REAGAN SMITH
ENERGY SOLUTIONS, INC.
Perfecting the Efficient Development of Natural Resources

April 10, 2007

State of New Mexico
Oil Conservation Division
1301 W. Grand Avenue
Artesia, NM 88210
Attention: Will Jones

RE: Apollo Energy, LP.
Application for Authorization to Inject for Salt Water Disposal
LC050797
Russell USA Field
Well # 60 & 65
T20S-R28E, Eddy County, NM

Dear Mr. Jones:

Please review and accept the enclosed Application For Authorization to Inject. Apollo Energy, L.P. would like to bring on-line two (2) salt water disposal wells, the Russell USA #60 and the Russell USA #65. The application package contains all relevant documentation. Please return the appropriate approvals to our office at our letterhead address and contact our office with questions and comments.

Sincerely,

Scott St. John
For Apollo Energy, L.P.

Enc:
Cc: GM-OCD
SSJ

2525 N.W. Expressway, Suite 312 • Oklahoma City, OK 73112
(405) 286-9326 • Fax: (405) 848-2712 • www.rsenergysolutions.com

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance __X__Disposal _____Storage
Application qualifies for administrative approval? __X__Yes _____No

II. OPERATOR: Apollo Energy, LP

ADDRESS: 6363 Woodway, Ste 1100, Houston, TX 77057

CONTACT PARTY: Tommy Wright PHONE: (337)-502-5227

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 __X__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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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: Scott St. John, Agent For Apollo Energy, L.P. TITLE: Project Mgr.

SIGNATURE: _____ DATE: 4/10/07

E-MAIL ADDRESS: SST JOHN@RSENERGYSOLUTIONS.COM

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances 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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose of Application

1. Disposal

II. Operator:

Apollo Energy, L.P.
6363 Woodway, Suite 1100
Houston, TX 77057
Contact: Tommy Wright, Phone: (337) 502-5227

III. Well Data

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

See "Exhibit A"

See "Exhibit B"

B. The following must be submitted for each disposal/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.

See "Exhibit A"

See "Exhibit B"

IV. Existing 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.

1. Please see attached Area of Review Map

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

1. Please see attached Tabulation of Data

VII. Proposed Operations

1. Proposed average and maximum daily rates and volume of fluids to be disposed.

   a. Russell USA #60

      i. The proposed maximum daily rate is estimated at 1,440 bpd.
      ii. The proposed average daily rate is expected to be 500 bpd.

   b. Russell USA #65

      iii. The proposed maximum daily rate is estimated at 1,440 bpd.
      iv. The proposed average daily rate is expected to be 500 bpd.

2. Whether the system is open or closed.

      i. This will be a closed system

3. Proposed average and maximum disposal pressure.

   a. Russell USA #60

      i. The proposed maximum pressure is expected to be 700 psi.
      ii. The proposed average pressure is expected to be 500 psi.

   b. Russell USA #65

      iii. The proposed maximum pressure is expected to be 700 psi.
      iv. The proposed average pressure is expected to be 500 psi.

4. Sources and an appropriate analysis of fluid and compatibility with the receiving formation if other than reinjected produced water.

      i. Disposal fluid shall be from the Yates Formation.

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.).

      i. Disposal will be into the Yates Formation for the purpose of disposal.

VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic 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 disposal zone as well as any such sources known to be immediately underlying the disposal interval.

1. The estimated top of the Rustler formation (containing shallow ground water) is approximately 70' and the base is approximately 85'.
2. The Yates formation top is between approximately 650' and 700'. The base is between approximately 800' and 900' with and average thickness of 25'.
3. The Seven Rivers formation (containing oil and gas) is estimated at 1,042' in Section 13, Township 20S, Range 28E

IX. Describe the proposed stimulation program, if any.

i. A stimulation program will not be utilized.

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

1. Appropriate logging and test data has been previously submitted. Please see R-263.

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.

1. No operable fresh water will within one mile radius of proposed area of review.

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 sources of drinking water.

Apollo Energy, L.P. affirms 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 sources of drinking water.

Apollo Energy, L.P. (Limited Partnership)

BY: Scott St. John, Agent for Apollo Energy
For William J. Dore, Manager of **BD Energy Company, LLC, General Partner** of **Apollo Energy, L.P.** (Limited Partnership)

XIII. 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

Exhibit – A

FORREST A. GARB & ASSOCIATES, INC.

INTERNATIONAL PETROLEUM CONSULTANTS
5310 HARVEST HILL ROAD, SUITE 275 - LB 152
DALLAS, TEXAS 75230 - 5805
(972)788-1110 Telefax (972)991-3160 (E MAIL) forgarb@forgarb.com

April 5, 2007

Mr. Will Jones
New Mexico Oil Conservation Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Water Disposal, Russell Field, Eddy County, New Mexico

Dear. Mr. Jones:

Water disposal in the Russell USA 60 well will prevent waste by allowing for additional oil recovery from the Russell Field. The Russell Field has produced 2.4 million barrels of oil and has an estimated 2.0 million barrels remaining recoverable oil. Water disposal will allow for continued production of the remaining recoverable oil and will help maintain the existing reservoir pressure. The favorable mobility ratio of the disposal water and oil in place will promote continued oil movement toward the producing wells. The disposal water will not damage the reservoir, but rather will enhance the existing production. Previous water disposal of 14.5 million barrels of water into this reservoir has enhanced the oil recovery. Additional disposal will not harm the reservoir.

Sincerely

W. D. Harris III
Chief Executive Officer
Forrest A. Garb & Associates, Inc.

Side 1

INJECTION WELL DATA SHEET

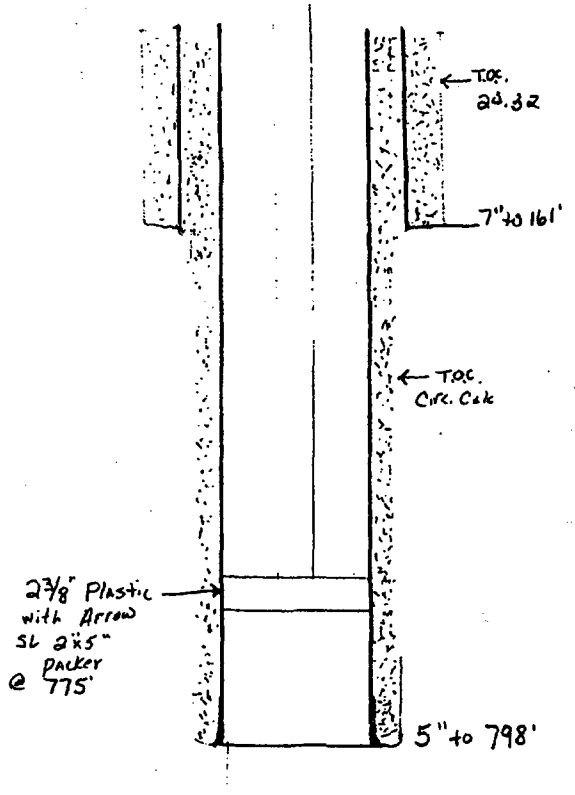
OPERATOR: Apollo Energy, L.L.C.

WELL NAME & NUMBER: Russell USA # 60 API # 300151-04200 Lease #: NMLC059797

WELL LOCATION: 2630 fnl 1980 fwl 13 20S 28E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC



TD-827'

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 8 5/8" Casing Size: 7" to 161'

Cemented with: 15 sx. *or* _____ ft³

Top of Cement: 20.32 Method Determined: CALC

Intermediate Casing

Hole Size: N/A Casing Size: N/A

Cemented with: N/A sx. *or* N/A ft³

Top of Cement: N/A Method Determined: N/A

Production Casing

Hole Size: 6 1/4" Casing Size: 5" to 798

Cemented with: 60 sx. *or* _____ ft³

Top of Cement: Circ. Method Determined: CALC.

Total Depth: 827

Injection Interval

798' feet to 827'

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8 Lining Material: Plastic

Type of Packer: Arrow SL

Packer Setting Depth: 775'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____Yes X No

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

2. Name of the Injection Formation: Yates

3. Name of Field or Pool (if applicable): Russell USA

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Upper Zone: None Lower Zone: 7-Rivers (900'-1,042')

Exhibit – B

Area of Review Map

Tabulation Data

Affidavit of Publication

Affidavit of Publication

NO. 19671

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 county and state, and that the here to 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 Consecutiv week/days on the same day as follows:

First Publication April 6 2007

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Subscribed and sworn to before me this

6th Day April 2007

Notary Public, Eddy County, New Mexico

My Commission expires October 9, 2008

Copy of Publication:

LEGAL NOTICE

NOTICE OF APPLICATION FOR AUTHORIZE FOR SALT WATER DISPOSAL
OCD FORM C-108
Applicant:
Apollo Energy, L.P.
6363 Woodway, Ste 1100
Houston, TX 77057
(337) 502-5227
Please Contact:
Reagan Smith Energy Solutions, Inc
2525 NW Expressway, Ste 312
Oklahoma City, OK 73112
(405) 286-9326
Intended purpose of well:
Salt water disposal well
Name and location of wells:
Russell USA #60
2630' FNL and 1980' FWL
Sec 13 T20S R28E
Eddy County, NM
Depth - #60 798'-827'
Russell USA #65
1990' FSL and 1330' FWL
Sec 13 T20S R28E
Eddy County, NM
Depth - #65 795'-828'
Formation name and Depth of wells:
Formation – Yates
Top between 650' and 700' Base is between 800' and 900'
Expected maximum disposal rates and pressures:
Maximum daily rate is estimated at 1,440 bpd
Average daily rate is expected to be 500 bpd.
Maximum disposal pressure is estimated at 700 psi
Average disposal pressure is expected to 500 psi
NOTICE: Interested parties must file objections or requests for hea with the Oil Conserva Division, 1220 South Francis Dr., Santa New Mexico 87505, in 15 days.
Published in the Artes Daily Press, Artesia, N.M. April 6, 2007
Legal 19

Proof of Mailing

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

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Street, Apt. No.; or PO Box No.: P.O. Box 10523
City, State, ZIP+4: MIDLAND, TX 79702

PS Form 3800, June 2002 — See Reverse for Instructions

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Total Postage & Fees	$ 4.71

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Street, Apt. No.; or PO Box No.: P.O. BOX 4294
City, State, ZIP+4: HOUSTON, TX 77210

PS Form 3800, June 2002 — See Reverse for Instructions

7005 1820 0006 4284 6377

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Total Postage & Fees	$ 4.71

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Sent To: BUREAU OF LAND Mgmt. ATTN JIM AMOS
Street, Apt. No.; or PO Box No.: 620 E. GREEN STREET
City, State, ZIP+4: CARLSBAD, NM 88220

PS Form 3800, June 2002 — See Reverse for Instructions

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7005 1820 0006 4284 638

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 4.71

Postmark Here

Sent To: LORD STRAUD ENGINEERING, INC.
Street, Apt. No.; or PO Box No.: 805 King Drive
City, State, ZIP+4: HOUSTON, TX 77019

PS Form 3800, June 2002 — See Reverse for Instructions

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

FORREST A. GARB & ASSOCIATES, INC.

INTERNATIONAL PETROLEUM CONSULTANTS
5310 HARVEST HILL ROAD, SUITE 275 - LB 152
DALLAS, TEXAS 75230 - 5805
(972)788-1110 Telefax (972)991-3160 (E MAIL) forgarb@forgarb.com

April 5, 2007

Mr. Will Jones
New Mexico Oil Conservation Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Water Disposal, Russell Field, Eddy County, New Mexico

Dear. Mr. Jones:

Water disposal in the Russell USA 65 well will prevent waste by allowing for additional oil recovery from the Russell Field. The Russell Field has produced 2.4 million barrels of oil and has an estimated 2.0 million barrels remaining recoverable oil. Water disposal will allow for continued production of the remaining recoverable oil and will help maintain the existing reservoir pressure. The favorable mobility ratio of the disposal water and oil in place will promote continued oil movement toward the producing wells. The disposal water will not damage the reservoir, but rather will enhance the existing production. Previous water disposal of 14.5 million barrels of water into this reservoir has enhanced the oil recovery. Additional disposal will not harm the reservoir.

Sincerely

W. D. Harris III
Chief Executive Officer
Forrest A. Garb & Associates, Inc.

Side 1

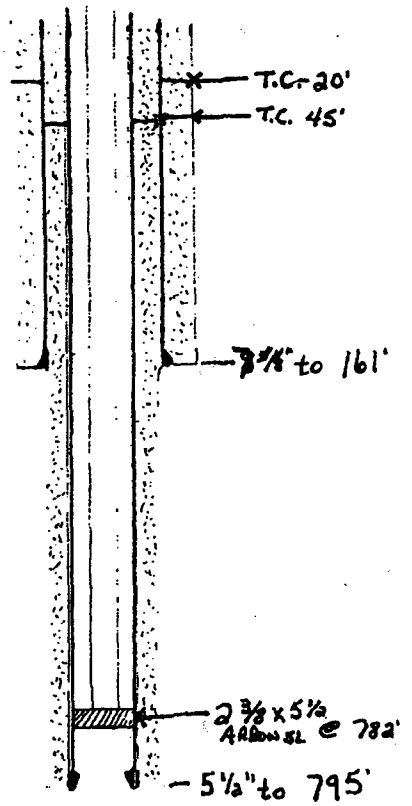
INJECTION WELL DATA SHEET

OPERATOR: Apollo Energy, L.L.C.

WELL NAME & NUMBER: Russell USA # 65 API #: 300152-02290 Lease #: NMLC059797

WELL LOCATION:	1990 fsl 1337 fwl		13	20S	28E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 8 5/8" Casing Size: 7"

Cemented with: 15 sx. *or* _____ ft³

Top of Cement: 20' Method Determined: CALC.

Intermediate Casing

Hole Size: N/A Casing Size: N/A

Cemented with: N/A sx. *or* N/A ft³

Top of Cement: N/A Method Determined: N/A

Production Casing

Hole Size: 6 1/4" Casing Size: 5 1/2"

Cemented with: 50 sx. *or* _____ ft³

Top of Cement: 45' Method Determined: CALC

Total Depth: 828

Injection Interval

795 feet to 828

(Perforated or Open Hole; indicate which)

TD @ 828

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8 Lining Material: Plastic

Type of Packer: Arrow SL

Packer Setting Depth: _____

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____Yes __x__No

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

2. Name of the Injection Formation: Yates

3. Name of Field or Pool (if applicable): Russell USA

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Lower Zone: 7-Rivers (900'-1.042') Upper Zone: None

R 20 E

11 12

14 13

Russell USA No. 3

Russell USA No. 2

Russell USA No. 1

Russell USA No. 18

Russell USA No. 35

Russell USA No. 28

Russell USA No. 30

Russell USA No. 54

Russell USA No. 58

Russell USA No. 49

Russell USA No. 32

Russell USA No. 11

Russell USA No. 15

Russell USA No. 27

Russell USA No. 67

Russell USA No. 63

Russell USA No. 50

Russell USA No. 46

Russell USA No. 14

Russell USA No. 26

Russell USA No. 16

Government AC No. 2

Russell USA No. 41

Russell USA No. 29

Russell USA No. 9

Russell USA No. 62

Russell USA No. 55

Russell USA No. 53

Russell USA No. 10

Russell USA No. 38

Russell USA No. 24

Russell USA No. 31

Russell USA No. 25

Russell USA No. 66

Russell USA No. 61

Russell USA No. 56

Russell USA No. 60

Wills Federal 10 y

Russell USA No. 42

Russell USA No. 39

Russell USA No. 45

Russell USA No. 17

Russell USA No. 33

Russell USA No. 6

Russell USA No. 65

Russell USA No. 5

Russell USA No. 7

SOUTH BATTENT

Indigo Federal No. 1

Russell USA No. 59

Russell USA No. 22

Russell USA No. 36

Russell USA No. 43

Russell USA No. 40

Russell USA No. 19

Russell USA No. 51

Russell USA No. 64

Russell USA No. 57

Russell USA No. 13

Russell USA No. 48

Russell USA No. 12

Russell USA No. 44

Russell USA No. 34

Russell USA No. 21

Russell USA No. 8

Russell USA No. 52

Russell USA No. 4

Russell USA No. 47

Russell USA No. 23

Russell USA No. 20

Russell USA No. 37

SUGGERTH & HICKS 23 24

Apollo Energy, L.P.
Russell Field
Area of Review Map

RUSSELL POOL

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 001

API# 3001502345 **Type:** Injection

Location: 330 FSL & 2310 FEL **Sec:** 12 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 471' w50 sx mud; 7" to 751' w75 sx Mud

Date: 12/3/1944 **Depth:** 881' **Open Hole**: X **Perforated:**

Completion: 75 qts 844-881

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 002

API# 3001502346 **Type:** Injection

Location: 330 FSL & 1650 FEL **Sec:** 12 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 765' w100 sx Mud; 5 1/2 to 775 w100 sx Mud

Date: 3/23/1945 **Depth:** 908' **Open Hole**: X **Perforated:**

Completion: 70 qts 863-900

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 003

API# 3001502348 **Type:** Injection

Location: 663 FSL & 2000 FEL **Sec:** 12 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 746' w100 sx Mud

Date: 6/18/1948 **Depth:** 890' **Open Hole**: X **Perforated:**

Completion: 30 qts 869-884

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 004

API# 3001502350 **Type:** Oil

Location: 660 FSL & 1980 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 712' w 75 sx Mud

Date: 9/14/1942 **Depth:** 908' **Open Hole**: X **Perforated:**

Completion: 40 qts 790-810

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 005

API# 3001502351 **Type:** Oil

Location: 1980 FSL & 1980 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8 to 470'; 7" to 724' w 50 sx

Date: 10/26/1942 **Depth:** 858' **Open Hole**: X **Perforated:**

Completion: 30 qts 812-827

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 006

API# 3001502352 **Type:** Oil

Location: 1980 FSL & 660 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8' to 446' w 50 sx; 7" to 740' w 50 sx circulated

Date: 3/25/1942 **Depth:** 817' **Open Hole**: X **Perforated:**

Completion: 30 qts. 785-805

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 007

API# 3001502353 **Type:** Oil

Location: 1980 FSL & 1968 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 9" to 473' w 50 sx; 7" to 725' w 50 sx

Date: 2/25/1943 **Depth:** 869' **Open Hole**: X **Perforated:**

Completion: 30 qts 845-860

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 008

API# 3001502355 **Type:** Oil

Location: 660 FSL & 660 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8 to 430' w 50 sx; 7" to 756 w 5 sx

Date: 4/25/1942 **Depth:** 810' **Open Hole**: X **Perforated:**

Completion: 30 qts. 780-810

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 009

API# 3001502356 **Type:** Oil

Location: 1980 FNL & 1980 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 13" to 120' pulled, 10' to 220' w ? Sx; 8 5/8" to 281' w 50 sx, 7" to 780 w 135 sx

Date: 8/22/1943 **Depth:** 845' **Open Hole**: X **Perforated:**

Completion: 20 qts.817-837

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 010

API# 3001502357 **Type:** Oil

Location: 2310 FNL & 990 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 13" to 82' w None mudded - pulled; 10 3/4" to 242' w none pulled; 7" to 736' w 125 sx

Date: 9/12/1944 **Depth:** 873' **Open Hole**: X **Perforated:**

Completion: 80 qts. 770-853

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 011

API# 3001502358 **Type:** Oil

Location: 990 FNL & 2310 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 10 3/4 to 255' w full hole; 7" to 770' w 125 sx

Date: 2/2/1945 **Depth:** 856' **Open Hole**: X **Perforated:**

Completion: 50 qts. 831-856

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 012

API# 3001502360 **Type:** Oil

Location: 996 FSL & 1005 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 202' w ?; 7" to 736' w 75 sx

Date: 4/25/1945 **Depth:** 829' **Open Hole**: X **Perforated:**

Completion: 50 qts. 803-822

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 013

API# 3001502361 **Type:** Oil

Location: 990 FSL & 2310 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 1/4" to 354' Circ.; 7" to 714" w 75 sx

Date: 9/18/1944 **Depth:** 835' **Open Hole**: X **Perforated:**

Completion: 45 qts. 806-830

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 014

API# 3001502362 **Type:** Oil

Location: 1650 FNL & 2310 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 293' w ?; 7" to 756' w 75 sx

Date: 3/17/1945 **Depth:** 859' **Open Hole**: X **Perforated:**

Completion: 40 qts. 813-833

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 015

API# 3001502363 **Type:** Oil

Location: 996 FNL & 1005 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 303' w ? Sx; 7" to 740' w 100 sx

Date: 5/21/1945 **Depth:** 878' **Open Hole**: X **Perforated:**

Completion: 40 qts. 855-871

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 016

API# 3001502364 **Type:** Oil

Location: 1656 FNL & 1005 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 315' w ?; 7" to 800' w 100 sx

Date: 6/15/1945 **Depth:** 880' **Open Hole**: X **Perforated:**

Completion: 40 qts. 864-880

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 017

API# 3001502365 **Type:** Oil

Location: 2322 FSL & 1005 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction:

Date: Depth: Open Hole: **Perforated:**

Completion:

NAME: Collier Pet Corp **LEASE:** Wills Federal 10y

API# 3001502366 **Type:** Oil

Location: 2222 FSL-1005 WSL **Sec:** 14 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 45' w 35sx 4 1/2' to 747' w 140 sx

Date: 5/10/1962 **Depth:** 810 **Open Hole**: X **Perforated:**

Completion:

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 018

API# 3001502367 **Type:** Oil

Location: 200 FNL & 2340 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 733' w 100 sx; 5 1/2" to 217' w 10 sx

Date: 9/5/1945 **Depth:** 867' **Open Hole**: X **Perforated:**

Completion: 50 qts. 842-867

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 019

API# 3001502368 **Type:** Oil

Location: 1656 FSL & 1005 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 689' w 80 sx

Date: 1/30/1946 **Depth:** 825' **Open Hole**: X **Perforated:**

Completion: 50 qts. 820-825

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 020

API# 3001502369 **Type:** Oil

Location: 330 FSL & 1005 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 557' w 85 sx Circ.

Date: 2/20/1946 **Depth:** 797' **Open Hole**: X` **Perforated:**

Completion: 50 qts. 792-797

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 021

API# 3001502370 **Type:** Oil

Location: 996 FSL & 330 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 681' w 125 sx Circ.

Date: 8/19/1946 **Depth:** 811' **Open Hole**: X **Perforated:**

Completion: 30 qts. 796-811

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 022

API# 3001502371 **Type:** Oil

Location: 1656 FSL & 330 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 679' w 125 sx Circulated

Date: 9/16/1946 **Depth:** 808' **Open Hole**: X **Perforated:**

Completion: 100 qts. 775-800

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 023

API# 3001502372 **Type:** Oil

Location: 338 FSL & 352 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 670' w 150 sx Circulated

Date: 9/28/1946 **Depth:** 782' **Open Hole**: X **Perforated:**

Completion: 30 qts. 767-782

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 024

API# 3001502373 **Type:** Oil

Location: 2322 FNL & 2333 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 775' w 150 sx Circulated

Date: 6/29/1947 **Depth:** 849' **Open Hole**: X **Perforated:**

Completion: 40 qts. 829-849

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 025

API# 3001502374 **Type:** Oil

Location: 2322 FNL & 1665 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 717' w 150 sx Circulated

Date: 7/8/1947 **Depth:** 847' **Open Hole**: X **Perforated:**

Completion: 30 qts. 832-847

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 026

API# 3001502375 **Type:** Oil

Location: 1656 FNL & 1665 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 732' w 150 sx

Date: 7/20/1947 **Depth:** 854' **Open Hole**: X **Perforated:**

Completion: 40 qts. 834-854

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 027

API# 3001502376 **Type:** Oil

Location: 996 FNL & 1665 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 752' w 150 sx Circulated

Date: 7/29/1947 **Depth:** 870' **Open Hole**: X **Perforated:**

Completion: 40 qts. 850-870

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 028

API# 3001502377 **Type:** Oil

Location: 330 FNL & 1665 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7"@ 652' w 150 sx. Cirulated

Date: 8/9/1947 **Depth:** 875" **Open Hole**: x **Perforated:**

Completion: 40 qts 845-865

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 029

API# 3001502378 **Type:** Oil

Location: 1980 FNL & 1980 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 9" to 453' w 50 sx; 7" to 725' w 50 sx

Date: 4/7/1943 **Depth:** 815' **Open Hole**: X **Perforated:**

Completion: 30 qts 794-805

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 030

API# 3001502379 **Type:** Oil

Location: 660 FNL & 1980 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 10" to 190'; 8 5/8 to 365'; 7" to 732' w 100 sx

Date: 9/4/1943 **Depth:** 850' **Open Hole**: X **Perforated:**

Completion: 40 qts. 825-845 845-850

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 031

API# 3001502380 **Type:** Oil

Location: 2310 FNL & 1650 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 10" to 212' 50 sx mud; 7" to 702' 75 sx

Date: 10/24/1944 **Depth:** 816' **Open Hole**: X **Perforated:**

Completion: 50 qts. 787-813

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 032

API# 3001502381 **Type:** Oil

Location: 1017 FNL & 2310 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 10" to 214'; 8" to 450" w 50 sx; 7" to 728' w 75 sx

Date: 6/6/1948 **Depth:** 870' **Open Hole**: X **Perforated:**

Completion: 5 qts 845-860

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 033

API# 3001502382 **Type:** Oil

Location: 2322 FSL & 2337 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 294' w 25 sx mud; 7" to 706' w 100 sx el toro

Date: 5/1/1945 **Depth:** 870' **Open Hole**: X **Perforated:**

Completion: 50 qts. 845-870

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 034

API# 3001502383 **Type:** Oil

Location: 959 FSL & 1669 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 283'; 7" to 703 w 100sx el toro

Date: 5/25/1945 **Depth:** 814' **Open Hole**: X **Perforated:**

Completion: 50 qts. 788-813

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 035

API# 3001502384 **Type:** Oil

Location: 332 FNL & 2340 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 354'; 7" to 745' w 100 sx circulated to surface

Date: 6/19/1946 **Depth:** 847' **Open Hole**: X **Perforated:**

Completion: 50 qts. 845-847

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 036

API# 3001502385 **Type:** Oil

Location: 1659 FSL & 1670 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 362' mudded hole; 7" to 712' w 75 sx

Date: 7/14/1946 **Depth:** 835' **Open Hole**: X **Perforated:**

Completion: 50 qts. 831-835

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 037

API# 3001502386 **Type:** Oil

Location: 331 FSL & 1669 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 318' mudded hole; 7" to 695' w 75 sx circulated between strings

Date: 9/14/1946 **Depth:** 810' **Open Hole**: X **Perforated:**

Completion: 40 qts. 790-810

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 038

API# 3001502387 **Type:** Oil

Location: 2321 FNL & 2339 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 301' mudded; 7" to 731' w 75 sx circulated

Date: 11/27/1946 **Depth:** 826' **Open Hole**: X **Perforated:**

Completion: 60 qts. 796-826

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 039

API# 3001502388 **Type:** Oil

Location: 2322 FSL & 2339 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 287'; 7" to 765' w 100 el toro

Date: 7/24/1945 **Depth:** 852' **Open Hole**: X **Perforated:**

Completion: 50 qts. 826-850

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 040

API# 3001502389 **Type:** Oil

Location: 1658 FSL & 2338 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" o 316'; 7" to 728' w 75 sx circulated b/tw strings

Date: 2/20/1947 **Depth:** 844' **Open Hole**: X **Perforated:**

Completion: 40 qts. 824-844

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 041

API# 3001502390 **Type:** Oil

Location: 1658 FNL & 2339 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 293' mudded; 7" to 734' w 75 sx circulated between strings

Date: 4/2/1947 **Depth:** 829' **Open Hole**: X **Perforated:**

Completion: 60 qts. 799-829

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 042

API# 3001502391 **Type:** Oil

Location: 2322 FSL & 1669 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 282'; 7" to 716' w 75 sx circulated strings

Date: 5/12/1947 **Depth:** 834' **Open Hole**: X **Perforated:**

Completion: 60 qts. 803-833

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 043

API# 3001502392 **Type:** Oil

Location: 1650 FSL & 2339 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 965' w 200 sx

Date: 7/9/1948 **Depth:** 824' **Open Hole**: X **Perforated:**

Completion: 50 qts. 797-822

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 044

API# 3001502393 **Type:** Oil

Location: 959 FSL & 2339 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 686' w 125 sx circulated

Date: 7/17/1948 **Depth:** 820' **Open Hole**: X **Perforated:**

Completion: 50 qts. 795-820

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 045

API# 3001502394 **Type:** Oil

Location: 2322 FSL & 1669 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 742' w 125 sx circulated

Date: 8/2/1948 **Depth:** 869' **Open Hole**: X **Perforated:**

Completion: 40 qts. 849-869

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 046

API# 3001502395 **Type:** Oil

Location: 1658 FNL & 1669 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 682' w 125 sx circulated

Date: 7/24/1948 **Depth:** 804' **Open Hole**: X **Perforated:**

Completion: 30 qts. 789-804

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 047

API# 3001502398 **Type:** Injection

Location: 330 FSL & 330 FEL **Sec:** 14 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 655' w 125' sx Circ.

Date: 7/17/1946 **Depth:** 993' **Open Hole**: X **Perforated:**

Completion: 40 qts. 756-770

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 048

API# 3001502399 **Type:** Injection

Location: 996 FSL & 330 FEL **Sec:** 14 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 662' w 125 sx Circ

Date: 7/30/1946 **Depth:** 784' **Open Hole**: X **Perforated:**

Completion: 40 qts. 764-784

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 049

API# 3001506186 **Type:** Oil

Location: 660 FNL & 2000 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 6 5/8 to 816 w 100 sx

Date: 11/24/1948 **Depth:** 875' **Open Hole**: X **Perforated:**

Completion:

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 050

API# 3001506187 **Type:** Oil

Location: 1305 FNL & 1980 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 823" w 100 sx

Date: 3/14/1951 **Depth:** 846' **Open Hole**: X **Perforated:**

Completion:

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 051

API# 3001506188 **Type:** Oil

Location: 1325 FSL & 660 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 4 1/2 to 827' w 125 sx

Date: 12/1/1956 **Depth:** 827 **Open Hole**: **Perforated:** X

Completion: 4 shots per foot 791' to 802' + 808' 816' frac 500# 20/40 sand

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 052

API# 3001506189 **Type:** Oil

Location: 660 FSL & 1315 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 4 1/2" to 815' w509 sx

Date: 1/18/1957 **Depth:** 815 **Open Hole**: **Perforated:** X

Completion: Shot 60 qts 803 to 780

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 053

API# 3001506191 **Type:** Oil

Location: 2310 FNL & 990 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 257' w10 sx, 4 1/2 @ 884' w 162 sx

Date: 2/5/1957 **Depth:** 884' **Open Hole**: **Perforated:** X

Completion: 60 qts 863 to 884

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 054

API# 3001510099 **Type:** Oil

Location: 660 FNL & 2630 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" @ 157' w 26 sx, 4 1/2 @ 826' w 100 sx

Date: 11/18/1963 **Depth:** 857 **Open Hole**: X **Perforated:**

Completion: 46 qts. 825 to 856'

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 055

API# 3001510100 **Type:** Oil

Location: 1980 FNL & 2630 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" @ 160' w 25 sx pumped, 4 1/2 @ 806' w 60 sx pumped

Date: 9/6/1963 **Depth:** 825 **Open Hole**: X **Perforated:**

Completion: 22 qts 810 - 825

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 056

API# 3001510204 **Type:** Oil

Location: 2630 FNL & 1330 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" @ 150' w 25 sx, 6 5/8 @ 126' at 5 1/2 @ 655' w 60 sx (taperod)

Date: 2/19/1963 **Depth:** 810 **Open Hole**: x **Perforated:**

Completion: 75 qts 780 - 809

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 057

API# 3001510214 **Type:** Oil

Location: 1330 FSL & 1980 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" @ 95' w 15 sx, 4 1/2 @ 800 w 100

Date: 7/29/1963 **Depth:** 820 **Open Hole**: X **Perforated:**

Completion: 18 qts 806' - 818'

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 058

API# 3001510240 **Type:** Oil

Location: 660 FNL & 1310 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" @ 160' w 28 sx, 4 1/2 @ 858' w 50 sx

Date: 10/22/1963 **Depth:** 881 **Open Hole**: X **Perforated:**

Completion: 45 qts. 880 - 457

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 059

API# 3001510250 **Type:** Oil

Location: 1980 FSL & 2630 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" @ 97' w 25 sx, 4 1/2 @ 818 w 60 sx

Date: 6/22/1963 **Depth:** 848 **Open Hole**: **Perforated:**

Completion: 30 qts 823-848

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 061

API# 3001510421 **Type:** Oil

Location: 2630 FNL & 1980 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 160' w 15 sx, 4 1/2 to 850'w 60 sx

Date: 6/29/1964 **Depth:** 863 **Open Hole**: X **Perforated:**

Completion: 22 qts 863 - 848

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 062

API# 3001510422 **Type:** Oil

Location: 1980 FNL & 1310 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 145' w 22 sx, 4 1/2 to 839'w 60 sx

Date: 7/20/1964 **Depth:** 461 **Open Hole**: X **Perforated:**

Completion: 46 qts 837 - 860

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 063

API# 3001510423 **Type:** Oil

Location: 1310 FNL & 1310 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 161' w 15 sx, 5 1/2 to 847' w 60 sx

Date: 9/25/1964 **Depth:** 866 **Open Hole**: X **Perforated:**

Completion: 40 qts

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 064

API# 3001510424 **Type:** Oil

Location: 1330 FSL & 1330 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 165' w 15 sx, 5 1/2 to 805' w 75 sx

Date: 11/9/1964 **Depth:** 826 **Open Hole**: X **Perforated:**

Completion: 50 qts

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 066

API# 3001520230 **Type:** Oil

Location: 2635 FNL & 2635 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 172' w 15 sx, 5 1/2 to 818' w 50 sx

Date: 6/27/1969 **Depth:** 859' **Open Hole**: X **Perforated:**

Completion: 40 qts 835 to 859

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 067

API# 3001520231 **Type:** Oil

Location: 1328 FNL & 2635 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 168' w 15 sx, 5 1/2 to 802' w 50 sx

Date: 8/15/1969 **Depth:** 834 **Open Hole**: X **Perforated:**

Completion: 50 qts 810 to 834

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 068

API# 3001520463 **Type:** Oil

Location: 10 FSL & 1980 FEL **Sec:** 12 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7" to 178' w 15 sx, 5 1/2 to 842' w 50 sx

Date: 1/3/1972 **Depth:** 864 **Open Hole**: X **Perforated:**

Completion: 43 qts 842 to 864

NAME: Apollo Energy, LP **LEASE:** Russell USA no. 069

API# 3001526491 **Type:** Oil

Location: 1170 FNL & 1965 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 8 5/8" to 302' w 300 sx circulated; 4 1/2 to 1100" w 250 sx circulated

Date: 12/2/1990 **Depth:** 972' **Open Hole**: **Perforated:** X

Completion: 800-805 10HLS 1500 gals 15% NEFE; 859-865 12 HLS, no treatment, 911-923 20 hls 3000 gal 15% NEFE

NAME: Oxy USA WTP Limited Partnership **LEASE:** Government AC No. 002

API# 3001521514 **Type:** Gas

Location: 1800 FNL & 1980 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Delaware Formation

Construction: 13 3/8, 48 @900' w 775 sax Circ, 9 5/8" @ 300' w 1,100 sacks circ, 5 1/2 17 + 20 @ 11,610 PCTD, 5,240 top atcement, 2740

Date: 6/1/1975 **Depth:** 5240' **Open Hole**: x **Perforated:**
Completion: PB Morrow, Bone Springs, open Brushing 5216-5230 Acidized w 1000 gals 15% NEFC

NAME: Thunderbolt Petroleum, LLC **LEASE:** Indigo Federal No. 001

API# 3001526478 **Type:** Oil

Location: 1650' FSL & 660 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Delaware Formation

Construction: 13 3/8" to 300 w 330sx Circulated, 8 5/8" to 2875 w 1320 sx 1" with 200sx, 5 1/3 to 7800" w 1050 sx

Date: 2/7/1991 **Depth:** 7800' **Open Hole**: x **Perforated:**

Completion: P.B. TD 5,320 @5009'

NAME: NORDSTRAND ENGINEERING INC **LEASE:** Oxy Yates Fed #7
API# 3001530800

Type: Oil **Location:** 330 FNL & 990 FNL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 7 7/8", 5 1/2 w J55@15.5/ ft, 5 1/2" surface circulate casing 525 sk class c 2% CACL

Date: Depth: 850' **Open Hole: Perforated:**

Completion: No Information Available

NAME: EGL Resources, Inc **LEASE:** Oxy Yates Fed #3 **API#** 3001530594

Type: Gas **Location:** 660 FEL & 2310 FNL **Sec:** 14 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 5 1/2 J55, 1505# 765', hole size 7 7/8, 776 sx cls C circ

Date: Depth: 890 **Open Hole: Perforated:**

Completion: No Information Available

NAME: Timothy D. Collier **LEASE:** Pre - Ongard Well No. 5
API# 3001502359

Type: Oil **Location:** 705 FSL 2025 FEL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 10"/222' , 8-5/8" 566' w50 sacks of cement, 7" 710' w 50 sx of cement, Mudded

Date: Depth: 710' **Open Hole: Perforated:**

Completion: Solid Nitro. 40 qts. 6-5-43 842 to 862 to bottom

NAME: LEASE: No Information on OCD **API#** 3001502354

Type: Location: Sec: Township Range:

Field and Formation:

Construction:

Date: Depth: Open Hole: Perforated:

Completion:

NAME: Nordsand Engineering **LEASE:** Oxy Yates 13 Federal No. 016

API# 3001531428 **Type:** Oil

Location: 380 FNL & 990 FWL **Sec:** 13 **Township** 20S **Range:** 28E

Field and Formation: Russell USA Field; Yates Formation

Construction: 1 7/8, 5 1/2 K55@876' 500 sx calss circ, 2 3/8 870'

Date: 11/23/1999 **Depth:** 915' **Open Hole**: x **Perforated:**

Completion: OH 876' - 915'

The high percentage of oxygen indicates that the sample leaked enroute to the laboratory; compensating for the oxygen content the Hydrogen Sulfide content is estimated at 63 grains per 100 cubic feet. The oil ranges in gravity from 36 to 38 API which has a viscosity of 5.7 centipoise at 92° F.

Water Sample

A sample of water was obtained at Crosby gun barrel and an analysis made. The analysis indicates water favorable for injection purposes with exceptions of the hydrogen sulfide content which is high. The corrosion doesn't seem to be extremely severe but contact with air will accelerate the corrosion. For subsurface disposal either complete aeration must be obtained or avoid a water-air contact to minimize the corrosion.

PETROLEUM ENGINEERS
CABLE & STINE
WICHITA FALLS, TEXAS

GEORGE TURNER
CROSBY LEASE
WATER ANALYSIS

pH Value ----------	8.6	Turbidity ------	20 ppm
Alkalinity P ------	100 ppm as $CaCO_3$	Alkalinity M ---	3580 ppm as $CaCO_3$
Hardness, Soap ----	7000 ppm as $CaCO_3$	Hardness, Soda -	7000 ppm as $CaCO_3$
Soluble Iron ------	.5 ppm as Fe	Total Iron -----	.5 ppm as Fe
Soluble Silica ----	10 ppm as SiO_2	Hydrogen Sulfide	3037 ppm as H_2S
Free Carbon Dioxide	0 ppm as CO_2	Dissolved Oxygen	0 ppm as O
Dissolved Solids --	39110 ppm	Total Solids ---	39130 ppm

CABLE & STINE
WICHITA FALLS TEXAS
PETROLEUM ENGINEERS

Calcium Carbonate Stability

Requirement ... 3220 ppm $CaCO_3$ at pH 9.9
Content ..... 3580 ppm $CaCO_3$ at pH 8.6
Saturated ..... 360 ppm

PRINCIPAL CONSTITUENTS

	ppm	(+) epm	(-) epm	Ionic ppm
Calcium ---------- as $CaCO_3$	4800	96.00		1920 ppm as Ca
Magnesium ---------- as $CaCO_3$	2200	44.00		537 ppm as Mg
Hydroxide ---------- as $CaCO_3$	0			
Carbonate ---------- as $CaCO_3$	100*			
Bicarbonates -------- as $CaCO_3$	3580		71.60	4368 ppm as HCO_3
Sulfate ---------- as SO_4	3283		68.40	3283 ppm as SO_4
Chloride ---------- as Cl	17600		495.44	17600 ppm as Cl
Sodium & Potassium -- as Na		495.44		11395 ppm as Na
		635.44	635.44	

Barium ---- 0

*All Carbonates converted to Bicarbonates in hypothetical combinations.

HYPOTHETICAL COMBINATION

Calcium Bicarbonate	5799.6 ppm
Calcium Sulfate	1739.2 ppm
Magnesium Sulfate	2648.8 ppm
Sodium Chloride	28983.0 ppm

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

DEC 1998
RECEIVED
OCD - ARTESIA

ADMINISTRATIVE ORDER NO. WFX-744

APPLICATION OF READY OIL AND GAS MANAGEMENT TO EXPAND ITS WATERFLOOD PROJECT IN THE RUSSELL YATES POOL IN EDDY COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Rule and Regulations, Ready Oil and Gas Management has made application to the Division on November 3, 1998 for permission to reinstate and expand its Russell Waterflood Project in the Russell Yates Pool in Eddy County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been filed in due form.

(2) Satisfactory information has been provided that all offset operators have been duly notified of the application.

(3) No objection has been received within the waiting period as prescribed by Rule 701(B).

(4) The proposed injection wells are eligible for conversion to injection under the terms of Rule 701.

(5) The proposed expansion of the above referenced waterflood project will not cause waste nor impair correlative rights.

(6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Ready Oil and Gas Management, be and the same is hereby authorized to inject water into the Yates formation at approximately 795 feet to approximately 828 feet through 2 3/8-inch plastic lined tubing set in a packer located within 100 feet of the uppermost injection perforations in the following described wells for purposes of secondary recovery to wit:

Wills Well No.34
API No.30-015-10420
2630' FNL & 1980' FWL – Unit 'F'
Injection Interval: 798 feet to 827 feet
Packer Setting: 775 feet
Maximum Injection Pressure: 450 psig

Well No.43
API No.30-015-20229
1990' FSL & 1337' FWL – Unit 'K'
Injection Interval: 795 feet to 828 feet
Packer Setting: 782 feet
Maximum Injection Pressure: 450 psig

Both in Section 13, Township 20 South, Range 28 East, Eddy County, New Mexico.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing or packer.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection wells to no greater than .57 psi per foot of depth to the uppermost injection perforations or casing shoe.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Yates formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Artesia district office of the Division of the failure of the tubing, casing or packer in said wells and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject wells shall be governed by all provisions of Division Order No. R-263, and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 24th day of November, 1998.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

LORI WROTENBERY
Director

S E A L

LW/BES/kv
cc: Oil Conservation Division - Artesia
Case File No.469; WFX-140

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING:

CASE NO. 469
ORDER NO. R-263

THE MATTER OF THE APPLICATION OF
NEIL H. WILLS, ET AL, FOR APPROVAL
OF A SECONDARY RECOVERY PROGRAM
(BY WATER FLOODING) IN THE RUSSELL
POOL, EDDY COUNTY, NEW MEXICO, IN
SECTIONS 12, 13 AND 14, TOWNSHIP 20 SOUTH,
RANGE 28 EAST, NMPM.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. January 15, 1953, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission."

NOW, on this 10th day of February, 1953, the Commission, a quorum being present, having considered the testimony adduced and the exhibits received at said hearing, and being otherwise fully advised in the premises;

FINDS:

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

(2) That the petitioner's request to revert to secondary recovery methods by a water injection program will tend to prevent waste and should be granted upon the condition that said program be pursued in the manner outlined at said hearing.

(3) That a secondary recovery program by water injection is of an experimental nature in this particular pool, and periodic reports should be submitted to the Commission by the petitioner disclosing its acts and doings in the matter.

IT IS THEREFORE ORDERED:

That the applicant, Neil H. Wills et al, be and hereby is given the right to institute a secondary recovery program on leases in the Russell Pool by injecting water into the Yates sand reservoir.

IT IS FURTHER ORDERED, That petitioner submit quarterly reports to the Commission disclosing all of its acts and doings and setting forth therein the progress it has made by the adoption of its secondary recovery program.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

R. R. SPURRIER, Secretary

S E A L

Original

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

TRANSCRIPT OF HEARING

CASE NO. 469

Henrickson's Reporting Service
2224 - 47th Street
Los Alamos, New Mexico

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

JANUARY 15, 1953

- -

In the Matter of:

The application of Neil H. Wills, et al, for approval of a secondary recovery program (by water flooding) in the Russell Pool, Eddy County, New Mexico, in Sections 12, 13 and 14, Township 20 South, Range 28 East, NMPM.

- -

TRANSCRIPT OF HEARING

BEFORE:

Hon. Ed Mechem, Governor and Chairman
Hon. R. R. Spurrier, Secretary and Member
Hon. E. S. Walker, Member

NEIL H. WILLS

having been first duly sworn, testified as follows:

WILLS - My name is Neil Wills. I am the operating partner in the lands in the Russell field of which we'd like to get permission from the Oil Conservation to flood.

The partnership owns all the lands in the field and possibly six or eight hundred acres of lands surrounding the field in almost all directions.

There are about fifty shallow wells in this field producing from the Yates Sand at a depth of oh, eight hundred to nine hundred feet.

And I have an engineering report prepared by the Cable Engineering Company of Wichita Falls, Texas which I'd like to submit to the Oil Conservation Commission and I think in this report, all the engineering facts are presented and I don't believe I can add any facts to the report. If there are any questions, I would be glad to try to answer them. I haven't very much of a case because we own all the lands and the lands, by the way, are all Federal lands.

The field is very small - - - -

WHITE - Then Mr. Wills, what you're asking the Commission to do is to read that report and issue their order based upon it?

WILLS - Yes, sir. That's right.

GRAHAM - Where will you obtain the water, Mr. Wills?

WILLS - We planned on obtaining the water from the top of the Capitan Reef Section, right below the Yates formation. It would be a very - I mean, that water would be very bad water, salty water but we

feel that it will be all right for flooding.

WHITE - What is the source of your water? And who will control it?

WILLS - Well, the water is from the wells we put into the Russell sand and it will be contolled by our engineer-in-charge.

GRAHAM - Is there underground water in that valley area?

WILLS - No, it's outside the area.

WHITE - What kind of packing are you going to use?

WILLS - Packing? Well, the present - the wells that will be incut wells, will be well packed. I don't understand the question. I'm not an engineer, I didn't do the engineering work on this.

WHITE - The answers to these questions will be in the report?

WILLS - I hope so.

MACEY - Mr. Wills, you are going to take the water out of the No. 5, is that correct?

WILLS - Or similar wells that we might obtain water from.

MACEY - They're all abandoned wells?

WILLS - That's right.

MACEY - You're going to perforate the strong section and then inject the - - -

WILLS - That's right. The water that we will obtain is about three hundred feet below the Russell Sand.

GRAHAM - What is the production of those wells, Mr. Wills? What do they do? They've failed, haven't they? What do you get out of them?

WILLS - We're making about two barrels per day per well. About 100 barrels a day for the field.

GRAHAM - What are your expectations? Will it materially increase?

WILLS - Well, the engineer says that if the flood is successful, we will get as much oil from the flood as we have already, which will be about a million barrels.

SPURRIER - Are there any other questions of this witness?

MACEY - What you plan to do is get a pilot program to start with -

WILLS - That's right.

MACEY - If it works out successfully, you intend to expand it?

WILLS - That's right. It will require about a year, according to the engineer to tell. This plat here shows, in red, the outline of the acreage that we own. And you see, the field is right in the middle of it. There's a thousand acres, at least the field is about four hundred acres.

MACEY - Was this Cable Engineering Company who made this survey for you, were they able to cut any cores yet or is that something - - -

WILLS - The last hole I drilled on Number 26 is the only hole which we cored. And that was about two years ago. That's the only core information we have at that one well.

MACEY - And that's what you're basing your proposal - - -

WILLS - That's right.

MACEY - upon the facts that you got from there?

WILLS - That's right.

MACEY - They say the continuity is pretty uniform down there, isn't it? I mean, it has characteristics.

WILLS - Well, it's very shaley. Whether it will be successful, we

don't know. It's very shaley and it's not the best type of sand probably. But it's - - so much oil remains in place, that it seems like we should try something to get additional oil out. There's oil there - there's no question about it.

MACEY - There's a lot of Yates fields down in that area that if this were successful, the same thing would probably be incorporated with them.

WILLS - This is the only Yates Sand field.

MACEY - And the rest of them are lime?

WILLS - That's right. The most of the production around Carlsbad is from the base of the Yates in the lime. There are some Yates fields in Lea County but not very close to Russell.

SPURRIER - Mr. Wills, do you offer this exhibit in evidence?

WILLS - Yes.

SPURRIER - Without objection, it will be received. Are there any further questions? If not, the witness may be excused and the case will be taken under advisement. The next case on the docket is Case 470.

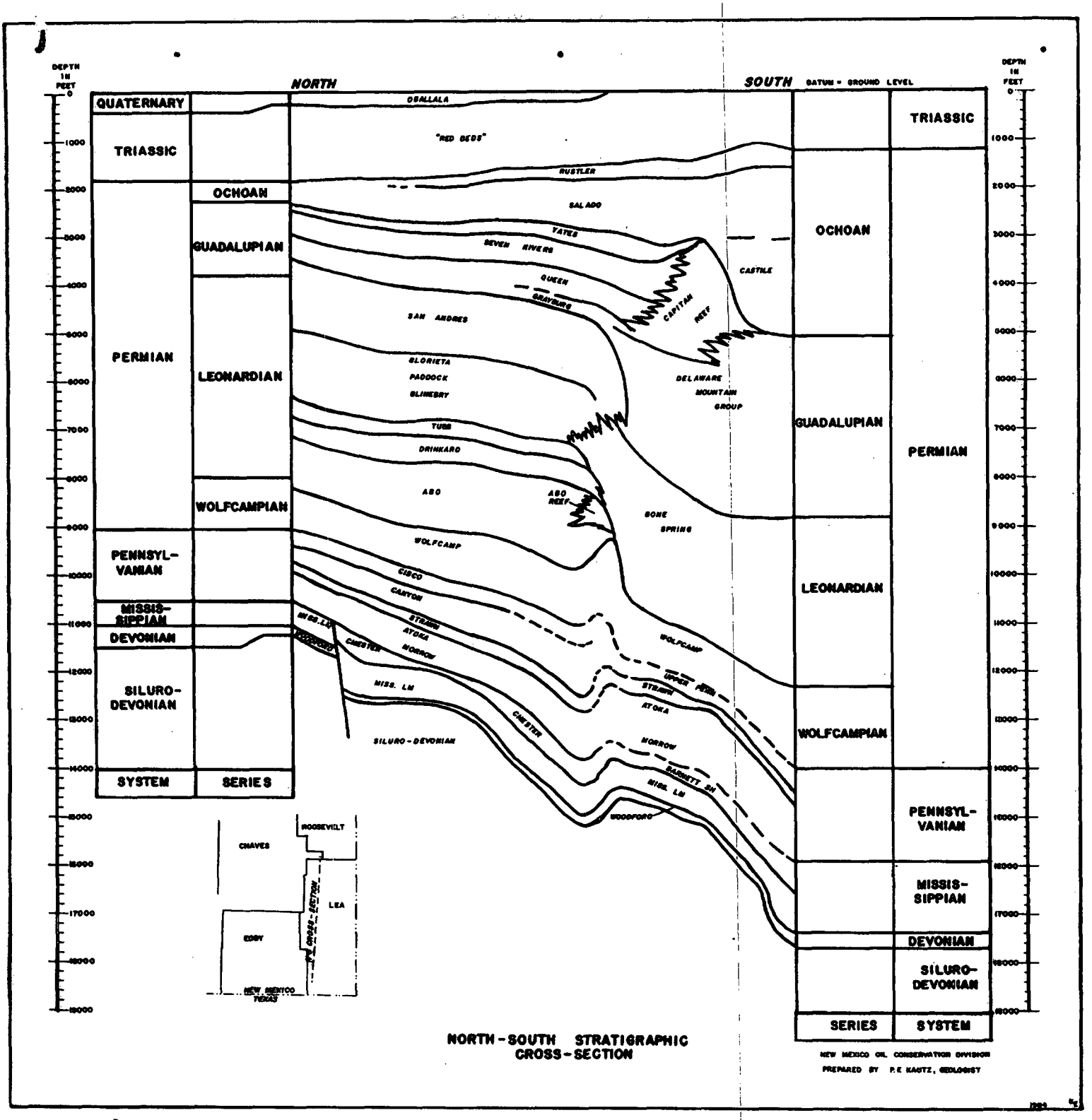
STATE OF NEW MEXICO)
)
COUNTY OF LOS ALAMOS)

I HEREBY CERTIFY that the foregoing and attached transcript of hearing on Case 469, before the Oil Conservation Commission, State of New Mexico, at Santa Fe, on January 15, 1953, is a true and correct record of the same to the best of my knowledge, skill and ability.

DATED at Los Alamos, New Mexico, this 16th day of January, 1953.

Audrey M. Hunisaker
REPORTER

Area of Review Wells for proposed two Apollo SWD wells			Land Type = all Federal																											
4/13/2007	No water injection reported in these 4 sections in 2005 and 2006																													
3001510420	RUSSELL USA 060	READY OIL & GAS	2630	N	1980	W	F	13	20S	28E		3001510420	828	153653	F	I		40		Active		31984								
3001520229	RUSSELL USA 065	READY OIL & GAS	1990	S	1337	W	K	13	20S	28E	3001520229		828	153653	K	I		40		Active		31984								
API	WELL_NAME	OPERATOR	FTG_NS	NS_CD	FTG_EW	EW_CD	OCD_	Sec	Tsp	Rge	3001520229	3001510420	TVD_DEPTH	OGRID_CDE	SDIV_	WEL	NBR_	ACRES	SPUD_DATE	COMPL_ST	POOL NAME	PROPERTY	LAST	DAYS_06	GAS06	OIL06	WAT06				
3001521514	GOVERNMENT AC 002	OXY USA WTP LIMITED PARTNERSHIP	1800	N	1980	W	F	13	20S	28E	1,623	830	11610	192463	F	G	2	80	17-Jan-90	Active	Del	27654	2006-05	151	2333	295	755				
3001526478	INDIGO FEDERAL 001	THUNDERBOLT PETROLEUM, LLC	1650	S	660	W	L	13	20S	28E	758	1,656	7800	160017	L	O	1	40	25-Oct-90	Active	Del	23459	2006-05	151	4850	655	0				
3001530800	OXY YATES 13 FEDERAL 007	E G L RESOURCES INC	990	N	330	W	D	13	20S	28E	2,511	2,326	0	173413	D	O				Unknown		25024								
3001530801	OXY YATES 13 FEDERAL 016	NORDSTRAND ENGINEERING INC	1650	N	330	W	E	13	20S	28E	1,924	1,919	915	230757	E	O	1	40	13-Nov-99	Active	Yates	302640	2006-04	151	0	178	0				
3001530594	OXY YATES 14 FEDERAL 003	NORDSTRAND ENGINEERING INC	2310	N	660	E	H	14	20S	28E	2,225	2,659	890	230757	H	G	1	160	12-Mar-99	Active	LowerYates Gas	302641	2006-05	151	613	211	0				
3001502350	RUSSELL USA 004	READY OIL & GAS	660	S	1980	W	N	13	20S	28E	1,477	1,990	908	153653	N	O	1	40		Active		31984	2002-07								
3001502351	RUSSELL USA 005	READY OIL & GAS	1980	S	1980	W	K	13	20S	28E	643	670	873	153653	K	O	1	40		Active		31984								
3001502352	RUSSELL USA 006	READY OIL & GAS	1980	S	660	W	L	13	20S	28E	677	1,480	906	153653	L	O	2	80		Active		31984	2002-07							
3001502353	RUSSELL USA 007	READY OIL & GAS	1980	S	1968	E	J	13	20S	28E	1,975	1,491	869	153653	J	O	1	40		Active		31984								
3001502355	RUSSELL USA 008	READY OIL & GAS	660	S	660	W	M	13	20S	28E	1,492	2,388	810	153653	M	O	1	40		Active		31984								
3001502356	RUSSELL USA 009	READY OIL & GAS	1980	N	1980	E	O	13	20S	28E	2,360	1,471	845	153653	O	O	1	40		Active		31984	1980-07							
3001502357	RUSSELL USA 010	READY OIL & GAS	2310	N	990	W	E	13	20S	28E	1,040	1,040	873	153653	E	O	1	40		Active		31984								
3001502358	RUSSELL USA 011	READY OIL & GAS	990	N	2310	E	B	13	20S	28E	2,821	1,916	856	153653	B	O	1	40		Active		31984								
3001502360	RUSSELL USA 012	READY OIL & GAS	996	S	1005	W	M	13	20S	28E	1,048	1,920	831	153653	M	O	1	40		Active		31984								
3001502361	RUSSELL USA 013	READY OIL & GAS	990	S	2310	E	O	13	20S	28E	1,915	1,933	838	153653	O	O	1	40		Active		31984								
3001502362	RUSSELL USA 014	READY OIL & GAS	1650	N	2310	E	G	13	20S	28E	2,314	1,393	836	153653	G	O	1	40		Active		31984								
3001502364	RUSSELL USA 016	READY OIL & GAS	1656	N	1005	E	B	13	20S	28E	3,362	2,493	875	153653	B	O	1	40	08-Jun-94	Active		31984	2002-07							
3001502365	RUSSELL USA 017	READY OIL & GAS	2322	S	1005	W	L	13	20S	28E	470	1,029	807	153653	L	O	1	40		Active		31984								
3001502367	RUSSELL USA 018	READY OIL & GAS	200	N	2340	E	B	13	20S	28E	3,481	2,613	867	153653	B	O	1	40		Active		31984	2002-07							
3001502368	RUSSELL USA 019	READY OIL & GAS	1656	S	1005	W	L	13	20S	28E	471	1,392	825	153653	L	O	1	40		Active		31984	2002-07							
3001502369	RUSSELL USA 020	READY OIL & GAS	330	S	1005	W	M	13	20S	28E	1,693	2,517	797	153653	M	O	1	40		Active		31984	2002-07							
3001502370	RUSSELL USA 021	READY OIL & GAS	996	S	330	W	M	13	20S	28E	1,415	2,336	1242	153653	M	O	1	40		Active		31984								
3001502371	RUSSELL USA 022	READY OIL & GAS	1656	S	330	W	L	13	20S	28E	1,061	1,926	812	153653	L	O	1	40		Active		31984								
3001502372	RUSSELL USA 023	READY OIL & GAS	338	S	352	W	M	13	20S	28E	1,923	2,828	782	153653	M	O	1	40		Active		31984								
3001502373	RUSSELL USA 024	READY OIL & GAS	2322	N	2333	E	G	13	20S	28E	1,879	1,015	849	153653	G	O	1	40		Active		31984								
3001502374	RUSSELL USA 025	READY OIL & GAS	2322	N	1665	E	G	13	20S	28E	2,475	1,664	847	153653	G	O	1	40		Plugged		31984								
3001502375	RUSSELL USA 026	READY OIL & GAS	1656	N	1665	E	G	13	20S	28E	2,803	1,903	854	153653	G	O	1	40		Active		31984	2001-12							
3001502376	RUSSELL USA 027	READY OIL & GAS	996	N	1665	E	B	13	20S	28E	3,233	2,312	870	153653	B	O	1	40		Active		31984	2001-12							
3001502378	RUSSELL USA 029	READY OIL & GAS	1980	N	1980	W	F	13	20S	28E	1,459	650	815	153653	F	O	1	40		Active		31984	1989-07							
3001502379	RUSSELL USA 030	READY OIL & GAS	660	N	1980	W	C	13	20S	28E	2,707	1,970	855	153653	C	O	1	40		Active		31984	1980-07							
3001502380	RUSSELL USA 031	READY OIL & GAS	2310	N	1650	W	F	13	20S	28E	1,029	460	814	153653	F	O	1	40		Active		31984								
3001502381	RUSSELL USA 032	READY OIL & GAS	990	N	2310	W	C	13	20S	28E	2,497	1,673	850	153653	C	O	1	40		Active		31984								
3001502382	RUSSELL USA 033	READY OIL & GAS	2322	S	2337	E	J	13	20S	28E	1,640	1,017	870	153653	J	O	1	40		Active		31984	2002-07							
3001502383	RUSSELL USA 034	READY OIL & GAS	959	S	1669	W	N	13	20S	28E	1,083	1,719	815	153653	N	O	1	40		Active		31984								
3001502384	RUSSELL USA 035	READY OIL & GAS	332	N	2340	W	C	13	20S	28E	3,123	2,326	847	153653	C	O	1	40		Active		31984								
3001502385	RUSSELL USA 036	READY OIL & GAS	1659	S	1670	W	K	13	20S	28E	470	1,038	835	153653	K	O	1	40		Active		31984								
3001502386	RUSSELL USA 037	READY OIL & GAS	331	S	1669	W	N	13	20S	28E	1,692	2,340	790	153653	N	O	1	40		Active		31984								
3001502387	RUSSELL USA 038	READY OIL & GAS	2321	N	2339	W	F	13	20S	28E	1,394	474	800	153653	F	O	1	40		Active		31984	2002-07							
3001502388	RUSSELL USA 039	READY OIL & GAS	2322	S	2339	W	K	13	20S	28E	1,056	486	852	153653	K	O	1	40		Active		31984								
3001502389	RUSSELL USA 040	READY OIL & GAS	1658	S	2338	E	J	13	20S	28E	1,639	1,382	844	153653	J	O	1	40		Active		31984								
3001502390	RUSSELL USA 041	READY OIL & GAS	1658	N	2339	W	F	13	20S	28E	1,915	1,036	829	153653	F	O	1	40		Active		31984								
3001502391	RUSSELL USA 042	READY OIL & GAS	2322	S	1669	W	K	13	20S	28E	470	452	849	153653	K	O	1	40		Active		31984	2001-12							
3001502392	RUSSELL USA 043	READY OIL & GAS	1650	S	2339	W	K	13	20S	28E	1,058	1,062	847	153653	K	O	1	40		Active		31984								
3001502393	RUSSELL USA 044	READY OIL & GAS	959	S	2339	W	N	13	20S	28E	1,438	1,729	854	153653	N	O	1	40		Active		31984								
3001502394	RUSSELL USA 045	READY OIL & GAS	2322	S	1669	E	J	13	20S	28E	2,298	1,664	870	153653	J	O	1	40		Active		31984								
3001502395	RUSSELL USA 046	READY OIL & GAS	1658	N	1669	W	F	13	20S	28E	1,665	1,021	875	153653	F	O	1	40		Active		31984								
3001502398	RUSSELL USA 047	READY OIL & GAS	330	S	330	E	P	14	20S	28E	2,353	3,274	993	153653	P	I	1	40		Active		31984								
3001502399	RUSSELL USA 048	READY OIL & GAS	996	S	330	E	P	14	20S	28E	1,941	2,841	784	153653	P	I	1	40		Active		31984								
3001506186	RUSSELL USA 049	READY OIL & GAS	660	N	2000	E	B	13	20S	28E	3,270	2,360	875	153653	B	O	1	40		Active		31984								
3001506187	RUSSELL USA 050	READY OIL & GAS	1305	N	1980	E	B	13	20S	28E	2,792	1,870	846	153653	B	O	1	40		Active		31984								
3001506188	RUSSELL USA 051	READY OIL & GAS	1325	S	660	W	L	13	20S	28E	949	1,870	827	153653	L	O	1	40		Active		31984								
3001506189	RUSSELL USA 052	READY OIL & GAS	660	S	1315	W	M	13	20S	28E	1,330	2,098	815	153653	M	O	1	40		Active		31984								
3001506191	RUSSELL USA 053	READY OIL & GAS	2310	N	990	E	H	13	20S	28E	3,111	2,332	884	153653	H	O	1	40		Active		31984	1989-10							
3001510099	RUSSELL USA 054	READY OIL & GAS	660	N	2630	E	B	13	20S	28E	2,940	2,081	857	153653	B	O	1	40		Active		31984								
3001510100	RUSSELL USA 055	READY OIL & GAS	1980	N	2630	E	G	13	20S	28E	1,855	933	825	153653	G	O	1	40		Active		31984								
3001510204	RUSSELL USA 056	READY OIL & GAS	2630	N	1330	W	F	13	20S	28E	660	650	810	153653	F	O	1	40		Active		31984	2002-07							
3001510214	RUSSELL USA 057	READY OIL & GAS	1330	S	1980	W	K	13	20S	28E	921	1,320	820	153653	K	O	1	40		Active		31984								
3001510250	RUSSELL USA 059	READY OIL & GAS	1980	S	2630	E	J	13	20S	28E	1,313	948	848	153653	J	O	1	40		Active		31984								
3001510420	RUSSELL USA 060	READY OIL & GAS	2630	N	1980	W	F	13	20S	28E	921	0	828	153653	F	I	1	40		Active		31984								
3001510421	RUSSELL USA 061	READY OIL & GAS	2630	N	1980	E	G	13	20S	28E	2,071	1,320	863	153653	G	O	1	40		Active		31984								
3001510422	RUSSELL USA 062	READY OIL & GAS	1980	N	1310	E	H	13	20S	28E	2,941	2,093	861	153653	H	O	1	40		Active		31984								
3001510423	RUSSELL USA 063	READY OIL & GAS	1310	N	1310	E	A	13	20S	28E	3,294	2,388	866	153653	A	O	1	40		Active		31984								
3001510424	RUSSELL USA 064	READY OIL & GAS	1330	S	1330	W	K	13	20S	28E	660	1,471	826	153653	K	O	1	40		Active		31984								
3001520229	RUSSELL USA 065	READY OIL & GAS	1990	S	1337	W	K	13	20S	28E	0	921	828	153653	K	I	1	40		Active		31984								
3001520230	RUSSELL USA 066	READY OIL & GAS	2635	N	2635	E	G	13	20S	28E	1,463	665	850	153653	G	O	1	40		Active		31984								
3001520231	RUSSELL USA 067	READY OIL & GAS	1328	N	2635	E	G	13	20S	28E	2,358	1,462	834	153653	G	O	1	40		Active		31984								
3001526491	RUSSELL USA 069	READY OIL & GAS	1170	N	1965	W	C	13	20S	28E	2,211	1,460	1120	153653	C	O	1	40		Active		31984	2002-07							
3001502359	TURNER FED 005	TIMOTHY D COLLIER	705	S	2025	E	N	13	20S	28E	2,309	2,326	0	214263	N	O				Plugged		30041								
3001502354	WILLS 002	TURNER GEORGE	1980	S	1980	E	J	13	20S	28E	1,963	1,480	0	214263	J	O				Unknown		30041								
3001502366	WILLS FEDERAL 010Y	COLLIER PET CORP	2222	S	1005	W	L	13	20S	28E	405	1,065		4863	L	O	1	40		Active		2945								


NORTH
SOUTH
DATUM = GROUND LEVEL
DEPTH IN FEET
QUATERNARY
TRIASSIC
PERMIAN
PENNSYL-VANIAN
MISSIS-SIPPIAN
DEVONIAN
SILURO-DEVONIAN
SYSTEM
SERIES
OCHOAN
GUADALUPIAN
LEONARDIAN
WOLFCAMPIAN
OGALLALA
"RED BEDS"
RUSTLER
SALADO
YATES
SEVEN RIVERS
QUEEN
GRAYBURG
SAN ANDRES
GLORIETA
PADDOCK
BLINEBRY
TUBB
DRINKARD
ABO
ABO REEF
WOLFCAMP
CISCO
CANYON
STRAWN
ATOKA
MORROW
MISS. LM
CHESTER
SILURO-DEVONIAN
WOODFORD
BARNETT SH
CASTILE
CAPITAN REEF
DELAWARE MOUNTAIN GROUP
BONE SPRING
UPPER PENN
CHAVES
ROOSEVELT
LEA
EDDY
NEW MEXICO
TEXAS
CROSS-SECTION
NORTH-SOUTH STRATIGRAPHIC CROSS-SECTION
NEW MEXICO OIL CONSERVATION DIVISION
PREPARED BY P.E. KASTZ, GEOLOGIST

Release 4/25/07

Jones, William V., EMNRD

From: Scott St.John [sstjohn@rsenergysolutions.com]
Sent: Friday, April 20, 2007 1:04 PM
To: Jones, William V., EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval
Attachments: Well Data for C-108.doc; Water Analysis 10-15-1948.pdf

Will,
Please see responses to your questions:

1) Please see attached well data for the amended AOR which includes information on the wells with API #'s 30-015-30800, 30-015-30594, and 30-015-02359. Please note, however, we did not find any information regarding API # 30-015-02354.
2) See Attached well data for additional information on whether mud or cement was used.
3) There have been no known flows since the Bradenhead survey. Both wells are being repaired by pulling the old tubing and running new 2 3/8th J-55 tubing and a packer. The annulus will be loaded with packer fluid and the integrity test will be performed.
4) The surface owner is the BLM. The Proof of Mailing section within the C-108 will show a copy of the certified mailing to the BLM
5) See attached water analysis for the Yates.
6) The only well in the entire field operated by Apollo that has penetrated the Lower Yates it he RUSSELL USA #69. That well was drilled to the Seven Rivers, tested and plugged back with a CIBP. A string of production casing was run to total depth and cemented. The zone is isolated and cannot leak into the lower Yates or Seven Rivers.
7) No well in the Apollo Russell Field has penetrated the Queen. Except for the RUSSELL USA #69, no well has gone deeper than the Yates. The Queen formation is not in jeopardy. The Captains Reef is encountered in the RUSSELL USA #6 (formerly Wills #1) from 439' to 584'. A string of 8-5/8" surface casing was set at 446' and cemented with 50 sacks by Haliburton. A production string of 7" casing was set at 740 ' and cemented with 50 sacks. It appears that the interval is both isolated from the surface and the Yates formation and has sufficient cement to cover the interval. 7" casing with a 7-7/8" hole yields 14.0867 cubic feet. Fifty (50) sacks has a yield of 39.5 cubic feet. This gives a calculated fill up to 556', which penetrates well into the surface casing. This configuration of cement is typical of the field. Furthermore, many wells have notations that cement was circulated to surface.
8) There is no evidence of Salinity or water in the Captain Reef in this area.
9) The depth of the Salado is surface to 250'. It is isolated according to cement circulation described in Answer 4.
10) Well head pressure is zero (0). The fluid level within the Russell USA Field ranges between 125 and 150 feet from surface.
11) Apollo has completed the Change of Operator through the OCD. Ready Oil and Gas is no longer the operator.
12) We have no knowledge of any existing Elogs.
13) When the RUSSELL USA #60 and #65 are reworked, Apollo will do a step rate test. The original pressure was requested because of the previous order.
14) The age of the tubing and packer is unknown. Because the age is unknown, tubing and packer will be replaced, the tubing will be plastic.

Scott St. John
Sr. Landman / Project Manager
Reagan Smith Energy Solutions
Tel: (405)-286-9326
Fax: (405)-848-2712

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Friday, April 13, 2007 6:15 PM
To: sstjohn@rsenergysolutions.com
Cc: Ezeanyim, Richard, EMNRD; Arrant, Bryan, EMNRD; Guye, Gerry, EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD
Subject: SWD applications: Russell RUSSELL USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Jones, William V., EMNRD

From: Jones, William V., EMNRD

Sent: Friday, April 13, 2007 5:15 PM

To: 'sstjohn@rsenergysolutions.com'

Cc: Ezeanyim, Richard, EMNRD; Arrant, Bryan, EMNRD; Guye, Gerry, EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD

Subject: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Hello Scott:
The Division has received your applications on behalf of Apollo Energy, L.P. and after reviewing have the following questions and comments:

1) Everyone's 1/2 mile area of review seems to be different. Please send construction details for the following wells that appear in our AOR selection:

30-015-30800
30-015-30594
30-015-02359
30-015-02354

2) Please expand your "construction details" section to specify for each AOR well if actual cement was used or only Mud. Your well files as the operator of this project should be more complete than the imaged State well files.

3) Send a statement about how the wells in this area have done on the most recent Bradenhead survey. Were there any flows? Have these been repaired?

4) Who is the surface owner of these two well sites? Were they notified?

5) Send a typical Yates water analysis from wells in this area.

6) Nordstrand Engineering operates the Oxy Yates 14 Federal Well No. 3 30-015-30594 located within the AOR of Well No. 65 and which is producing Gas from the Lower Yates. What depth is this? Is this Gas interval in any danger of migration of waters into it from injection?

7) Please elaborate more on the Geology below the Yates oil interval. Is the Queen present in this area in addition to the 7Rvrs? At what depth is the Capitan Reef in this area and how is it protected from any additional invasion of salt water from this operation? Are there any injection log profiles from previous injection in your well files showing the vertical sweep areas in this old waterflood? Was all water staying within the intended injection interval?

8) Do you have any evidence of the Salinity or water quality in the Capitan Reef in this area?

9) What depths are the Salado formation in this area and how is it isolated from any Yates injection?

10) What is the current static wellhead pressure on each of these old injection wells? If fluid is not at the surface, how far down to fluid?

11) Since Ready Oil & Gas is still showing on Division records as the operator of these two wells and of numerous AOR wells, please send certified notice to Ready Oil & Gas of this intended injection.

12) No scans are seen on the Division imaged site of any Elogs on these wells. If any logs exist, please send copies to Bryan Arrant in Artesia.

13) Unless evidence such as a step-rate injection test is presented which shows that additional pressure is warranted, the Division will start these injection wells out with a maximum surface injection pressure of 160 psi.

14) How old is the tubing and packer in these two injection wells? Is it plastic coated tubing?

Thank You,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Jones, William V., EMNRD

From: Guye, Gerry, EMNRD
Sent: Monday, April 16, 2007 9:51 AM
To: Jones, William V., EMNRD
Cc: Macquesten, Gail, EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will
My records indicate the following:

Russell USA #60	MIT (Pressure Test)	6-5-2001	BH (Casinghead test)	9-20-2005	Acceptable
Russell USA #65		11-21-2001		9-20-2005	Acceptable

The following wells are listed as injection in RBDMS however they have never been tested and production records do not indicate any injection reported:

Russell USA #1
#2
#3
#47
#48

If I can furnish any other info please let me know.

~ ~ Gerry ~ ~

From: Jones, William V., EMNRD
Sent: Friday, April 13, 2007 4:15 PM
To: sstjohn@rsenergysolutions.com
Cc: Ezeanyim, Richard, EMNRD; Arrant, Bryan, EMNRD; Guye, Gerry, EMNRD; Macquesten, Gail, EMNRD; Brooks, David K., EMNRD
Subject: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

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1) Everyone's 1/2 mile area of review seems to be different. Please send construction details for the following wells that appear in our AOR selection:

30-015-30800
30-015-30594
30-015-02359
30-015-02354

2) Please expand your "construction details" section to specify for each AOR well if actual cement was used or only Mud. Your well files as the operator of this project should be more complete than the imaged State well files.

3) Send a statement about how the wells in this area have done on the most recent Bradenhead survey. Were there any flows? Have these been repaired?

4) Who is the surface owner of these two well sites? Were they notified?

5) Send a typical Yates water analysis from wells in this area.

6) Nordstrand Engineering operates the Oxy Yates 14 Federal Well No. 3 30-015-30594 located within the AOR of Well No. 65 and which is producing Gas from the Lower Yates. What depth is this? Is this Gas interval in any danger of migration of waters into it from injection?

7) Please elaborate more on the Geology below the Yates oil interval. Is the Queen present in this area in addition to the 7Rvrs? At what depth is the Capitan Reef in this area and how is it protected from any additional invasion of salt water from this operation? Are there any injection log profiles from previous injection in your well files showing the vertical sweep areas in this old waterflood? Was all water staying within the intended injection interval?

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13) Unless evidence such as a step-rate injection test is presented which shows that additional pressure is warranted, the Division will start these injection wells out with a maximum surface injection pressure of 160 psi.

14) How old is the tubing and packer in these two injection wells? Is it plastic coated tubing?

Thank You,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

Jones, William V., EMNRD

From: Arrant, Bryan, EMNRD
Sent: Friday, April 27, 2007 8:05 AM
To: Jones, William V., EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will, I have picked estimated geology tops for an offset wells.

In 12-20-28 in the SW/4 is the Cities ,Govt Y # 2 well.

TX	470'
BX	610'
YATES	848'
SEVEN RIVERS	1165'
CAPITAN REEF	1300'
BOWERS SAND	1760'
QUEEN SAND	2095'
DELAWARE	2855'

In the SW/4 of 13-20-28 is the Siete Oil & Gas, Indigo Federal #1.

TX	308'
BX	440'
YATES	775'
SEVEN RIVERS	1042'
CAPITAN REEF	1160'
BOWERS SAND	1604'
QUEEN	2150'
DELAWARE	2895'

In the NW/4 of 13-20-28 is the Cities Govt. AC #2

TX	???
BX	???
YATES	885'
SEVEN RIVERS	1040'
CAPITAN REEF	1180'
BOWERS SAND	1690'
QUEEN	2130'
DELAWARE	2990'

As you aware, this area is located in back reef section and the geology is sometimes difficult to define.
I am not understanding Scott St. John's response to your questions?
I would ask for further clarification and question on how the Salado happens to occur from surface to 250' as answered in item (9) and how the Capitan Reef is encountered from 439'-584' in item (7).
Please refer to all offset wells in this area and written publications of the Capitan Reef, etc.
I am sure that this type of scenario does not occur anywhere in southeast New Mexico.

Bryan G. Arrant
District II Geologist
New Mexico Oil Conservation Division
1310 West Grand Ave.
Artesia, NM 88210
505-748-1283 Ext. 103

Jones, William V., EMNRD

From: Arrant, Bryan, EMNRD
Sent: Friday, April 27, 2007 8:42 AM
To: Jones, William V., EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will,
Have you scanned through some of the invaluable old well files in this area?
API # 30-015-02351 (for example) shows water sands at surface and in the 800' range.
It takes time, but one can find information from these old files that may not be available elsewhere.
Also, the log libraries in Midland has data that is invaluable.
PI, Midland Energy Library and Subsurface Library that I know of.

Bryan G. Arrant
District II Geologist
New Mexico Oil Conservation Division
1310 West Grand Ave.
Artesia, NM 88210
505-748-1283 Ext. 103

From: Jones, William V., EMNRD
Sent: Thursday, April 26, 2007 3:04 PM
To: Arrant, Bryan, EMNRD
Subject: FW: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Bryan: Here attached to this email are their responses.

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

From: Scott St.John [mailto:sstjohn@rsenergysolutions.com]
Sent: Friday, April 20, 2007 1:04 PM
To: Jones, William V., EMNRD
Subject: RE: SWD applications: Russell USA #60 and #65: Resuming injection into the Yates Oil Producing Interval

Will,
Please see responses to your questions:

1) Please see attached well data for the amended AOR which includes information on the wells with API #'s 30-015-30800, 30-015-30594, and 30-015-02359. Please note, however, we did not find any information regarding API # 30-015-02354.
2) See Attached well data for additional information on whether mud or cement was used.
3) There have been no known flows since the Bradenhead survey. Both wells are being repaired by pulling the old tubing and running new 2 3/8th J-55 tubing and a packer. The annulus will be loaded with packer fluid and the integrity test will be performed.

FORMATION RECORD

FROM	TO	THICKNESS IN FEET	FORMATION
0	140	140	Sand, WATER
140	212	72	red rock
212	285	73	gyp
285	290	5	red rock
290	300	10	shell
300	360	60	red rock
360	454	94	" "
454	465	11	" "
465	608	143	salt
608	645	37	anhy
645	670	25	lime
670	676	6	red rock
676	790	114	lime
790	814	24	blue shale, sandy
814	832	18	sand, OIL PAY
832	857	25	lime
857	859	2	blue shale, sandy
859	873	14	sand, shaley T.D.

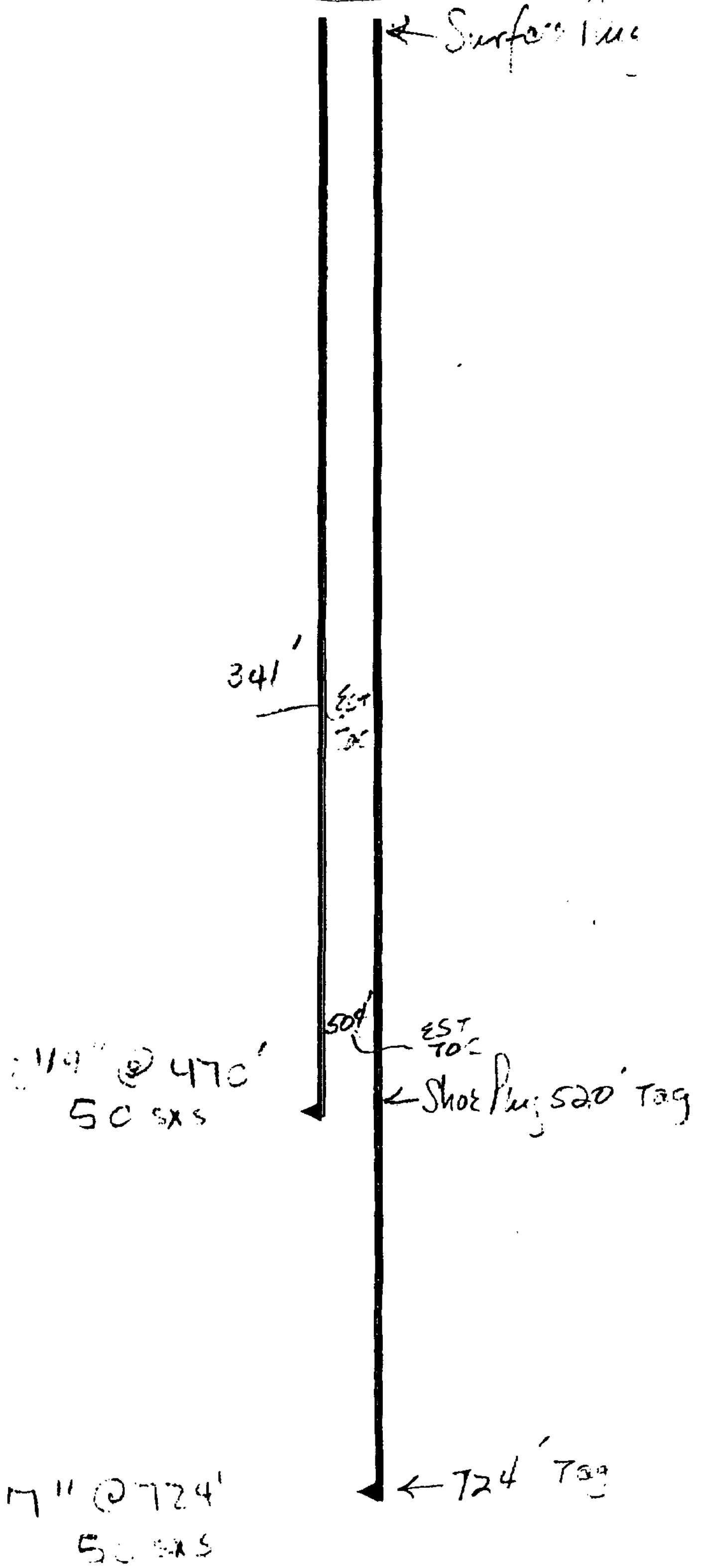
WATER at 869 to 874, 40 bbls. per day. Plugged back to 858 with 3 sacks Calaseal and 2 sacks cement, obtained 100% water shut-off. Shot with 30 qts. Solidified, 812 to 827, and increased production from 12 bbls. to 36 bbls., in 24 hrs.

30-015-02351

Operator Ready Oil Gas Mngt
Well Turnst Federal #2
Unit K Section 13 Twnship 26 Range 26
API # 30-015-02351

TOPS

Salado	465'
B Salt	608'
Yates	775'



- Contact OCD 24 hrs. prior to any work done.
- Salt gel mud consisting of 10# brine with 25# of gel per barrel must be placed between each plug.
- Install dry hole marker as per Rule 202.B.2
- Plugs are to be set from point indicated up.
- Plugs must not be less than 100' or 25 Sacks of cement, whichever is greater, unless specifically indicated.
- Shoe and stub plugs will be 50' above and below shoe or stub and tagged.
- Surface plug will be from 0' - 60'
- Where plugs are required, cement must be placed inside and outside of all casing string(s) in the correct footage or sacks required, **if no cement exists.**
- Plugs to be tagged will be indicated.

Injection Permit Checklist 2/8/07

248192

SWD Order Number 1079 Dates: Division Approved _____ District Approved _____

Well Name/Num: RUSSELL USA #60 ~~#1~~ Date Spudded: _____

API Num: (30-) 015-10420 County: _____

R-263

Footages 2630 FNL/1980 FWL Sec 13 Tsp 20S Rge 28E

Operator Name: APOLLO ENERGY, L.P. Contact TOMMY WRIGHT

Operator Address: 6363 WOODWAY, SUITE 1100, HOUSTON, TX 77057

Current Status of Well: _____ Planned Work: _____ Inj. Tubing Size: 2 3/8"

	Hole/Pipe Sizes	Depths	Cement	Top/Method
Surface	8 5/8 7"	161	15	@ 20' CALC.
Intermediate				
Production	6 1/4 5"	798'	60	CIRC = calc.
Last DV Tool				
Open Hole/Liner				
Plug Back Depth				

Diagrams Included (Y/N): Before Conversion ✓ After Conversion ✓

Checks (Y/N): Well File Reviewed ✓ ELogs in Imaging NO

Intervals:	Depths	Formation	Producing (Yes/No)
Salt/Potash	85 To		
Capitan Reef	Yes just Vertically above the Reef.		
Cliff House, Etc:			
Formation Above	Yates = 650 To 900		
Top Inj Interval	798	Yates	
Bottom Inj Interval	827	Yates	
Formation Below	7 RVRS = 900 1042'		

_____ PSI Max. WHIP

Y Open Hole (Y/N)

_____ Deviated Hole (Y/N)

OIL waste AFFirm Statem ✓

Fresh Water: Depths: 70' To 85' Wells(Y/N) NONE Analysis Included (Y/N): NO Affirmative Statement ✓

Salt Water Analysis: Injection Zone (Y/N/NA) _____ DispWaters (Y/N/NA) _____ Types: Yates

Notice: Newspaper(Y/N) ✓ Surface Owner ? WHO ? Mineral Owner(s) _____

Other Affected Parties: _____

AOR/Repairs: NumActiveWells _____ Repairs? _____ Producing in Injection Interval in AOR _____

AOR Num of P&A Wells _____ Repairs? _____ Diagrams Included? _____ RBDMS Updated (Y/N) _____

Well Table Adequate (Y/N) ____ AOR STRs: Sec_____Tsp_____Rge_____ UIC Form Completed (Y/N) _____

New AOR Table Filename _____ Sec_____Tsp_____Rge_____ This Form completed _____

Conditions of Approval: Sec_____Tsp_____Rge_____ Data Request Sent _____

Brodenhead Surveys ?

Inj Profile

Yates water analysis / Talk about lower Yates Gas

AOR Required Work: _____

Required Work to this Well: _____

Injection Permit Checklist 2/8/07

SWD Order Number 1080 Dates: Division Approved _____ District Approved _____ 248192

Well Name/Num: Russell USA #65 Date Spudded: _____

API Num: (30-) _____ County: _____

Footages 1990 FSL / 1330 FWL Sec 13 Tsp 20S Rge 28E

Operator Name: Apollo Energy, LP Contact _____

Operator Address: _____

Current Status of Well: _____ Planned Work: _____ Inj. Tubing Size: 2 3/8

	Hole/Pipe Sizes	Depths	Cement	Top/Method
Surface				
Intermediate				
Production				
Last DV Tool				
Open Hole/Liner				
Plug Back Depth				

Diagrams Included (Y/N): Before Conversion ✓ After Conversion ✓

Checks (Y/N): Well File Reviewed ✓ ELogs in Imaging no

Intervals:	Depths	Formation	Producing (Yes/No)
Salt/Potash			
Capitan Reef			
Cliff House, Etc:			
Formation Above			
Top Inj Interval	795		
Bottom Inj Interval	828		
Formation Below			

_____ PSI Max. WHIP

Yes Open Hole (Y/N)

_____ Deviated Hole (Y/N)

Fresh Water: Depths: _____ Wells(Y/N) _____ Analysis Included (Y/N): _____ Affirmative Statement _____

Salt Water Analysis: Injection Zone (Y/N/NA) _____ DispWaters (Y/N/NA) _____ Types: _____

Notice: Newspaper(Y/N) _____ Surface Owner _____ Mineral Owner(s) ✓

Other Affected Parties: Thunderbolt, OXY, BLM, NORDSTRAND ENGR.

AOR/Repairs: NumActiveWells _____ Repairs? _____ Producing in Injection Interval in AOR _____

AOR Num of P&A Wells _____ Repairs? _____ Diagrams Included? _____ RBDMS Updated (Y/N) _____

Well Table Adequate (Y/N) _____ AOR STRs: Sec _____ Tsp _____ Rge _____ UIC Form Completed (Y/N) _____

New AOR Table Filename _____ Sec _____ Tsp _____ Rge _____ This Form completed _____

Conditions of Approval: Sec _____ Tsp _____ Rge _____ Data Request Sent _____

Run inj profile

Send notice To Turner Savage, EGL Resources, Collins Pat Corp.

AOR Required Work: _____

Required Work to this Well: _____