

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

ORIGINAL

API NO. 15- 129-21,167-00-00

County Morton

NW - NW Sec. 3 Twp. 33S Rge. 40 X ^E _W

Operator: License # 4549

Name: Anadarko Petroleum Corporation

Address P. O. Box 351

City/State/Zip Liberal, KS 67905-0351

Purchaser: Phibro Energy, Inc.

Operator Contact Person: J. L. Ashton

Phone (316) 624-6253

Contractor: Name: Norseman Drilling, Inc.

License: 3779

Wellsite Geologist: NA

Designate Type of Completion

New Well Re-Entry Workover

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

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

Operator: _____

Well Name: _____

Comp. Date _____ Old Total Depth _____

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

1-14-93 1-22-93 2-21-93
Spud Date Date Reached TD Completion Date

810 Feet from S (circle one) Line of Section

960 Feet from E (circle one) Line of Section

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

Lease Name USA "I" Well # 4

Field Name Stirrup

Producing Formation Morrow "D"

Elevation: Ground 3241 KB NA

Total Depth 5700 PBSD 5356

Amount of Surface Pipe Set and Cemented at 1497 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

Drilling Fluid Management Plan PLT 1 4-2889
(Data must be collected from the Reserve Pit)

Chloride content 800 ppm Fluid volume 5000 bbls

Dewatering method used Natural Evaporation

Location of fluid disposal if hauled offsite: _____

Operator Name _____

Lease Name _____

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

County _____ Docket No. _____

RELEASED

FROM CONFIDENTIAL

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 Beverly J. Williams
Title Engineering Technician Date 4-15-93

Subscribed and sworn to before me this 15th day of April, 1993.

Notary Public Cheryl Steers

Date Commission Expires _____

CHERYL STEERS
My Appt. Expires 6-1-93

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)

Operator Name Anadarko Petroleum Corporation Lease Name USA "I" Well # 4

Sec. 3 Twp. 33S Rge. 40 East West County Morton

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 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:

Log Formation (Top), Depth and Datum Sample
 Name Top Datum
 SEE ATTACHMENT

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	1497	Pozmix & Class "H"	700	2% cc 4% gel 2% cc
Production	7 7/8	5 1/2	15.50	5437	Pozmix & Thixset Prem H	205	1/4% sx flocele 5% sx gilsonite 0.3 Halad 344
		DV TOOL		2734	Pozmix	130	

ADDITIONAL CEMENTING/SQUEEZE RECORD				
Purpose	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input checked="" 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
4	5258-72	A/50 gal 7 1/2% HCL acid/ft.	
		Total acid 700 gals. A/1400	
		gals 7 1/2% acid.	

TUBING RECORD Size 2 7/8 Set At 5226 Packer At - Liner Run Yes No

Date of First, Resumed Production, SWD or Inj. 2-13-93 Producing Method Flowing Pumping Gas Lift Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	158	79	0	500	35.3

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 5258-5272

ORIGINAL

APR 19
CONFIDENTIAL

ATTACHMENT

USA "I" NO. 4
SECTION 3-33S-40W
MORTON COUNTY, KANSAS

RECEIVED
KANSAS CORPORATION COMMISSION

APR 20 1993

CONSERVATION DIVISION
WICHITA, KS

<u>NAME</u>	<u>TOP</u>
B/STONE CORRAL	1514
CHASE	2206
COUNCIL GROVE	2503
ADMIRE	2740
WABAUNSEE	2934
TOPEKA	3177
HEEBNER	3674
TORONTO	3689
LANSING	3794
KANSAS CITY	4166
MARMATON	4464
CHEROKEE	4656
MORROW	5060
MORROW "A"	5086
MORROW "D"	5230
L/MORROW	5382
KEYES	5510
ST. GENEVIEVE	5622
TD	5700

RELEASED

APR 28 1994

FROM CONFIDENTIAL

ORIGINAL APR 19

NORSEMAN DRILLING, INC.
WICHITA, KANSAS
DRILLERS' WELL LOG

CONFIDENTIAL

WELL NAME: USA "I" No. 4
SECTION 3-33S-40W
MORTON COUNTY, KANSAS
COMMENCED: JANUARY 14, 1993
COMPLETED: JANUARY 23, 1993
OPERATOR: ANADARKO PETROLEUM CORPORATION

RECEIVED
KANSAS CORPORATION COMMISSION

APR 20 1993

CONSERVATION DIVISION
WICHITA, KS

Depth		Formation	Remarks
From	To		
0	1060	Sand & Redbed	Ran 36 jts of 24#
1061	1245	Glorietta Sand	8 5/8" csg set @
1246	2265	Redbed	1497'; w/500 SX of
2266	5700	Lime-Shale	50/50 pozmix-4% Gel-2%CC Tailed with 200 SX Class H-2%CC Job complete at 7:15 p.m. 01/15/93.

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FROM CONFIDENTIAL

Ran 5 1/2" 15.50#,
Set @ 5437'; Cement
w/50 SX 65/35 pozmix
Class H + 6% D-20;
Tailed w/ 155 SX
D.S. Self Stress I;
D-60 + 5# D-42;
1/4#/SK D-29;
Plug down @ 6:00
p.m. on 01/23/93.

STATE OF KANSAS

COUNTY OF SEDGWICK

)I, the undersigned, being duly sworn on
)oath, state that the above Drillers' Well
)Log is true and correct to the best of my
)knowledge and belief and according to the
)records of this office.

NORSEMAN DRILLING, INC.

James P. Reilly

JAMES P. REILLY, PRESIDENT

Subscribed & sworn to before me this

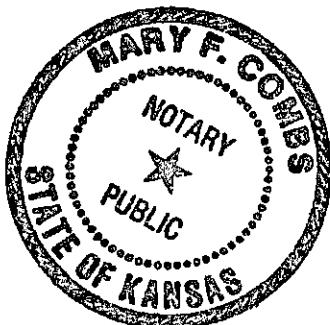
March 31, 1993

My Appointment Expires:

August 25, 1996

Mary F. Combs

Mary F. Combs, Notary Public
8515 S. West Street
Wichita, KS 67233





REMIT TO:

P O BOX 201556
HOUSTON TX 77216

INVOICE

0312

556028
ANADARKO PETROLEUM CORP

BOX 351
LIBERAL

KS 67901

APR 19
CONFIDENTIAL
ORIGINAL

INVOICE DATE	01/15/93
INVOICE NUMBER	03-12-4996
TYPE SERVICE	
CEMENTING CEMENT SURFACE C	

WELL NAME / JOB SITE	STATE	COUNTY / CITY	SERVICE FROM LOCATION	SHIPPED VIA	CUSTOMER P.O. NO./REF.
	KS	MORTON	ULYSSES	DS	
LOCATION / PLANT ADDRESS			DATE OF SERVICE ORDER	CUSTOMER OR AUTHORIZED REPRESENTATIVE	
SEC 3-335-400			01/15/93	JOHN SHILLING	

ITEM CODE	DESCRIPTION	UOM	QTY	UNIT PRICE	AMOUNT
959200002	MILEAGE, ALL OTHER EQUIPMENT	HR	40	2.6500	106.00
959697000	PAGE TREAT ANALYSIS RECORDER	JOB	1	140.0000	140.00
102871020	OSNG CHNT 1501-2000 1ST 3HR	3HR	1	1,100.0000	1,100.00
045601000	CEMENT HEAD RENTAL	JOB	1	.0000	N/C
049102000	TRANSPORTATION CHNT TON MILE	MT	637	0000	760.56
049100000	SERVICE CHG CEMENT MATL LAND	CFT	752	1.2000	902.40
040015000	0909. CEMENT CLASS H	CFT	450	7.4700	3,361.50
045000000	035. LITEPOZ 3 EXTENDER	CFT	250	3.7400	935.00
045014050	020. BENTONITE EXTENDER	LBS	1600	.1500	252.00
067005100	31 CALCIUM CHLORIDE	LBS	1216	.3600	437.76
056702085	PLUG CEAG 8-5/8" TOP PLASTIC	EA	1	20.0000	20.00
	DISCOUNT - MATERIAL				1,551.95
	DISCOUNT - SERVICE				1,007.40

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KANSAS CORPORATION COMMISSION

APR 20 1993

CONSERVATION DIVISION
WICHITA, KS

RELEASED

APR 28 1994

FROM CONFIDENTIAL

SUB TOTAL 4,824.76

N C	STATE TAX ON	3,530.78	176.01
N F C	LOCAL TAX ON	3,530.76	35.01

AMOUNT DUE -- 5,005.81

1095-2041
AT

Jim Paulson

OPERATIONS RECEIVED

1-30 APR 29 1993

APPROVED	IDC
DATE	TANGIBLE
CODED BY	OPERATIONS

WITH QUESTIONS CALL 316-356-1272
FEDERAL TAX ID # 38-239-7173
TERMS -- NET 30 DAYS DUE ON OR BEFORE FEB 14, 1993

THANK YOU. WE APPRECIATE YOUR BUSINESS.

L. B. Watson
T. B. WATSON



INVOICE

REMIT TO:

P O BOX 201556
HOUSTON TX 77216

0312

556028
AMADARCO PETROLEUM CORP

BOX 351
LIBERAL

KS 67901

APR 19
CONFIDENTIAL

INVOICE DATE

01/23/93

PAGE

INVOICE NUMBER

1

03-12-5012

TYPE SERVICE

CEMENTING
CEMENT PRODUCTION

WELL NAME / JOB SITE	STATE	COUNTY / CITY	SERVICE FROM LOCATION	SHIPPED VIA	CUSTOMER P.O. NO./REF.
USA 1-4	KS	FINNEY	WYLSSES	DS	
LOCATION / PLANT ADDRESS			DATE OF SERVICE ORDER	CUSTOMER OR AUTHORIZED REPRESENTATIVE	
SEC 03-335-40W			01/23/93	JOHN SHILLING	

RECEIVED
KANSAS CORPORATION COMMISSION

APR 20 1993

CONSERVATION DIVISION
WICHITA, KS

ITEM CODE	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
059200002	MILEAGE, ALL OTHER EQUIPMENT	MI	43	2.6500	113.95
059697000	PACR TREAT ANALYSIS RECORDER	JOB	1	140.0000	140.00
102071055	CSNG CMNT 5001-5500' 1ST 8HR	8HR	1	1,550.0000	1,550.00
048016000	CEMENT PUMPER-PER ADDL STAGE	8HR	1	1,075.0000	1,075.00
049102000	TRANSPORTATION CMNT TON MILE	MI	345	.8800	303.60
049100000	SERVICE CHG CEMENT MATL LAND	CFT	399	1.2000	478.80
040015000	0909. CEMENT CLASS H	CFT	273	7.4700	2,039.31
000433001	D007. SELF STRESS I CMNT ADD	LBS	2390	.3600	860.40
045008000	D35. LITEPOZ 3 EXTENDER	CFT	62	3.9400	244.28
045014050	D20. BENTONITE EXTENDER	LBS	941	.1500	141.15
045019050	D42. KOLITE LOST CIRC ADDITI	LBS	775	.4900	379.75
044003025	D29. CELLOPHANE FLAKES	LBS	39	1.5900	62.01
044002050	D60. FLAC FLUID LOSS ADDITIV	LBS	73	7.7300	564.29
100282000	D026. CHEMICAL WASH CM7	DBL	50	25.9600	1,298.00
102643055	L237. CLAY STABILIZER	GAL	16	6.1000	98.88
047002050	D46. ANTIFOAM	LBS	29	3.0600	88.74
048601000	CEMENT HEAD RENTAL	JOB	1	.0000	N/C
	DISCOUNT - MATERIAL				2,079.65
	DISCOUNT - SERVICE				1,318.09

John Shilling

SUB TOTAL -- 6,040.42

N C	STATE TAX ON	3,891.46	190.69
N F C	LOCAL TAX ON	3,891.46	38.91

2-7-93

AMOUNT DUE -- 6,270.02

4095-2040

Handwritten signature

WITH QUESTIONS CALL 316-356-1272

FEDERAL TAX ID # 38-239-7173

TERMS -- NET 30 DAYS DUE ON OR BEFORE FEB 22, 1993

THANK YOU. WE APPRECIATE YOUR BUSINESS.

J.B. Watson
T. WATSON



DOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER 93-12-5012 DATE 1-23-93
AGE 1st DISTRICT 21455PS, KS

MADE IN U.S.A.
WELL AND NO. ISA 1-4
LOCATION (LEGAL) Sec. 3-33s-40w
FORMATION
COUNTY/PARISH MORTON STATE KS API. NO.
NAME ANADARKO Petroleum Corp. ORIGINAL
AND ADDRESS
ZIP CODE

RIG NAME: Norseman Drilling
WELL DATA: WELL ID: 1-4
BIT SIZE 7 7/8 CSG/Liner Size 5 7/8
TOTAL DEPTH 5452 WEIGHT 5.3
MUD TYPE GRADE 155
MUD DENSITY 4.3
MUD VISC. 128.7
NOTE: Include Footage From Ground Level To Head In Disp. Capacity

SPECIAL INSTRUCTIONS
APR 19
CONFIDENTIAL

Float TYPE Float collar DEPTH 5409
Squeeze Job TYPE DEPTH 2734
SAGE TOOL TYPE mt shoe DEPTH 3452

IS CASING/TUBING SECURED? YES NO
LIFT PRESSURE 3500 PSI CASING WEIGHT + SURFACE AREA (3.14 x R²)
PRESSURE LIMIT PSI BUMP PLUG TO 1230 PSI
ROTATE RPM RECIPROCATE FT No. of Centralizers

Head & Plugs TBG D.P. SQUEEZE JOB
TOOL TYPE DEPTH
TAIL PIPE: SIZE DEPTH
TUBING VOLUME Bbls
CASING VOL. BELOW TOOL Bbls
TOTAL Bbls
ANNUAL VOLUME Bbls

JOB SCHEDULED FOR TIME ASAP DATE 1-23-93 ARRIVE ON LOCATION TIME 1330 DATE 1-23-93 LEFT LOCATION TIME: DATE:

TIME	PRESSURE		VOLUME PUMPED bbl		INJECT RATE	FLUID TYPE	FLUID DENSITY	REMARKS
	TBG OR D.P.	CASING	INCREMENT	CUM				
0001 to 2400								
1548	310	20			5.9	2%	start 2% H2O	
1551	410	30			5.9	cm 7	start cm 7	
1556	380	20			5.9	2%	start 2% H2O	
1601	440	30			5.8	cm 10	start scavenger cm 10	
1606	380	42			5.8	cm 14.9	start cm 14.9 slurry	
1610	260		21		5.8	cm 14.9	DSI check	
1614	10						shut down wash pump lines deepst plug	
1617	0	60			6.5	H2O	start displacement	
1619	250		11		6.5	H2O	psi check	
1626	90		55			H2O	lower rate	
1628	130	68"			6.4	mud	start mud	
1633	220		30		6.4	mud	psi check	
1638	910		58"			mud	lower rate	
1640	1230		68"			mud	bump 1st stage	
1641							blood psi of float holding end 1st stage	
1646							drop bomb	
1701	770						open D.K. Tool	

SERVICE LOG DETAILS RECEIVED
KANSAS CORPORATION COMMISSION
APR 20 1993
CONSERVATION DIVISION
WICHITA, KS
RELEASED
APR 28 1994
FROM CONFIDENTIAL

SYSTEM CODE	NO. OF SACKS	YIELD CU. FT/SK	COMPOSITION OF CEMENTING SYSTEMS		SLURRY MIXED	
			BBLS	DENSITY	BBLS	DENSITY
1.	50	2.83	35002	+ 6% gal	30	10
2.						
3.	155	1.54	self stress I	+ .5% D60 + 5# D42 + 4# D29	47.5	14.7
4.				1.2% D46		
5.						
6.						

RECKDOWN FLUID TYPE VOLUME DENSITY PRESSURE MAX. MIN.
HESITATION SQ. RUNNING SQ. CIRCULATION LOST YES NO Cement Circulated To Surf. YES NO Bbls.
RECKDOWN PSI FINAL PSI DISPLACEMENT VOL. 128.7 Bbls TYPE OF WELL TOIL GAS STORAGE INJECTION BRINE WATER WILDCAT
Washed Thru Perfs YES NO TO FT. MEASURED DISPLACEMENT WIRELINE
PERFORATIONS CUSTOMER REPRESENTATIVE DS SUPERVISOR
TO TO John Schilling James Esquivel

~~CONFIDENTIAL~~

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*
(See other instructions on reverse side)

FOR APPROVED
OMB NO. 1004-0137
Expires: December 31, 1991

5. LEASE DESIGNATION AND SERIAL NO.

KS NM 67918

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME, WELL NO.

USA "I" No. 4

9. API WELL NO.

15-129-21,167

10. FIELD AND POOL, OR WILDCAT

Stirrup

11. SEC. T., R., M., OR BLOCK AND SURVEY OR AREA

Sec. 3-33S-40W

12. COUNTY OR PARISH

Morton

13. STATE

Kansas

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1. TYPE OF WELL: OIL WELL GAS WELL DRY Other _____

b. TYPE OF COMPLETION: NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RENVR. Other _____

2. NAME OF OPERATOR
Anadarko Petroleum Corporation

3. ADDRESS AND TELEPHONE NO.

P. O. Box 351, Liberal, Kansas 67905-0351 (316) 624-6253

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 810' FNL & 960' FWL of NW/4

At top prod. interval reported below Same

At total depth Same

14. PERMIT NO. DATE ISSUED

15-129-21,167 | 1-7-93

15. DATE SPUNDED 16. DATE T.D. REACHED 17. DATE COMPL. (Ready to prod.) 18. ELEVATIONS (DF, RKB, RT, OR, ETC.)* 19. ELEV. CASINGHEAD

1-14-93 | 1-22-93 | 2-21-93 | 3241 GR | NA

20. TOTAL DEPTH, MD & TVD 21. PLUG, BACK T.D., MD & TVD 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY ROTARY TOOLS CABLE TOOLS

5700 | 5356 | NA | → | X |

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 25. WAS DIRECTIONAL SURVEY MADE

5258-5272 (U. Morrow "D") | Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN 27. WAS WELL CORRED

DIL/SFL/GR; CNL/LDT/GR; Microlog | No

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT. CEMENTING RECORD	AMOUNT PULLED
8 5/8	24#	1497	12 1/4	500 sxs Poz 200 sxs Class H/Surf	0
5 1/2	15.50#	5437	7 7/8	50 sxs Poz /155 sxs Thixset Prem H	0
	DV Tool	2734		130 sxs Pozmix	0

29. LINER RECORD 30. TUBING RECORD

SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 7/8	5226	

31. PREPARATION RECORD (Interval, size and number)

5258-72 - 4 SPF - Total Shotg = 56

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5258-72	50 gal 7 1/2% HCL acid/ft. Total acid 700 gals. A/1400 gals 7 1/2% acid.

33. PRODUCTION

DATE FIRST PRODUCTION 2-13-93 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pumping WELL STATUS (Producing or shut-in) Producing

DATE OF TEST 2-21-93 HOURS TESTED 24 CHOKE SIZE NA PROD'N. FOR TEST PERIOD → OIL—BBL. 158 GAS—MCF. 79 WATER—BBL. 0 GAS-OIL RATIO 500

FLOW. TUBING FROM. 60 CASING PRESSURE 60 CALCULATED 24-HOUR RATE → OIL—BBL. 158 GAS—MCF. 79 WATER—BBL. 0 OIL GRAVITY-API (CORR.) 35.3°

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY

Sold

35. LIST OF ATTACHMENTS

Electric Logs, KCC ACO-1, Drillers Log, Cement Tickets, Etc.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Beverly J. Williams TITLE Engineering Technician DATE MAY 7 1993 CONSERVATION DIVISION Wichita Kansas

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Kansas Corporation Commission

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
B/Stone Corral	1514			Sand & Redbed	0	
Chase	2206			Glorietta Sand	1061	
Council Grove	2503			Redbed	1246	
Admire	2740			Lime-Shale	2266	
Wabaunsee	2934			TD	5700	
Topeka	3177					
Heebner	3674					
Toronto	3689					
Lansing	3794					
Kansas City	4166					
Marmaton	4464					
Cherokee	4656					
Morrow	5060					
Morrow "A"	5086					
Morrow "D"	5230					
L/Morrow	5382					
Keyes	5510					
St. Genevieve	5622					
TD	5700					

DATE
 (SEE REVERSE SIDE)
 THIS IS A SUMMARY OF THE DATA OBTAINED FROM THE LOGS AND IS NOT A SUBSTITUTE FOR THE ORIGINAL LOGS.