ADA C. MAY
NOTARY PUBLIC
STATE OF KANSAS
MY ABOUL EXIL 10-28-95

Subscribed and sworn to before me this 2/st day of Ounce

Ada C. May

Date Commission Expires

F Letter of Confidentiality Attached
C Vireline Log Received
C Geologist Report Received

Distribution

XCC SMD/Rep N6PA

XGS Plug Cher

(Specify)

Form ACD-1 (7-91)

Operator Name Phill	ins Explora	ation Com	กลทช	LC	<b></b> .	Aurell	-	11-11 4	2-20"A"	
Operator Name <u></u>		East	parry,	<u></u>		1		Well #	2 20 A	
Sec. <u>20</u> Twp. <u>25 S</u>	~ ~	- East Xi Vest		, County		ieno			<u> </u>	
INSTRUCTIONS: Show interval tested, time hydrostatic pressures if more space is need	mportant tops tool open an , bottom hole t	and base of d closed, f emperature,	lowing a	nd shut-in	press	ures, wheti	ser shut-in pre	ssure rea	ched static	: level
Drill Stem Tests Take (Attach Additional	•	☑ <sub>Y••</sub> □	, Ko		Log	Formatio	n (Tap), Depth	and Datum	,	mple
Samples Sent to Geolo	gical Survey	□ Yes □	No	Name   Heebne	er.		<b>Тор</b> 3204		<b>Datum</b> -1489	
Cores Taken		☐ Yes 区	] No	Lansir			3420	,	-1705	
Electric Log Run (Submit Copy.)		<b>⊠</b> <sub>Y••</sub> □	]. <sub>No</sub>	B/KC   Cherok   Miss C	Cher	t	3765 3869 3890	•	-2050 -2154 -2175 -2245	
List All E.Logs Run:	DIL, SDL/1	DSN, FF-M Coral	SG,			k Shale	3960 3966 4160 4167	,	-2245 -2251 -2445 -2452	
	Report al		RECORD	W Hew C		h - 1	production, et	c.		
Purpose of String	Size Hole Drilled	Size Cas Set (In	- :	Weight Lbs./ft.	.	Setting Depth	Type of Cement	# Sacks Used	Type and P	
Surface	12 1/4	8 5/8	ļ	20' / .		211.	60/40 Poz	175	3%CC, 2	 %gel
Production	.7 7/8	5 1/2		15.5		4134	Howco EA-2	150	10%salt	,1%ge
			Ţ	5%CalSeal	L, ļ	6of 1% H	alad 322, 5	#/sk Gi	Isonite	
	•	AD	DITICHAL	CEMENTING/S	QUEE:	ZE RECORD		<u> </u>	•	
Purpose: Perforate Protect Casing Plug Back TD Plug Off Zone	Depth Top Bottom	Type of Ce	ment	#Sacks Use	od		Type and Percen	t Additive	-	
Shots Per Fact	PERFORATION Specify Footage	RECORD - Br					Fracture, Shot, i Kind of Mater		weeze Recor Dep	
4 .	3895 to 39	905				250 gal	10% acetic		3895-	3905
		<u> </u>				500 gal	7 1/2% HCL,	1500 g	al 6% HC	և/
<u></u>		<u></u>					1 1/2% HF		3895–	3905
		•					•			
TUBING RECORD	<b>Size</b> 2 7/8	<b>set At</b> 4106		Pecker At none	     	Liner Run	☐ <sub>Y•</sub> , ☑	Хо	•	
Date of First, Resum	ed Production,	SWD or Inj.	Produ	cing Nethod	□FL		iping 🗆 Gas L	ift 🗆 ot	her (Explai	n)
3-15-94 Estimated Production Per 24 Hours	<b>1011</b>	Bbls.	Ges 20	i.	later	Bbls.	Gas-011 400			vity
Disposition of Gas:				THOD OF COMPI	-	-		ı	Production I	
Vented Sold (If vented, sub		•••• [	Open	Hole X Pe	orf.	Dually	Comp. Comm	ingled 3	<u>895–3905</u>	

# Aurell #2-20"A"

DST #1 3860 -3914 30-60-90-120

Blow: Strong blow GTS 15 minutes (tool plugged) flushed tool

revived blow

Blow: Strong blow GTS throughout (see gas volume report below)

FFP: 100# - 140#

Recovered: 150 ft oily gas cut mud

Bottom stand plugged with cuttings

IFP: Plugged 266# - 317# IBHP: 617# FBHP: 615#

IHP: 1876 FHP: 1854# Temp: 120 degrees

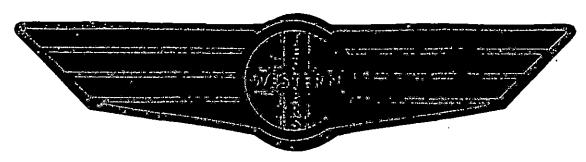
Gauged gas:	tool open GTS	15 minutes	
•	10 minutes	45,000	flushed tool
	20 minutes	40,000	
	30 minutes	30,000	,
Gauged gas:	10 "	104,000	<del>-</del> '
	20 <b>"</b>	94,000	
	30 <b>"</b>	69,000	
	40 "	55,000	
	50 "	55,000	
	60 "	49,000	
	70 "·	45,000	
•	80 "	58,000	
	90 "	49,000	

RECEIVE TO A COMMISSION KANSAS CORPORATION COMMISSION

JUN 21 1994

CONSERVATION DIVISION WICHITA, AS

# FORMATION TEST REPORT



Home Office:

P.O. Box 1599

Wichita, Kansas 67201

Phone /14800-688-7021

RECEIVED
KANSAS CORPORATION COMMISSION

JUN 2 1 1994

CONSERVATION DIVISION WICHITA, KS

# DST REPORT

### GENERAL INFORMATION

DATE : 2/23/94 TICKET : 20222
CUSTOMER : PHILLIPS EXPLORATION CO
WELL : #2-20-A TEST: 1 GEOLOGIST: PHILLIPS
ELEVATION: 1715 KB FORMATION: MISSISSIPPI

ELEVATION: 1715 KB FORMATION: MISS SECTION: 20 TOWNSHIP: 25S RANGE: 9W COUNTY: RENO STATE: KS GAUGE SN#: 11018 RANGE: 4425 CLOCK: 12

## WELL INFORMATION

PERFORATION INTERVAL FROM: 3860.00 ft TO: 3914.00 ft TVD: 3914.0 ft
DEPTH OF SELECTIVE ZONE:
DEPTH OF RECORDERS: 3865.0 ft 3911.0 ft
TEMPERATURE: 120.0

DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in
WEIGHT PIPE LENGTH: 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH: 3838.0 ft I.D.: 3.800 in
TEST TOOL LENGTH: 22.0 ft TOOL SIZE: 5.500 in
ANCHOR LENGTH: 54.0 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: 4.5XH
PACKER DEPTH: 3855.0 ft SIZE: 6.630 in
PACKER DEPTH: 3860.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

# MUD INFORMATION

DRILLING CON: DUKE RIG 4
MUD TYPE : CHEMICAL VISCOSITY: 78.00 cp
WEIGHT : 8.800 ppg WATER LOSS: 6.800 cc
CHLORIDES : 3000 ppm

CHLORIDES: 3000 ppm

JARS-MAKE: SERIAL NUMBER:
DID WELL FLOW: NO REVERSED OUT: NO

# COMMENTS

### Comment

. . .

INITIAL FLOW PERIOD SLID TOOL - TOOL OPENED WITH WEAK BLOW - FLUSHED TOOL & RECEIVED STRONG BLOW. GAS TO SURFACE IN 15 MINUTES. FINAL FLOW PERIOD

をずられている マール・ロード

# DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

STRONG BLOW - GAS TO SURFACE THROUGHOUT. SEE GAS SHEET.

1 95 9

FLUID RECOVERY

Feet of Fluid	% Oil		% Water	% Mud	Comments
150.0	1.0	29.0	0.0	70.0	OIL SPECKED GAS CUT MUD

RATE INFORMATION

OIL VOLUME: 0.0210 STB
GAS VOLUME: 3.4260 SCF TOTAL FLOW TIME: 115.0000 min.
MUD VOLUME: 1.4728 STB AVERAGE OIL RATE: 18.7051 STB/D
WATER VOLUME: 0.0000 STB AVERAGE WATER RATE: 0.0000 STB/D
TOTAL FLUID: 1.4938 STB

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1876.00

Description	Duration	p1	p End
INITIAL FLOW INITIAL SHUT-IN FINAL FLOW FINAL SHUT-IN	30.00 60.00 90.00 120.00	266.00	317.00 617.00 140.00 615.00

FINAL HYDROSTATIC PRESSURE: 1854.00

# DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE I	NFORMATION		
INITIAL HYDROSTATIC PRESSURE:	1907.00		
Description	Duration	p1	p End
INITIAL FLOW INITIAL SHUT-IN		284.00	461.00 624.00
FINAL FLOW FINAL SHUT-IN	90.00 120.00	129.00	160.00 632.00
FINAL HYDROSTATIC PRESSURE:	1870.00		

# GAS FLOW REPORT

# GENERAL INFORMATION

: 20222 : AURELL DATE : 2/23/94
CUSTOMER : PHILLIPS EXPLORATION CO TICKET LEASE WELL: #2-20-A ELEVATION: 1715 KB SECTION: 20 GEOLOGIST: PHILLIPS FORMATION: MISSISSIPPI TEST: 1

TOWNSHIP: 25S

COUNTY: RENO RANGE : 9W STATE : KS GAUGE SN#: 11018 **RANGE: 4425** CLOCK : 12

PRE	FLOW			
Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
15 MIN 20 MIN 25 MIN 30 MIN	MERLA MERLA MERLA MERLA	0.750 0.750 0.750 0.750	10" WATER 8" WATER 5" WATER 3" WATER	44800 SCF/D 40000 SCF/D 31600 SCF/D 24500 SCF/D

SECON	D FLOW		<del></del>	<del>-</del>
Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10 MIN 20 MIN 30 MIN 40 MIN 50 MIN 60 MIN 70 MIN	MERLA MERLA MERLA MERLA MERLA MERLA MERLA	0.750 0.750 0.750 0.750 0.750 0.750 0.750	54" WATER 44" WATER 25" WATER 15" WATER 15" WATER 12" WATER 10" WATER	104000 SCF/D 94100 SCF/D 69000 SCF/D 55200 SCF/D 55200 SCF/D 49300 SCF/D 44800 SCF/D 58500 SCF/D
				44800

# PRESSURE TRANSIENT REPORT

# GENERAL INFORMATION

DATE : 2/23/94
CUSTOMER : PHILLIPS EXPLORATION CO
WELL : #2-20-A TEST: 1
ELEVATION: 1715 KB
SECTION : 20
RANGE : 9W COUNTY: RENO : 20222 TICKET LEASE : AURELL GEOLOGIST: PHILLIPS
FORMATION: MISSISSIPPI
TOWNSHIP: 25S
STATE: KS
CLOCK: 12

COUNTY: RENO RANGE: 4425 GAUGE SN#: 11018

INITIAL FLOW	<u> </u>	
Time (min)	Pressure	Delta P
0.00 5.00 10.00 15.00 20.00 25.00	284.00 439.00 452.00 458.00 461.00	284.00 155.00 13.00 6.00 3.00 0.00

INITIAL SE	HUT IN		
Time (min)	Pressure	Delta P	Horner T
3.00	514.00	514.00	9.33
6.00	537.00	23.00	5.17
9.00	552.00	15.00	3.78
12.00	569.00	17.00	3.08
15.00	577.00	8.00	2.67
18.00	583.00	6.00	2.39
21.00	589.00	6.00	2.19
24.00	593.00	4.00	2.04
27.00	600.00	7.00	1.93
30.00	605.00	5.00	1.83
33.00	608.00	3.00	1.76
36.00	611.00	3.00	1.69
39.00	613.00	2.00	1.64
42.00	615.00	2.00	1.60
45.00	617.00	2.00	1.56
48.00	619.00	2.00	1.52
51.00	621.00	2.00	1.49
54.00	622.00	1.00	1.46
57.00	623.00	1.00	1.44
60.00	624.00	1.00	1.42

# PRESSURE TRANSIENT REPORT (CONTINUED)

INAL FLOW	FINAL F
	ime min)
129.00 5.00 129.00 129.00 129.00 113.00 100.00 5.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00 96.00	0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00
0.00     86.00       5.00     104.00       0.00     113.00       5.00     123.00       0.00     140.00       5.00     156.00	55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00

··	FINAL	SHUT IN	] <del></del>		•				
	Time (min)	٠.	Pressure	٠.	Delta P	Но	rner T		
	3.00 6.00 9.00 12.00 15.00 18.00 21.00 24.00 27.00 30.00 33.00		290.00 367.00 401.00 431.00 451.00 477.00 498.00 530.00 553.00 570.00 576.00		290.00 77.00 34.00 30.00 20.00 26.00 21.00 32.00 23.00 17.00 6.00		31.00 16.00 11.00 8.50 7.00 6.00 5.29 4.75 4.33 4.00 3.73		
	36.00 39.00 42.00 45.00 48.00 51.00 54.00 57.00		583.00 589.00 594.00 599.00 604.00 608.00 611.00 616.00		7.00 6.00 5.00 5.00 5.00 4.00 3.00 5.00		3.50 3.31 3.14 3.00 2.88 2.76 2.67 2.58		

# PRESSURE TRANSIENT REPORT (CONTINUED)

[	<u> </u>	FINAL	SHUT	IN	(CONTINUED)	<u> </u>				<u> </u>	 $\neg$
		Time (min)			Pressure	De.	lta P	:	Horner T		
		60.00 63.00 66.00 69.00 72.00 75.00 78.00 81.00 84.00	. ,		619.00 624.00 626.00 628.00 629.00 630.00 630.00 630.00		3.00 5.00 2.00 2.00 1.00 1.00 0.00 0.00	-	2.50 2.43 2.36 2.30 2.25 2.20 2.15 2.11 2.07		
		87.00 90.00 93.00 96.00 102.00 105.00 111.00 114.00 120.00			630.00 630.00 631.00 631.00 631.00 631.00 631.00 632.00 632.00 632.00	2	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		2.03 2.00 1.97 1.94 1.88 1.86 1.83 1.81 1.79 1.77		

Phone 913-483-2627, Russell, KS Phone 316-793-5861, Great Bend, KS

Phone 913-625-5516, Hays, KS Phone 913-672-3471, Oakley, KS Phone 316-886-5926, Medicine Lodge, KS Phone 913-798-3843, Ness City, KS

6259

Home Office P. O. Box 31 Russell, Kansas 67665 Called Out On Location Johnster Range گد 20 County Well No. 2 20 A Location Owner To Allied Cementing Co., Inc. Type Job You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. Hole Size Charge Depth To Tbg. Size ANSAS CORPORATION COMMISS ()Street Drill Pipe City State The above was done to satisfaction and supervision of owner agent or Tool Depth Shoe Join N Cement Left in Csg. Purchase Order No. MINITUMSERVATION DIVISIO Press Max. Displace Meas Line CEMENT Perf. Amount Ordered EQUIPMENT Consisting of Common 05 No. Cementer Miles Poz. Mix 1.20 20 Helper Pumptrk Gel. No. Cementer Chloride Helper Pumptrk Quickset Driver Rick Bulktrk 101 Sales Tax Bulktrk Driver Handling DEPTH of Job Mileage Reference: Sulvetone Self-Total Floating Equipment Comenting Co and

# 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 inerchandise 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 wilful 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 accom-

plish the job as an independent contractor and not as an employee or agent of the CUSTOMER.