

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

API NO. 15- 155-21,276 - 0000
County Reno
SE SE NW Sec. 20 Twp. 25 S Rge. 09 X W

Operator: License # 31160
Name: Phillips Exploration Company, LC
Address 100 S. Main, Suite 510

2310 Feet from (N) (circle one) Line of Section
2310 Feet from (W) (circle one) Line of Section

City/State/Zip Wichita, Kansas 67202
Purchaser: NCRA

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

Operator Contact Person: James B. Phillips
Phone (316) 265-2857

Lease Name Aurell Well # 1-20"A"
Field Name Langdon

Contractor: Name: Sterling Drilling Co., Inc.
License: 5142

Producing Formation Mississippi Chert
Elevation: Ground 1707 KB 1716

Wellsite Geologist: Casey Galloway
Designate Type of Completion
 XX New Well Re-Entry Workover

Total Depth 4050 PBDT 4028
Amount of Surface Pipe Set and Cemented at 227 Feet

Oil SWD SIOW Temp. Abd.
 Gas EMHR SIGW
 Dry Other (Core, WSM, etc.)

Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set _____ Feet

If Workover/Re-Entry: old well info. _____
Operator: _____

If Alternate II completion, cement circulated from _____
feet depth to _____ w/ _____ sx cmt.

Well Name: _____
Comp. Date _____ Old Total _____
 Deepening Re-perf. Conv. to Inj/SWD
 Plug Back PBDT
 Commingled Docket No. _____
 Dual Completion Docket No. _____
 Other (SWD or Inj?) Docket No. _____

Drilling Fluid Management Plan 4-15-94 CR
(Data must be collected from the Reserve Pit)
Chloride content 10000 ppm Fluid volume 2000 bbls

7/24/93 7/30/93 8/12/93
Spud Date Date Reached TD Completion Date

Deaerating method used evaporation & hauled
Location of fluid disposal if hauled offsite: _____

Operator Name C & C Tank Service, Inc
Lease Name Roach SWD License No. 30708

SW Quarter Sec. 14 Twp. 23 S Rng. 09 X W
County Reno Docket No. 22208

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.

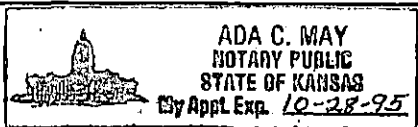
All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature James B. Phillips
Title President Date 8/23/93

K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received
Distribution
 KCC SWD/Rep NGPA
 KGS Plug Other
(Specify)

Subscribed and sworn to before me this 27th day of January, 19 94.

Notary Public Ada C. May
Date Commission Expires _____



Operator Name Phillips Exploration Company, LC Lease Name Aurell Well # 1-20"A"

Sec. 20 Twp. 25 S Rge. 09 East West
 County Reno

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	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Heebner	3206	-1490
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Lansing	3421	-4795
List All E.Logs Run:		B/KC	3767	-2051
DIL, SDL/DSN, FF-MSG, Coral		Cherokee Shale	3873	-2157
		Miss Chert	3894	-2178
		Miss Lime	3960	-2244
		Kinderhook Shale	3971	-2255
		T.D.	4050	-2334

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	20	227	60/40 Poz	175	3%CC, 2%gel
Production	7 7/8	5 1/2	15.5	4043	Howco FA-2	150	10%salt, 1%gel
					5% CalSeal, .6 of 1% Halad, 5#/sk Gilsonite		
						322	

Purpose:	Depth		Type of Cement	#Sacks Used	Type and Percent Additives
	Top	Bottom			
<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
	2	3901 to 3906		250 gal 10% acetic	
			500 gal 7 1/2% HCL, 1500 gal 1 1/2% HF/		
			6% HCL		3901-06

TUBING RECORD	Size 2 7/8	Set At 3993	Packer At none	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Date of First, Resumed Production, SWD or Inj.	Producing Method		<input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
8/19/93					
Estimated Production Per 24 Hours	Oil Bbls. 50	Gas Mcf 20	Water Bbls. 250	Gas-Oil Ratio 400	Gravity 34

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION: Open Hole Perf. Dually Comp. Commingled Other (Specify) _____

Production Interval: 3901 to 3906

CUSTOMER COPY



HALLIBURTON
ENERGY SERVICES

REMIT TO:
P.O. BOX 951046
DALLAS, TX 75395-1046

INVOICE

ORIGINAL

INVOICE NO.	DATE				
509459	07/30/1993				
WELL LEASE NO./PROJECT	WELL/PROJECT LOCATION	STATE	OWNER		
AURELL 1-20 A	RENO	KS	SAME		
SERVICE LOCATION	CONTRACTOR	JOB PURPOSE	TICKET DATE		
PRATT	STERLING DR LG.	CEMENT PRODUCTION CASING	07/30/1993		
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
685220	CASEY COATS			COMPANY TRUCK	54171

PHILLIPS EXPLORATION COMPANY
100 S. MAIN, SUITE 510
WICHITA, KS 67202

DIRECT CORRESPONDENCE TO:
OKLAHOMA TOWER
210 WEST PARK AVENUE
SUITE 2000
OKLAHOMA CITY, OK 73102-5601

RECEIVED
 KANSAS CORPORATION COMMISSION
 JAN 27 1994
 CONSERVATION DIVISION
 WICHITA, KS

REFERENCE NO.	DESCRIPTION	UM	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT				
000-117	MILEAGE	30 MI	2.75	82.50
		1 UNT		
001-016	CEMENTING CASING	4043 FT	1,410.00	1,410.00
		1 UNT		
030-016	CEMENTING PLUG 5W ALUM TOP	5.5 IN	60.00	60.00
		1 EA		
40	CENTRALIZER 5-1/2" X 7 7/8"	4 EA	44.00	176.00
807.93022				
12A	GUIDE SHOE - 5 1/2" 8RD THD.	1 EA	121.00	121.00
825.205				
24A	INSERT FLOAT VALVE - 5 1/2" 8	1 EA	110.00	110.00
815.19251				
27	FILL-UP UNIT 5 1/2"-6 5/8"	1 EA	55.00	55.00
815.19315				
045-050	COMPUPAC SYSTEM W/HALLIBURTO	1 JOB	500.00	N/C
		1 DAY		
018-315	MUD FLUSH	500 GAL	.65	325.00
504-308	CEMENT - STANDARD	25 SK	6.76	169.00
504-308	CEMENT - STANDARD	150 SK	6.76	1,014.00
507-277	HALLIBURTON-GEL BENTONITE	1 SK	15.50	15.50
508-291	GILSONITE BULK	750 LB	.40	300.00
509-968	SALT	700 LB	.13	91.00
508-127	CAL SEAL 60	7 SK	20.70	144.90
507-775	HALAD-322	85 LB	6.90	586.50
500-207	BULK SERVICE CHARGE	213 CFT	1.25	266.25
500-306	MILEAGE CMTG MAT DEL OR RETU	283.14 TMI	.85	240.67

INVOICE SUBTOTAL

5,167.32

DISCOUNT-(BID)
INVOICE BID AMOUNT

930.11-
4,237.21

***** CONTINUED ON NEXT PAGE *****

TERMS: If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, Customer agrees to pay attorney fees of 20% of the unpaid account, plus all collection and court costs.

Phone 913-483-127, Russell, Kansas
 Phone 316-793-5861, Great Bend, Kansas

ORIGINAL

Phone Plainville 913-434-2812
 Phone Ness City 913-798-3843

ALLIED CEMENTING CO., INC.

Home Office P. O. Box 31
 Russell, Kansas 67665

1663

New

Date	7-24-93	Sec.	20	Twp.	25	Range	9	Called Out	6:00AM	On Location	9:00AM	Job Start	11:30AM	Finish	12:00PM	
Lease	Avrell	Well No.	#1-20A	Location				Langdon, W. 1/2, S. 1/4, T. 25, R. 9	County	Revo	State	Ks				

Contractor	Sterling Rig #2	
Type Job	Surface	
Hole Size	12 1/4"	T.D. 233'
Csg.	8 5/8"	Depth 227'
Tbg. Size		Depth
Drill Pipe		Depth
Tool		Depth
Cement Left in Csg.	15'	Shoe Joint
Press Max.		Minimum
Meas Line		Displace 1 1/4 bbl
Perf.		

Owner Same
 To Allied Cementing Co., Inc.
 You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To Phillips Exploration, Co.
 Street 100 S. Main Suite 510
 City Wichita State Ks, 67202

The above was done to satisfaction and supervision of owner agent or contractor.

Purchase Order No.
 X *Jerry Belding*
CEMENT

Amount Ordered	175 sks 60/40 3% occ, 2% gel		
Consisting of			
Common	105	5.75	603.75
Poz. Mix	70	3.00	210.00
Gel.	4	7.00	28.00
Chloride	5	25	125.00
Quickset			

EQUIPMENT

#	No.	Cementor	Jim
Pumptrk	181	Helper	Bob W.
#	No.	Cementor	
Pumptrk		Helper	
#		Driver	Rick
Bulktrk	101		
Bulktrk		Driver	

Handling	175	1.00	175.00
Mileage	28		196.00
Sub Total			
Total			1337.75

DEPTH of Job	
Reference:	
28	Pumptrk Charge 430.00
1	Pumptrk Mileage 63.00
	8 5/8" Wooden Plug 42.00
	Sub Total
	Tax
	Total 535.00

RECEIVED
 KANSAS CORPORATION COMMISSION
 JAN 27 1994
 CONSERVATION DIVISION
 WICHITA, KS

Flooding Equipment
 Total # 1872.75
 Less 374.55
 \$ #1498.20

Remarks: Cement Did Circulate

[Signature]

Allied Cementing
 Buf Tom Dickson

GENERAL TERMS AND CONDITIONS

DEFINITIONS: In these terms and conditions, "Allied" shall mean Allied Cementing Co., Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

TERMS: Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "ALLIED" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing, in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "ALLIED," refunded directly to "CUSTOMER." For purposes of this paragraph, ALLIED and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

ATTORNEY FEES: In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the terms of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limited to, a reasonable sum as and for attorney's fees.

PRICES AND TAXES: All merchandise listed in "ALLIED'S" current price schedule are F.O.B. ALLIED'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by ALLIED shall be added to the quoted prices charged to CUSTOMER.

TOWING CHARGES: ALLIED will make a reasonable attempt to get to and from each job site using its own equipment. Should ALLIED be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by ALLIED, will be charged to and paid by CUSTOMER.

PREPARATION CHARGES: If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay ALLIED for the expenses incurred by ALLIED as a result of the cancellation.

DEADHAUL CHARGES: Unless otherwise specified on the front of this Contract, a deadhaul charge as set forth in ALLIED'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

SERVICE CONDITIONS AND LIABILITIES: 1. ALLIED carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond ALLIED'S control, ALLIED shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless ALLIED, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with ALLIED'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of ALLIED or its employees.

2. With respect to any of ALLIED'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to ALLIED at the landing, CUSTOMER shall either recover the lost item without cost to ALLIED or reimburse ALLIED the current replacement cost of the item unless the loss or damage results from the sole negligence of ALLIED or its employees.

3. ALLIED does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

WARRANTIES: 1. ALLIED warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. ALLIED'S obligation under this warranty is expressly limited to repair, replacement, or allowance for credit, at its option, for any merchandise which is determined by ALLIED to be defective. THIS IS THE SOLE WARRANTY OF ALLIED AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. CUSTOMER'S sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and ALLIED shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.

2. More specifically:

(A) Nothing in this contract shall be construed as a warranty by ALLIED of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

(B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by ALLIED or any interpretation of tests, meter readings, chart information, analysis of research, or recommendations made by ALLIED, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of ALLIED or its employees in the preparation or furnishing of such facts, information or data.

(C) Work done by ALLIED shall be under the direct supervision and control of the CUSTOMER or his agent and ALLIED will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.

ORIGINAL

DST REPORT

API #15-155-21276

GENERAL INFORMATION

DATE : 7/28/93	TICKET : 19134
CUSTOMER : PHILLIPS EXPLORATION CO	LEASE : AURELL
WELL : #1-20A TEST: 1	GEOLOGIST: PHILLIPS
ELEVATION: 1707 GL	FORMATION: MISSISSIPPI
SECTION : 20	TOWNSHIP : 25S
RANGE : 9W	STATE : KS
COUNTY: RENO	CLOCK : 12
GAUGE SN#: 11018	RANGE : 4425

WELL INFORMATION

PERFORATION INTERVAL FROM: 3872.00 ft TO: 3914.00 ft TVD: 3914.0 ft
 DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS
 DEPTH OF RECORDERS: 3875.0 ft 3911.0 ft
 TEMPERATURE: 121.0

DRILL COLLAR LENGTH: 425.0 ft	I.D.:	2.200 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 3425.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 22.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 42.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE :	4.5FH
PACKER DEPTH: 3887.0 ft	SIZE:	6.750 in
PACKER DEPTH: 3872.0 ft	SIZE:	6.750 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : STERLING DRLG RIG 2	VISCOSITY : 56.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 7.200 cc
WEIGHT : 8.700 ppg	SERIAL NUMBER:
CHLORIDES : 3500 ppm	REVERSED OUT?: NO
JARS-MAKE :	
DID WELL FLOW?: NO	

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW. GAS TO SURFACE
IN 7 MINUTES. TOOL PULLED - FLUSHED TOOL &
REVIVED BLOW. FINAL FLOW PERIOD STRONG BLOW- GAS

RECEIVED
 KANSAS CORPORATION COMMISSION
 JAN 27 1994
 CONSERVATION DIVISION
 WICHITA, KS

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

TO SURFACE THROUGHOUT. SEE GAS SHEET ATTACHED.
 PLUGGING INITIAL FLOW PERIOD.
 BOTTOM STAND PLUGGED WITH CUTTINGS.

FLUID RECOVERY

ft	Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
	360.0	10.0	25.0	0.0	65.0	SL OIL CUT HVY GAS C/MUD
	60.0	65.0	20.0	0.0	15.0	GASSY FROTHY OIL
	720.0	75.0	25.0	0.0	0.0	V. HVY GAS CUT FREE OIL
	0.0	0.0	0.0	0.0	0.0	GRAVITY 34 @ 60 DEGREES
	0.0	0.0	0.0	0.0	0.0	2500 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME: 5.6539 STB	TOTAL FLOW TIME: 120.0000 min.
GAS VOLUME: 16.6465 SCF	AVERAGE OIL RATE: 108.7472 STB/D
MUD VOLUME: 3.4084 STB	AVERAGE WATER RATE: 0.0000 STB/D
WATER VOLUME: 0.0000 STB	
TOTAL FLUID : 9.0623 STB	

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1842.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	0.00	0.00
INITIAL SHUT-IN	60.00		862.00
FINAL FLOW	90.00	197.00	410.00
FINAL SHUT-IN	120.00		834.00

FINAL HYDROSTATIC PRESSURE: 1826.00

ORIGINAL

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1867.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	357.00	168.00
INITIAL SHUT-IN	60.00		845.00
FINAL FLOW	90.00	228.00	410.00
FINAL SHUT-IN	123.00		847.00

FINAL HYDROSTATIC PRESSURE: 1824.00

ORIGINAL

GAS FLOW REPORT

API#15-155-21276

GENERAL INFORMATION

DATE : 7/28/93
CUSTOMER : PHILLIPS EXPLORATION CO
WELL : #1-20A TEST: 1
ELEVATION: 1707 GL
SECTION : 20
RANGE : 9W COUNTY: RENO
GAUGE SN#: 11018 RANGE : 4425
TICKET : 19134
LEASE : AURELL
GEOLOGIST: PHILLIPS
FORMATION: MISSISSIPPI
TOWNSHIP : 25S
STATE : KS
CLOCK : 12

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.750	5 PSIG	175000 SCF/D
20 MIN	MERLA	0.750	PLUGGED	PLUGGED SCF/D
30 MIN	MERLA	0.750	3.5 PSIG	144000 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN	MERLA	0.750	5 PSIG	175000 SCF/D
20 MIN	MERLA	0.750	18" PSIG	370000 SCF/D
30 MIN	MERLA	0.750	24" PSIG	449000 SCF/D
40 MIN	MERLA	0.750	22" PSIG	424000 SCF/D
50 MIN	MERLA	0.750	20" PSIG	398000 SCF/D
60 MIN	MERLA	0.750	15" PSIG	331000 SCF/D
70 MIN	MERLA	0.750	10" PSIG	259000 SCF/D
80 MIN	MERLA	0.750	8" PSIG	227000 SCF/D
90 MIN	MERLA	0.750	7" PSIG	211000 SCF/D

ORIGINAL

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 7/28/93
CUSTOMER : PHILLIPS EXPLORATION CO
WELL : #1-20A TEST: 1
ELEVATION: 1707 GL
SECTION : 20
RANGE : 9W COUNTY: RENO
GAUGE SN#: 11018 RANGE : 4425
TICKET : 19134
LEASE : AURELL
GEOLOGIST: PHILLIPS
FORMATION: MISSISSIPPI
TOWNSHIP : 25S
STATE : KS
CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	357.00	357.00
5.00	725.00	368.00
10.00	813.00	88.00
15.00	836.00	23.00
20.00	839.00	3.00
25.00	412.00	-427.00
30.00	168.00	-244.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	826.00	826.00	0.00
6.00	836.00	10.00	0.00
9.00	839.00	3.00	0.00
12.00	841.00	2.00	0.00
15.00	842.00	1.00	0.00
18.00	843.00	1.00	0.00
21.00	843.00	0.00	0.00
24.00	844.00	1.00	0.00
27.00	844.00	0.00	0.00
30.00	844.00	0.00	0.00
33.00	844.00	0.00	0.00
36.00	845.00	1.00	0.00
39.00	845.00	0.00	0.00
42.00	845.00	0.00	0.00
45.00	845.00	0.00	0.00
48.00	845.00	0.00	0.00
51.00	845.00	0.00	0.00
54.00	845.00	0.00	0.00
57.00	845.00	0.00	0.00

ORIGINAL

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	845.00	0.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	228.00	228.00
5.00	188.00	-40.00
10.00	183.00	-5.00
15.00	395.00	212.00
20.00	442.00	47.00
25.00	390.00	-52.00
30.00	357.00	-33.00
35.00	359.00	2.00
40.00	368.00	9.00
45.00	360.00	-8.00
50.00	359.00	-1.00
55.00	359.00	0.00
60.00	359.00	0.00
65.00	359.00	0.00
70.00	362.00	3.00
75.00	377.00	15.00
80.00	390.00	13.00
85.00	401.00	11.00
90.00	410.00	9.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	803.00	803.00	0.00
6.00	821.00	18.00	0.00
9.00	829.00	8.00	0.00
12.00	836.00	7.00	0.00
15.00	836.00	0.00	0.00
18.00	837.00	1.00	0.00
21.00	839.00	2.00	0.00
24.00	841.00	2.00	0.00
27.00	843.00	2.00	0.00
30.00	845.00	2.00	0.00

ORIGINAL

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
33.00	845.00	0.00	0.00
36.00	845.00	0.00	0.00
39.00	845.00	0.00	0.00
42.00	845.00	0.00	0.00
45.00	845.00	0.00	0.00
48.00	845.00	0.00	0.00
51.00	845.00	0.00	0.00
54.00	845.00	0.00	0.00
57.00	845.00	0.00	0.00
60.00	845.00	0.00	0.00
63.00	846.00	1.00	0.00
66.00	846.00	0.00	0.00
69.00	846.00	0.00	0.00
72.00	846.00	0.00	0.00
75.00	846.00	0.00	0.00
78.00	847.00	1.00	0.00
81.00	847.00	0.00	0.00
84.00	847.00	0.00	0.00
87.00	847.00	0.00	0.00
90.00	847.00	0.00	0.00
93.00	847.00	0.00	0.00
96.00	847.00	0.00	0.00
99.00	847.00	0.00	0.00
102.00	847.00	0.00	0.00
105.00	847.00	0.00	0.00
108.00	847.00	0.00	0.00
111.00	847.00	0.00	0.00
114.00	847.00	0.00	0.00
117.00	847.00	0.00	0.00
120.00	847.00	0.00	0.00
123.00	847.00	0.00	0.00