WELL NAME:	Lehner # 19
COMPANY:	Hugoton Energy Corp
LOCATION:	24-20S-24W
	Ness County Kansas
DATE:	04/23/97

TRILOBITE TESTING L.L.C.

OPERATOR : Hugoton Energy Corp
WELL NAME: Lehner #19
LOCATION : 24-20-24 Ness KS
INTERVAL : 4347.00 To 4362.00 ft

DATE 4/20/97
KB 2287.00 ft
GR 0.00 ft
TD 4362.00 ft

TICKET NO: 10117 DST #1
FORMATION: Mississippi/Warsaw
TEST TYPE: CONV

RECORDER DATA

Mins			Field	1	2	3	4
PF	0	Rec.	13754	13754	13249		
SI	0	Range(Psi)	4000.0	4000.0	4500.0	0.0	0.0
SF	0	Clock(hrs)	12 HR	12 HR	12 HR		
FS	0	Depth(ft)	4349.0	4349.0	4359.0	0.0	0.0

TIME DATA----------
PF Fr. 2320 to hr
IS Fr. to hr
SF Fr. to hr
FS Fr. to 2350 hr

	Field	1	2	3	4
A. Init Hydro	0.0	0.0	0.0	0.0	0.0
B. First Flow	0.0	0.0	0.0	0.0	0.0
B1. Final Flow	0.0	0.0	0.0	0.0	0.0
C. In Shut-in	0.0	0.0	0.0	0.0	0.0
D. Init Flow	0.0	0.0	0.0	0.0	0.0
E. Final Flow	0.0	0.0	0.0	0.0	0.0
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0
G. Final Hydro	0.0	0.0	0.0	0.0	0.0
Inside/Outside	I	I	O		

T STARTED 2030 hr
T ON BOTM 2310 hr
T OPEN 2323 hr
T PULLED 2350 hr
T OUT 0230 hr

RECOVERY
Tot Fluid 550.00 ft of 550.00 ft in DC and 0.00 ft in DP
550.00 ft of Mud W/Show oil n tool
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

TOOL DATA----------

Tool Wt.	800.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	1400000.00 lbs
Initial Str Wt	82000.00 lbs
Unseated Str Wt	83000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	555.00 ft
D.P. Length	3773.00 ft

BLOW DESCRIPTION
Initial Flow:
Weak surging blow - lost packer seat

MISRUN

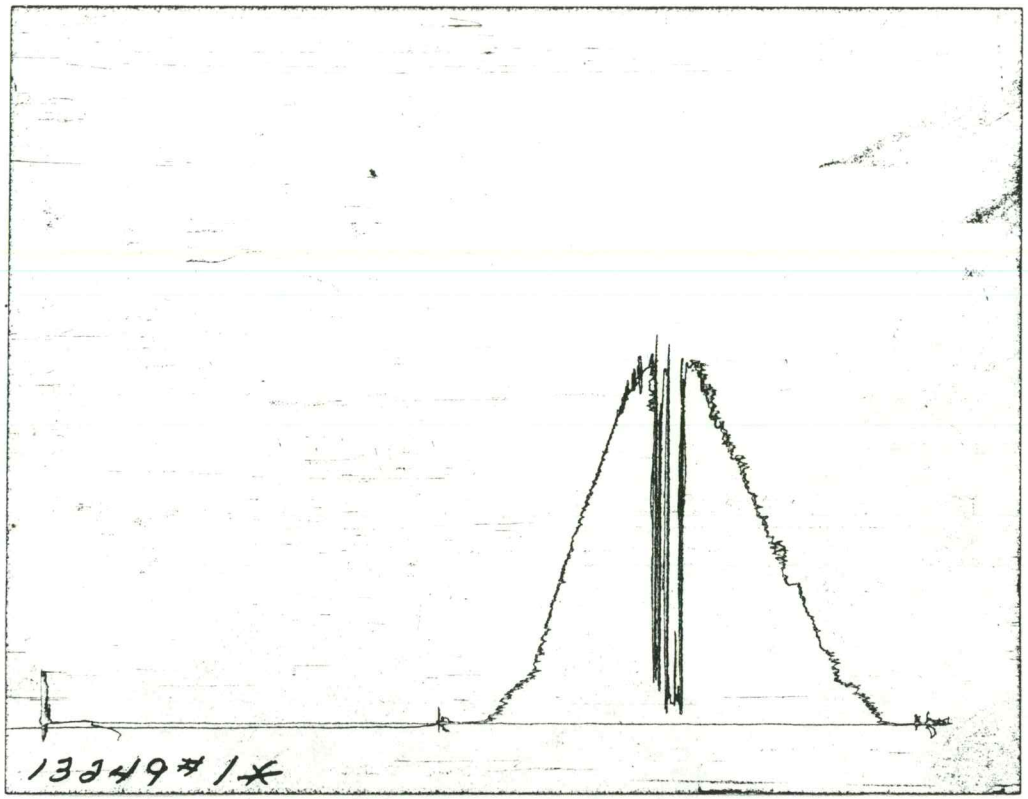
MUD DATA----------

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	47.00 S/L
W.L.	8.20 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	120.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Dan Bangle
Co. Rep.	Dan Fredlund
Contr.	Murfin
Rig #	20
Unit #	
Pump T.	

SAMPLES:
SENT TO:

Test Successful: N

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 10117

Well Name & No. Lehner #19 Test No. 1 Date 4-20-97

Company Hugoton Energy Corp Zone Tested Miss Warsaw

Address 301 N. Main Suite 1900 Wichita, Ks. 67202 Elevation 2287 KB ____ GL

Co. Rep / Geo. Dan Fredlund Cont. Murfin #20 Est. Ft. of Pay ____ Por. ____ %

Location: Sec. 24 Twp. 20 Rge. 24 Co. Ness State Ks

No. of Copies 12 Distribution Sheet (Y, N) N Turnkey (Y, N) N Evaluation (Y, N) ____

Interval Tested 4347 - 4362 Initial Str Wt./Lbs. 82,000 Unseated Str Wt./Lbs. 83,000

Anchor Length 15 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 140,000

Top Packer Depth 4342 Tool Weight 800

Bottom Packer Depth 4347 Hole Size — 7 7/8" ____ Rubber Size — 6 3/4" ____

Total Depth 4362 Wt. Pipe Run ____ Drill Collar Run 555

Mud Wt. 9.1 LCM ____ Vis. 47 WL 8.2 Drill Pipe Size 4.5XH Ft. Run 3773

Blow Description I.F. Weak surging blow - lost Packer seat

Misrun

Recovery — Total Feet 550 GIP ____ Ft. in DC 550 Ft. in DP ____

Rec. 550	Feet Of Mud w/show oil	%gas	%oil	%water	%mud
Rec. ____	Feet Of in Tool	%gas	%oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud

BHT 120 °F Gravity ____ °API D@ ____ °F Corrected Gravity ____ °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides 4700 ppm System

(A) Initial Hydrostatic Mud	1876 PSI	Recorder No.	13754	T-Started	20:30
(B) First Initial Flow Pressure	____ PSI	(depth)	4349	T-Open	23:20
(C) First Final Flow Pressure	____ PSI	Recorder No.	13249	T-Pulled	23:50
(D) Initial Shut-in Pressure	____ PSI	(depth)	4359	T-Out	02:30
(E) Second Initial Flow Pressure	____ PSI	Recorder No.	____		
(F) Second Final Flow Pressure	____ PSI	(depth)	____		
(G) Final Shut-in Pressure	____ PSI	Initial Opening	____	Test	500.00
(H) Final Hydrostatic Mud	1826 PSI	Initial Shut-in	____	Jars X	200.00
		Final Flow	____	Safety Joint X	50.00
		Final Shut-in	____	Straddle	____
		____		Circ. Sub	____
		____		Sampler X	200 PD N/C
				Extra Packer	____
				Elect. Rec.	____ (12)
				Other	Misrun
				TOTAL PRICE $	750.00

TRILOBIITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By ____

Our Representative Dan Rangle

TRILOBITE TESTING L.L.C.

OPERATOR : Hugoton Energy Corp
WELL NAME: Lehner #19
LOCATION : 24-20-24 Ness KS
INTERVAL : 4338.00 To 4362.00 ft

DATE 4/21/97
KB 2287.00 ft
GR 0.00 ft
TD 4362.00 ft

TICKET NO: 10118 DST #2
FORMATION: Mississippi/Warsaw
TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4
PF 30	Rec.	13754	13754	13249		
SI 60	Range(Psi)	4000.0	4000.0	4500.0	0.0	0.0
SF 60	Clock(hrs)	12 HR	12 HR	12 HR		
FS 120	Depth(ft)	4340.0	4340.0	4359.0	0.0	0.0

TIME DATA----------
PF Fr. 1350 to 1420 hr
IS Fr. 1420 to 1520 hr
SF Fr. 1520 to 1620 hr
FS Fr. 1620 to 1820 hr

	Field	1	2	3	4
A. Init Hydro	2107.0	2100.0	0.0	0.0	0.0
B. First Flow	68.0	77.0	0.0	0.0	0.0
B1. Final Flow	78.0	89.0	0.0	0.0	0.0
C. In Shut-in	749.0	762.0	0.0	0.0	0.0
D. Init Flow	98.0	119.0	0.0	0.0	0.0
E. Final Flow	127.0	129.0	0.0	0.0	0.0
F. Fl Shut-in	768.0	771.0	0.0	0.0	0.0
G. Final Hydro	2066.0	2087.0	0.0	0.0	0.0
Inside/Outside	I	I	O		

T STARTED 1145 hr
T ON BOTM 1340 hr
T OPEN 1350 hr
T PULLED 1820 hr
T OUT 2130 hr

RECOVERY
Tot Fluid 258.00 ft of 258.00 ft in DC and 0.00 ft in DP
72.00 ft of Gassy Oil 20%gas 80%oil
0.00 ft of
186.00 ft of Mud Cut Gassy Oil 20%mud 20%gas 60%oil
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
SALINITY 0.00 P.P.M. A.P.I. Gravity 30.00

TOOL DATA----------

Tool Wt.	800.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	95000.00 lbs
Initial Str Wt	82000.00 lbs
Unseated Str Wt	82000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	555.00 ft
D.P. Length	3764.00 ft

BLOW DESCRIPTION
Initial Flow:
Weak blow, building to 3"

Initial Shut In:

Final Flow:
Weak blow, building to 3/4"

Final Shut In:

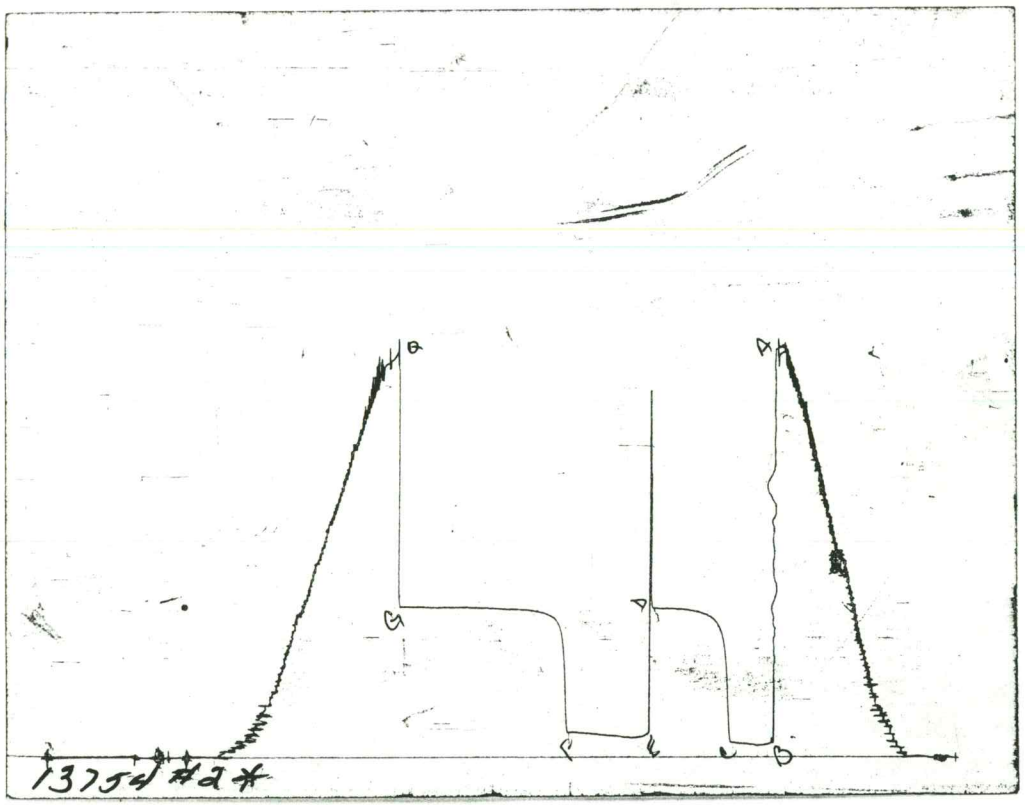
MUD DATA----------

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	47.00 S/L
W.L.	9.40 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	124.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Dan Bangle
Co. Rep.	Dan Fredlund
Contr.	Murfin
Rig #	20
Unit #	
Pump T.	

SAMPLES:
SENT TO:

Test Successful: Y

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 10118

Well Name & No. Lehner #19 Test No. 2 Date 4-21-97

Company Hugoton Energy Corp Zone Tested Miss Warsaw

Address _____ Elevation 2287 KB _____ GL

Co. Rep / Geo. Dan Fredlund Cont. Murfin #20 Est. Ft. of Pay 5 Por. 10 %

Location: Sec. 24 Twp. 20 Rge. 24 Co. Ness State Ks.

No. of Copies 12 Distribution Sheet (Y, N) N Turnkey (Y, N) N Evaluation (Y, N) _____

Interval Tested 4338 - 4362 Initial Str Wt./Lbs. 82,000 Unseated Str Wt./Lbs. 82,000

Anchor Length 24 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 95,000

Top Packer Depth 4333 Tool Weight 800

Bottom Packer Depth 4338 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____

Total Depth 4362 Wt. Pipe Run _____ Drill Collar Run 555

Mud Wt. 9.1 LCM _____ Vis. 47 WL 9.4 Drill Pipe Size 4.5 XH Ft. Run 3764

Blow Description I.F. Weak - building to 3"

F.F. Weak - building to 3/4"

Recovery — Total Feet 258 GIP _____ Ft. in DC 258 Ft. in DP _____

Rec. 72 Feet Of GSY O 20 %gas 80 %oil %water %mud

Rec. 186 Feet Of MCGSY O 20 %gas 60 %oil %water 20 %mud

Rec. _____ Feet Of _____ %gas %oil %water %mud

Rec. _____ Feet Of _____ %gas %oil %water %mud

Rec. _____ Feet Of _____ %gas %oil %water %mud

BHT 124 °F Gravity _____ °API D@ _____ °F Corrected Gravity 30 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6200 ppm System

(A) Initial Hydrostatic Mud	2107 PSI	Recorder No.	13754	T-Started	11:45
(B) First Initial Flow Pressure	68 PSI	(depth)	4340	T-Open	13:50
(C) First Final Flow Pressure	78 PSI	Recorder No.	13249	T-Pulled	18:20
(D) Initial Shut-in Pressure	749 PSI	(depth)	4359	T-Out	21:30
(E) Second Initial Flow Pressure	98 PSI	Recorder No.			
(F) Second Final Flow Pressure	127 PSI	(depth)			
(G) Final Shut-in Pressure	768 PSI	Initial Opening	30	Test	700
(H) Final Hydrostatic Mud	2066 PSI	Initial Shut-in	60	Jars X	200
		Final Flow	60	Safety Joint X	50
		Final Shut-in	120	Straddle	
				Circ. Sub	
				Sampler X	200
				Extra Packer	
				Elect. Rec.	
				Other	80
				TOTAL PRICE $	1230

TRILOBIITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By _____

Our Representative Dan Bangle

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 10118 Date 4-21-97

Company Name Hugoton Energy Corp

Lease Lehner #19 Test No. 2

County Ness Sec. 24 Twp. 20 Rng. 24

SAMPLER RECOVERY

Gas 0 ML

Oil 2000 ML

Mud 2000 ML

Water 0 ML

Other ML

Pressure 450 PSI

Total 4000 ML

PIT MUD ANALYSIS

Chlorides 6200 ppm.

Resistivity .185 ohms @ 80 F

Viscosity 47

Mud Weight 9.1

Filtrate 9.4

Other

SAMPLER ANALYSIS

Resistivity ohms @ F

Chlorides ppm.

Gravity 30 corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity ohms @ F

Chlorides ppm.

MIDDLE

Resistivity ohms @ F

Chlorides ppm.

BOTTOM

Resistivity ohms @ F

Chlorides ppm.

WELL NAME Lehner #19 DST # 2 RECORDER # 13754

INIT. HYD. MUD. _____ _____ FINAL HYD. MUD _____ _____

INITIAL FLOW MINUTES / INTERVAL		INITIAL SHUTIN MINUTES / INTERVAL			FINAL FLOW MINUTES / INTERVAL		FINAL SHUTIN MINUTES / INTERVAL	
				1				
		.430		2			.6666	
		.610		3			.726	
		.672		4			.746	
		.703		5			.756	
		.722		6			.764	
		.734		7			.766	
		.742		8			.768	
		.751		9			.769	
		.756		10			.771	
		.760		11			.774	
		.763		12			.776	
		.767		13			.776	
		.769		14			.776	
		.770		15			.776	
		.772		16			.778	
		.772		17			.778	
		.773		18			.778	
		.773		19			.778	
		.773		20			.780	
		.773		21			.780	
				22			.782	
				23			.782	
				24				
				25				
				26				
				27				

Operator.....: Hugoton Energy Corp
Well Name.....: Lehner #19
DST Number.....: 2

Location.: 24-20S-24W Ness Cty KS Recorder No...: 13754
Test Type: conventional Recorder Depth: 4340
Formation: Mississippi/Warsaw Test Interval.: 4338-4362

RESERVOIR CALCULATIONS: Fluid calculations based on shut-in #2

RESERVOIR PARAMETERS USED:

Net Pay	10.00 ft
Porosity	15.00 %
Bottom Hole Temp	124.00 F
Specific Gravity	0.036
API Gravity	30.00
Compressibility	0.000005 /psi
Viscosity	9.5206 cp
Total Recovery	258.00 ft
Total Flowing Time	90.00 min.
Flow Rate	13.24 bbls/d
Final Flowing Pressure	129.00 psi
Horner Slope	60.0070 psi/cycle
Extrapolated Pressure	785.28 psi
Formation Volume Factor	1.04 Reservoir/Surface
Well Bore Radius	3.94 in

RESULTS:

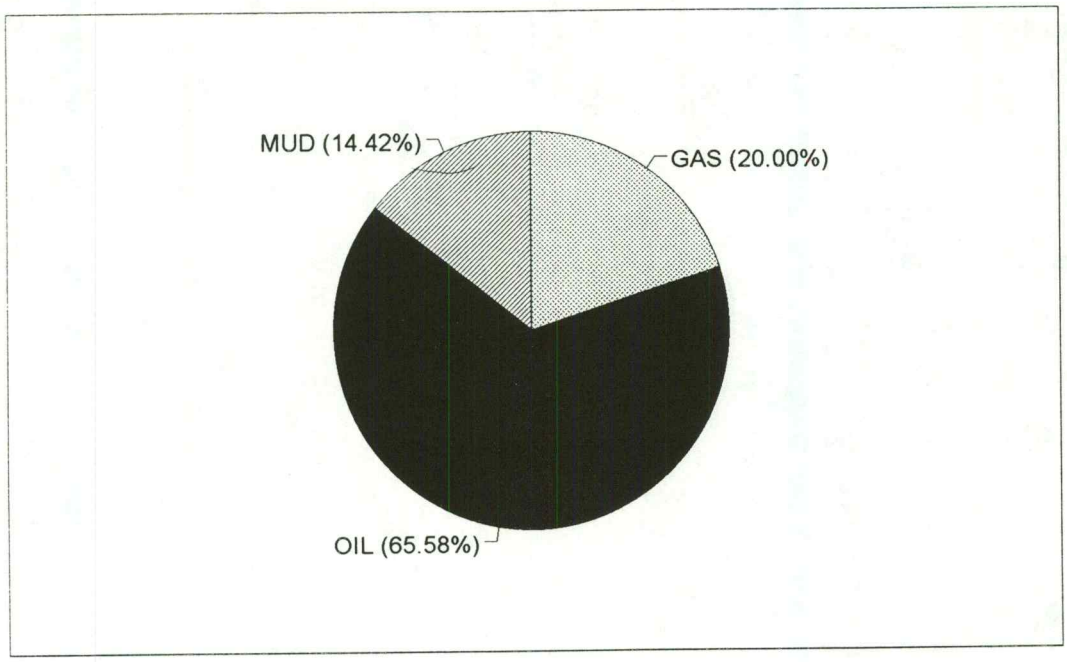
Effective Permeability	35.664584 md
Flow Capacity	356.6458 md.ft
Transmissibility	37.4604 md.ft/cp
Skin Factor	7.6942
Radius of Investigation	81.01469 ft
Damage Ratio	2.5722
Productivity Index	0.0202 bbls/psi.d
Productivity Index W/O Damage.	0.0519 bbls/psi.d

CALCULATED RECOVERY ANALYSIS - DRILL COLLARS

DST 2 TICKET 10118

SAMPLE #	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
1	72	20	14.4	80	57.6		0		0
2	186	20	37.2	60	111.6		0	20	37.2
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
TOTAL	258		51.6		169.2		0		37.2

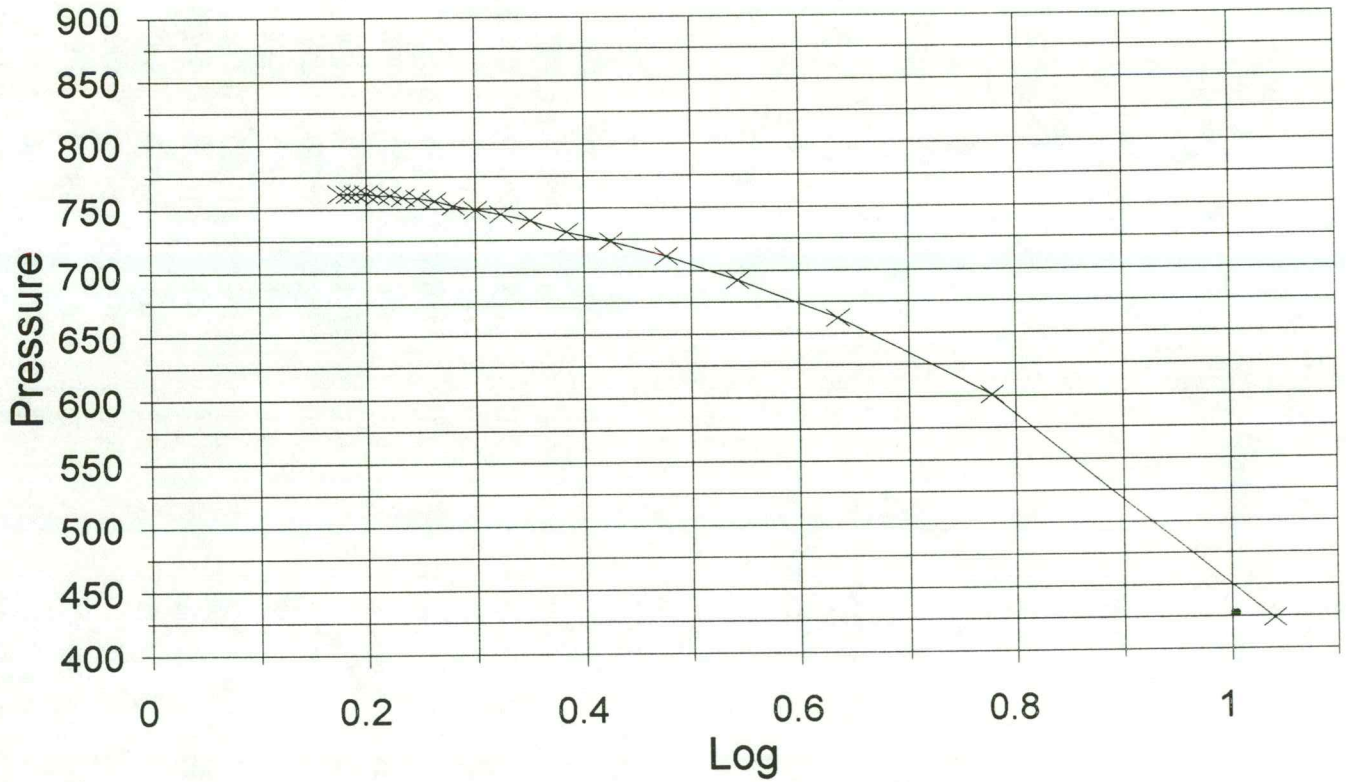
			HRS OPEN		BBL/DAY
BBL OIL=	0.827388	*	1.5	=	13.23821
BBL WATER=	0	*		=	0
BBL MUD=	0.181908				
BBL GAS =	0.252324				



	Time	Pressure PSIg	Log Horn T	<> Pressure	(T+dT)/dT
***Start Shutin 1	3	423.2	1.041	423.2	11.0
	6	600.8	0.778	177.6	6.0
	9	662.0	0.637	61.3	4.3
	12	692.7	0.544	30.6	3.5
	15	711.5	0.477	18.8	3.0
	18	723.3	0.426	11.9	2.7
	21	731.2	0.385	7.9	2.4
	24	740.1	0.352	8.9	2.3
	27	745.1	0.325	4.9	2.1
	30	749.0	0.301	4.0	2.0
	33	752.0	0.281	3.0	1.9
	36	755.9	0.263	4.0	1.8
	39	757.9	0.248	2.0	1.8
	42	758.9	0.234	1.0	1.7
	45	760.9	0.222	2.0	1.7
	48	760.9	0.211	0.0	1.6
	51	761.9	0.201	1.0	1.6
	54	761.9	0.192	0.0	1.6
	57	761.9	0.184	0.0	1.5
	60	761.9	0.176	0.0	1.5

Horner Plot: Shut-in #1

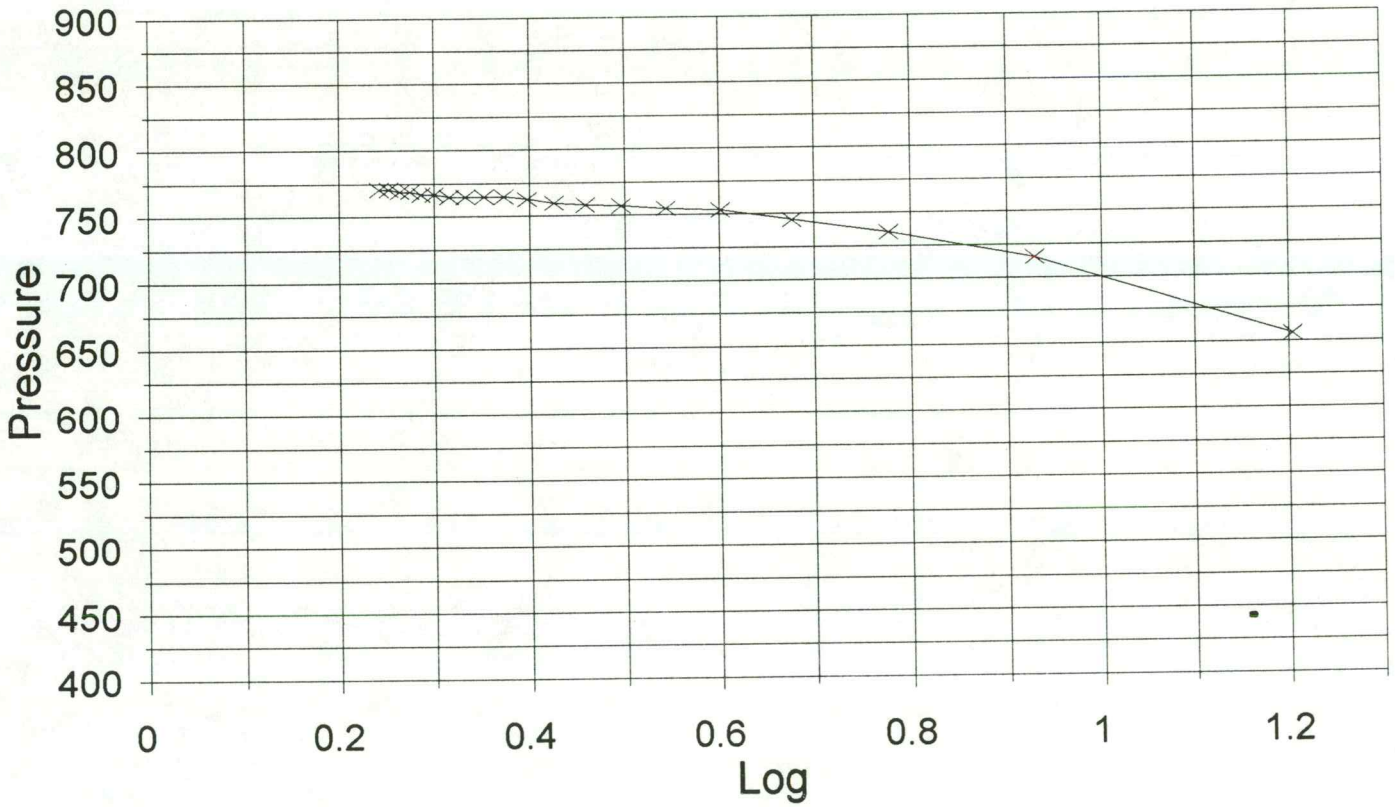
P * 771.56 Slope 55.143



	Time	Pressure PSIg	Log Horn T	<> Pressure	(T+dT)/dT
***Start Shutin 2	6	656.1	1.204	656.1	16.0
	12	715.4	0.929	59.3	8.5
	18	735.2	0.778	19.8	6.0
	24	745.1	0.677	9.9	4.8
	30	753.0	0.602	7.9	4.0
	36	754.9	0.544	2.0	3.5
	42	756.9	0.497	2.0	3.1
	48	757.9	0.459	1.0	2.9
	54	759.9	0.426	2.0	2.7
	60	762.8	0.398	3.0	2.5
	66	764.8	0.374	2.0	2.4
	72	764.8	0.352	0.0	2.3
	78	764.8	0.333	0.0	2.2
	84	764.8	0.316	0.0	2.1
	90	766.8	0.301	2.0	2.0
	96	766.8	0.287	0.0	1.9
	102	768.8	0.275	2.0	1.9
	108	768.8	0.263	0.0	1.8
	114	770.7	0.253	1.9	1.8
	120	770.7	0.243	0.0	1.8

Horner Plot: Shut-in #2

P* 785.28 Slope 60.007



TRILOBITE TESTING L.L.C.

OPERATOR : Hugoton Energy Corp
WELL NAME: Lehner #19
LOCATION : 24-20-24 Ness KS
INTERVAL : 4361.00 To 4372.00 ft

DATE 4/22/97
KB 2287.00 ft
GR 0.00 ft
TD 4372.00 ft

TICKET NO: 10119 DST #3
FORMATION: Mississippi/Warsaw
TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4
PF 30	Rec.	13754	13754	13249		
SI 60	Range(Psi)	4000.0	4000.0	4500.0	0.0	0.0
SF 60	Clock(hrs)	12 HR	12 HR	12 HR		
FS 120	Depth(ft)	4362.0	4362.0	4369.0	0.0	0.0

TIME DATA----------
PF Fr. 0920 to 0950 hr
IS Fr. 0950 to 1050 hr
SF Fr. 1050 to 1150 hr
FS Fr. 1150 to 1350 hr

	Field	1	2	3	4
A. Init Hydro	2137.0	2072.0	0.0	0.0	0.0
B. First Flow	0.0	0.0	0.0	0.0	0.0
B1. Final Flow	0.0	0.0	0.0	0.0	0.0
C. In Shut-in	758.0	772.0	0.0	0.0	0.0
D. Init Flow	88.0	103.0	0.0	0.0	0.0
E. Final Flow	255.0	278.0	0.0	0.0	0.0
F. Fl Shut-in	749.0	768.0	0.0	0.0	0.0
G. Final Hydro	2016.0	2055.0	0.0	0.0	0.0
Inside/Outside		I	I	O	

T STARTED 0720 hr
T ON BOTM 0915 hr
T OPEN 0920 hr
T PULLED 1350 hr
T OUT 1650 hr

RECOVERY
Tot Fluid 650.00 ft of 555.00 ft in DC and 95.00 ft in DP
100.00 ft of Cut Gassy Oil 20%gas 80%oil
250.00 ft of Mud Cut Gassy Oil 20%mud 20%gas 60%oil
60.00 ft of Gassy Oil Cut Mud 20%gas 40%oil 40%mud
120.00 ft of Gassy Oil Water Cut Mud
0.00 ft of 10%gas 20%oil 20%water 50%mud
120.00 ft of Slight Oil Cut Water 5%oil 95%water
0.00 ft of
0.00 ft of RW = .35 @ 80
SALINITY 25000.00 P.P.M. A.P.I. Gravity 30.00

TOOL DATA----------

Tool Wt.	800.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	100000.00 lbs
Initial Str Wt	82000.00 lbs
Unseated Str Wt	0.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	555.00 ft
D.P. Length	3777.00 ft

BLOW DESCRIPTION
Initial Flow:
Slid tool 5' to bottom, weak surging blow, flushed tool, good surge, 2" blow decreasing to 3/4"

Initial Shut In:

Final Flow:
Fair blow, bottom of bucket in 22.5 minutes

Final Shut In:

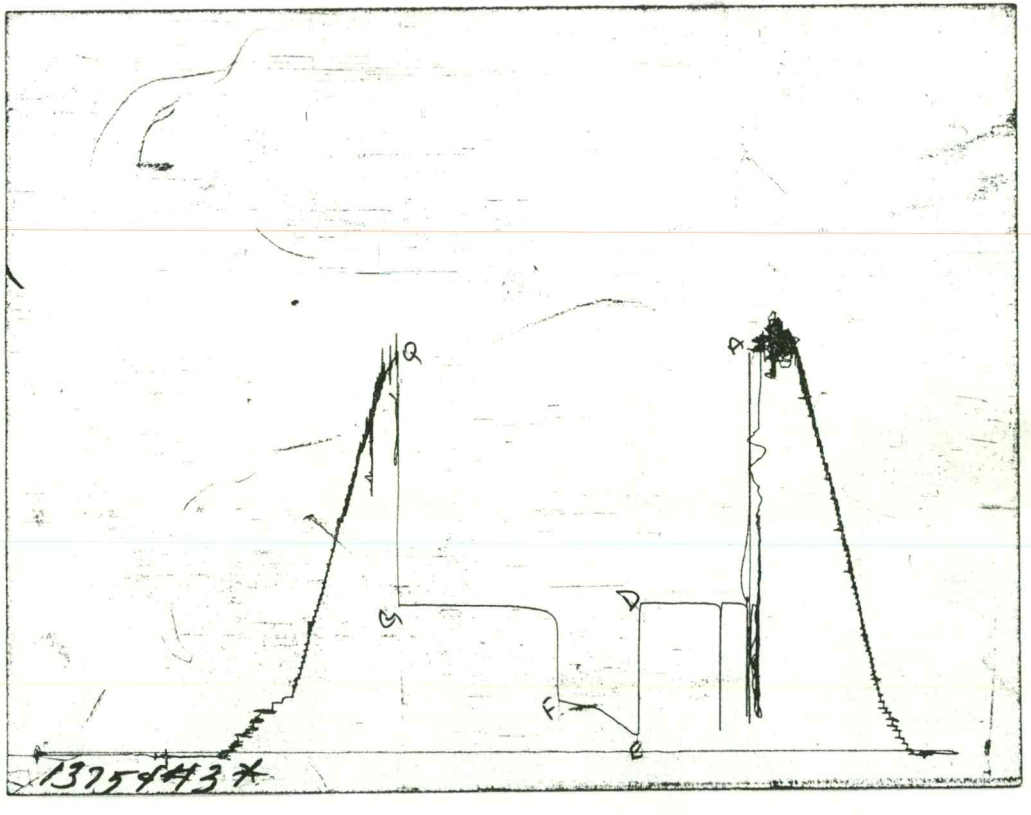
Tool Plugged on Initial Flow
SAMPLES:
SENT TO:

MUD DATA----------

Mud Type	Chemical
Weight	9.20 lb/cf
Vis.	49.00 S/L
W.L.	9.60 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	0.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Dan Bangle
Co. Rep.	Dan Fredlund
Contr.	Murfin
Rig #	20
Unit #	
Pump T.	

Test Successful: Y

CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 10119

Well Name & No. Lehner #19 Test No. 3 Date 11-22-97

Company Hugoton Energy Corp Zone Tested Miss Warsaw

Address _____ Elevation 2287 KB _____ GL

Co. Rep / Geo. Dan Fredlund Cont. Murfin #20 Est. Ft. of Pay 10 Por. 8 %

Location: Sec. 24 Twp. 20 Rge. 24 Co. Ness State Ks

No. of Copies 12 Distribution Sheet (Y, N) N Turnkey (Y, N) N Evaluation (Y, N) _____

Interval Tested 4361 - 4372 Initial Str Wt./Lbs. 82,000 Unseated Str Wt./Lbs. _____

Anchor Length 11 Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 100,000

Top Packer Depth 4356 Tool Weight 800

Bottom Packer Depth 4361 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____

Total Depth 4372 Wt. Pipe Run _____ Drill Collar Run 555

Mud Wt. 9.2 LCM _____ Vis. 49 WL 9.6 Drill Pipe Size 4.5 XH Ft. Run 3777

Blow Description Slid tool 5' to bottom - weak surging blow
Flushed tool - Good Surge - 2" blow decreasing to ½".
F.F. Fair - bottom of Bucket in 22½ min.
Plugged on IF

Recovery — Total Feet 650 GIP _____ Ft. in DC 555 Ft. in DP 95

Rec.	100	Feet Of	CGsyO	10 %gas	80 %oil	%water	%mud
Rec.	250	Feet Of	MCGsyO	20 %gas	60 %oil	%water	20 %mud
Rec.	60	Feet Of	OCGsyM	20 %gas	40 %oil	%water	40 %mud
Rec.	120	Feet Of	O+WCGsyM	10 %gas	20 %oil	20 %water	50 %mud
Rec.	120	Feet Of	SlTly OC WTR	%gas	5 %oil	95 %water	%mud

BHT 127 °F Gravity 28 °API D@ 60 °F Corrected Gravity 30 °API

RW .35 @ 80 °F Chlorides 25,000 ppm Recovery Chlorides 8600 ppm System

(A) Initial Hydrostatic Mud	2137 PSI	Recorder No.	13754	T-Started	07:20
(B) First Initial Flow Pressure	— PSI	(depth)	4362	T-Open	09:20
(C) First Final Flow Pressure	— PSI	Recorder No.	13249	T-Pulled	13:50
(D) Initial Shut-in Pressure	758 PSI	(depth)	4369	T-Out	16:50
(E) Second Initial Flow Pressure	88 PSI	Recorder No.			
(F) Second Final Flow Pressure	255 PSI	(depth)			
(G) Final Shut-in Pressure	749 PSI	Initial Opening	30	Test	700
(H) Final Hydrostatic Mud	2016 PSI	Initial Shut-in	60	Jars X	200
		Final Flow	60	Safety Joint X	50
		Final Shut-in	120	Straddle	
				Circ. Sub	
				Sampler X	200
				Extra Packer	
				Elect. Rec.	
				Other	80
				TOTAL PRICE $	1230

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By _____

Our Representative Dan Bangle

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 10119 Date 4-22-97

Company Name Hugoton Energy Corp.

Lease Lehner #19 Test No. 3

County Ness Sec. 24 Twp. 20 Rng. 24

SAMPLER RECOVERY

Gas 0 ML

Oil 2000 ML

Mud 0 ML

Water 2000 ML

Other ML

Pressure 500 PSI

Total 4000 ML

PIT MUD ANALYSIS

Chlorides 8600 ppm.

Resistivity .82 ohms @ 60 F

Viscosity 49

Mud Weight 9.2

Filtrate 9.6

Other

SAMPLER ANALYSIS

Resistivity .35 ohms @ 80 F

Chlorides 25,000 ppm.

Gravity 30 corrected @ 60 F

PIPE RECOVERY

TOP

Resistivity ohms @ F

Chlorides ppm.

MIDDLE

Resistivity ohms @ F

Chlorides ppm.

BOTTOM

Resistivity .35 ohms @ 80 F

Chlorides 25,000 ppm.

WELL NAME Lehner #19 DST # 3 RECORDER # 13754

INIT. HYD. MUD. _____ _____ FINAL HYD. MUD _____ _____

NITIAL FLOW INUTES _____ NTERVAL_____		INITIAL SHUTIN MINUTES_____ INTERVAL_____			FINAL FLOW MINUTES_____ INTERVAL_____		FINAL SHUTIN MINUTES_____ INTERVAL_____	
				1			.704	
				2			.738	
				3			.753	
				4			.763	
				5			.766	
				6			.771	
				7			.774	
				8			.774	
				9			.776	
				10			.776	
				11			.778	
				12			.778	
				13			.778	
				14			.778	
				15			.779	
				16			.779	
				17			.778	
				18			.779	
				19			.779	
				20			.779	
				21			.779	
				22				
				23				
				24				
				25				
				26				
				27				

Operator.....: Hugoton Energy Corp
Well Name.....: Lehner #19
DST Number.....: 3

Location.: 24-20S-24W Ness Cty KS Recorder No...: 13754
Test Type: conventional Recorder Depth: 4362
Formation: Mississippi/Warsaw Test Interval.: 4361-4372

RESERVOIR CALCULATIONS: Fluid calculations based on shut-in #2

RESERVOIR PARAMETERS USED:

Net Pay	10.00 ft
Porosity	16.00 %
Bottom Hole Temp	127.00 F
Specific Gravity	0.036
API Gravity	30.00
Compressibility	0.000005 /psi
Viscosity	9.1190 cp
Total Recovery	650.00 ft
Total Flowing Time	90.00 min.
Flow Rate	32.63 bbls/d
Final Flowing Pressure	278.00 psi
Horner Slope	19.2600 psi/cycle
Extrapolated Pressure	772.48 psi
Formation Volume Factor	1.05 Reservoir/Surface
Well Bore Radius	3.94 in

RESULTS:

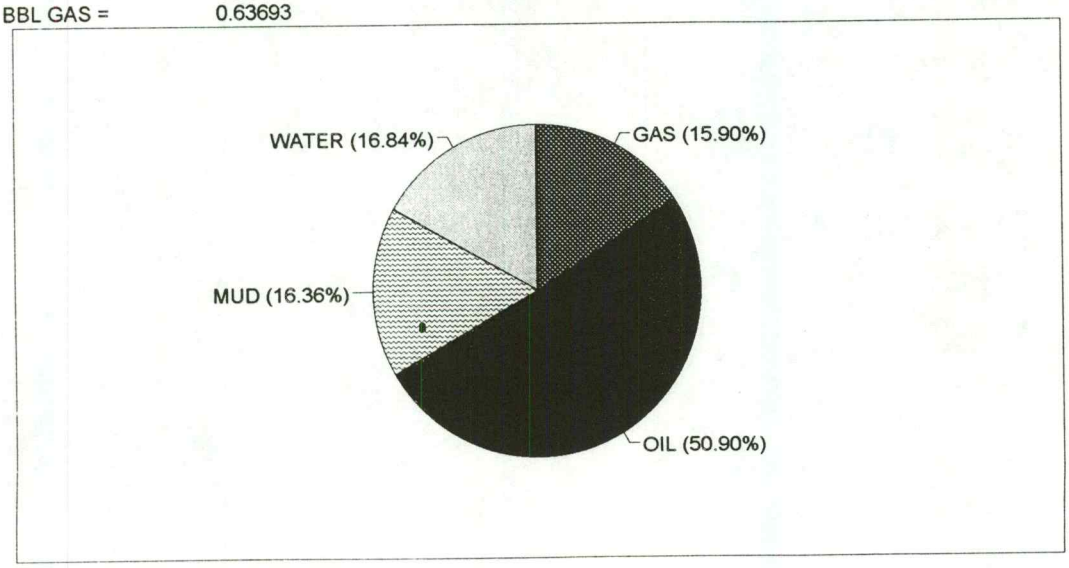
Effective Permeability	262.707290 md
Flow Capacity	2627.0729 md.ft
Transmissibility	288.0878 md.ft/cp
Skin Factor	23.6996
Radius of Investigation	211.03817 ft
Damage Ratio	5.0504
Productivity Index	0.0660 bbls/psi.d
Productivity Index W/O Damage.	0.3332 bbls/psi.d

CALCULATED RECOVERY ANALYSIS

DST 3 TICKET 10119

SAMPLE #		TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
DRILL	1	95	20	19	80	76		0		0
PIPE	2			0		0	60	0	40	0
	3			0		0		0		0
	4			0		0		0		0
	5			0		0		0		0
	6			0		0		0		0
WEIGHT	1			0		0		0		0
PIPE	2			0		0		0		0
	3			0		0		0		0
	4			0		0		0		0
DRILL	1	5	20	1	80	4		0		0
COLLARS	2	250	20	50	60	150		0	20	50
	3	60	20	12	40	24		0	40	24
	4	120	10	12	10	12	20	24	50	60
	5	120		0	5	6	95	114		0
TOTAL		650		94		272		138		134

			HRS OPEN		BBL/DAY
BBL OIL=	2.03916	*	1.5	=	32.62656
BBL WATER=	0.67482	*		=	10.79712
BBL MUD=	0.65526				
BBL GAS =	0.63693				



	Time	Pressure PSIg	Log Horn T	<> Pressure	(T+dT)/dT
***Start Shutin 2	6	693.7	1.204	693.7	16.0
	12	727.3	0.929	33.6	8.5
	18	742.1	0.778	14.8	6.0
	24	752.0	0.677	9.9	4.8
	30	754.9	0.602	3.0	4.0
	36	759.9	0.544	4.9	3.5
	42	762.8	0.497	3.0	3.1
	48	762.8	0.459	0.0	2.9
	54	764.8	0.426	2.0	2.7
	60	764.8	0.398	0.0	2.5
	66	766.8	0.374	2.0	2.4
	72	766.8	0.352	0.0	2.3
	78	766.8	0.333	0.0	2.2
	84	766.8	0.316	0.0	2.1
	90	767.8	0.301	1.0	2.0
	96	767.8	0.287	0.0	1.9
	102	767.8	0.275	0.0	1.9
	108	767.8	0.263	0.0	1.8
	114	767.8	0.253	0.0	1.8
	120	767.8	0.243	0.0	1.8

Horner Plot: Shut-in #2

P* 772.48 Slope 19.260

