

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
September 1999
Form Must Be Typed

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 6363
Name: Rigdon & Bruen Oil, LLC
Address: P.O. Box 386
City/State/Zip: Sedan, Kansas 67361
Purchaser: Farmland
Operator Contact Person: Sharon Siegener
Phone: (620) 725-5153
Contractor: Name: McPherson Drilling
License: 5495
Wellsite Geologist: Thomas H. Oast

Designate Type of Completion:

☐ New Well ☒ Re-Entry ☐ Workover
☒ Oil ☐ SWD ☐ SIOW ☐ Temp. Abd.
☐ Gas ☐ ENHR ☐ SIGW
☐ Dry ☐ Other (Core, WSW, Expl., Cathodic, etc)

If Workover/Re-entry: Old Well Info as follows:

Operator: Jones&Buck Development/Rigdon&Bruen Oil, LLC
Well Name: 35 A-P/Siegener-JBD #1

Original Comp. Date: 03/29/01 Original Total Depth: 1720'
☐ Deepening ☒ Re-perf. ☐ Conv. to Enhr./SWD
☐ Plug Back ☐ Plug Back Total Depth
☐ Commingled ☐ Docket No. ☐
☐ Dual Completion ☐ Docket No. ☐
☐ Other (SWD or Enhr.?) ☐ Docket No. ☐

Spud Date or ~~Recompletion Date~~ 7-12-2001 Date Reached TD 7-12-2001 Completion Date or ~~Recompletion Date~~ 7-12-2001

API No. 15 - 019-26555-0001
County: Chautauqua
SE SE NW NW Sec. 5 Twp. 34 S. R. 12 ☒ East ☐ West
4244 feet from S N (circle one) Line of Section
4212 feet from E W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:

(circle one) NE SE NW SW

Lease Name: American-Petroleum Well #: 35

Field Name: Sedan/Peru

Producing Formation: Peru

Elevation: Ground: 929.14 Kelly Bushing:

Total Depth: 1720' Plug Back Total Depth: 1330'

Amount of Surface Pipe Set and Cemented at 40' Feet

Multiple Stage Cementing Collar Used? ☐ Yes ☒ No

If yes, show depth set Feet

If Alternate II completion, cement circulated from 1720'

feet depth to surface w/ 235 sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content ppm Fluid volume bbls

Dewatering method used

Location of fluid disposal if hauled offsite:

Operator Name:

Lease Name: License No.:

Quarter Sec. Twp. S. R. ☐ East ☐ West

County: Docket No.:

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market, Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

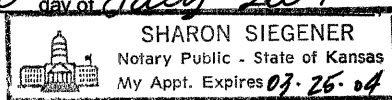
Signature: Gene Wilson

Title: Production Supervisor Date: 7-30-01

Subscribed and sworn to before me this 30 day of July, 2001

19
Notary Public: Sharon Siegener

Date Commission Expires: 25 March, 2004



KCC Office Use ONLY

☐ Letter of Confidentiality Attached
If Denied, Yes ☐ Date:
☐ Wireline Log Received
☐ Geologist Report Received
☐ UIC Distribution

Operator Name: Rigdon & Bruen Oil, LLC Lease Name: American-Petroleum Well #: 35
 Sec. 5 Twp. 34 S. R. 12 ☒ East ☐ West County: Chautauqua

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach copy of all Electric Wireline Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken ☐ Yes ☒ No
 (Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☒ No

Cores Taken ☐ Yes ☒ No

Electric Log Run ☒ Yes ☐ No
 (Submit Copy)

List All E. Logs Run:

Gamma Ray/ Neutron
 Cement Bond

☐ Log Formation (Top), Depth and Datum ☒ Sample

Name Top Datum

Lenapah Limestone 1062' -150

Peru Sandstone 1171' -159

Mulky Coal 1403' -491

Mississippi 1720' -807

CASING RECORD ☐ New ☒ Used

Report all strings set-conductor, surface, intermediate, production, etc.

| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
|-------------------|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| surface | 12" | 8 5/8" | | 40' | Portland | 12 | |
| Production | 6 3/4" | 4 1/2" | 9.5 | 1722' | 50/50/02 | 235 | 8% gel |
| | | | | | | | |

ADDITIONAL CEMENTING / SQUEEZE RECORD

| Purpose: | Depth Top Bottom | Type of Cement | #Sacks Used | Type and Percent Additives |
|---|------------------|----------------|-------------|----------------------------|
| <input type="checkbox"/> Perforate | | | | |
| <input type="checkbox"/> Protect Casing | | | | |
| <input type="checkbox"/> Plug Back TD | | | | |
| <input type="checkbox"/> Plug Off Zone | | | | |

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) | Depth |
|----------------|---|---|-------|
| | Open Hole Completion 1718'-1749' | | |
| 2 | Perforated 1405'-1417' | 250 gal acid 100 sks sand | 1417' |
| | Bridge plug set 1330' | | 1330' |
| 2 | Perforated 1072'-1084' | 250 gal acid 80 sks sand | 1084' |
| | | | |

| TUBING RECORD | | Size | Set At | Packer At | Liner Run | | |
|---|-----------|---------|---|---------------|---|--|--|
| 2 3/8" | | | 1070' | | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | |
| Date of First, Resumed Production, SWD or Enhr. 07/12/2001 | | | Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) | | | | |
| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity | | |
| | 06 | | 40 | | | | |

Disposition of Gas

METHOD OF COMPLETION

Production Interval

☐ Vented ☐ Solid ☒ Used on Lease
 (If vented, Submit ACO-18.)

☐ Open Hole ☒ Perf. ☐ Dually Comp. ☐ Commingled
☐ Other (Specify) _____

ACKARMIN HARDWARE and LUMBER CO
168 EAST MAIN STREET
SEDAN, KS 67361

PAGE NO 1

PHONE: (316) 725-3183

THANKS FOR YOUR BUSINESS!!

| CUSTOMER NO. | JOB NO. | PURCHASE ORDER NO. | REFERENCE | TERMS | CLERK | DATE | TH |
|--------------|---------|--------------------|-----------|----------|-------|---------|----|
| 253636 | | | | NET 18TH | SC | 2/22/01 | 12 |

SOLD TO
JONES & BUCK DEVELOPMENT
P. O. BOX 68
SEDAN KS 67361

SHIP TO
Seigler
At Lease

DOCN 38125

INVOICE #

TAX : 001 KANSAS SALES TAX

| SHIPPED | ORDERED | UM | SKU | DESCRIPTION | SOLO | UNITS | PRICE/PER | EXTENSION |
|---------|---------|----|---------|---------------------|------|-------|-----------|-----------|
| 12 | | EA | RM44816 | PORTLAND CEMENT 94H | | 12 | 7.38 /EA | 87.68 |

** AMOUNT CHARGED TO STORE ACCOUNT ** 93.21 TAXABLE 87.68

NON-TAXABLE 0.00

SUBTOTAL 87.68

TAX AMOUNT 5.61

TOTAL AMOUNT 93.21

X *MaH*
RECEIVED BY

KANSAS CORPORATION

AUG 03 2001

CONSERVATION DISTRICT



211 W. 14th, P.O. Box 884 Chanute, KS 66720 • 316/431-9210 • 1-800/467-8876

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| INVOICE DATE | INVOICE NO. |
|--------------|-------------|
| 03/14/01 | 00171313 |

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KANSAS CORPORATION LIMITED

AUG 03 2001

CONSERVATION DIVISION

TERMS: Net 30 Days
A Finance Charge computed at 1% per month (annual percentage rate of 12%) will be added to balances over 30 days.

B. D. & P. J. BUCK
P.O. BOX 68
EDAN KS 67361

REMIT TO: CONSOLIDATED IND. SERVICES
P.O. BOX 26147
SHAWNEE MISSION, KS 66225

PLEASE REFER TO THIS ACCOUNT NUMBER WHEN MAKING INQUIRIES

| P.O. NO. | LOCATION | LEASE AND WELL NO. | DATE OF JOB | JOB TICKET NO. | | | |
|----------|----------|-----------------------------------|------------------|----------------|-----------|--|----------------|
| 0095 | 40 | SIEGMAN J80 # J801 | 03/12/2001 | 17520 | | | |
| BER | | DESCRIPTION | UNITS | UNIT PRICE | UNIT MEAS | | EXTENDED PRICE |
| | | CEMENT PUMPER | 1.0000 | 525.0000 | EA | | 525.00 |
| | | CASING FOOTAGE | 1720.0000 | .1300 | EA | | 223.60 |
| | | COTTONSEED HULLS | 2.0000 | 12.1000 | SK | | 24.20 |
| | | FLO-SEAL (25#) | 5.0000 | 35.2500 | SK | | 176.25 |
| | | GILSONITE (50#) | 30.0000 | 18.4000 | SK | | 552.00 |
| | | GRANULATED SALT (80#) | 500.0000 | .2000 | LB | | 100.00 |
| | | PREMIUM GEL | 7.0000 | 11.0000 | SK | | 77.00 |
| | | 4 1/2" RUBBER PLUG | 1.0000 | 27.3000 | EA | | 27.30 |
| | | 80 BBL VACUUM TRUCK | 6.0000 | 65.0000 | HR | | 390.00 |
| | | 50/50 POZ CEMENT MIX | 235.0000 | 7.5000 | SK | | 1762.50 |
| | | BULK CEMENT DELIVERY/MIN BULK DEL | 1.0000 | 175.0000 | EA | | 175.00 |
| 32.85 | TAX | 149.56 | | | | | |
| | | | ORIGINAL INVOICE | | | | |
| | | | PLEASE PAY | | | | |
| | | | 4182.41 | | | | |

P.O. BOX 13
DEWEY, OK 74029

GCW Green Country Wireline, Inc.

STEVE HARTER
918-534-2107

SALES CONTRACT AND FIELD WORK ORDER

| | | |
|---|--------------------------------------|---------------------------------------|
| Job No. 2702 | Charge To: June Buck | Customer Order No. |
| Date 3-23-01 | Address KANSAS CITY, MO | Nearest Town |
| Operator HARTER | City and State | Field |
| Riggers | Mail Invoices To: PAUL DUBOIS | Lease and Well No. SURGNER (1) |
| | Address | County CHAUTAUQUE |
| Legal Description—Sec. S-34S 12E | City and State CONSERVATION | State OKLAHOMA |

In consideration of service work to be performed, the undersigned hereby agrees to the following general terms and conditions of services:

- (1) All accounts are to be paid within the terms fixed by Green Country Wireline, Inc. Invoices; past due accounts are subject to a service charge of 1 1/2 % per month. An account is past due when not settled by the first day of the second month, following the month of purchase. In addition, costs and reasonable attorney's fees for collection may be charged.
- (2) Because of the uncertain conditions and hazards existing in a well which are beyond the control of Green Country Wireline, Inc., it is understood by the customer that Green Country Wireline, Inc. cannot guarantee the results of their services and will not be held responsible for personal or property damage in the performance of their services.
- (3) Should any Green Country Wireline, Inc. instruments or equipment be lost or damaged in the performance of the operations requested, the customer agrees to make every reasonable effort to recover same, and to reimburse Green Country Wireline, Inc. for the value of the items which cannot be recovered, or the cost of repairing damage to items recovered.
- (4) It is further understood and agreed that all depth measurements shall be supervised by the customer of its employees.
- (5) The customer certifies that it has the full right and authority to order such work on such well and that the well in which the work is to be done by Green Country Wireline, Inc. is in proper and suitable condition for the performances of said work.
- (6) The customer agrees to pay any and all taxes, fees and charges placed on services rendered by Green Country Wireline, Inc. by government requirements including city, state and federal taxes and fees or reimburse Green Country Wireline, Inc. for such taxes and fees paid to said agencies.
- (7) No employee is authorized to alter the terms or conditions of this agreement.

DATE **3-23-01** CUSTOMER **June Buck** BY **Steve Harter**
PRINT CORRECT NAME Signature of Customer or Authorized Representative

| WORK PERFORMED | | PRICING | |
|--|-----------------------|-------------------------------------|-----------------------------|
| Ran G.R. - C.B.C. log: | | Set up | \$ 100.00 |
| From 171.3 ft. to 171.4 ft. ; From 171.4 ft. to SURF ft. | | 1st..... Shots | \$ |
| From..... ft. to..... ft.; From..... ft. to..... ft. | | Next..... Shots @ \$..... Ea. | \$ |
| Set..... Bridge Plug at..... ft. | | Next..... Shots @ \$..... Ea. | \$ |
| (TYPE) | | Next..... Shots @ \$..... Ea. | \$ |
| Perforated with..... as Follows: | | LOGGING: | |
| From..... ft. to..... ft.,..... Shots | | Depth Charge..... ft. @ \$..... ft. | \$ |
| | | Logging Chg..... ft. @ \$..... ft. | \$ 350.00 |
| | | BRIDGE PLUG: | |
| | | Type..... | \$ |
| | | Setting Charge..... | \$ |
| | | Depth Charge..... ft. @ \$..... ft. | \$ |
| | | Cement Bond Log..... | \$ 350.00 |
| | | OTHER SERVICES | |
| | | CONTRACT | 650.00 |
| ZERO 1/8" | CASING SIZE 6" | CASING WT. | CUSTOMER'S T.D. 1713 |
| OPEN HOLE RECORD | | | GCW T.D. |
| | | | FLUID LEVEL |
| | | | TYPE FLUID IN HOLE |

I certify that the above ordered services have been performed

P.O. BOX 13
DEWEY, OK 74029

GCW Green Country Wireline, Inc.

STEVE HARTER
918 - 534-2107

SALES CONTRACT AND FIELD WORK ORDER

| | | |
|---|-------------------------------|------------------------------------|
| Job No. 2736 | Charge To: TONE - BACK | Customer Order No. |
| Date 5-3-01 | Address | Nearest Town |
| Operator HARTER | City and State | Field SBDCI |
| Riggers CNW 4 | Mail Invoices To: | Lease and Well No. SIEGENER |
| Legal Description - Sec. 5-34S 12E | Address AUG 0 2 2001 | County CHAUTAUQUE |
| | City and State | State KAN |

In consideration of service work to be performed, the undersigned hereby agrees to the following general terms and conditions of services:

- (1) All accounts are to be paid within the terms fixed by Green Country Wireline, Inc. invoices; past due accounts are subject to a service charge of 1 1/2% per month. An account is past due when not settled by the first day of the second month, following the month of purchase. In addition, costs and reasonable attorney's fees for collection may be charged.
- (2) Because of the uncertain conditions and hazards existing in a well which are beyond the control of Green Country Wireline, Inc., it is understood by the customer that Green Country Wireline, Inc. cannot guarantee the results of their services and will not be held responsible for personal or property damage in the performance of their services.
- (3) Should any Green Country Wireline, Inc. instruments or equipment be lost or damaged in the performance of the operations requested, the customer agrees to make every reasonable effort to recover same, and to reimburse Green Country Wireline, Inc. for the value of the items which cannot be recovered, or the cost of repairing damage to items recovered.
- (4) It is further understood and agreed that all depth measurements shall be supervised by the customer or its employees.
- (5) The customer certifies that it has the full right and authority to order such work on such well and that the well in which the work is to be done by Green Country Wireline, Inc. is in proper and suitable condition for the performances of said work.
- (6) The customer agrees to pay any and all taxes, fees and charges placed on services rendered by Green Country Wireline, Inc. by government requirements including city, state and federal taxes and fees or reimburse Green Country Wireline, Inc. for such taxes and fees paid to said agencies.
- (7) No employee is authorized to alter the terms or conditions of this agreement.

DATE **5-3-01** CUSTOMER **TONE - BACK** BY **STEVE HARTER** Signature of Customer or Authorized Representative

| WORK PERFORMED | PRICING | | | | |
|--|---|------------|-----------------|----------|--------------------|
| Ran log: | Set up \$ 1000 | | | | |
| From ft. to ft.; From ft. to ft. | 1st 24 Shots \$ 500 | | | | |
| From ft. to ft.; From ft. to ft. | Next 4 Shots @ \$ 100 Ea. \$ 400 | | | | |
| Set Bridge Plug at ft. (TYPE) | Next Shots @ \$ Ea. \$ | | | | |
| Perforated with 3 1/2" OMC as Follows: | LOGGING: | | | | |
| From 1705 ft. to 1717 ft. 24 Shots | Depth Charge ft. @ \$ ft. \$ | | | | |
| | Logging Chg. ft. @ \$ ft. \$ | | | | |
| | BRIDGE PLUG: | | | | |
| | Type \$ | | | | |
| | Setting Charge \$ | | | | |
| | Depth Charge ft. @ \$ ft. \$ | | | | |
| | Cement Bond Log \$ | | | | |
| | OTHER SERVICES | | | | |
| | CONTRACT 540 | | | | |
| ZERO SC | CASING SIZE 4.5 | CASING WT. | CUSTOMER'S T.D. | GCW T.D. | FLUID LEVEL |
| OPEN HOLE RECORD | | | | | TYPE FLUID IN HOLE |

COMMENTS:

I certify that the above ordered services have been performed to my satisfaction that all work requested was completed.

P.O. BOX 13
DEWEY, OK 74029

GCW Green Country Wireline, Inc.

STEVE HARTER
918 - 534-2107

SALES CONTRACT AND FIELD WORK ORDER

| | | |
|----------------------------------|-----------------------------------|--------------------------------------|
| Job No. 2993 | Charge To: KISDON + BRUEN | Customer Order No. |
| Date 6-26-51 | Address | Nearest Town |
| Operator HARTE | City and State | Field SEDAN PERU |
| Riggers C NW/1 | Mail Invoices To: KANSAS CONVEYER | Lease and Well No. A.P. SIECENER (1) |
| Legal Description—Sec. 5-345 12E | Address | County CHAUTAUQUE |
| | City and State | State KANSAS |

In consideration of service work to be performed, the undersigned hereby agrees to the following general terms and conditions of services:

- (1) All accounts are to be paid within the terms fixed by Green Country Wireline, Inc. invoices; past due accounts are subject to a service charge of 1½ % per month. An account is past due when not settled by the first day of the second month, following the month of purchase. In addition, costs and reasonable attorney's fees for collection may be charged.
- (2) Because of the uncertain conditions and hazards existing in a well which are beyond the control of Green Country Wireline, Inc., it is understood by the customer that Green Country Wireline, Inc. cannot guarantee the results of their services and will not be held responsible for personal or property damage in the performance of their services.
- (3) Should any Green Country Wireline, Inc. instruments or equipment be lost or damaged in the performance of the operations requested, the customer agrees to make every reasonable effort to recover same, and to reimburse Green Country Wireline, Inc. for the value of the items which cannot be recovered, or the cost of repairing damage to items recovered.
- (4) It is further understood and agreed that all depth measurements shall be supervised by the customer of its employees.
- (5) The customer certifies that it has the full right and authority to order such work on such well and that the well in which the work is to be done by Green Country Wireline, Inc. is in proper and suitable condition for the performances of said work.
- (6) The customer agrees to pay any and all taxes, fees and charges placed on services rendered by Green Country Wireline, Inc. by government requirements including city, state and federal taxes and fees or reimburse Green Country Wireline, Inc. for such taxes and fees paid to said agencies.
- (7) No employee is authorized to alter the terms or conditions of this agreement.

DATE 6-26-51 CUSTOMER PRINT CORRECT NAME BY Signature of Customer or Authorized Representative

| WORK PERFORMED | | PRICING | |
|--|-------------|---------------------------------------|---------------------------|
| Ran | log: | Set up | \$ 100.00 |
| From ft. to ft.; From ft. to ft. | | 1st. 20 Shots | \$ 50.00 |
| From ft. to ft.; From ft. to ft. | | Next 4 Shots @ \$10.00 Ea. | \$ 40.00 |
| Set C.I.B.P. (TYPE) Bridge Plug at 1330 ft. | | Next Shots @ \$ Ea. | \$ |
| | | Next Shots @ \$ Ea. | \$ |
| Perforated with 3.50 in. as Follows: | | LOGGING: | |
| From 1072 ft. to 1084 ft. Shots | | Depth Charge ft. @ \$ ft. | \$ |
| | | Logging Chg. ft. @ \$ ft. | \$ |
| | | BRIDGE PLUG: | |
| | | Type C.I.B.P. | \$ 50.00 |
| | | Setting Charge | \$ |
| | | Depth Charge ft. @ \$ ft. | \$ |
| | | Cement Bond Log | \$ |
| OTHER SERVICES | | | |
| | | TOTAL | 1240.00 |
| | | Less 10 % | 124.00 |
| | | TOTAL | 1116.00 |
| | | # 17113 | |
| ZERO | CASING SIZE | CASING WT. | CUSTOMER'S T.D. PLUG 1310 |
| OPEN HOLE RECORD | | | GCW T.D. |
| | | FLUID LEVEL | 6-26-01 |
| | | TYPE FLUID IN HOLE | |

COMMENTS:

I certify that the above ordered services have been performed to my satisfaction, that all zones perforated were designated

THOMAS H. OAST, P.G.

Geological Consultant

P.O. Box 94
Sedan, KS 67381

Phone (316) 725-3400
Fax (316) 725-3662
Home Phone (316) 725-3619

March 12, 2001

**Jones & Buck Development
P.O. Box 68
Sedan, Kansas 67361**

Reference: Your Siegener-JBD / JBD #1 well
API# 15-019-26,555-0000

Reported Spot Location: 3960' FSL, 3960' FEL (NW $\frac{1}{4}$)
Section 5 - T34S - R12E
Chautauqua County, Kansas
Peru-Sedan Oil & Gas Field

Ground Elevation (GL): 912' Estimated
Kelly Bushing (KB) 917' Estimated

Topography/Vegetation: Flat, wooded

TD (Total Depth): 1720' Driller from GL

Drilling Contractor: McPherson Drilling
Winfield, Kansas
KCC #5495

Drilling Rig Model: Portadrill TKT

Hole Data: 12" surface hole to 40.0'
(40.0' of 8 5/8" casing installed)
6.75" borehole to 1720'
4 $\frac{1}{2}$ " production casing set @ 1718'

Drilling Commenced: February 22, 2001
Drilling Completed: March 10, 2001
Casing Installed/Cemented: March 12, 2001

Electric Log Program: (OH)
(CH)

Current Status: 4 $\frac{1}{2}$ " Production installed.
Waiting on further completion.

AUG 03 2001

COPIES OF THIS REPORT ARE

This geological report concludes wellsite supervision and sample examination on the above referenced test well. The well was drilled to a total depth (TD) of 1720' with mud rotary tools. The drilling samples exhibited several significant hydrocarbon shows which are described in the following lithology report. Potential commercial zones include the Wayside Sandstone, Mulky Coal interval and Riverton Coal. The Cattleman Sand did exhibit a gas show but may lack porosity to produce. The well will be subsequently deepened to further evaluate the Mississippi Chat/Limestone.

The estimated ground elevation of this well location is 912 feet from which all measurements were made. The depths mentioned below are based on the estimated drilling time of the drill rig. Additional correlation may be needed with any future electric logs programs.

| <u>DEPTH (feet)</u> | <u>LITHOLOGY</u> |
|---------------------|---|
| 000 - 650 | No samples observed. |
| 650 - 659 | Gray shale. |
| 659 - 661 | Iola Limestone - Cream, no shows. |
| 661 - 795 | Layton Sandstone - White to clear, very fine grained, silty to shaley, no shows from 661 - 730'. Black shale to coal from 730 - 731'. Sandstone as before, poor to fair to porosity, no shows from 731 - 740'. Sandstone as above, fine to medium grained, clean to slightly shaley, good to excellent porosity, good disposal zone balance of formation. |
| 795 - 801 | Limestone - Brown, fine crystalline, no shows. |
| 801 - 850 | Gray shale. |
| 850 - 860 | Drum Limestone - Cream to buff, fine crystalline, no shows. |
| 860 - 866 | Light gray siltstone to shale. |
| 866 - 905 | Light gray to gray sandy shale. |
| 905 - 1055 | Gray shale. |

Jones & Buck Development
March 12, 2001
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KANSAS CORPORATION COMMISSION

AUG 03 2001

CONCESSION DISTRICT

| | |
|-------------|--|
| 1055 - 1059 | False Cap Limestone - Buff, no shows. |
| 1059 - 1062 | Dark gray to black shale. |
| 1062 - 1069 | Lenapah Limestone - Cream to buff, fine crystalline, no shows. |
| 1069 - 1071 | Gray shale. |
| 1071 - 1094 | Wayside Sandstone - Light gray, fine grained, good porosity, slightly unconsolidated, excellent fluorescence and odor, free oil on pits from 1071 - 1087'. Sandstone and shows as above, abundant dead oil and possible water zone balance of formation. |
| 1094 - 1133 | Gray Shale. |
| 1133 - 1166 | Altamont Limestone - Cream to buff, fine crystalline, no significant shows. |
| 1166 - 1220 | Weiser Sandstone - Clear to light gray, fine to very fine grained, slightly silty to clean, no shows. |
| 1220 - 1260 | Gray shale, silty. |
| 1260 - 1284 | Pawnee Limestone - Buff to brown, poor to fair porosity, no significant shows. |
| 1284 - 1288 | Black shale. |
| 1288 - 1346 | Gray shale to siltstone. |
| 1346 - 1378 | Oswego Limestone (#1) - Dark brown to grayish brown, fine crystalline, poor porosity, no shows. |
| 1378 - 1385 | Summit Coal interval - Dark gray to black shale, no shows. |
| 1385 - 1403 | Oswego Limestone (#2) - Grayish to brown, fine crystalline, poor porosity, no shows. |
| 1403 - 1409 | Mulky Coal - Black shale. |
| 1409 - 1420 | Breezy Hill Limestone - Grayish, fine crystalline, no shows. |

set plug c 1330'

Jones & Buck Development
March 12, 2001
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KANSAS COMMISSION

AUG 03 2001

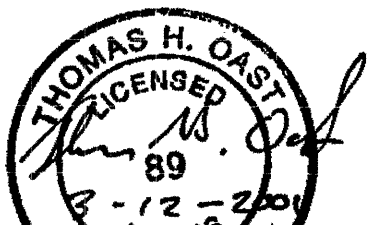
CONSERVATION

| | |
|--------------|--|
| 1420 - 1447 | Variegated shales and sandy shales. |
| 1447 - 1449 | Verdigris Limestone - Brown, no shows. |
| 1449 - 1452 | Black shale. |
| 1452 - 1459 | Cattleman Sandstone - Clear, very fine grained poor porosity, good fluorescence, slight odor, probable gas zone. |
| 1459 - 1610 | Variegated shales and sandy shales. |
| 1610 - 1612 | Coal. |
| 1612 - 1629 | Gray shale. |
| 1629 - 1631 | Limestone - Brown, no shows. |
| 1631 - 1710 | Gray shale. |
| 1710 - 1712 | Riverton Coal - Coal. |
| 1712 - 1719½ | Gray shale. |
| 1719½ - 1720 | Mississippi Chat - White, fresh chert. |
| 1720 | Drillers' total depth. |

FORMATION TOP INFORMATION

| <u>Formation</u> | <u>Depth (Sub-Sea)</u> |
|--------------------|------------------------|
| Lenapah Limestone | 1062' (-150) |
| Wayside Sandstone | 1071' (-159) |
| Altamont Limestone | 1133' (-221) |
| Pawnee Limestone | 1260' (-348) |
| Oswego Limestone | 1346' (-434) |
| Mulky Coal | 1403' (-491) |
| Mississippi Chat | 1719½' (-807½) |

Please feel free to contact me if you have any questions
concerning this report.



Sincerely,

Thomas H. Oast
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Geological Consultant
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