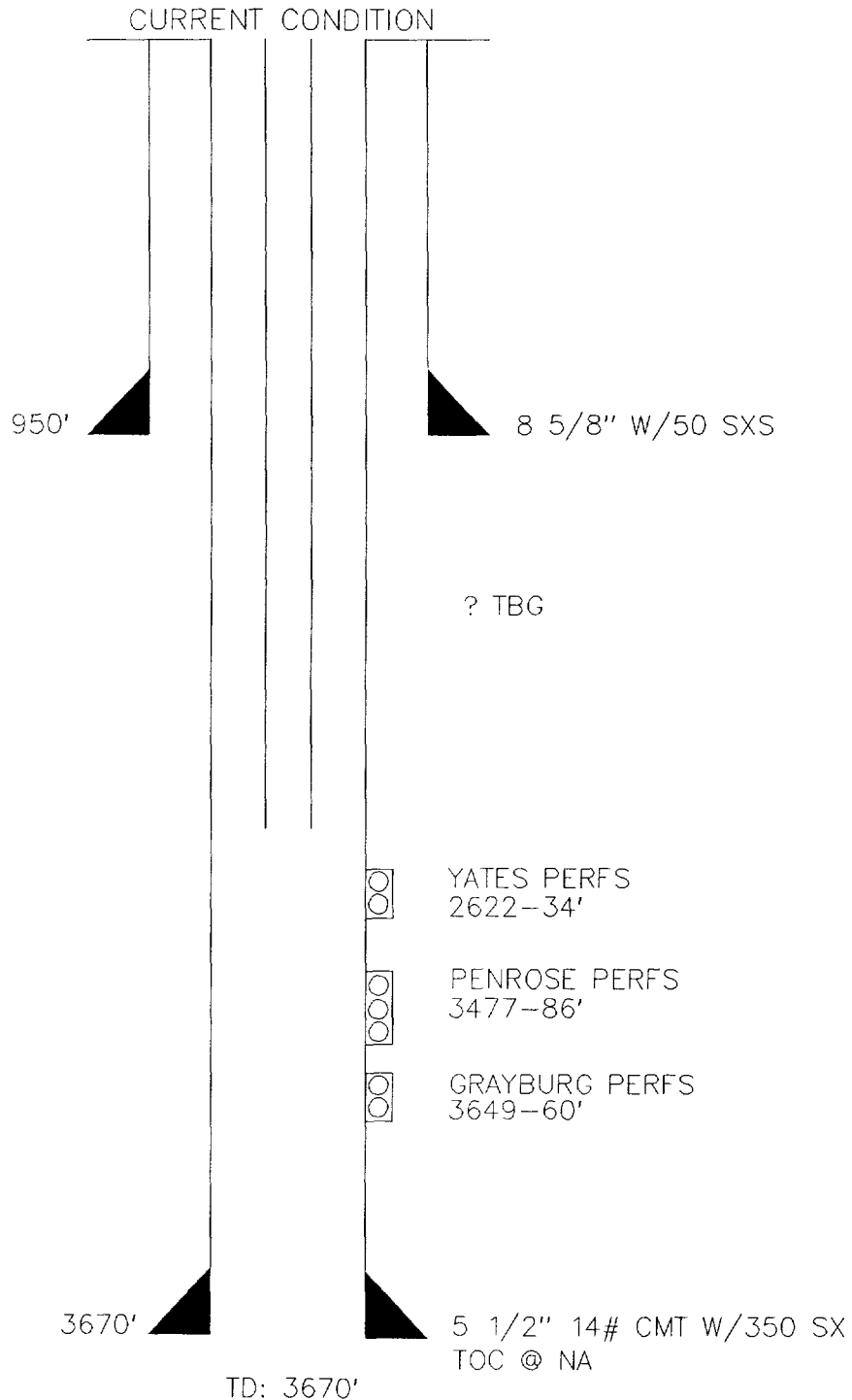
CURRENT CONDITION



ENERGY RESOURCES INC

JMS 1/3/92

STATE 32 No. 1
SHUGART FIELD
EDDY COUNTY, NEW MEXICO



Page _____
Date _____
By _____

KENWOOD #1-Y

Surface:
8 5/8" @
732' cmt
w/ 75 sx

732'

121 Jts
2 3/8" Tb.
SETTING Depth NA

(10/24) Queen { (3142-3144)
(3150-3160)
(3170-3180)
(10/24) Penton { (3390-3400)
(3448-3454)

Premier (7/63) (3550-3572)
Grayburg
Rfts
(7/63) (3724-3762)
(Lower A&A)

sve
3778'
Tbg @
3793'

Production:
5 1/2" @
3835' cmt
w/ 175 sx

3835'

TD: 3839'

41
40
39
38
37
36
35
34
33
32
31
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Page
Date
By

Kenwood #3

Surface.
8 5/8" @
750' Cmt
w/ 50 sk

750'

119 JTs
2 3/8" 4.7 #
PLASTIC COATED TBG

2 3/8" x 5 1/8"
Tension
Pkr @
3688'

Greyburg (3774-3792)
Perfs (3799-3825)
(Lower As B)

Production:
5 1/2" 14 #
@ 3895'
Cmt w/ 150
sk

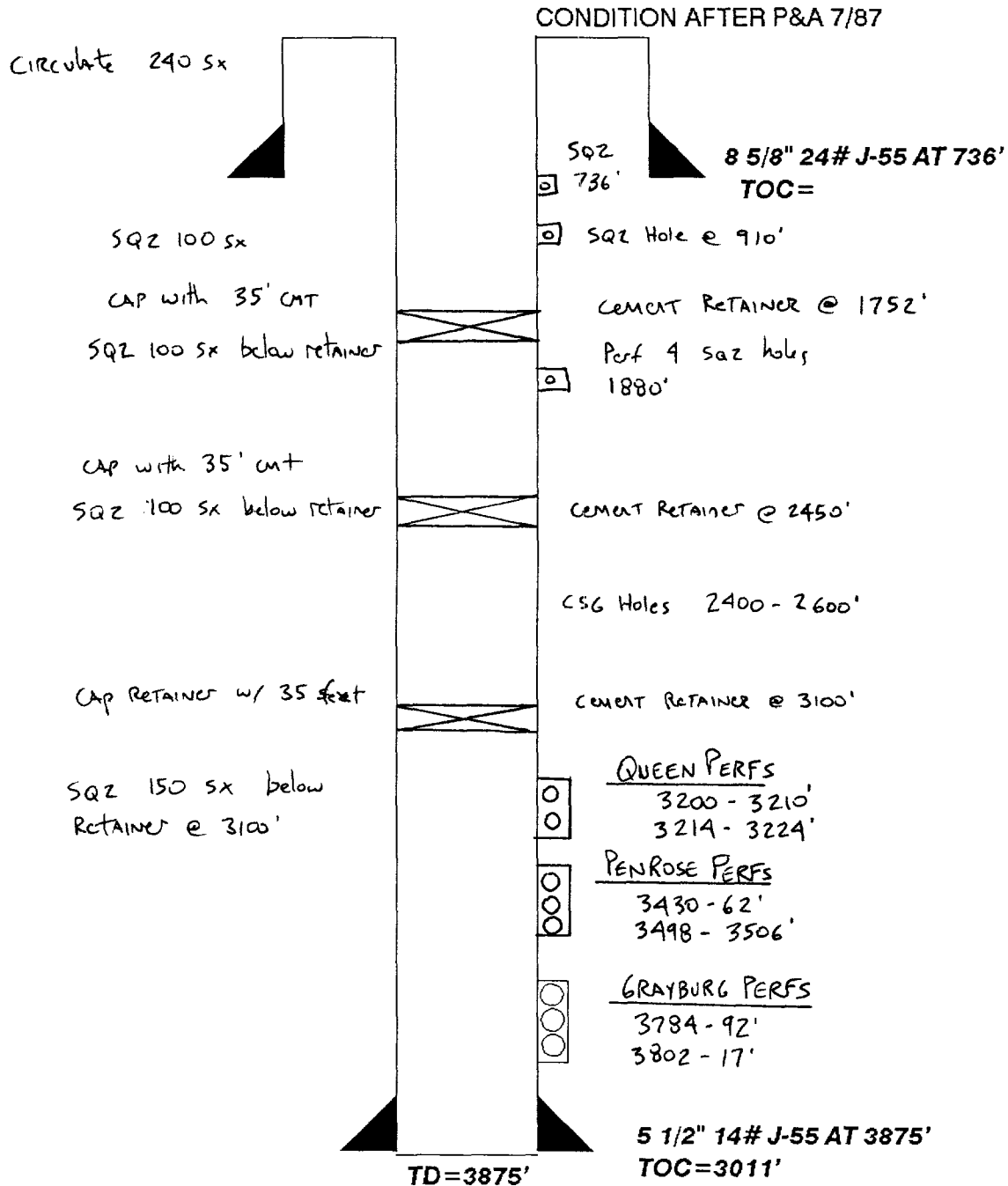
3895'

T.D: 3895'

(2/64)

MERIDIAN OIL
 KENWOOD No. 4
 SHUGART FIELD
 EDDY COUNTY, NEW MEXICO

JMS 12/31/91



Page _____
Date _____
By _____

Kenwood # 5

Surface:

$8\frac{5}{8}"$, 24"

@ 748'

Cmt w/ 350sx

Hole size 11"

748'

121 Jts. $2\frac{3}{8}"$
4.7# Tbg.

Penrose (3408-3420)
Perfs (3424-3434)

All perfs
5/78

Graybud (3754-3762)
Perfs (3772-3784)
(Lower 17.8)

Tbg @
3750'

MA @
3825'
3845'

Production:

$5\frac{1}{2}"$, 14"

@ 3845'

Cmt w/ 1300sx

Hole size - $7\frac{7}{8}"$

TD: 3855'

Page
Date
By

MONTEREY B
State No. 3

Surface
8 5/8" @
801' Cmt w/
150 sx

801'

Tubing
Assembly

116 Jts 2 3/8" Tbg
1 Jt. orange Pecked
MA w/ holes in btm.

(3/60)

Yates (2620-2632)
Perfs (sqrd off)

(2/74)

Queen (3204-3216)
Perf (3224-3232)

(3/74)

Penrose (3448-3464)
Perfs

(3/60)

Premier (3630-3640)
Perfs

MA @
3639'

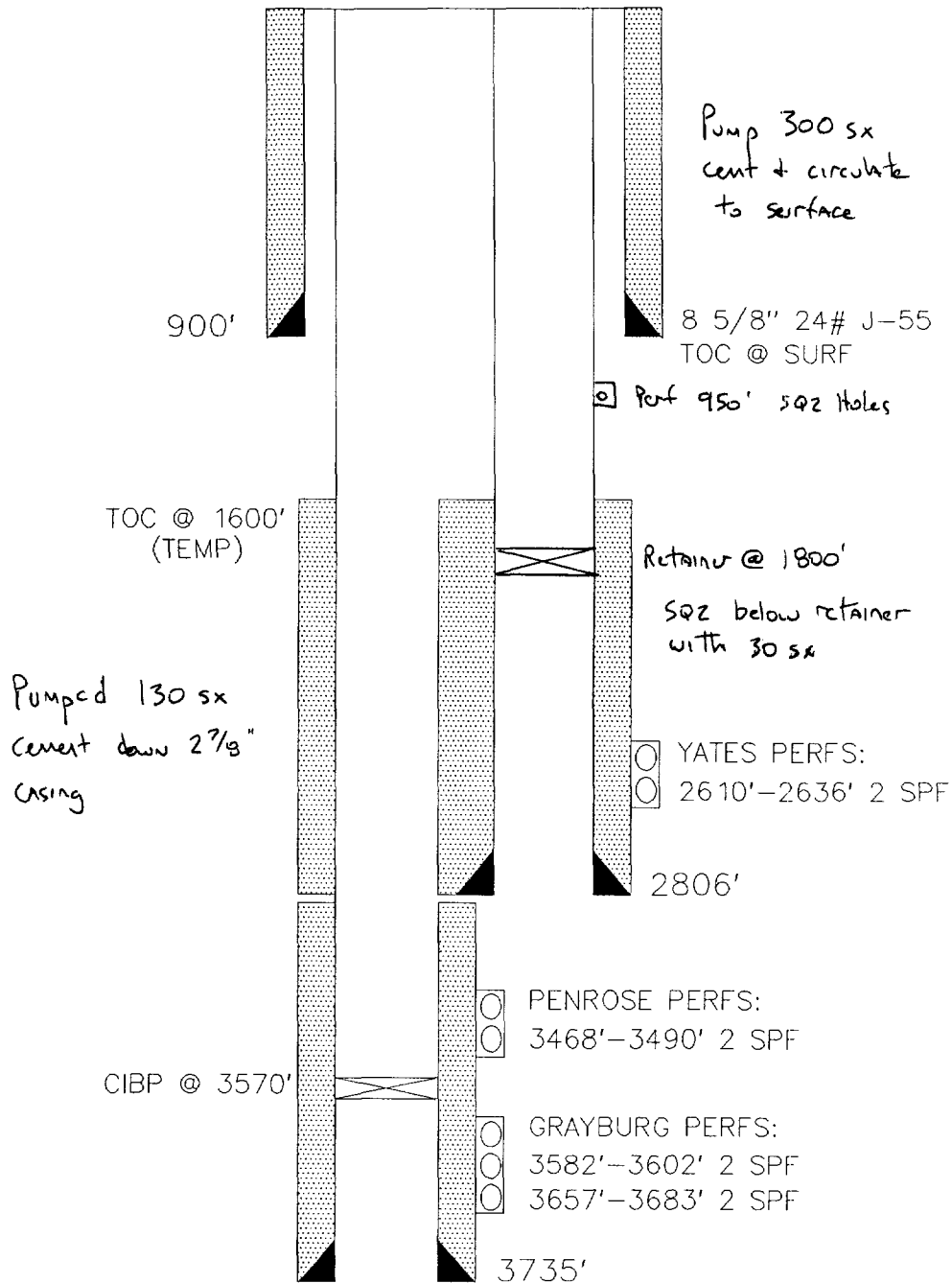
Production:
7" 20#
@ 3676'
Cmt w/ 200sx

TD: 3676'

JMS 6/6/91

NEW MEXICO Y STATE No. 1
SHUGART (Y,7R,QN,G) FIELD
EDDY COUNTY, NEW MEXICO

CONDITION AFTER P&A 6/91



LONG STRING-INJ-PENROSE

CASING:

2 7/8" 6.4# J-55
SET @ 3735'
TOC @ 2820' (CALC.)
BUTTRESS THREAD

SHORT STRING-PROD-YATES

CASING:

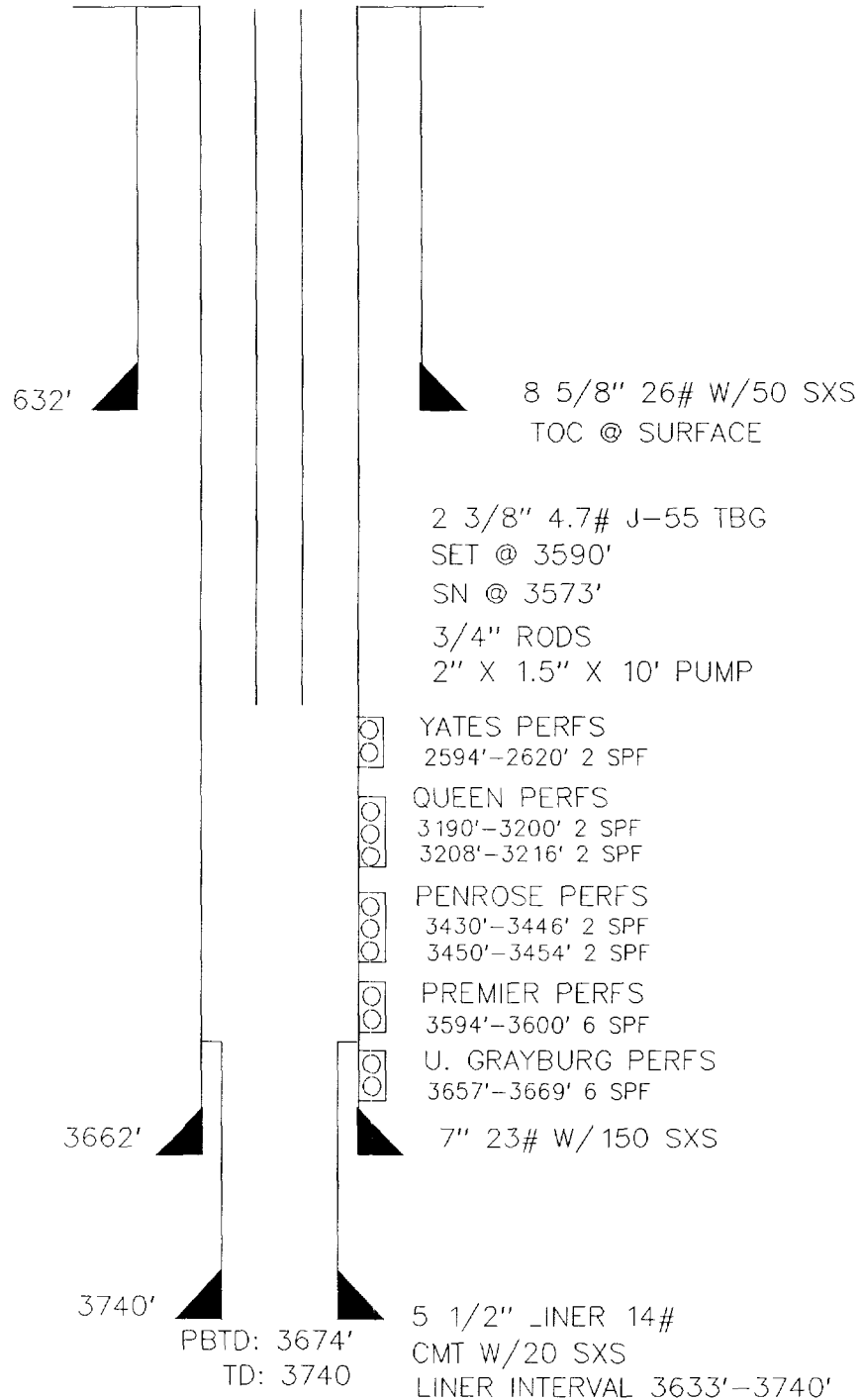
2 7/8" 6.4# J-55
SET @ 2806'
TOC @ 1600'
BUTTRESS THREAD

JUNK IN HOLE UP TO 2494'

MERIDIAN OIL

SHUGART A NO. 1
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

CURRENT CONDITION

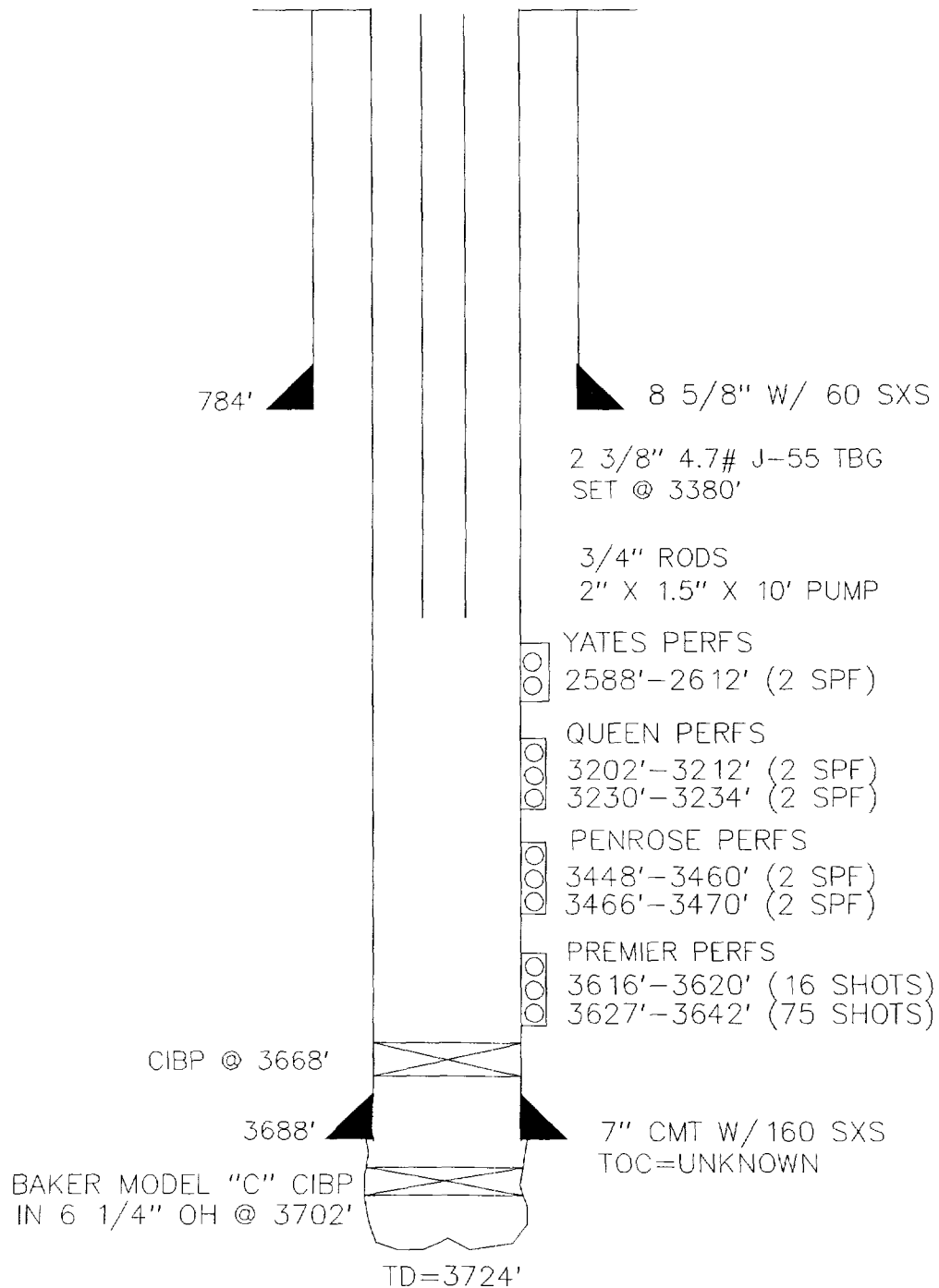


MERIDIAN OIL

JMS 12/19/91

SHUGART A NO. 2
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

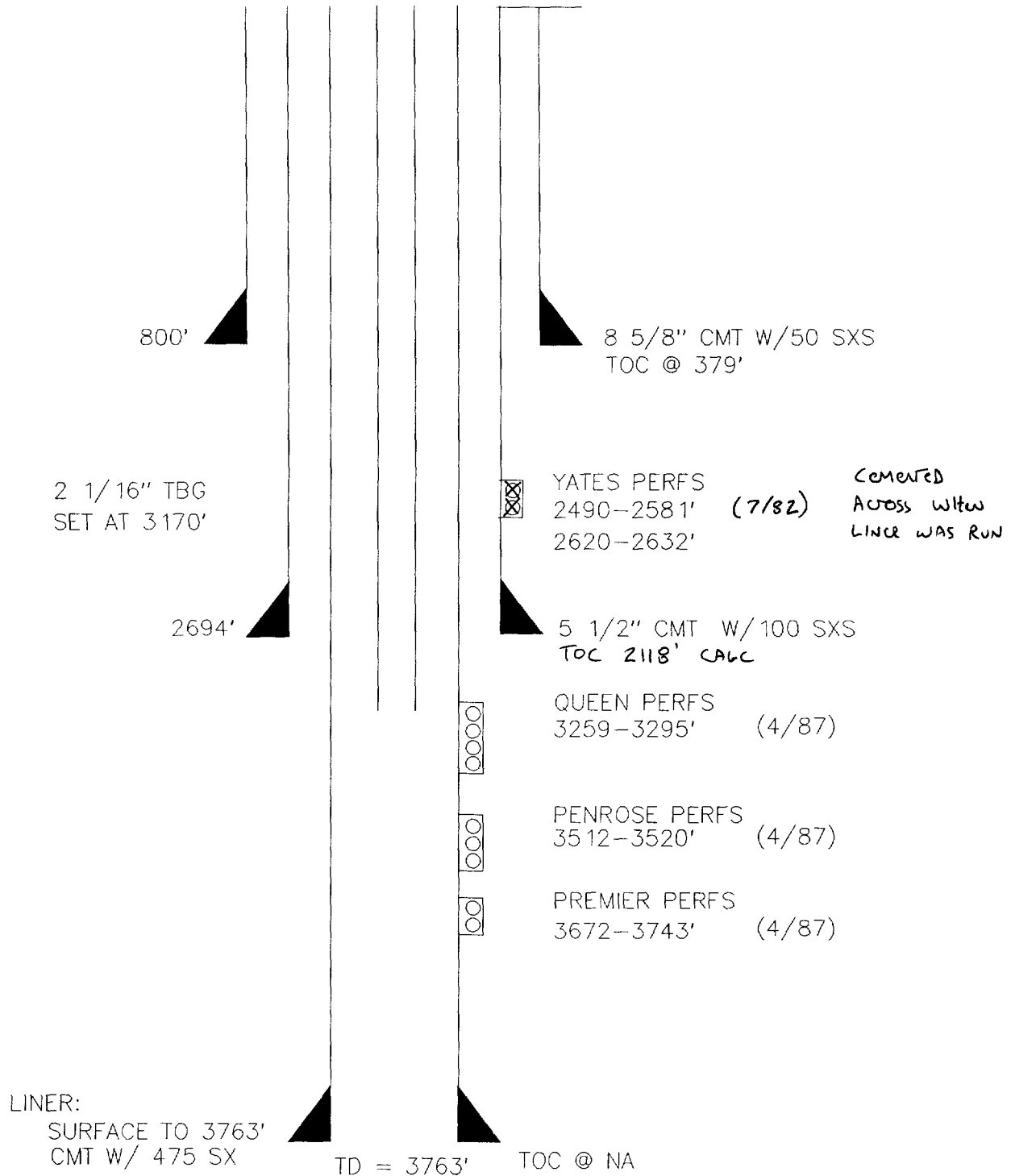
CURRENT CONDITION



MERIDIAN OIL
SHUGART A No. 3
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

JMS 1/1/92

CURRENT CONDITION

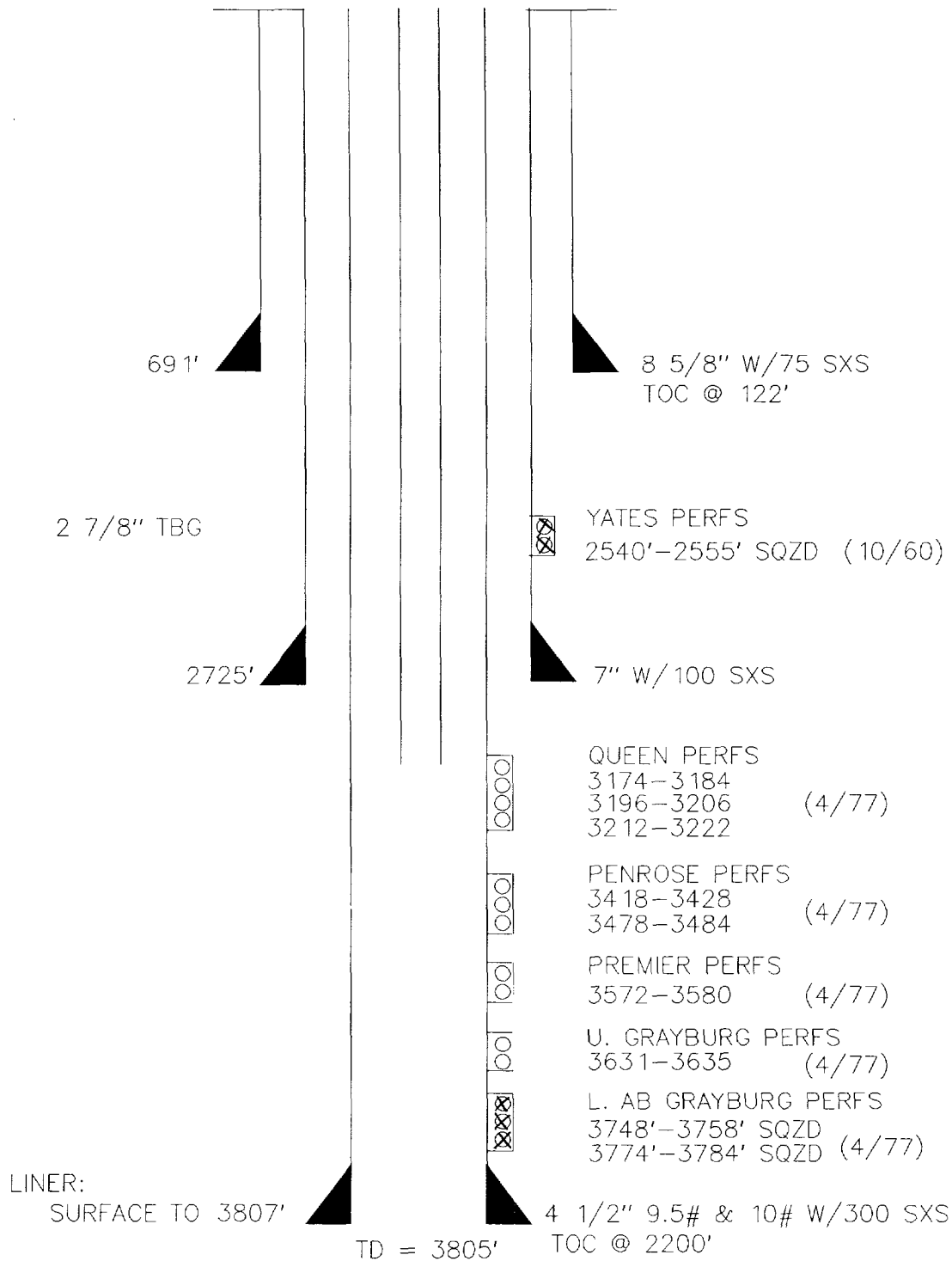


MERIDIAN OIL

SHUGART A NO. 5
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

JPK 8/15/91

CURRENT CONDITION



Page _____
Date _____
By _____

Meridian Oil
ENGINEERING CALCULATION SHEET

MO-0139 (1-88)

26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

2 3/8" T₆₅

(3/4")

Yates Perfs
(2560 - 2585)

TID: 2649'

T₆₅ @ 2606.49'
2649'

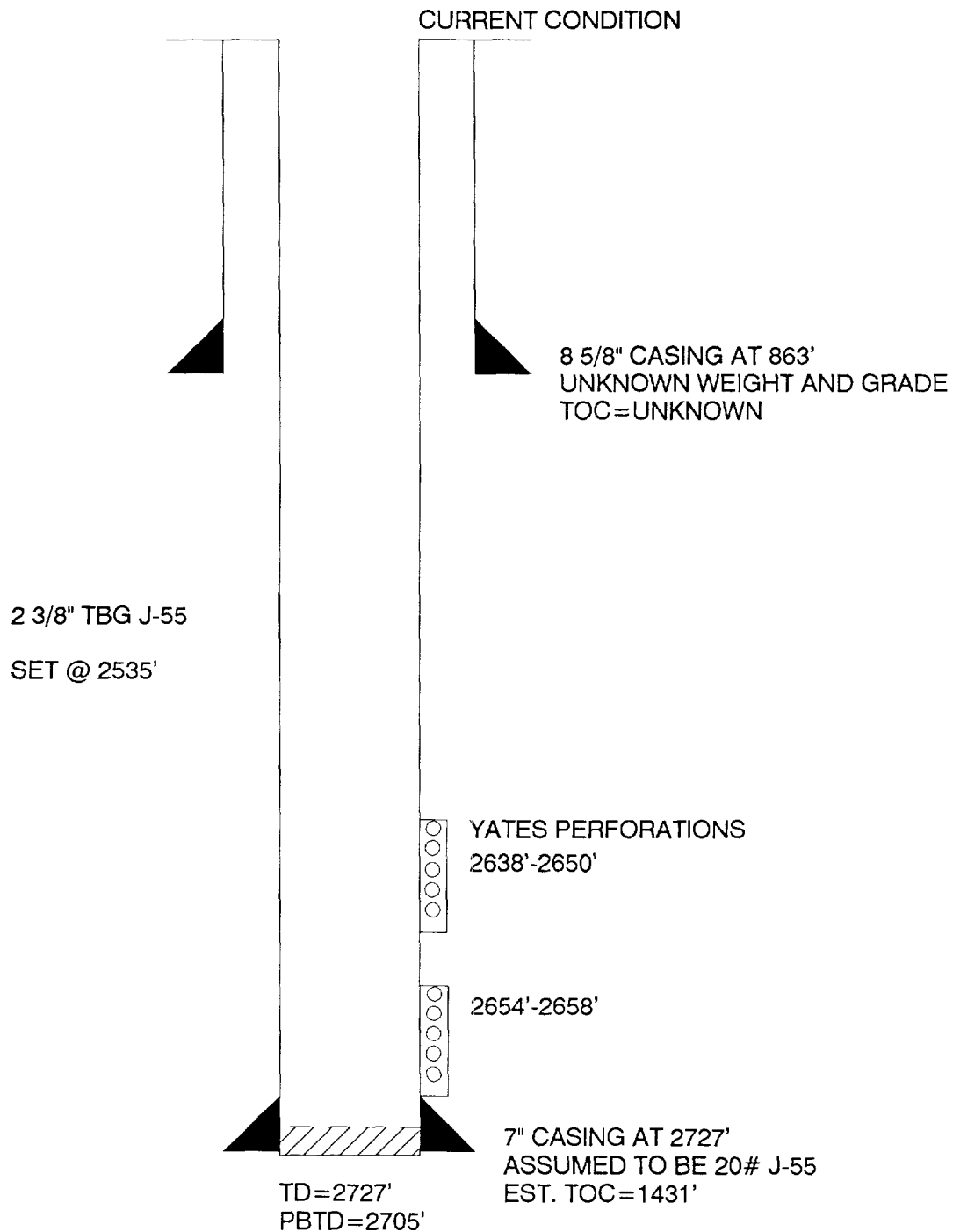
Production:
7", 20" # @
2649', Cmt w/
75sx
T₆₅ @ 2217' calc.

Surface
8 5/8" @
777' Cmt
w/ 52sx
T₆₅ @ 398' calc.

777'

MERIDIAN OIL
SHUGART A NO. 7
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

JMS 12/31/91



MERIDIAN OIL
SHUGART A NO. 8
SHUGART FIELD
EDDY COUNTY, NEW MEXICO

JMS 12/30/91

CONDITION AFTER P&A 9/82

Bradenhead
SQZ 4 1/2" casing
and circ. cement through
SQZ holes at 550'
225 sx Class C

8 5/8" 24# J-55 AT 27'
TOC=SURFACE

= perf 4 sqz holes
550'

SPOT CMT INSIDE CASING
FROM 1690 - 2541'

SQZ UNDER RETAINER
WITH 100 SX CLASS C

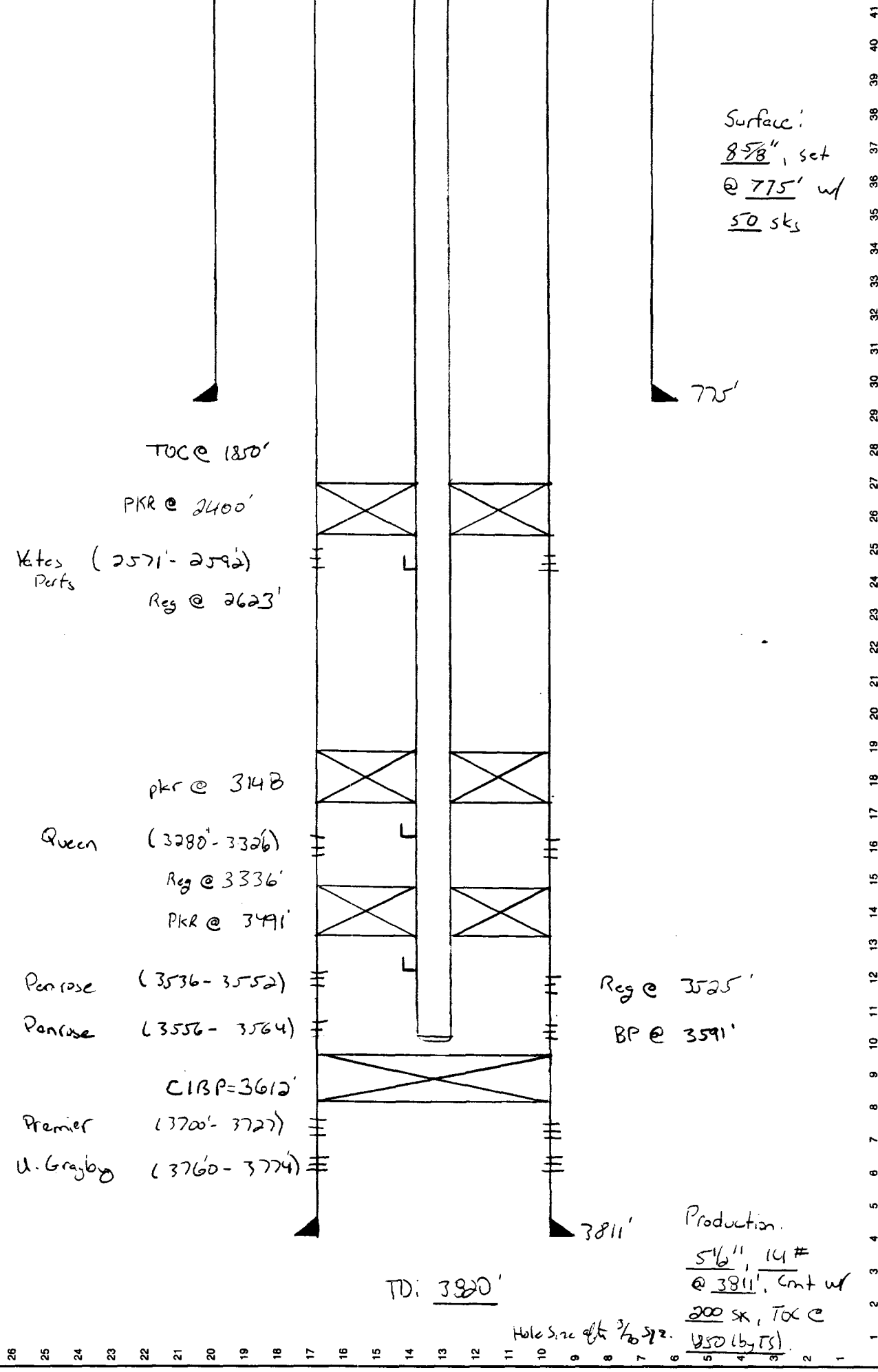
CEMENT RETAINER AT 2541'

⊗ YATES PERFS:
⊗ 2590-2610' (6 SPF)
⊗

4 1/2" 9.5# J-55 AT 2692'
TOC=1795'

TD=2692'

Page _____
Date _____
By _____



1/1/70

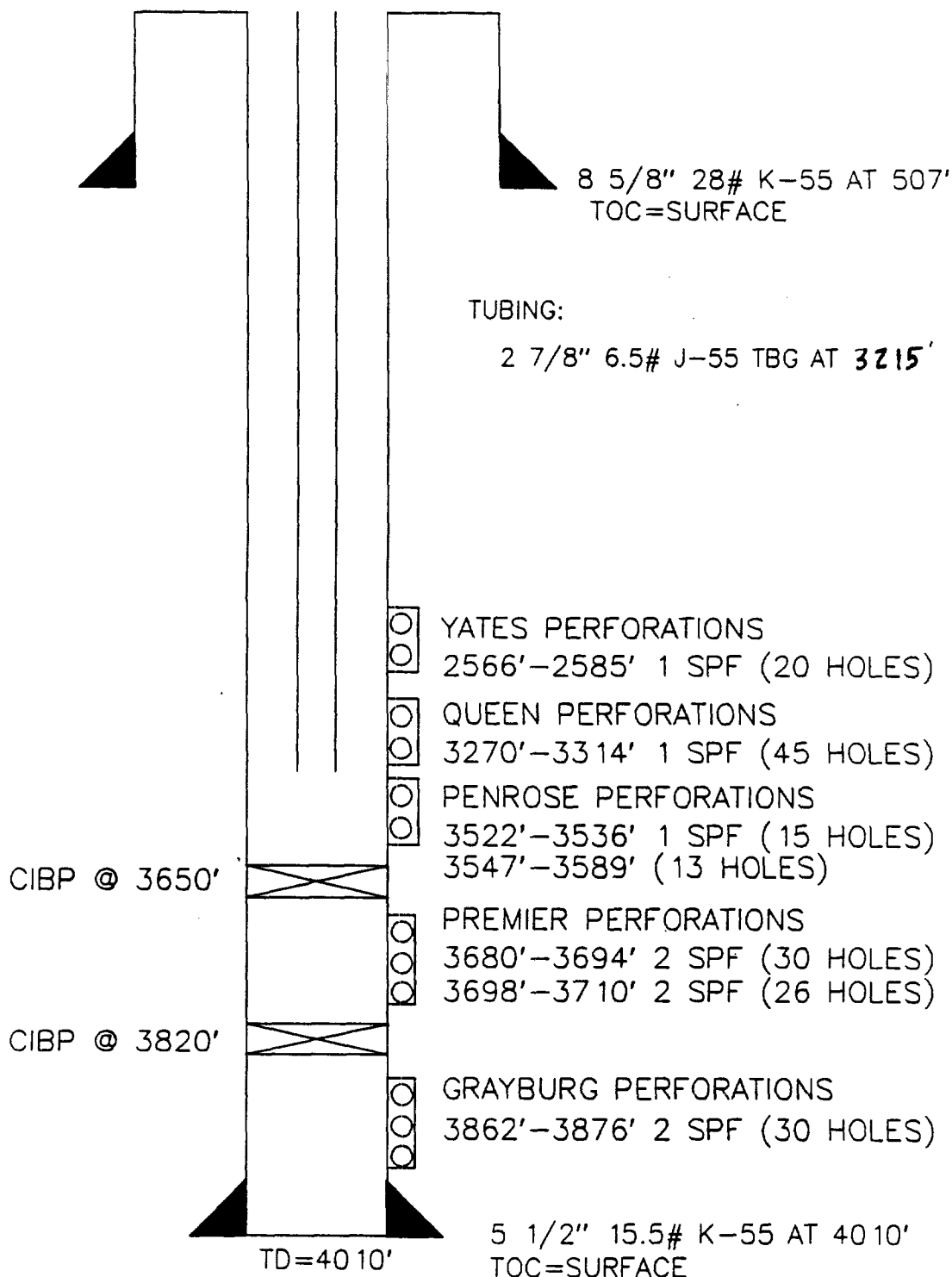
(3/61)

(7/6)

(8/61)

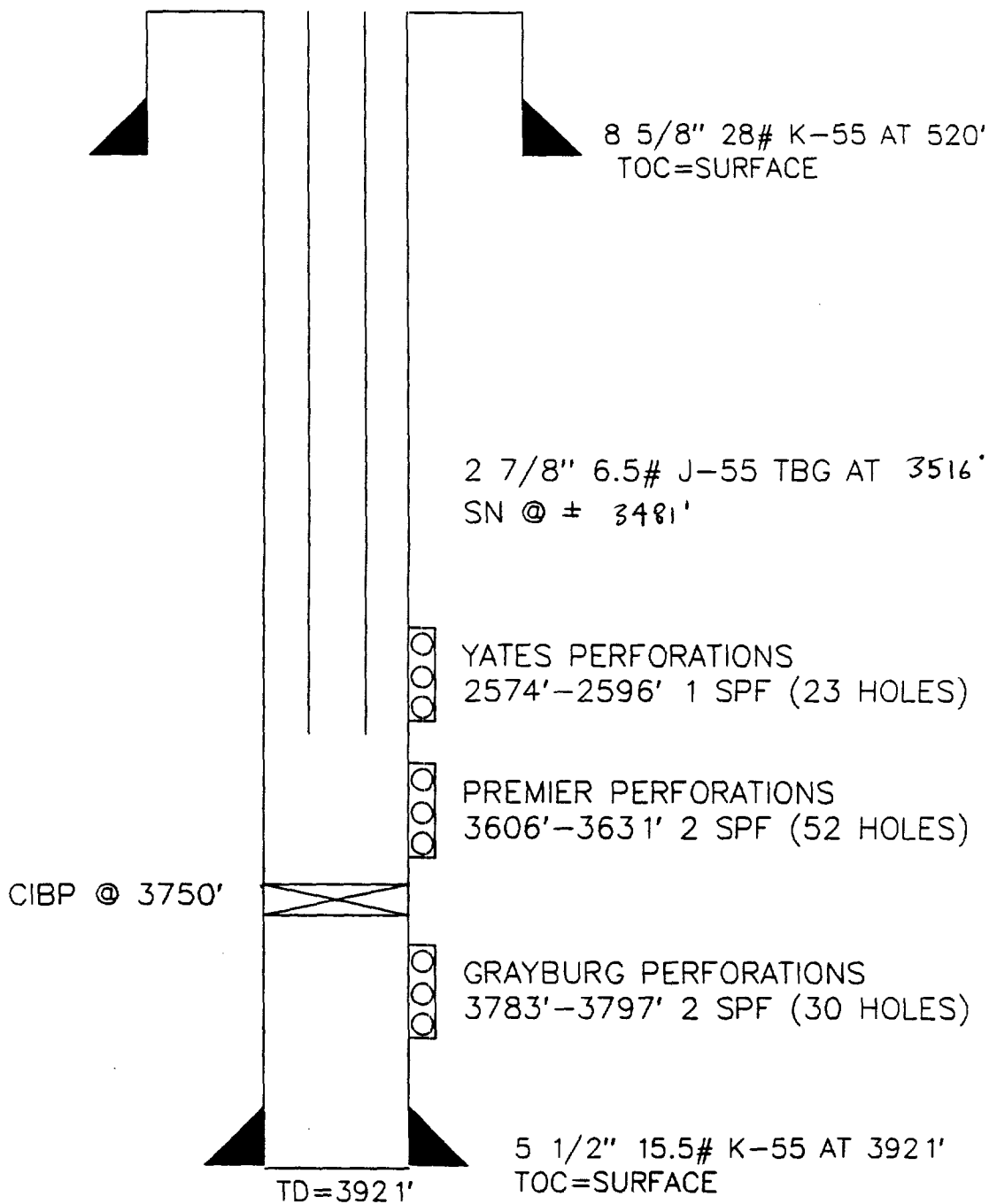
41
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MERIDIAN OIL
 SHUGART A NO. 10
 SHUGART FIELD
 EDDY COUNTY, NEW MEXICO



JMS 8/20/91

MERIDIAN OIL
SHUGART A NO. 11
SHUGART FIELD
EDDY COUNTY, NEW MEXICO



Page
Date
By

SHUGART
APCO A # 4

Surface:
8-5/8" 24#
@ 744'
Cmt w/ 1350 sx

744'

74
sts.

(12/61)

Yates
Perfs

(2492-2498)

225B

10' sub

3438' - Arrow Tandem
Tension (No hold Down)
(Nickel Coated)

(2/61)

Queen
perfs

(3220-3226)

(3230-3236)

3JTs

4 JTs

L.S.

1Jt.

3151' - Baker Model "R"
Tandem Tension PKR

3250' - 2 1/16" Nickel Coated
Reg. sub.

3393' - Baker Model "A-2"
Lok-set pkr.

3430 - 2 1/16 Nickel coated
regulator sub

(6/61)

Penrose
Perfs

(3470-3480)

(3484-3490)

2 JTs

BP

Production:
4 1/2" 9.5#
@ 3650'
Cmt w/ 2000 sx

Tbg @
3505

3650'

TD - 3650'

Page
Date
By

SHUGART
APCO A No. 3

Surface:
 $8\frac{5}{8}"$, 24#
@ 218' Cmt
w/ 125 sx.

218'

Tubing
Assembly

Top 113 Jts. $2\frac{3}{8}"$
EUE 8th Ths
1" S.N.
3' Perf.
Btm Open ended MA

Penrose (5/58)
(3523-3547)

(4/73) Premier { (3690-3694)
(3704-3706)
(3712-3718)
(4/73) U. Greyby (3756-3764)
San Andro (4086-4110)
(5/58)

MA @ 3610
Cmt. rot @ 3623'

Production:
 $5\frac{1}{2}"$, 14#
@ 4150'
Cmt w/ 250 sx

TD 4150'

4150'

Shugart Apco A #5

Shugart (APCO) A No 5

Page
Date
By

Surface:

8 5/8", 28#

@ 776'

Cmt w/ 375ss

Hole size 10"

776'

2 3/8" EUG
Tbg
(No more information)

(1470)

Queen
Perf

(3270-3280)

(3300-3310)

(1470)

Penrose
Perf

(3528-3530)

(3532-3534)

(3536-3538)

(3540-3546)

Tbg @
3410'

Production:

5 1/2", 15.5#

@ 3965'

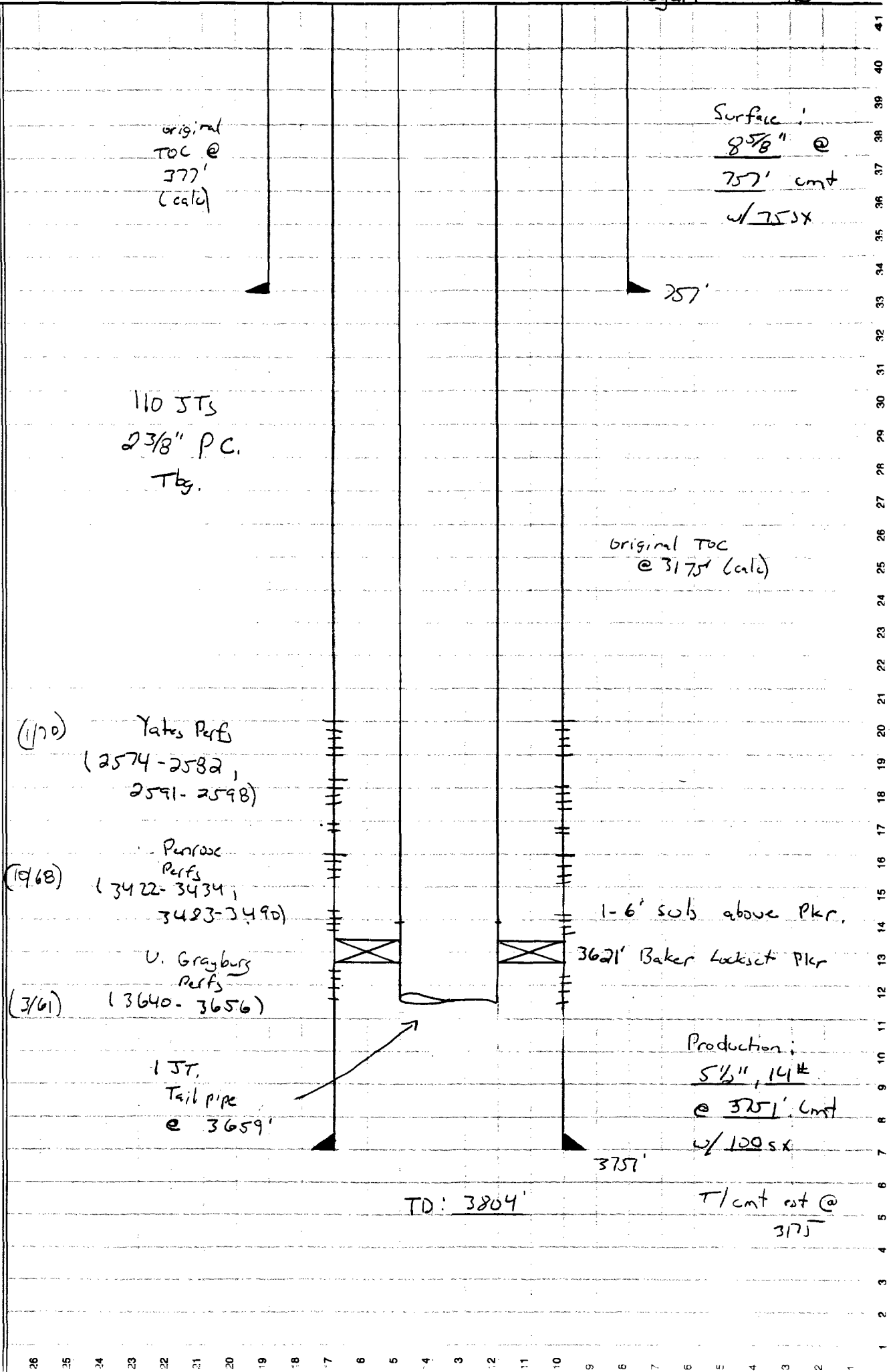
Cmt w/ 325ss

Hole size 7 1/2"

3965'

TD. 3965'

Page _____
Date _____
By _____



(MESA-QUEEN (MESA QUEEN UNIT AREA WATERFLOOD)
POOL - Cont'd.)

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) (As Amended by Order No. R-3444-A, September 12, 1968) That the applicant, Tenneco Oil Company, is hereby authorized to institute a waterflood project in its Mesa Queen Unit Area, Mesa-Queen Pool, by the injection of water into the Queen formation through the following-described wells in Township 16 South, Range 32 East, NMPM, Lea County, New Mexico:

Well	No.	Unit	Section
Tenneco-Mesa Queen Unit	2	NW/4 NE/4	16
Tenneco-Mesa Queen Unit	1	NE/4 NW/4	16
Tenneco-Mesa Queen Unit	6	SW/4 NW/4	16
Tenneco-Mesa Queen Unit	16	NW/4 SE/4	16
Tenneco-Mesa Queen Unit	9	SE/4 NE/4	16
Tenneco-Mesa Queen Unit	5	SE/4 NE/4	17
Tenneco-Mesa Queen Unit	4	SW/4 NE/4	17
Tenneco-Mesa Queen Unit	18	SE/4 SW/4	17
Tenneco-Mesa Queen Unit	11	NE/4 SW/4	17
Tenneco-Mesa Queen Unit	10	NW/4 SW/4	17
Tenneco-Mesa Queen Unit	20	SE/4 SE/4	17
Tenneco-Mesa Queen Unit	24	SW/4 NW/4	20

(2) (As Amended by Order No. R-3444-A, September 12, 1968) That the subject waterflood project is hereby designated the Tenneco Mesa Queen Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commissions Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the Tenneco Mesa Queen Waterflood Project to include such additional lands and injection wells in the area of said project as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SHUGART POOL
(Shenandoah-Yates, Seven Rivers, Queen
and Grayburg Waterflood)
Eddy County, New Mexico

Order No. R-3431, Authorizing Shenandoah Oil Corporation to Institute a Waterflood Project in the Yates, Seven Rivers, Queen, and Grayburg Formations in the Shugart Pool, Eddy County, New Mexico, June 18, 1968.

Application of Shenandoah Oil Corporation
for a Waterflood Project, Eddy County, New
Mexico.

CASE NO. 3779
Order No. R-3431

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 a.m. on June 5, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 18th day of June, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Shenandoah Oil Corporation, seeks permission to institute a waterflood project in the Shugart Pool by the injection of water into the Yates, Seven Rivers, Queen, and Grayburg formations through five injection wells located in Units F and N of Section 29, and Units A, G, and I of Section 30, all in Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico.

(3) That the applicant further seeks an administrative procedure whereby said project could be expanded to include additional lands and injection wells in the area of said project as may be necessary in order to complete an efficient injection pattern; that said administrative procedure should provide for administrative approval for conversion to water injection in

(SHUGART (SHENANDOAH-YATES, SEVEN RIVERS, QUEEN AND GRAYBURG WATERFLOOD) POOL - Cont'd.)

exception to the well response requirements of Rule 701 E-5 of the Commission Rules and Regulations.

(4) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Shenandoah Oil Corporation, is hereby authorized to institute a waterflood project in the Shugart Pool by the injection of water into the Yates, Seven Rivers, Queen, and Grayburg formation through the following-described wells in Township 18 South, Range 31 East, NMPM, Eddy County, New Mexico:

LEASE	WELL NUMBER	LOCATION
Kenwood-Federal	3	Unit F - Section 29
Shugart "A"	8	Unit N - Section 29
Shugart "D"	8	Unit A - Section 30
Shugart "D"	1	Unit G - Section 30
Shugart "C"	3	Unit I - Section 30

(2) That the subject waterflood project is hereby designated the Shenandoah Shugart Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the Shenandoah Shugart Waterflood Project to include such additional lands and injection wells in the area of the project as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SQUARE LAKE POOL
(Square Lake "12" Unit Area Waterflood)
Eddy County, New Mexico

Order No. R-3448, Authorizing Kewanee Oil Company to Institute a Waterflood Project in the Square Lake Pool, Eddy County, New Mexico, July 3, 1968.

Application of Kewanee Oil Company for a Waterflood Project, Eddy County, New Mexico.

CASE NO. 3792
Order No. R-3448

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 a. m. on June 26, 1968, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 3rd day of July, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Kewanee Oil Company, seeks permission to institute a waterflood project in its Square Lake "12" Unit Area, Square Lake Pool, by the injection of water into the Grayburg formation through seven injection wells in Sections 1 and 12, Township 17 South, Range 29 East, and Sections 6 and 7, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Kewanee Oil Company, is hereby authorized to institute a waterflood project in its Square Lake "12" Unit Area, Square Lake Pool, by the injection of water into the Grayburg formation through the following-described wells in Eddy County, New Mexico:

CALCULATED CEMENT TOPS for AREA OF REVIEW RANDOM GROUP

Proposed Injection Well: MERIDIAN Shugart "A" No. 4
 Proposed Injection Zone: 2538 to 2554
 Minimum Required TOC: 2038 Feet

Formation: Yates
 Yield: 70%

Well Name	No.	Type	T.D.	Casing	Depth	Borehole	Cement	TOC	Remarks
State 32	#1	PROD (SI)	3670	8.625 5.5	950 3670	12.25 7.875	50 sx 350	850 2,001 ERR	Top of 5.5" Liner @ 3328'
Shugart "A"	#1	PROD (PB)	3674	8.675 7 5.5	632 3662 3740	11 10.5 7.875	50 sx 150 20	466 3,291 3,645	800 5.5" Liner 3633'-3740'
Kernwood	#3	INJ (SI)	3695	8.625 5.5	750 3675	11 7.875	50 sx 150	500 3,180 ERR	P & A WITH IN ONE YEAR
Kernwood	#5	PROD	3855	8.625 5.5	748 3845	11 7.875	350 sx 1300	(389) (2,353) ERR	
Shugart "A"	#9	INJ	3820	8.625 5.5	775 3811	11 7.875	50 sx 200	613 2,857 ERR	1850' by Temp Survey
Shugart Apco "A"	#4	INJ (SI)	3650	8.625 4.5	744 3650	11 6.25	350 sx 200	(393) 2,040 ERR	
Shugart "C"	#3	INJ (SI)	3804	8.625 5.5	757 3751	11 7.875	75 sx 100	513 3,274 ERR	34 w/ 2000 SY'S down

Numbers in () denote negative values, i.e., cement circulated to surface.

WRITE KERNWOOD #3 INTO ORDER

CONDITION MUST P&A OR
 SQUEEZE TO OBTAIN TOC AT
 APPROXIMATELY 2000'

VERBALLY COMMUNICATED
 THIS CONDITION TO
 JOE SNAPE ENG w/ MERIDIAN
 ON 4-8-92.

5/1/92

CALCULATED CEMENT TOPS for AREA OF REVIEW RANDOM GROUP

Proposed Injection Well: MERIDIAN Shugart "A" No.4				Formation: Yates					
Proposed Injection Zone: 2538 to 2554				Yield: 70%					
Minimum Required TOC: 2038 Feet									
Well Name	No.	Type	T.D.	Casing	Depth	Borehole	Cement	TOC	Remarks
State 32	#1	PROD (51)	3670	8.625 5.5	950 3670	12.25 7.875	50 350	850 2,001 ERR	Top of 5.5" Liner @ 3328"
Shugart "A"	#1	PROD	3674 (PB)	8.675 7 5.5	632 3662 3740	11 10.5 7.875	50 150 20	466 3,291 3,645	5.5" Liner 3633'-3740'
Kennwood	#3	INJ (51)	3895	8.625 5.5	750 3895	11 7.875	50 150	588 3,180 ERR	
Kennwood	#5	PROD	3855	8.625 5.5	748 3845	11 7.875	350 1300	(389) (2,353) ERR	
Shugart "A"	#9	INJ	3820	8.625 5.5	775 3811	11 7.875	50 200	613 2,857 ERR	1850' by Temp Survey
Shugart Apco "A"	#4	INJ (51)	3650	8.625 4.5	744 3650	11 6.25	350 200	(393) 2,040 ERR	
Shugart "C"	#3	INJ (51)	3804	8.625 5.5	757 3751	11 7.875	75 100	513 3,274 ERR	

Numbers in () denote negative values, i.e., cement circulated to surface.

ILLEGIBLE

[illegible]

Reproduced By

Auto-Tone Electrical Log Service

Dallas 2, Texas

REFERENCE 1999SD



COMPLETION RECORD

SF: DATE

COMPLAINT

CITY REPORT

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE