

ORIGINAL

STATE CORPORATION COMMISSION OF KANSAS  
OIL & GAS CONSERVATION DIVISION  
WELL COMPLETION FORM  
ACO-1 WELL HISTORY  
DESCRIPTION OF WELL AND LEASE

Operator: License # 5418

Name: ALLEN DRILLING COMPANY

Address 6565 S. Dayton, Ste 3800  
Engelwood, CO 80111

City/State/Zip \_\_\_\_\_

Purchaser: D&A

Operator Contact Person: Doug Hoisington

Phone (303) 799-6660

Contractor: Name: ALLEN DRILLING COMPANY

License: 5418

Wellsite Geologist: Rich O'Donnell

Designate Type of Completion  
 New Well  Re-Entry  Workover

Oil  SWD  SIOW  Temp. Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, MSW, Expl., Cathodic, etc)

if Workover/Re-Entry: old well info as follows:

Operator: N/A

Well Name: ---

Comp. Date --- Old Total Depth ---

Deepening  Re-perf.  Conv. to Inj/SWD  
 Plug Back  PBTB  
 Commingled  Docket No. \_\_\_\_\_  
 Dual Completion  Docket No. \_\_\_\_\_  
 Other (SWD or Inj?)  Docket No. \_\_\_\_\_

6/08/93 6/16/93 6/16/93  
Spud Date Date Reached TD Completion Date

API NO. 15- 135-23,736-0000

County Ness

N/2-SW-SE Sec. 21 Twp. 20S Rge. 23  <sup>E</sup>  <sup>U</sup>

990 Feet from  <sup>N</sup> (circle one) Line of Section

1980 Feet from  <sup>E</sup> <sup>W</sup> (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
NE,  <sup>SE</sup>  <sup>NW</sup> or  <sup>SW</sup> (circle one)

Lease Name PETERSILIE Well # 1-21

Field Name Pawnee Valley

Producing Formation D&A

Elevation: Ground 2243' KB 2256'

Total Depth 4470' PBTB ---

Amount of Surface Pipe Set and Cemented at 781 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set N/A Feet

If Alternate II completion, cement circulated from N/A

feet depth to --- w/ --- sx cmt.

Drilling Fluid Management Plan D&A 7-7-93  
(Data must be collected from the Reserve Pit)

Chloride content 4000 ppm Fluid volume 200 bbls

Dewatering method used Evaporation

Location of fluid disposal if hauled offsite: N/A

Operator Name ---

Lease Name --- License No. ---

--- Quarter --- Sec. --- Twp. --- S Rng. --- E/W

County --- Docket No. ---

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, 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 on 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 [Signature]  
Title Vice President Date July 1, 1993

Subscribed and sworn to before me this 1st day of July  
19 93

Notary Public [Signature]

Date Commission Expires 1-17-94

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JUL - 6 1993

K.C.C. OFFICE USE ONLY		
F	<input checked="" type="checkbox"/>	Letter of Confidentiality Attached
C	<input checked="" type="checkbox"/>	Wireline Log Received
C	<input type="checkbox"/>	Geologist Report Received
Distribution		
<input checked="" type="checkbox"/>	KCC	<input type="checkbox"/> SWD/Rep
<input type="checkbox"/>	KGS	<input type="checkbox"/> Plug
<input type="checkbox"/>		<input type="checkbox"/> NGPA
		<input type="checkbox"/> Other
		(Specify)

Operator Name ALLEN DRILLING COMPANY Lease Name PETERSILIE Well # 1-21

Sec. 21 Twp. 20 Rge. 23  East  West  
 County Ness

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all drill stem 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 during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run (Submit Copy.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No List All E.Logs Run: <u>DIL, CD/DSN, CAL</u>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum  See Attached
---	--

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> 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	12-1/4"	8-5/8"	24#	781'	40/60poz	375	2%gel 3%cc

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		Acid, Fracture, Shot, Cement Squeeze Record	
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used)	Depth

TUBING RECORD	Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SMD or In].	Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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Disposition of Gas: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease (If vented, submit ACO-18.)	<b>METHOD OF COMPLETION</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify)	Production Interval Dry & abandoned
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## Tests:

Trilobite Testing L.L.C., Hays, KS.

D.S.T. #1 4347'-4381' (L. Cherokee Fm.) OP15 SI30 OP15 SI30  
recovered 10' of drilling mud; FP 36-36#/49-49#, SIP 50-60#, HP 2165-  
2140#.

D.S.T. #2 4347'-4391' (L. Cherokee "Basal" Sandstones) OP 15 SI30  
OP15 SI30, recovered 8' of drilling mud; FP 50-52#/62-62#, SIP 216-  
63#, HP 2170-2150#.

Formation Log Tops

Anhydrite	1483'	(+773)
Heebner Shale	3718'	(-1462)
Toronto	3734'	(-1478)
Lansing/K.C.	3766'	(-1510)
Base/K.L.	4128'	(-1872)
Pawnee	4218'	(-1962)
Labette Shale	4287'	(-2031)
Ft. Scott	4293'	(-2037)
Cherokee Shale	4318'	(-2062)
Basal Cherokee Sandstone	4382'	(-2126)
Mississippian	4406'	(-2150)

RECEIVED  
STATE CORPORATION COMMISSION

JUL - 6 1993

CONSERVATION DIVISION  
Wichita, Kansas

DISTRICT Hays

DATE 6-9-93

TO: HALLIBURTON SERVICES YOU ARE HEREBY REQUESTED TO FURNISH EQUIPMENT AND SERVICEMEN TO DELIVER AND OPERATE

THE SAME AS AN INDEPENDENT CONTRACTOR TO: Allen Orlg Co. (CUSTOMER) AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIALS FOR THE PURPOSE OF SERVICING

WELL NO. 1-21 LEASE Petersville SEC. 21 TWP. 10 RANGE 23W

FIELD \_\_\_\_\_ COUNTY Mass STATE KS OWNED BY SAME

THE FOLLOWING INFORMATION WAS FURNISHED BY THE CUSTOMER OR HIS AGENT

Table with columns: FORMATION NAME, TYPE, THICKNESS, FROM, TO, CASING, LINER, TUBING, OPEN HOLE, PERFORATIONS, WEIGHT, SIZE, FROM, TO, MAX. ALLOW. P.S.I., SHOTS/FT.

PREVIOUS TREATMENT: DATE \_\_\_\_\_ TYPE \_\_\_\_\_ MATERIALS \_\_\_\_\_

TREATMENT INSTRUCTIONS: TREAT THRU TUBING  ANNULUS  CASING  TUBING/ANNULUS  HYDRAULIC HORSEPOWER ORDERED \_\_\_\_\_

Set surface casing w/ 375 SK 40/60 #03  
2 7/8 ID  
3 7/8 CC

CUSTOMER OR HIS AGENT WARRANTS THE WELL IS IN PROPER CONDITION TO RECEIVE THE PRODUCTS, SUPPLIES, MATERIALS, AND SERVICES

As consideration, the above-named Customer agrees: THIS CONTRACT MUST BE SIGNED BEFORE WORK IS COMMENCED

- a) To pay Halliburton in accord with the rates and terms stated in Halliburton's current price list. Invoices are payable NET by the 20th of the following month after date of invoice. Upon Customer's default in payment of Customer's account by the last day of the month following the month in which the invoice is dated, Customer agrees to pay interest thereon after default at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event it becomes necessary to employ attorneys to enforce collection of said account, Customer agrees to pay all collection costs and attorney fees in the amount of 20% of the amount of the unpaid account.
- b) To defend, indemnify, release and hold harmless Halliburton, its divisions, subsidiaries, parent and affiliated companies and the officers, directors, employees, agents and servants of all of them from and against any claims, liability, expenses, attorneys fees, and costs of defense to the extent permitted by law for:
  - Damage to property owned by, in the possession of, or leased by Customer, and/or the well owner (if different from Customer), including, but not limited to, surface and subsurface damage. The term "well owner" shall include working and royalty interest owners.
  - Reservoir, formation, or well loss or damage, subsurface trespass or any action in the nature thereof.
  - Personal injury or death or property damage (including, but not limited to, damage to the reservoir, formation or well), or any damages whatsoever, growing out of or in any way connected with or resulting from pollution, subsurface pressure, losing control of the well and/or a well blowout or the use of radioactive material.The defense, indemnity, release and hold harmless obligations of Customer provided for in this Section b) and Section c) below shall apply to claims or liability even if caused or contributed to by Halliburton's negligence, strict liability, or the unseaworthiness of any vessel owned, operated, or furnished by Halliburton or any defect in the data, products, supplies, materials, or equipment of Halliburton whether in the preparation, design, manufacture, distribution, or marketing thereof, or from a failure to warn any person of such defect. Such defense, indemnity, release and hold harmless obligations of Customer shall not apply where the claims or liability are caused by the gross negligence or willful misconduct of Halliburton. The term "Halliburton" as used in said Sections b) and c) shall mean Halliburton, its divisions, subsidiaries, parent and affiliated companies, and the officers, directors, employees, agents and servants of all of them.
- c) That because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, Halliburton is unable to guarantee the effectiveness of the products, supplies or materials, nor the results of any treatment or service, nor the accuracy of any chart interpretation, research analysis, job recommendation or other data furnished by Halliburton. Halliburton personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that Halliburton shall not be liable for and Customer shall indemnify Halliburton against any damages arising from the use of such information.
- d) That Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's liability and Customer's exclusive remedy in any cause of action (whether in contract, tort, breach of warranty or otherwise) arising out of the safe or use of any products, supplies or materials is expressly limited to the replacement of such products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the Customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.
- e) That Customer shall, at its risk and expense, attempt to recover any Halliburton equipment, tools or instruments which are lost in the well and if such equipment, tools or instruments are not recovered, Customer shall pay Halliburton its replacement cost unless such loss is due to the sole negligence of Halliburton. If Halliburton equipment, tools or instruments are damaged in the well, Customer shall pay Halliburton the lesser of its replacement cost or the cost of repairs unless such damage is caused by the sole negligence of Halliburton. In the case of equipment, tools or instruments for marine operations, Customer shall, in addition to the foregoing, be fully responsible for loss of or damage to any of Halliburton's equipment, tools or instruments which occurs at any time after delivery to Customer at the landing unit returned to the landing, unless such loss or damage is caused by the sole negligence of Halliburton.
- f) To waive the provisions of the Deceptive Trade Practices - Consumer Protection Act, to the extent permitted by law.
- g) That this contract shall be governed by the law of the state where services are performed or materials are furnished.
- h) That Halliburton shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive officer of Halliburton.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMER'S AGENT.  
SIGNED \_\_\_\_\_ CUSTOMER  
DATE 6-9-93  
TIME 7:30 A.M. P.M.

We certify that the Fair Labor Standards Act of 1938, as amended, has been complied with in the production of goods and/or with respect to services furnished under this contract.

CUSTOMER

# JOB LOG

WELL NO. 1-21 LEASE K97165210 TICKET NO. 311467

CUSTOMER Allen Drilling Co. PAGE NO. 1

JOB TYPE SURFACE DATE 6-9-93

FORM 2013 R-2

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0400							Closed Out On loc. at Requested Time Rig Drig 560' Out Rig Finish Drig. START Casing Casing on Bottom Break Circulation Hookup To TRK.
	0530							
	11:16	5.5	0		✓			ST. Cement
	11:38		86.8					FINISH Cement
	12:32							Release Plug
	12:33	7	0		✓			Disp Plug.
	12:40	7	48.4					Plug down 500' in Well 5K To Pit Watch! Pickup TRK.
	13:26							Job Complete Plug @ 761'
								15 BBLs Returns

RECEIVED  
 STATE CORPORATION COMMISSION  
 JUL 6 1993  
 CONSERVATION DIVISION  
 Wichita, Kansas  
 T. Henson  
 SCHWARTZ BOULE

WELL DATA

FIELD \_\_\_\_\_ SEC. 31 TWP. 20 RNG. 22W COUNTY. WESS STATE. KS

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
 FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO 0636  
 INITIAL PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 PRESENT PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
 PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
 BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
 MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	<u>N</u>	<u>24</u>	<u>8 7/8</u>	<u>103</u>	<u>784</u>	
LINER						
TUBING						
OPEN HOLE			<u>12 1/4</u>	<u>784</u>	<u>726</u>	SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

JOB DATA

CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <u>6-9-93</u>	DATE <u>6-9</u>	DATE <u>6-9</u>	DATE <u>6-9</u>
TIME <u>0700</u>	TIME <u>0530</u>	TIME <u>1215</u>	TIME <u>1321</u>

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR		
FLOAT SHOE		
GUIDE SHOE		
CENTRALIZERS		
BOTTOM PLUG		
TOP PLUG <u>WOODS</u> <u>2 1/2</u>	<u>1</u>	<u>WOODS</u>
HEAD <u>P.S.</u>	<u>1</u>	<u>"</u>
PACKER		
OTHER		

MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL. API  
 DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL. API  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 ACID TYPE \_\_\_\_\_ GAL. %  
 SURFACTANT TYPE \_\_\_\_\_ GAL. IN  
 NE AGENT TYPE \_\_\_\_\_ GAL. IN  
 FLUID LOSS ADD. TYPE \_\_\_\_\_ GAL.-LB. IN  
 GELLING AGENT TYPE \_\_\_\_\_ GAL.-LB. IN  
 FRIC. RED. AGENT TYPE \_\_\_\_\_ GAL.-LB. IN  
 BREAKER TYPE \_\_\_\_\_ GAL.-LB. IN  
 BLOCKING AGENT TYPE \_\_\_\_\_ GAL.-LB.  
 PERFPAC BALLS TYPE \_\_\_\_\_ QTY.  
 OTHER \_\_\_\_\_

PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<u>T. HEERY</u>	<u>71010</u>	<u>PLUG UP</u>
<u>W. WOODS</u>	<u>29207</u>	<u>39804 WESS CITY, KS</u>
<u>R. (REDAKED)</u>	<u>91547</u>	<u>"</u>
<u>G. DORRIZ</u>	<u>10012</u>	<u>41604-2106 WESS, KS</u>

DEPARTMENT CEMENT  
 DESCRIPTION OF JOB 8 7/8" SURFACE  
 JOB DONE THRU: TUBING  CASING  ANNULUS  TBG/ANN.   
 CUSTOMER REPRESENTATIVE X (10/12)  
 HALLIBURTON OPERATOR W. WOODS COPIES REQUESTED \_\_\_\_\_

CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
	<u>375</u>	<u>40% POZ</u>	<u>60% POZ</u>	<u>B</u>	<u>270 GEL, 37.5 G.C.</u>	<u>1.30</u>	<u>13.96</u>

PRESSURES IN PSI

SUMMARY

VOLUMES

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_  
 SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN. \_\_\_\_\_ 15-MIN. \_\_\_\_\_  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_  
 TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_  
 FEET 25' REASON REQUESTED

PRESLUSH: BBL-GAL \_\_\_\_\_  
 LOAD & BKDN: BBL-GAL \_\_\_\_\_  
 TREATMENT: BBL-GAL \_\_\_\_\_  
 CEMENT SLURRY (BBL) 86.8 JHL - 6 1993 48.4  
 TOTAL VOLUME: BBL-GAL \_\_\_\_\_  
 REMARKS CONSERVATION DIVISION  
Wichita Kansas  
TOTAL P.O.P. = 786'

RECEIVED

STATE CONSERVATION COMMISSION

REMARKS CONSERVATION DIVISION  
 Wichita Kansas

CUSTOMER: ALSO DRILLING COMPANY  
 LEASE: PETRO STEEL  
 WELL NO.: 1-21  
 JOB TYPE: 8 7/8" SURFACE  
 DATE: 6-9-93

**HALLIBURTON SERVICES**  
Duncan, Oklahoma 73533

A Division of Halliburton Company

TICKET

NO. **311969-9**

FORM 1906 R-11

WELL NO.—FARM OR LEASE NAME <i>1-21 Antares</i>		COUNTY <i>Nowata</i>	STATE <i>Ks</i>	CITY / OFFSHORE LOCATION	DATE <i>6-9-93</i>
CHARGE TO <i>Allen Oils Co</i>		OWNER	TICKET TYPE (CHECK ONE) SERVICE <input checked="" type="checkbox"/> SALES <input type="checkbox"/>		NETROGEN JOB YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
ADDRESS		CONTRACTOR <i>P. J. Taylor</i>	1 LOCATION <i>Nowata</i>		CODE <i>25553</i>
CITY, STATE, ZIP		SHIPPED VIA <i>51797</i>	FREIGHT CHARGES <input type="checkbox"/> PPD <input type="checkbox"/> COLLECT	2 LOCATION <i>HAWKS</i>	CODE <i>25525</i>
WELL TYPE <i>01</i>	WELL CATEGORY <i>01</i>	WELL PERMIT NO.	DELIVERED TO <i>6000 Ave</i>	3 LOCATION	CODE
TYPE AND PURPOSE OF JOB <i>010</i>		ORDER NO. <i>B-155408</i>	REFERRAL LOCATION		

As consideration, the above-named Customer agrees to pay Halliburton in accord with the rates and terms stated in Halliburton's current price lists. Invoices payable NET by the 20th of the following month after date of invoice. Upon Customer's default in payment of Customer's account by the last day of the month following the month in which the invoice is dated, Customer agrees to pay interest thereon after default at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all collection costs and attorney fees in the amount of 20% of the amount of the unpaid account. These terms and conditions shall be governed by the law of the state where services are performed or equipment or materials are furnished.

Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's liability and customer's exclusive remedy in any cause of action (whether in contract, tort, product liability, breach of warranty or otherwise) arising out of the sale or use of any products, supplies or materials is expressly limited to the replacement of such products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.

PRICE REFERENCE	SECONDARY REF OR PART NO.	L O C.	ACCOUNT	DESCRIPTION	UNITS 1		UNITS 2		UNIT PRICE	AMOUNT
					QTY	MEAS	QTY	MEAS		
030-117		1		MILEAGE	1.5	mi.			23.75	35.63
001-016		1		Jump Plug	784	FT	811		735.00	735.00
030-303		1		LA-11 Plug	1	5/8"			95.00	95.00

NOT THIS IS AN INVOICE

RECEIVED  
STATE COMMISSION

AS PER ATTACHED BULK MATERIAL DELIVERY TICKET NO.

**B-155408-6 1993**

WAS JOB SATISFACTORILY COMPLETED?  
 WAS OPERATION OF EQUIPMENT SATISFACTORY?  
 WAS PERFORMANCE OF PERSONNEL SATISFACTORY?  
 *[Signature]*  
 CUSTOMER OR HIS AGENT (PLEASE PRINT)  
 *[Signature]*  
 CUSTOMER OR HIS AGENT (SIGNATURE)

WE CERTIFY THAT THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED HAS BEEN COMPLIED WITH IN THE PRODUCTION OF GOODS AND OR WITH RESPECT TO SERVICES FURNISHED UNDER THIS CONTRACT.

T. H. [Signature]  
 HALLIBURTON OPERATOR *89377*  
 CONSERVATION DIVISION  
 Wichita, Kansas

SUB TOTAL **3872.48**

APPLICABLE TAXES WILL BE ADDED ON INVOICE

CUSTOMER

MATERIALS DELIVERED  
AND  
TICKET CONTINUATION

**HALLIBURTON SERVICES**  
Duncan, Oklahoma 73538  
A Division of Halliburton Company

FOR INVOICE AND  
TICKET NO. 311969

DATE <b>6-9-93</b>	CUSTOMER ORDER NO.	WELL NO. AND FARM <b>1-21 Petersilie</b>	COUNTY <b>Ness</b>	STATE <b>Kansas</b>
CHARGE TO <b>Allen Drlg.</b>		OWNER <b>Same</b>	CONTRACTOR <b>Co. Tools</b>	
MAILING ADDRESS		DELIVERED FROM <b>Hays, Ks.</b>	LOCATION CODE <b>25525</b>	PREPARED BY <b>D.W. Dobratz</b>
CITY & STATE		DELIVERED TO <b>LOCATION</b>	TRUCK NO. <b>4604-8206</b>	RECEIVED BY <i>[Signature]</i>
No. <b>B 155408</b>				

PRICE REFERENCE	SECONDARY REF. OR PART NO.	CODE		DESCRIPTION	UNITS 1		UNITS 2		UNIT PRICE	AMOUNT	
		L	D		QTY.	MEAS.	QTY.	MEAS.			
504-136		2	B	40/60 Pozmix Standard	375				5.55	2081.	25
509-406	890.50812	2	B	Calcium Chloride 3% Blended	9				28.25	254.	25
500-207		2	B	SERVICE CHARGE					1.25	491.	25
500-306		2	B	Mileage Charge	32,576		13		.85	179.	98
No. <b>B 155408</b>					CARRY FORWARD TO INVOICE		SUB-TOTAL		<b>3006. 73</b>		

THIS IS NOT AN INVOICE

RECEIVED  
STATE COMMISSION  
JUL 6 1993  
Wichita, Kansas

CUSTOMER



DISTRICT Hwy. 1

DATE 6-16-93

TO: HALLIBURTON SERVICES YOU ARE HEREBY REQUESTED TO FURNISH EQUIPMENT AND SERVICEMEN TO DELIVER AND OPERATE THE SAME AS AN INDEPENDENT CONTRACTOR TO: Allen Doby, Coe (CUSTOMER) AND DELIVER AND SELL PRODUCTS, SUPPLIES, AND MATERIALS FOR THE PURPOSE OF SERVICING

WELL NO. 1-31 LEASE Peterson SEC. 21 TWP. 20<sup>s</sup> RANGE 23<sup>w</sup>

FIELD \_\_\_\_\_ COUNTY Ness STATE K. OWNED BY Same

THE FOLLOWING INFORMATION WAS FURNISHED BY THE CUSTOMER OR HIS AGENT

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_
FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_
PACKER: TYPE \_\_\_\_\_ SET AT \_\_\_\_\_
TOTAL DEPTH 4470' MUD WEIGHT \_\_\_\_\_
BORE HOLE \_\_\_\_\_
INITIAL PROD: OIL \_\_\_\_\_ BPD, H2O \_\_\_\_\_ BPD, GAS \_\_\_\_\_ MCF
PRESENT PROD: OIL \_\_\_\_\_ BPD, H2O \_\_\_\_\_ BPD, GAS \_\_\_\_\_ MCF

Table with columns: NEW USED, WEIGHT, SIZE, FROM, TO, MAX. ALLOW. P.S.I. Rows include CASING, LINER, TUBING, OPEN HOLE, PERFORATIONS.

PREVIOUS TREATMENT: DATE \_\_\_\_\_ TYPE \_\_\_\_\_ MATERIALS \_\_\_\_\_

TREATMENT INSTRUCTIONS: TREAT THRU TUBING  ANNULUS  CASING  TUBING/ANNULUS  HYDRAULIC HORSEPOWER ORDERED

Plug to 110' with 125 sk 40/100 per 6" hole, 1/4" fluoride / 50 sk @ 1200'
50 sk @ 800'
10 sk 40' to surface
15 sk in Reel Hole

CUSTOMER OR HIS AGENT WARRANTS THE WELL IS IN PROPER CONDITION TO RECEIVE THE PRODUCTS, SUPPLIES, MATERIALS, AND SERVICES

As consideration, the above-named Customer agrees: THIS CONTRACT MUST BE SIGNED BEFORE WORK IS COMMENCED

- a) To pay Halliburton in accord with the rates and terms stated in Halliburton's current price list. Invoices are payable NET by the 20th of the following month after date of invoice.
b) To defend, indemnify, release and hold harmless Halliburton, its divisions, subsidiaries, parent and affiliated companies and the officers, directors, employees, agents and servants of all of them from and against any claims, liability, expenses, attorneys fees, and costs of defense to the extent permitted by law for:
1. Damage to property owned by, in the possession of, or leased by Customer, and/or the well owner (if different from Customer), including, but not limited to, surface and subsurface damage.
2. Reservoir, formation, or well loss or damage, subsurface trespass or any action in the nature thereof.
3. Personal injury or death or property damage (including, but not limited to, damage to the reservoir, formation or well), or any damages whatsoever, growing out of or in any way connected with or resulting from pollution, subsurface pressure, losing control of the well and/or a well blowout or the use of radioactive material.
c) The defense, indemnity, release and hold harmless obligations of Customer provided for in this Section b) and Section c) below shall apply to claims or liability even if caused or contributed to by Halliburton's negligence, strict liability, or the unseaworthiness of any vessel owned, operated, or furnished by Halliburton or any defect in the data, products, supplies, materials, or equipment of Halliburton whether in the preparation, design, manufacture, distribution, or marketing thereof, or from a failure to warn any person of such defect.
d) That Halliburton warrants only title to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY, FITNESS OR OTHERWISE WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE.
e) That Customer shall, at its risk and expense, attempt to recover any Halliburton equipment, tools or instruments which are lost in the well and/or on the surface. If Halliburton equipment, tools or instruments are not recovered, Customer shall pay Halliburton its replacement cost unless such loss is due to the sole negligence of Halliburton.
f) To waive the provisions of the Deceptive Trade Practices - Consumer Protection Act, to the extent permitted by law.
g) That this contract shall be governed by the law of the state where services are performed or materials are furnished.
h) That Halliburton shall not be bound by any changes or modifications in this contract, except where such change or modification is made in writing by a duly authorized executive officer of Halliburton.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMER'S AGENT.

SIGNED Martin P. [Signature] CUSTOMER

DATE 6-16-1993

TIME 7:10 A.M. P.M. [ ]

We certify that the Fair Labor Standards Act of 1938, as amended, has been complied with in the production of goods and/or with respect to services furnished under this contract.

CUSTOMER

# JOB LOG

WELL NO. 1 XI LEASE Leola TICKET NO. 361112

CUSTOMER Allen Dely Co PAGE NO. 1

FORM 2013 R-2

JOB TYPE Plug To Abandon DATE 6-16-93

CHART NO.	TIME	RATE (BPM)	VOLUME (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	17:00							Called out
	1500							on loc. Set up truck Reg lowering down Drill Pipe
	1710							Run Plugging stand to 1500'
	1740		5					Pump 5 <sup>50</sup> H <sub>2</sub> O spacer
			14.8					mix 50% cement
			2					2 <sup>50</sup> H <sub>2</sub> O spacer
			20					30 <sup>50</sup> mud to Balance
	1755							Pull D.P. to 500'
			5					Pump 5 <sup>50</sup> H <sub>2</sub> O spacer
	1825		14.2					mix 50% cement
			3					Pump 2 <sup>50</sup> H <sub>2</sub> O spacer
			6					6 <sup>50</sup> mud to Balance
	1840							<del>Run</del> Pull D.P. out of hole
	1900							Run Rubber plug down 40' solid Bridge
			3					mix 10% 40' to cement
			4.4					mix 15% in Pat hole
	1920							Wash & Run up truck
	1945							Job Complete

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Wichita, Kansas

CUSTOMER

WELL DATA

FIELD, SEC, TWP, RNG, COUNTY, STATE, FORMATION NAME, TYPE, THICKNESS, PROD, PRESENT PROD, COMPLETION DATE, MUD TYPE, MUD WT, PACKER TYPE, SET AT, BOTTOM HOLE TEMP, PRESSURE, MISC. DATA, TOTAL DEPTH

JOB DATA

Table with 4 columns: CALLED OUT, ON LOCATION, JOB STARTED, JOB COMPLETED. Includes DATE and TIME for each.

PERSONNEL AND SERVICE UNITS

Table with 3 columns: NAME, UNIT NO. & TYPE, LOCATION. Lists personnel involved in the job.

DEPARTMENT, DESCRIPTION OF JOB

JOB DONE THRU: TUBING, CASING, ANNULUS, TBG/ANN.

CUSTOMER REPRESENTATIVE, HALLIBURTON OPERATOR, COPIES REQUESTED

CEMENT DATA

Table with 8 columns: STAGE, NUMBER OF SACKS, CEMENT, BRAND, BULK SACKED, ADDITIVES, YIELD CU.FT./SK., MIXED LBS./GAL.

PRESSURES IN PSI

SUMMARY

VOLUMES

CIRCULATING, BREAKDOWN, AVERAGE, SHUT-IN, ORDERED, TREATING, FEET, PRESURUSH, LOAD & BKDN, TREATMENT, CEMENT SLURRY, TOTAL VOLUME, AVERAGE RATES IN BPM, CEMENT LEFT IN PIPE, REASON

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CUSTOMER, LEASE, WELL NO., JOB TYPE, DATE

**HALLIBURTON SERVICES**

Duncan, Oklahoma 73538

A Division of Halliburton Company

NO. 367112-9

FORM 1906 R-11

WELL NO.—FARM OR LEASE NAME <i>721</i>		COUNTY <i>No.</i>	STATE <i>Pa.</i>	CITY / OFFSHORE LOCATION	DATE <i>6-16-93</i>
CHARGE TO <i>Allen Dwyer Co.</i>		OWNER <i>Same</i>		TICKET TYPE (CHECK ONE) SERVICE <input checked="" type="checkbox"/> SALES <input type="checkbox"/>	NITROGEN JOB YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
ADDRESS		CONTRACTOR <i>Co. Truck</i>		LOCATION <i>1 No. Co. Rd.</i>	CODE <i>25553</i>
CITY, STATE, ZIP		SHIPPED VIA <i>No. Co. Rd.</i>		FREIGHT CHARGES <input type="checkbox"/> PPD <input type="checkbox"/> COLLECT	LOCATION <i>2</i>
WELL TYPE <i>01</i>	WELL CATEGORY <i>01</i>	WELL PERMIT NO.	DELIVERED TO <i>S. No. Co. Rd.</i>	LOCATION <i>3</i>	CODE
TYPE AND PURPOSE OF JOB <i>115</i>		ORDER NO. <i>B-155412</i>	REFERRAL LOCATION		

As consideration, the above-named Customer agrees to pay Halliburton in accord with the rates and terms stated in Halliburton's current price lists. Invoices payable NET by the 20th of the following month after date of invoice. Upon Customer's default in payment of Customer's account by the last day of the month following the month in which the invoice is dated, Customer agrees to pay interest thereon after default at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event it becomes necessary to employ an attorney to enforce collection of said account, Customer agrees to pay all collection costs and attorney fees on the amount of 20% of the amount of the unpaid account. These terms and conditions shall be governed by the law of the state where services are performed or equipment or materials are furnished.

Halliburton warrants only as to the products, supplies and materials and that the same are free from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE (WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. Halliburton's liability and customer's exclusive remedy in any cause of action (whether in contract, tort product liability, breach of warranty or otherwise) arising out of the sale or use of any products, supplies or materials is expressly limited to the replacement of such products, supplies or materials on their return to Halliburton or, at Halliburton's option, to the allowance to the customer of credit for the cost of such items. In no event shall Halliburton be liable for special, incidental, indirect, punitive or consequential damages.

PRICE REFERENCE	SECONDARY REF OR PART NO.	L O C.	ACCOUNT	DESCRIPTION	UNITS 1		UNITS 2		UNIT PRICE	AMOUNT
					QTY	MEAS	QTY	MEAS		
<i>000 117</i>		<i>1</i>		MILEAGE <i>514</i>	<i>13</i>	<i>mi</i>			<i>223</i>	<i>35 25</i>
<i>090 712</i>		<i>1</i>		<i>Pump Service</i>	<i>2</i>	<i>hr</i>				<i>395 00</i>
<i>000 005</i>		<i>1</i>		<i>110 ft 1 1/2 Day</i>	<i>1</i>	<i>cc</i>	<i>5 1/2</i>	<i>pic</i>		<i>95 00</i>

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*B-155412*

*1029 12*

AS PER ATTACHED BULK MATERIAL DELIVERY TICKET NO. \_\_\_\_\_

WAS JOB SATISFACTORILY COMPLETED? \_\_\_\_\_

WAS OPERATION OF EQUIPMENT SATISFACTORY? \_\_\_\_\_

WAS PERFORMANCE OF PERSONNEL SATISFACTORY? \_\_\_\_\_

X \_\_\_\_\_ CUSTOMER OR HIS AGENT (PLEASE PRINT)

X \_\_\_\_\_ CUSTOMER OR HIS AGENT (SIGNATURE)

WE CERTIFY THAT THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED HAS BEEN COMPLIED WITH IN THE PRODUCTION OF GOODS AND OR WITH RESPECT TO SERVICES FURNISHED UNDER THIS CONTRACT.

*Ray B. [Signature]*  
HALLIBURTON OPERATOR  
Wichita, Kansas

HALLIBURTON APPROVAL

CUSTOMER

SUB TOTAL

APPLICABLE TAXES WILL BE ADDED ON INVOICE

**BULK MATERIALS DELIVERY  
AND  
TICKET CONTINUATION**

**HALLIBURTON SERVICES**  
Duncan, Okla. 73546

A Division of Halliburton Company

FOR INVOICE AND  
TICKET NO. **367112**

DATE <b>6-16-93</b>	CUSTOMER ORDER NO.	WELL NO. AND FARM <b>Petersille #1-21</b>	COUNTY <b>Ness</b>	STATE <b>KANSAS</b>
CHARGE TO <b>Allen Drilling</b>		OWNER <b>Same</b>	CONTRACTOR <b>Co. Todd</b>	No. <b>B 155418</b>
MAILING ADDRESS		DELIVERED FROM <b>Hays, Ks</b>	LOCATION CODE <b>25525</b>	PREPARED BY <b>Kuhn</b>
CITY & STATE		DELIVERED TO <b>S Ness City, Ks</b>	TRUCK NO. <b>3860</b>	RECEIVED BY <b>R. Logler</b>

PRICE REFERENCE	SECONDARY REF. OR PART NO.	CODE		DESCRIPTION	UNITS 1		UNITS 2		UNIT PRICE	AMOUNT			
		L	D		QTY.	MEAS.	QTY.	MEAS.					
504-136		2	B	40/60 Pozmix Standard	125				5.55	693	75		
507-277	516.00259	2	B	Halliburton Gel @4%	4				15.50	62	00		
507-210	890.50071	2	B	Flocele Blended	31	lb			1.40	43	40		
					Returned Mileage Charge	TOTAL WEIGHT	LOADED MILES	TON MILES					
					SERVICE CHARGE ON MATERIALS RETURNED								
500-207		2	B	SERVICE CHARGE					1.25	168	75		
500-306		2	B	Mileage Charge	11,081	TOTAL WEIGHT	13	LOADED MILES	.85	61	22		
No. <b>B 155418</b>							CARRY FORWARD TO INVOICE		SUB-TOTAL		<b>1,029</b>	<b>12</b>	

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CUSTOMER

# Sheets Oil Company

1333 W. 120th Ave., Suite 310  
Westminster, CO 80234  
(303) 451-0175

## Well Summary

Well Summary: Allen Drilling Company  
#1-21 Petersille

Location: N/2 SW SE Sec. 21 T20S-R23W  
Ness County, Kansas

Elevation: 2243 G.L. 2256 K.B.

Contractor: Allen Drilling Company - Rig No. 5

Spud Date: 06/09/93

Completion Date: 06/16/93

Bits:	Bit #1 12 1/4"	Reed	RT	0'-560'
	Bit #2 12 1/4"	Smith	RT	560'-782'
	Bit #3 7 7/8"	Security	S84CF	782'-3535'
	Bit #4 7 7/8"	Reed	HP52 RR	3535'-4470'

Cores: None

Tests: Trilobite Testing L.L.C., Hays, KS.  
D.S.T. #1 4347'-4381' (L. Cherokee Fm.) OP15 SI30 OP15 SI30  
recovered 10' of drilling mud; FP 36-36#/49-49#, SIP 50-60#, HP 2165-  
2140#.

D.S.T. #2 4347'-4391' (L. Cherokee "Basal" Sandstones) OP 15 SI30  
OP15 SI30, recovered 8' of drilling mud; FP 50-52#/62-62#, SIP 216-  
63#, HP 2170-2150#.

Deviations: 1621' - 1• 2678' - 1/2• 3736' - 3/4• 4470' - 3/4•  
2178' - 3/4• 3208' - 3/4• 4381' - 1•

Logs: Halliburton Logging Services, Great Bend, KS; Dual Induction Laterlog -  
Compensated Density Dual Spaced Neutron Log

Mud: Mud Systems, Inc., Great Bend, KS.

Status: Dry Hole

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### Chronological Log

06/08/93 Move Allen Rig #5 in and rig up. Spud 12 1/4" surface hole @ 9:00 pm

06/09/93 At 7:00 am: Drilling 12 1/4" hole @ 629'. Drill to 12 1/4" T.D. @ 782'. Run 18 5ts. (784') New 8 5/8" 24# Surface Casing. Set @ 781' w/ 375 sx. 40/60 poz, 2% Gel, 3% CC by Halliburton. Cement did circulate. Plug down @ 12:45 pm. Drill plug @ 8:45 pm.

06/10/93 At 7:00 am: Drilling @ 1545'.

06/11/93 At 7:00 am: Drilling @ 2590'.

06/12/93 At 7:00 am: Drilling @ 3225'. Displace mud @ 3500'. Bit trip @ 3535'.

06/13/93 At 7:00 am: Drilling @ 3730'

06/14/93 At 7:00 am: Drilling @ 4193'. Drill to 4381'. Prepare to run D.S.T. #1, 4347'-4381'.

06/15/93 Run D.S.T. #1  
At 7:00 am: Tripping out of hole w/ D.S.T. #1. Prepare for and run D.S.T. #2, 4347'-4391'.

06/16/93 Drill to R.T.D. @ 4470'. Condition hole and run open hole logs. Decision made to plug and abandon. Rig released at approximately 12:15 pm.

### Formation Log Tops

Anhydrite	1483' (+773)
Heebner Shale	3718' (-1462)
Toronto	3734' (-1478)
Lansing/K.C.	3766' (-1510)
Base/K.L.	4128' (-1872)
Pawnee	4218' (-1962)
Labette Shale	4287' (-2031)
Ft. Scott	4293' (-2037)
Cherokee Shale	4318' (-2062)
Basal Cherokee Sandstone	4382' (-2126)
Mississippian	4406' (-2150)

### Sample Description

Note: Samples were examined wet, logged back on drilling time and corrected for log tops.

#### Lanes of Interest:

Hoebner Shale 3718' (-1462)

Shale, black, carbonaceous; soft, firm, platy, fissile.

Toronto 3734' (-1478)

Limestone, white, microcrystalline to crystalline, gd. intercrystalline porosity; v. chalky, pr. permeability. No show.

Lansing-Kansas City 3766' (-1510)

3766'-82': Limestone, lt. buff, crystalline, fr-gd. intercrystalline porosity, fossil, ferrous; cherty in part. No show.

3789'-3805': Limestone, lt. buff, crystalline, gd. porosity, fossil, ferrous. No show.

3810'-38': Limestone, lt. buff to cream. macrocrystalline, gd. intercrystalline porosity, scattered micro-vugular porosity. No show.

3842'-56': Limestone, lt. buff, microcrystalline, dense. No show.

3860'-78': Limestone, buff to lt. tan, microcrystalline; dense, pr. porosity decreasing through section; v. cherty. No show.

3880'-3902': Limestone, white to lt. buff, microcrystalline, pr. porosity; cherty in part

3904'-10': Limestone, lt. buff, crystalline, sucrosic; fossiliferous, gd. intercrystalline porosity. No show.

3916'-29': Limestone, lt. buff, microcrystalline, v. dense; chalky, pr. permeability. No show.

3943'-59': Limestone, lt. buff, crystalline, cherty, dense, v. tight. No show.

3968'-84': Limestone, white to lt. buff, v. chalky, pr. permeability. No show.

3986'-98': Limestone, lt. buff, microcrystalline, dense, tight. No show.

4002'-4014': Limestone, white, crystalline, oolitic, fossiliferous. No show.

4017'-4026': Limestone, white microcrystalline to crystalline, fossiliferous; chalky, dense. No show.

4036'-43': Limestone, buff, crystalline; pr. - fr. intercrystalline porosity. No show.

4046'-50': Limestone, lt. buff, crystalline, pr-fr. intercrystalline porosity; v. chalky. No show.

4070'-75': Limestone, lt. buff, crystalline, oolitic; chalky, cherty in part. No show.

4078'-97': Limestone, lt. buff, crystalline, fr. oolic porosity @ top; chalky, cherty, dense @ base. No show.

4100'-12': Limestone, lt. buff, microcrystalline, dense, cherty. No show.

4118'-26': Limestone, lt. buff, microcrystalline, v. dense, cherty. No show.



Pawnee 4218' (-1962)

Limestone. grey, v. microcrystalline, argillaceous, chalky, dense; becoming cherty at base. No show.

Labette Shale 4287' (-2031)

Shale, black, carbonaceous, firm, blocky.

Et. Scott 4293' (-2037)

Limestone, lt. buff, crystalline, fossiliferous-coralline; chalky; v. pr. perm; spotted stain, brt. fluorescence, no cut; no odor.

Cherokee Shale 4318' (-2062)

Shale, reddish-brown, v. soft, platy, fissile.

Basal Cherokee Sandstone 4382' (-2126)

Sandstone, white, v. fine grained, quartz, sub-angular, fr. sorting, friable in part; pr. fr. porosity & permeability; v. glauconitic, chlorotic (increasing through section); calcareous cement; chalky @ v. base.

4382'-94': Gd. to v. gd. show of Free oil & stain; Fluorescence, gd. slow milky cut; fr. to gd. odor.  
Tested by D.S.T.'s #1 & #2.

4394'-4403': Sandstone as above, no show.

Mississippian 4406' (-2150)

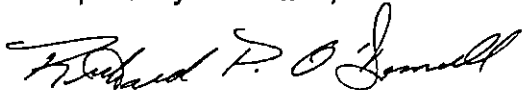
4406'-20': Chert, pearl white, v. dense, tight. No show.

4422'-48': Chert, buff, opaque, v. dense, tight. No show.

4458'-70': Chert, white to lt. buff opaque, v. dense, tight. No show.

The #1-21 Petersilie test well is structurally 33' low to D.C. Slawson's #1-A Petersilie well approximately 1320' to the southwest (SE SW Sec. 21). Sandstone development, although 21' in thickness, was of poor reservoir quality as proven by the D.S.T.'s and confirmed by the open hole logs. There were no other significant shows of oil in the #1-21 Petersilie test well. As a result, it was decided by all parties to plug and abandon this test.

Respectfully submitted,



Richard P. O'Donnell  
Petroleum Geologist  
Sheets Oil Company  
(303) 451-0175