

ORIGINAL

SIDE ONE

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

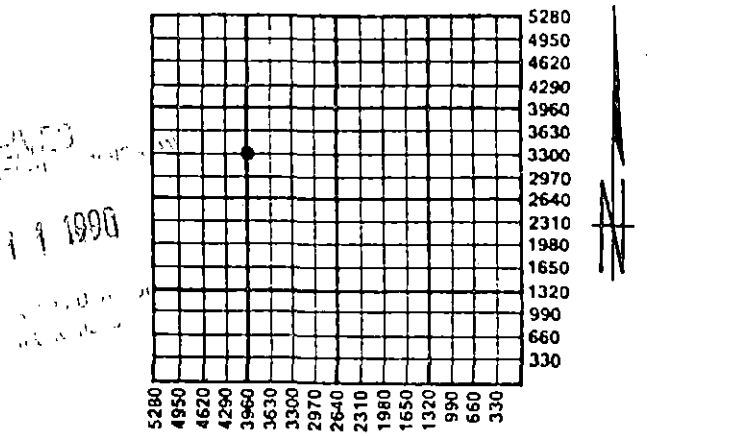
Operator: License # 5852
Name: Hoffmann Oil Co.
Address P.O. Box 1847
Liberal, KS 67905
Purchaser: PEPL
Operator Contact Person: Ned E. Lowry
Phone (316) 624-8141
Contractor: Name: Gabbert & Jones, Inc.
License: 5842
Wellsite Geologist: _____

Designate Type of Completion
 New Well Re-Entry Workover
 Oil SWD Temp. Abd.
 Gas Inj Delayed Comp.
 Dry Other (Core, Water Supply, etc.)

If **OWMO**: old well info as follows:
Operator: _____
Well Name: _____
Comp. Date _____ Old Total Depth _____

Drilling Method:
 Mud Rotary Air Rotary Cable
10/30/89 11/13/89 3/26/90
Spud Date Date Reached TD Completion Date

API NO. 15- 189-21,392-00-00
County Stevens County
C S $\frac{1}{2}$ NW Sec. 35 Twp. 33 Rge. 38 East West
3300 Ft. North from Southeast Corner of Section
3980 Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)
Lease Name Dunne-Hoffmann "D" Well # 3
Field Name Ptarmigan
Producing Formation Council Grove
Elevation: Ground 3177' KB 3188'
Total Depth 6625' PBTD 3164'

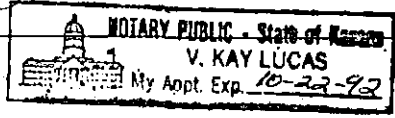


Amount of Surface Pipe Set and Cemented at 1685 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set N/A Feet
If Alternate II completion, cement circulated from N/A
feet depth to _____ w/ _____ sx cmt.

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 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 drillers time log 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. Any recompletion, workover or conversion of a well requires filing of ACO-2 within 120 days from commencement date of such work.

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 Ned E. Lowry Ned E. Lowry
Title Agent Date 6/8/90
Subscribed and sworn to before me this 8th day of June, 19 90.
Notary Public V. Kay Lucas
Date Commission Expires _____



K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Drillers Timelog Received

Distribution
 KCC SWD/Rep NGPA
 KGS Plug Other
(Specify)

JAN 10 1990

SIDE TWO

Operator Name Hoffmann Oil Co. Lease Name Dunne-Hoffmann Well # D-3
 Sec. 35 Twp. 33 Rge. 38 East West
 County Stevens

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	Formation Description <input checked="" type="checkbox"/> Log <input type="checkbox"/> Sample <table border="1"> <thead> <tr> <th>Name</th> <th>Top</th> <th>Bottom</th> </tr> </thead> <tbody> <tr> <td>St. Louis</td> <td>6460</td> <td></td> </tr> <tr> <td>St. Genevieve</td> <td>6313</td> <td>6460</td> </tr> <tr> <td>Chester</td> <td>6194</td> <td>6313</td> </tr> <tr> <td>Morrow</td> <td>5712</td> <td>6194</td> </tr> <tr> <td>Marmaton</td> <td>4950</td> <td></td> </tr> <tr> <td>Lansing KC</td> <td>4236</td> <td></td> </tr> <tr> <td>Heebner</td> <td>4110</td> <td></td> </tr> <tr> <td>Council Grove</td> <td>2878</td> <td></td> </tr> <tr> <td>Chase</td> <td>2556</td> <td></td> </tr> </tbody> </table>	Name	Top	Bottom	St. Louis	6460		St. Genevieve	6313	6460	Chester	6194	6313	Morrow	5712	6194	Marmaton	4950		Lansing KC	4236		Heebner	4110		Council Grove	2878		Chase	2556	
Name	Top		Bottom																													
St. Louis	6460																															
St. Genevieve	6313		6460																													
Chester	6194	6313																														
Morrow	5712	6194																														
Marmaton	4950																															
Lansing KC	4236																															
Heebner	4110																															
Council Grove	2878																															
Chase	2556																															
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input 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																															

CASING RECORD New Used
 Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4	8-5/8"	24#	1625'	50-50Poz.	825	4% gel, 2%CC
Long String	7 7/8	5 1/2	14#	3172'	Class C	150	20% Diacel D 2%CC
					Class H	50	10% Diesel, 2%CC

Shots Per Foot	PERFORATION RECORD Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
2	2958-66' Council Grove B	1000 gal. 15% FE Acid	3164 PBD
2	2930-36, 2907-26, 2898-2902 2893-96, 2886-90, Council Grove A	3600 gal. 7 1/2% FE Acid 12060 gal. gelled 2% KCl w/70 quality foam & 26,500# sand	2954 PBD

TUBING RECORD Size 2 3/8" Set At 3006' Packer At N/A Liner Run Yes No

Date of First Production 3/26/90 Producing Method Flowing Pumping Gas Lift Other (Explain)
 Estimated Production Per 24 Hours Oil Bbls. Gas 60 Mcf Water 1/2 Bbls. Gas-Oil Ratio Gravity

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)
 METHOD OF COMPLETION: Open Hole Perforation Dually Completed Commingled
 Other (Specify) _____

STEVENS COUNTY RECORDERS OFFICE
 REC'D JAN 10 1990

REPORT NO.
115034 DST

PAGE NO. 1

TEST DATE:
10-NOV-1989

WELL PERFORMANCE
TESTING™ REPORT

Schlumberger

A Production System Analysis (NODAL™)
Based On Model Verified™ Interpretation

COMPANY: ANADARKO PETROLEUM

WELL: DUNN HOFFMAN D-3

TEST IDENTIFICATION

Test Type OH - DST
Test No. ONE
Formation LOWER MORROW
Test Interval (ft) 6154 TO 6170
Depth Reference RKB

WELL LOCATION

Field W. HUGOTON
County STEVENS
State KANSAS
Sec/Twn/Rng 35/33S/38W
Elevation (ft)

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) 6170
Hole Size (in) 7 7/8
Casing/Liner I.D. (in)
Perf'd Interval/Net Pay (ft) .. 6
Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type CHEMICAL
Mud Weight (lb/gal) 9.0
Mud Resistivity (ohm.m)
Filtrate Resistivity (ohm.m) ..
Filtrate Chlorides (ppm) 600

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 2921.2
Gas Cushion Type N/A
Surface Pressure (psi)
Liquid Cushion Type N/A
Cushion Length (ft)

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 5482/3.83
Collar Length (ft)/I.D. (in) .. 630/2.25
Packer Depth (ft) 6148 & 6154
Bottomhole Choke Size (in) ... 15/16
Gauge Depth (ft)/Type 6124/MECHANICAL

NET PIPE RECOVERY

Volume	Fluid Type	Properties
30 FT.	HEAVY MUD	600 PPM CHL. RES. = 1.20 @ 68 F

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
2400 CC	DRLG MUD	600 PPM CHL. RES. = 1.20 @ 68 F

Pressure: 0 GOR: GLR:

INTERPRETATION RESULTS

Model of Behavior
Fluid Type Used for Analysis ..
Reservoir Pressure (psi)
Transmissibility (md.ft/op) ..
Effective Permeability (md) ..
Skin Factor/Damage Ratio
Storage Ratio, Omega
Interporos. Flow Coef., Lambda ..
Distance to an Anomaly (ft) ..
Radius of Investigation (ft) ..
Potentiometric Surface (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)
Basic Solids (%)
Gas Gravity
GOR (scf/STB)
Water Cut (%)
Viscosity (cp)
Total Compressibility (1/psi) ..
Porosity (%)
Reservoir Temperature (F) 148
Form. Vol. Factor (bbl/STB)

PRODUCTION RATE DURING TEST: N/A

COMMENTS:

THE FOLLOWING IS A BASIC DATA PRINTOUT OF THE DST PERFORMED ON THE DUNN HOFFMAN D-3 WELL IN THE LOWER MORROW ZONE. UPON THE INITIAL OPENING, THE TOOL ENCOUNTERED 6 FEET OF FILL RESULTING IN INTENSIVE PLUGGING OF THE PERFORATED ANCHOR AND RECORDERS. DUE TO THE RESTRICTIONS CREATED BY THE FILL, BOTH SHUT-IN PERIODS AND THE INITIAL FLOW ARE NOT CHARACTERISTIC OF THIS ZONE. IT IS A FAIR ASSUMPTION THAT THE FINAL FLOWING PRESSURES EXHIBIT A SOMEWHAT ACCURATE ACCOUNT OF THE TESTED INTERVAL; YET, NO HYDROCARBONS WERE RECOVERED IN EITHER THE SAMPLE CHAMBER OR PIPE RECOVERY.

Wichita, Kansas

WELL TEST INTERPRETATION REPORT #: 115034 DST		PAGE: 2
CLIENT : ANADARKO PETROLEUM		17-NOV-89
REGION : M.A.D.	SEQUENCE OF EVENTS	FIELD: W. HUGOTON
DISTRICT: WOODWARD		ZONE : LOWER MORROW
BASE : OKC		WELL : DUNN HOFFMAN
ENGINEER: J. MULLINS		LOCATION: 35/33S/38W

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (HR:MIN)	BHP (PSIA)	WHP (PSIA)
1	10-NOV	07:05	SET PACKERS, HYDROSTATIC	-0:10	2921.2	
2		07:15	OPENED TOOL, BUBBLE HOSE	0:00	537.1	1 Inch
3		07:20	VERY WEAK BLOW IN BUCKET	0:05		1 Inch
4		07:35	NO BLOW IN BUCKET	0:20		0
5		07:45	NO BLOW @ SURFACE	0:30		0
6						
7		07:45	END INITIAL FLOW	0:30	955.2	0
8		07:45	BEGIN SHUT-IN	0:30	427.9	
9		08:45	END SHUT-IN PERIOD	1:30	1761.1	
10						
11		08:50	OPENED TOOL, BUBBLE HOSE	1:35	120.2	0
12			NO BLOW DURING FINAL FLOW			
13		09:48	STILL, NO BLOW IN BUCKET	2:33		0
14						
15		09:48	END FINAL FLOW	2:33	149.4	0
16		09:49	BEGIN FINAL SHUT-IN	2:34	142.2	
17		11:48	END SHUT-IN	4:33	1764.2	
18		11:53	PULL LOOSE, HYDROSTATIC	4:39	2667.6	
19			TRIP OUT OF HOLE			

RECEIVED
STATE CORPORATION

JUN 11 1990

CONSERVATION DIVISION
Wichita Kansas

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 115034

COMPANY : ANADARKO PETROLEUM

INSTRUMENT NO. J-1053

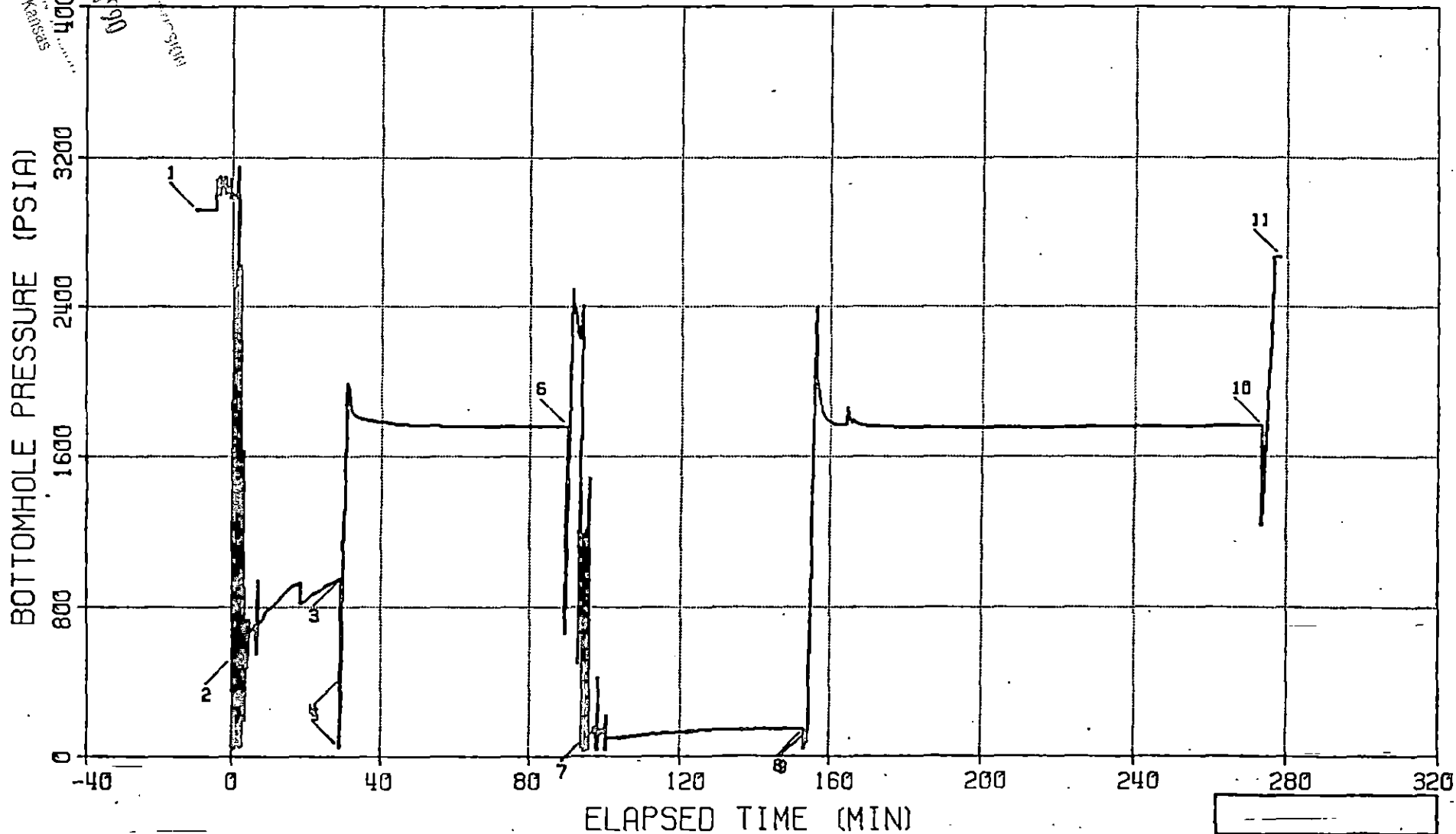
WELL : DUNN HOFFMAN D-3

DEPTH : 6124 FT

CAPACITY : 6400 PSI

PORT OPENING : INSIDE

RECEIVED
JUN 11 1990
Geophysical Dept.
Tulsa, Kansas



 * WELL TEST DATA PRINTOUT *

FIELD REPORT # : 115034

COMPANY : ANADARKO PETROLEUM
 WELL : DUNN HOFFMAN D-3

INSTRUMENT # : J-1053
 CAPACITY [PSI] : 6400.
 DEPTH [FT] : 6124.0
 PORT OPENING : INSIDE
 TEMPERATURE [DEG F] : 148.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA
1	7:04:53	10-NO	HYDROSTATIC MUD	-10.11	2921.2
2	7:15:00	10-NO	START FLOW	0.00	537.1
3	7:44:24	10-NO	END FLOW	29.40	955.2
4	7:44:00	10-NO	CYCLED TOOL	29.00	50.0
5	7:44:28	10-NO	START SHUT-IN	29.46	427.9
6	8:44:52	10-NO	END SHUT-IN	89.86	1761.1
7	8:50:43	10-NO	START FLOW	95.71	120.2
8	9:48:17	10-NO	END FLOW	153.29	149.4
9	9:49:25	10-NO	START SHUT-IN	154.41	142.2
10	11:48:43	10-NO	END SHUT-IN	273.72	1764.2
11	11:53:25	10-NO	HYDROSTATIC MUD	278.42	2667.6

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	29.40	29.40	537.1	955.2
2	95.71	153.29	57.58	120.2	149.4

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	29.46	89.86	60.40	427.9	1761.1	955.2	29.40
2	154.41	273.72	119.31	142.2	1764.2	149.4	86.98

RECEIVED
 JUN 11 1990
 CONSERVATION DIVISION
 Wichita Kansas

TEST PHASE : SHUTIN PERIOD # 2

FINAL FLOW PRESSURE [PSIA] = 149.4

PRODUCING TIME [MIN] = 86.98

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
0:54:25	10-NO	219.41	65.00	1756.6	1607.2	0.369
0:59:25	10-NO	224.41	70.00	1757.5	1608.1	0.351
1:04:25	10-NO	229.41	75.00	1758.8	1609.4	0.334
1:09:25	10-NO	234.41	80.00	1759.9	1610.5	0.320
1:14:25	10-NO	239.41	85.00	1760.9	1611.5	0.306
1:19:25	10-NO	244.41	90.00	1761.7	1612.3	0.294
1:24:25	10-NO	249.41	95.00	1762.6	1613.2	0.282
1:29:25	10-NO	254.41	100.00	1762.6	1613.2	0.272
1:34:25	10-NO	259.41	105.00	1763.2	1613.8	0.262
1:39:25	10-NO	264.41	110.00	1763.9	1614.4	0.253
1:44:25	10-NO	269.41	115.00	1764.2	1614.8	0.245
1:48:43	10-NO	273.72	119.31	1764.2	1614.8	0.238

RECEIVED
JUN 11 1990

UNIVERSITY OF KANSAS
WICHITA, KANSAS

EST PHASE : FLOW PERIOD # 1

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
7:15:00	10-NO	0.00	0.00	537.1
7:20:00	10-NO	5.00	5.00	662.9
7:25:00	10-NO	10.00	10.00	783.9
7:30:00	10-NO	15.00	15.00	884.2
7:35:00	10-NO	20.00	20.00	833.8
7:40:00	10-NO	25.00	25.00	907.8
7:44:24	10-NO	29.40	29.40	955.2

EST PHASE : SHUTIN PERIOD # 1

FINAL FLOW PRESSURE [PSIA] = 955.2
 PRODUCING TIME [MIN] = 29.40

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:44:28	10-NO	29.46	0.00	427.9	-527.3	
7:45:28	10-NO	30.46	1.00	1544.4	589.2	1.483
7:46:28	10-NO	31.46	2.00	1940.4	985.2	1.196
7:47:28	10-NO	32.46	3.00	1828.1	872.8	1.033
7:48:28	10-NO	33.46	4.00	1812.9	857.6	0.922
7:49:28	10-NO	34.46	5.00	1802.4	847.2	0.838
7:50:28	10-NO	35.46	6.00	1796.0	840.8	0.771
7:51:28	10-NO	36.46	7.00	1791.7	836.4	0.716
7:52:28	10-NO	37.46	8.00	1787.6	832.4	0.670
7:53:28	10-NO	38.46	9.00	1784.1	828.9	0.630
7:54:28	10-NO	39.46	10.00	1781.4	826.2	0.595
7:56:28	10-NO	41.46	12.00	1777.3	822.1	0.538
7:58:28	10-NO	43.46	14.00	1773.5	818.3	0.491
8:00:28	10-NO	45.46	16.00	1771.0	815.8	0.453
8:02:28	10-NO	47.46	18.00	1768.2	813.0	0.421
8:04:28	10-NO	49.46	20.00	1766.3	811.1	0.393
8:06:28	10-NO	51.46	22.00	1764.1	808.8	0.369
8:08:28	10-NO	53.46	24.00	1763.1	807.8	0.347
8:10:28	10-NO	55.46	26.00	1762.3	807.1	0.329
8:12:28	10-NO	57.46	28.00	1761.4	806.2	0.312
8:14:28	10-NO	59.46	30.00	1761.1	805.8	0.297
8:19:28	10-NO	64.46	35.00	1761.1	805.8	0.265
8:24:28	10-NO	69.46	40.00	1761.1	805.8	0.239
8:29:28	10-NO	74.46	45.00	1761.1	805.8	0.218
8:34:28	10-NO	79.46	50.00	1761.1	805.8	0.201
8:39:28	10-NO	84.46	55.00	1761.1	805.8	0.186
8:44:28	10-NO	89.46	60.00	1761.1	805.8	0.173
8:44:52	10-NO	89.86	60.40	1761.1	805.8	0.172

STATE OF KANSAS
 CONSERVATION DIVISION

JUN 11 1990

CONSERVATION DIVISION
 Wichita Kansas

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
8:50:43	10-NO	95.71	0.00	120.2
8:55:43	10-NO	100.71	5.00	103.8
9:00:43	10-NO	105.71	10.00	105.9
9:05:43	10-NO	110.71	15.00	120.1
9:10:43	10-NO	115.71	20.00	127.7
9:15:43	10-NO	120.71	25.00	135.4
9:20:43	10-NO	125.71	30.00	140.9
9:25:43	10-NO	130.71	35.00	144.1
9:30:43	10-NO	135.71	40.00	145.4
9:35:43	10-NO	140.71	45.00	146.5
9:40:43	10-NO	145.71	50.00	148.3
9:45:43	10-NO	150.71	55.00	149.4
9:48:17	10-NO	153.29	57.58	149.4

TEST PHASE : SHUTIN PERIOD # 2

FINAL FLOW PRESSURE [PSIA] = 149.4
 PRODUCING TIME [MIN] = 86.98

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9:49:25	10-NO	154.41	0.00	142.2	-7.2	
9:50:25	10-NO	155.41	1.00	1625.6	1476.2	1.944
9:51:25	10-NO	156.41	2.00	2003.9	1854.5	1.648
9:52:25	10-NO	157.41	3.00	1874.7	1725.2	1.477
9:53:25	10-NO	158.41	4.00	1815.0	1665.5	1.357
9:54:25	10-NO	159.41	5.00	1789.8	1640.4	1.265
9:55:25	10-NO	160.41	6.00	1777.6	1628.1	1.190
9:56:25	10-NO	161.41	7.00	1772.7	1623.3	1.128
9:57:25	10-NO	162.41	8.00	1771.1	1621.7	1.075
9:58:25	10-NO	163.41	9.00	1768.6	1619.2	1.028
9:59:25	10-NO	164.41	10.00	1805.9	1656.5	0.987
0:01:25	10-NO	166.41	12.00	1786.6	1637.1	0.916
0:03:25	10-NO	168.41	14.00	1767.4	1618.0	0.858
0:05:25	10-NO	170.41	16.00	1762.6	1613.2	0.809
0:07:25	10-NO	172.41	18.00	1760.7	1611.2	0.766
0:09:25	10-NO	174.41	20.00	1758.7	1609.3	0.728
0:11:25	10-NO	176.41	22.00	1757.1	1607.7	0.695
0:13:25	10-NO	178.41	24.00	1755.5	1606.1	0.665
0:15:25	10-NO	180.41	26.00	1754.7	1605.3	0.638
0:17:25	10-NO	182.41	28.00	1753.9	1604.5	0.613
0:19:25	10-NO	184.41	30.00	1753.2	1603.8	0.591
0:24:25	10-NO	189.41	35.00	1753.2	1603.8	0.542
0:29:25	10-NO	194.41	40.00	1753.4	1603.9	0.502
0:34:25	10-NO	199.41	45.00	1753.8	1604.4	0.467
0:39:25	10-NO	204.41	50.00	1754.2	1604.8	0.438
0:44:25	10-NO	209.41	55.00	1754.6	1605.1	0.412
0:49:25	10-NO	214.41	60.00	1755.4	1606.0	0.389

Wichita, Kan

DUANE-HOFFMAN D-3
1980' FNL & 1300' FWL
SEC. 35-33S-38W
STEVENS COUNTY, KANSAS

GABBERT-JONES
DRILLERS WELL LOG

Commenced: 10-30-89
Completed: 11-13-89
Operator: ANADARKO PETROLEUM CORPORATION

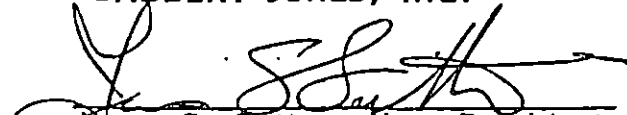
R-8

Depth		Formation	Remarks
From	To		
0	1150	Sand - Redbed	Ran 39 jts of 24# 8 5/8"
1150	1311	Glorietta Sand	csg LD @ 1685' w/625 sks
1311	1685	Sand - Redbed	50/50 Posmix, 4% Gel, 2% CC
1685	1770	Anhy	200 sks Common - 2% CC
1770	2190	Sand - Lime	PD @ 6:45 PM 10-31-89
2190	2505	Shale - Lime	
2505	5930	Lime - Shale	Ran 75 jts of 14# 5 1/2"
5930	6120	Lime	csg LD @ 3172' w/
6120	6625	Lime - Shale	150 sks Class C - 20% DCD
	6625 TD		2% CC - 1/4# FS - 50 sks Class C
			10% DCD - 2% CC - 1/4# FS
			PD @ 10:30 AM 11-13-89.
			RR @ 11:30 AM 11-13-89.

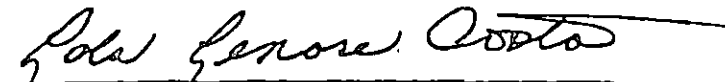
State of Kansas
County of Sedgwick

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.

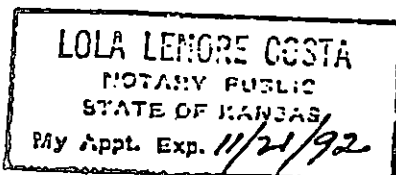
GABBERT-JONES, INC.


James S. Sutton, II -- President

Subscribed & sworn to before me this
17th day of November 1989.


Lola Lenore Costa

My Commission expires Nov. 21, 1992



RECEIVED JUN 08 1990