TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name: MESCHBERGER HEIRS 1-6 | Test No. 1 | Date 5/17/92

Company: RANKEN ENERGY CORP. | Zone VIOLA

Address: 2325 W. 15TH EDMOND OK 73013 | Elevation 1845

Co. Rep./Geo.: DOUG BELLIS | Cont. EMPHASIS #7 | Est. Ft. of Pay 8

Location: Sec. 6 | Twp. 24S | Rge. 11W | Co. STAFFORD | State KS

Interval Tested: 3761-3841 | Drill Pipe Size: 4.5 XH

Anchor Length: 80 | Wt. Pipe I.D. - 2.7 Ft. Run:

Top Packer Depth: 3756 | Drill Collar – 2.25 Ft. Run:

Bottom Packer Depth: 3761 | Mud Wt.: 9 lb/Gal.

Total Depth: 3841 | Viscosity: 46 | Filtrate: 11.2

Tool Open @: 10:15AM | Initial Blow: VERY GOOD BLOW / BOTTOM OF BUCKET IN 2 MINUTES

Final Blow: VERY GOOD BLOW / BOTTOM OF BUCKET IN 2 MINUTES

Recovery - Total Feet: 804 | Flush Tool?: NO

Rec. 2800 | Feet of: GAS IN PIPE

Rec. 186 | Feet of: OIL CUT MUD 35%OIL/65%MUD

Rec. 60 | Feet of: GAS & OIL CUT MUD 35%GAS/10%OIL/55%MUD

Rec. 434 | Feet of: GAS, OIL & WATER CUT MUD 20%GAS/10%OIL/25%WATER/45%MUD

Rec. 124 | Feet of: GAS, OIL & MUD CUT WATER 10%GAS/5%OIL/75%WATER/10%MUD

BHT 104 °F | Gravity °API | @ °F Corrected Gravity 32 °API

RW 0.03 | @ 80 °F | Chlorides 19500 ppm Recovery | Chlorides 8000 ppm System

(A) Initial Hydrostatic Mud: 1915.6 PSI | AK1 Recorder No. 22150 | Range 3925

(B) First Initial Flow Pressure: 99.6 PSI | @ (depth) 3825 | w / Clock No. 17640

(C) First Final Flow Pressure: 153.2 PSI | AK1 Recorder No. 10248 | Range 4400

(D) Initial Shut-in Pressure: 1201.2 PSI | @ (depth) 3841 | w / Clock No. 19960

(E) Second Initial Flow Pressure: 167.6 PSI | AK1 Recorder No. | Range

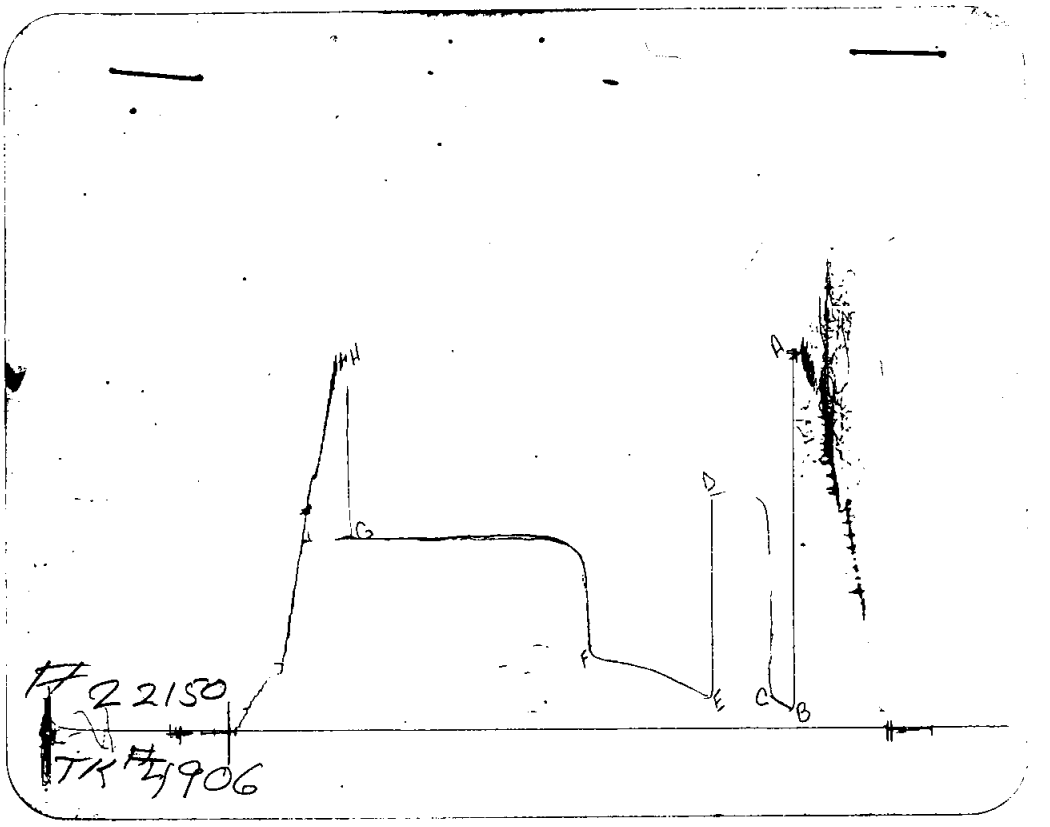
(F) Second Final Flow Pressure: 360.1 PSI | @ (depth) | w / Clock No.

(G) Final Shut-in Pressure: 992.3 PSI | Initial Opening 15 | Final Flow 120

(H) Final Hydrostatic Mud: 1914.6 PSI | Initial Shut-in 45 | Final Shut-in 180

Our Representative: HARRY SCHMIDT

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1911	1915.6
(B) FIRST INITIAL FLOW PRESSURE	95	99.6
(C) FIRST FINAL FLOW PRESSURE	153	153.2
(D) INITIAL CLOSED-IN PRESSURE	1167	1201.2
(E) SECOND INITIAL FLOW PRESSURE	153	167.6
(F) SECOND FINAL FLOW PRESSURE	363	360.1
(G) FINAL CLOSED-IN PRESSURE	953	992.3
(H) FINAL HYDROSTATIC MUD	1911	1914.6

COMPUTER EVALUATION BY TRILOBITE TESTING, L.L.C.

RANKEN ENERGY CORP. MESCHBERGER HEIRS 1- DST 1
6 24S 11W STAFFORD KS

****

ELEVATION:	1845	KB	EST. PAY	8	FT
DATUM:	-1981		ZONE TESTED:	VIOLA	
TEST INTERVAL:	3761-3841		TIME INTERVALS:	15-45-120-180	
RECORDER DEPTH:	3825		VISCOSITY:	11.017	CP
BOTTOM HOLE TEMP:	104		HOLE SIZE:	7.875	IN

****

CUBIC FEET OF GAS IN PIPE:	223.55			
TOTAL FEET OF RECOVERY:	804.00	CORRECTED PIPE FILLUP:	960.267	
TOTAL BARRELS OF RECOVERY:	11.43	CORR. BARRELS OF RECOVERY:	13.655	BBL
BARRELS IN DRILL PIPE:	11.43	API GRAVITY:	32	
BARRELS IN WEIGHT PIPE:	0.00	FLUID GRADIENT:	0.375	
BARRELS IN DRILL COLLARS:	0.00			
GAS OIL RATIO:	19.5533	CU.FT/BBL		
BUBBLE POINT PRESSURE:	167.287			
UNCORRECTED INITIAL PRODUCTION:			121.95	BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE:			145.65	BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:			76.253	

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INITIAL SLOPE	6.32	PSI/CYCLE	FINAL SLOPE	12.96	PSI/CYCLE
INITIAL P*	1203	PSI	FINAL P*	995	PSI

****

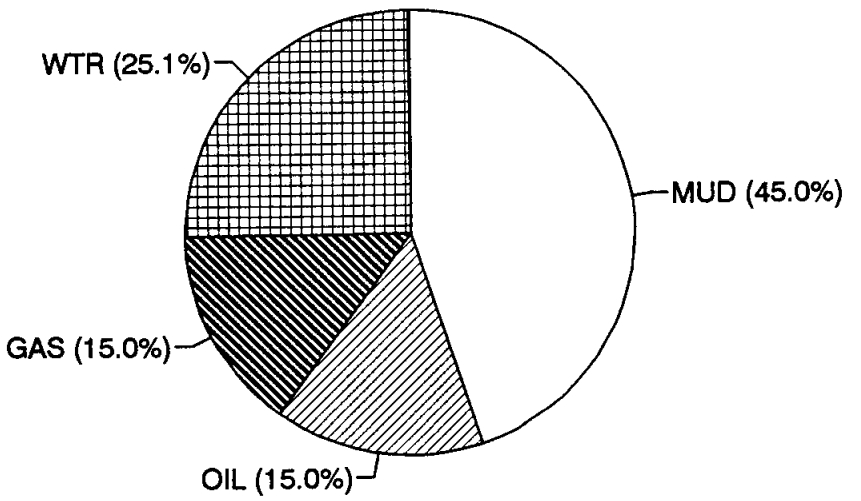
TRANSMISSIBILITY	1828.04	(MD.-FT./CP.)
PERMEABILITY	2517.52	(MD.)
INDICATED FLOW CAPACITY	20140.20	)MD.FT)
PRODUCTIVITY INDEX	2.07	(BARRELS/DAY/PSI)
DAMAGE RATIO	8.97	
RADIUS OF INVESTIGATION	582.98	(FT,)
POTENTIOMETRIC SURFACE	328.45	(FT.)
DRAWDOWN FACTOR	17.267	(%)
THEORETICAL POTENTIAL FROM FINAL FLOW PRESSURE	1307.16	
THEORETICAL POTENTIAL FROM PSEUDO STEADY FLOW STATE	684.33	

CALCULATED RECOVERY ANALYSIS DRILL PIPE

DST # 1 TICKET 4906

SAMPLE	TOTAL	GAS		OIL		WATER		MUD	
#	FEET	%	FEET	%	FEET	%	FEET	%	FEET
1	186		0	35	65.1		0	65	120.9
2	60	35	21	10	6		0	55	33
3	434	20	86.8	10	43.4	25	108.5	45	195.3
4	124	10	12.4	5	6.2	75	93	10	12.4
5			0		0		0		0
TOTAL	804	14.950249	120.2	15	120.7	25.062189	201.5	45	361.6

			HRS	BBL/DAY
BBL OIL=	1.716354	*	2.25	18.308
BBL WATER=	2.86533	*		30.564
BBL MUD=	5.141952			
BBL GAS	1.709244			



INITIAL FLOW

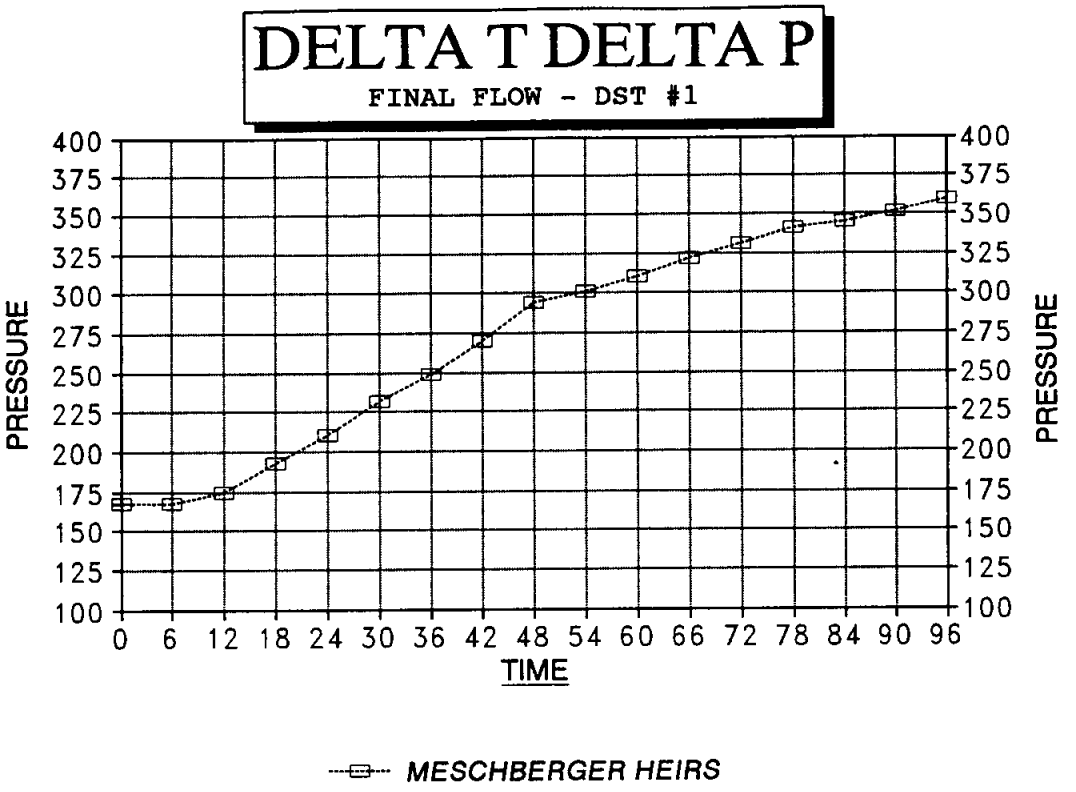
RECORDER # 22150 DST # 1

TIME(MIN)	PRESSURE	⟨⟩PRESSURE
0	99.6	99.6
3	107.2	7.6
6	116.8	9.6
9	126.4	9.6
12	136.1	9.7
15	153.2	17.1

FINAL FLOW

RECORDER # 22150 DST # 1

TIME(MIN)	PRESSURE	⟨⟩ PRESSURE
0	167.6	167.6
6	167.6	0
12	174.3	6.7
18	192.5	18.2
24	210.7	18.2
30	231.8	21.1
36	249.1	17.3
42	270.1	21
48	294	23.9
54	300.7	6.7
60	310.3	9.6
66	321.8	11.5
72	331.4	9.6
78	340.9	9.5
84	344.8	3.9
90	351.5	6.7
96	360.1	8.6



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE: 76.253

MESCHBERGER
FINAL

DST #1
SHUTIN
45 TOTAL FLOW TIME

Slope 6.32 psi/cycle
P * 1203 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	1139.9	0.929	1139.9	9
	12	1177.9	0.677	38.0	5
	18	1196.4	0.544	18.5	4
X	24	1200.3	0.459	3.9	3
	30	1201.2	0.398	0.9	3
	36	1201.2	0.352	0.0	2
X	42	1201.2	0.316	0.0	2

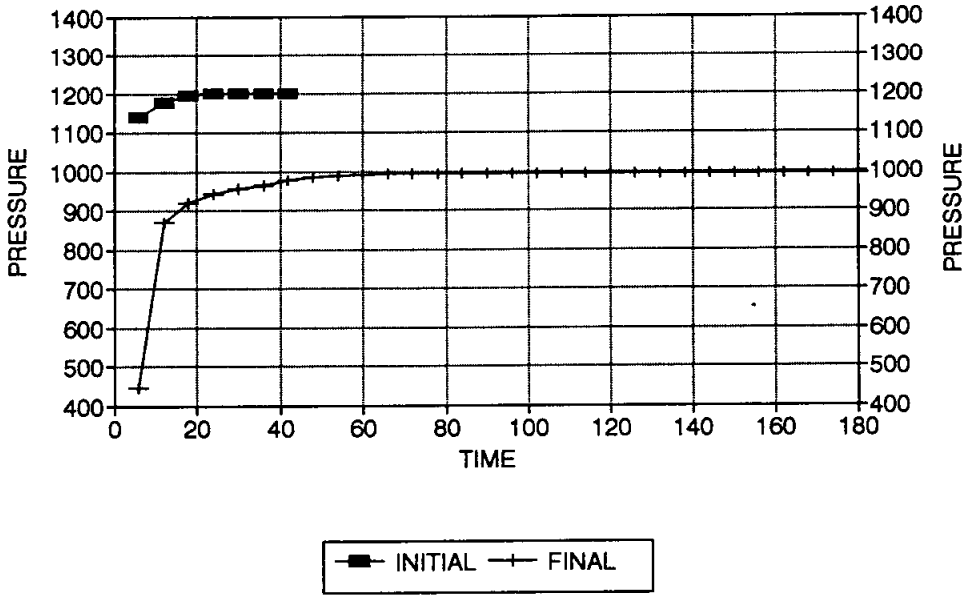
MESCHGERGER
FINAL

DST #1
SHUTIN
135 TOTAL FLOW TIME

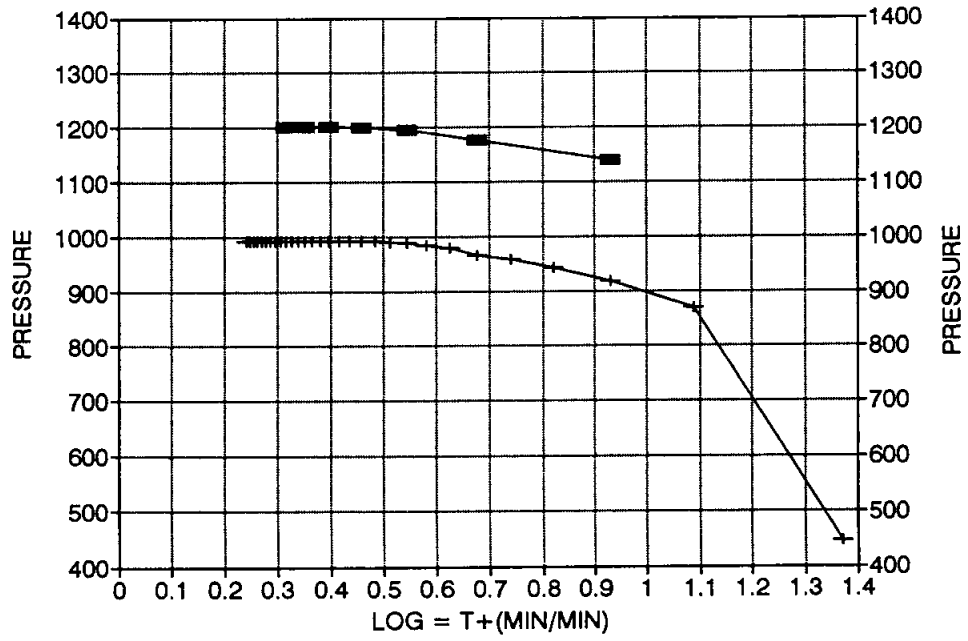
Slope 12.96 psi/cycle
P * 995 psi

	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	6	445.9	1.371	445.9	24
	12	870.1	1.088	424.2	12
	18	918.5	0.929	48.4	9
	24	941.8	0.821	23.3	7
	30	957.3	0.740	15.5	6
	36	965.1	0.677	7.8	5
	42	977.7	0.625	12.6	4
	48	984.5	0.581	6.8	4
X	54	988.4	0.544	3.9	4
	60	990.2	0.512	1.8	3
	66	992.3	0.484	2.1	3
	72	992.3	0.459	0.0	3
	78	992.3	0.436	0.0	3
	84	992.3	0.416	0.0	3
	90	992.3	0.398	0.0	3
	96	992.3	0.381	0.0	2
	102	992.3	0.366	0.0	2
	108	992.3	0.352	0.0	2
	114	992.3	0.339	0.0	2
	120	992.3	0.327	0.0	2
	126	992.3	0.316	0.0	2
	132	992.3	0.306	0.0	2
	138	992.3	0.296	0.0	2
	144	992.3	0.287	0.0	2
	150	992.3	0.279	0.0	2
	156	992.3	0.271	0.0	2
	162	992.3	0.263	0.0	2
	168	992.3	0.256	0.0	2
	174	992.3	0.249	0.0	2
X	180	992.3	0.243	0.0	2

MESCHBERGER HEIRS 1-6/DST #1
DELTA T DELTA P



HORNER PLOT



0.104	99.62132	
0.112	107.2839	
0.122	116.862	IF
0.132	126.44	
0.142	136.0178	
0.16	153.2581	
0.175	167.6252	
0.182	174.3298	
0.201	192.5279	FF
0.22	210.7277	
0.242	231.8014	
0.26	249.0436	
0.282	270.1176	
0.297	284.4863	
0.314	300.7694	
0.324	310.3475	
0.336	321.8412	
0.346	331.4192	
0.356	340.9972	
0.36	344.8284	
0.367	351.533	
0.376	360.1531	
0.376	360.1531	
0.376	360.1531	
0.376	360.1531	
0.376	360.1531	

1.182		1139.996
1.221		1177.934
1.24		1196.427
0.1244	200.3	~~119.1607~~
0.1245		~~119.2565~~
0.1245	1201.2	~~119.2565~~
0.1245		~~119.2565~~
		0
0.476		455.9402
0.904		870.1535
0.954		918.5899
0.978		941.8509
0.994		957.3624
1.002		965.1212
1.015		977.7401
1.022		984.5359
1.026		988.4196
10.29		990.2 0
1.03		992.3035
1.03		992.3035
1.03		992.3035
1.03		992.3035
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1.03		992.3035
1.03		992.3035
1.03		992.3035

IS

FS

22

30

992.3

WELL NAME_____ DST #__1__ RECORDER #__22150__

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

INITIAL FLOW MINUTES 15 INTERVAL 3		INITIAL SHUTIN MINUTES 45 INTERVAL 6			FINAL FLOW MINUTES 120 INTERVAL 6		FINAL SHUTIN MINUTES 180 INTERVAL 6	
.104	99	—		1	.175		—	
.112		1.182		2	.182		.476	
.122		1.221		3	.201		.904	
.132		1.240		4	.220		.954	
.142		1.244		5	.242		.978	
.160	153	1.245		6	.260		.994	
		1.245		7	.282		1.002	
		1.245	1201.3	8	.297		1.015	
				9	.314		1.022	
				10	.324		1.026	
				11	.336		1.029	
				12	.346		1.030	
				13	.356		1.030	992
				14	.360		1.030	
				15	.367		1.030	
				16	.376	360		
				17				
				18				
				19				
				20				
				21				
				22				
				23				
				24				
				25				
				26				
				27				

22
30

1.030

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

628 6897

1-800-593-5620

No 4906

Test Ticket

Well Name & No. MESCHBERGER HEIRS 1-G Test No. ONE Date 5-17-92

Company RANKEN ENERGY CORP. Zone Tested VIOLA

Address 2325 E NW 15TH ST. EDMOND OK. 73013 Elevation 1845' GL

Co. Rep./Geo. _____ Cont. _____ Est. Ft. of Pay 8

Location: Sec. 06 Twp. 24S Rge. 11W Co. STAFFORD State KS

No. of Copies 5 Distribution Sheet ____ Yes (No) Turnkey ____ Yes (No) Evaluation

Interval Tested 3761 TO 3841 Drill Pipe Size 4 1/2" XH

Anchor Length 80' Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3756 Hole Size — 7 7/8" ____ Rubber Size — 6 3/4" ____

Bottom Packer Depth 3761 Wt. Pipe I.D. — 2.7 Ft. Run ____

Total Depth 3841 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.0 lb / gal. Viscosity 46 Filtrate 11.2

Tool Open @ 10:15 A Initial Blow VERY GOOD BOT. BUCKET IN 2 MIN.

Final Blow SAME AS INITIAL

Recovery — Total Feet 804 Feet of Gas in Pipe 2,800 Flush Tool? NO

Rec. 186	Feet Of	O.C.M.	%gas 35	%oil	%water 65	%mud
Rec. 60	Feet Of	G.+O.C.M.	%gas 35	%oil 10	%water	%mud 55
Rec. 434	Feet Of	G.O.+W.C.M.	%gas 20	%oil 10	%water 25	%mud 45
Rec. 124	Feet Of	G.O.+M.C.W.	%gas 10	%oil 5	%water 75	%mud 10
Rec. ____	Feet Of	____	%gas	%oil	%water	%mud

BHT 104 °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW 0.3 @ 80 °F Chlorides 19500 ppm Recovery Chlorides 8000 ppm System

(A) Initial Hydrostatic Mud	1911 PSI	AK1 Recorder No.	2215	Range	3925
(B) First Initial Flow Pressure	95 PSI	@ (depth)	3825	w/Clock No.	17640
(C) First Final Flow Pressure	153 PSI	AK1 Recorder No.	10248	Range	4400
(D) Initial Shut-In Pressure	1167 PSI	@ (depth)	3841	w/Clock No.	19960
(E) Second Initial Flow Pressure	153 PSI	AK1 Recorder No.	____	Range	____
(F) Second Final Flow Pressure	363 PSI	@ (depth)	____	w/Clock	[redacted]
(G) Final Shut-In Pressure	953 PSI	Initial Opening	15	Test	550.00
(H) Final Hydrostatic Mud	1911 PSI	Initial Shut-In	45	Jars	200.00
		Final Flow	120	Safety Joint	50.00
		Final Shut-In	180	Straddle	____
				Circ. Sub	____
				Sampler	____
				Extra Packer	____
				Other	____
				TOTAL PRICE $	800.00

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 Doug Bellis

Our Representative [signature]

Printcraft Printers - Hays, KS

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MESCHBERGER HEIRS 1-6 Test No. 2 Date 5/20/92

Company RANKEN ENERGY CORP. Zone VIOLA

Address 2325 W. 15TH EDMOND OK 73013 Elevation 1845

Co. Rep./Geo. DOUG BELLIS Cont. EMPHASIS #7 Est. Ft. of Pay

Location: Sec. 6 Twp. 24S Rge. 11W Co. STAFFORD State KS

Interval Tested 3800-3832 Drill Pipe Size 4.5 XH

Anchor Length 32 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 3800 Drill Collar – 2.25 Ft. Run

Bottom Packer Depth 3832 Mud Wt. 9 lb/Gal.

Total Depth 3915 Viscosity 46 Filtrate 11.2

Tool Open @ 6:45 PM Initial Blow VERY WEAK FOR 7 MINUTES-DEAD

Final Blow SAME AS INITIAL

Recovery - Total Feet 15 Flush Tool? YES

Rec. 15 Feet of MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT N/A °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides 8000 ppm System

(A) Initial Hydrostatic Mud 1871.3 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 34.5 PSI @ (depth) 3817 w / Clock No. 17640

(C) First Final Flow Pressure 34.5 PSI AK1 Recorder No. 10248 Range 4400

(D) Initial Shut-in Pressure 1085.9 PSI @ (depth) 3827 w / Clock No. 19960

(E) Second Initial Flow Pressure 34.5 PSI AK1 Recorder No. 11058 Range 4500

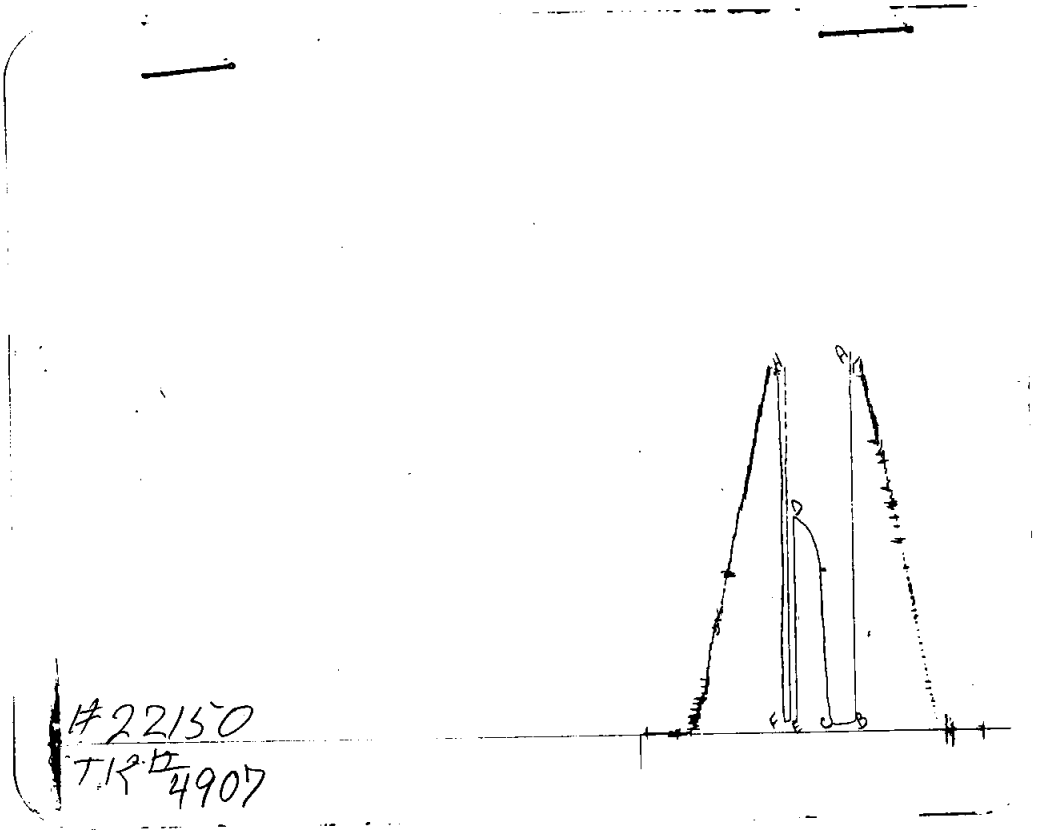
(F) Second Final Flow Pressure 42.9 PSI @ (depth) 3915 w / Clock No. 69696

(G) Final Shut-in Pressure PSI Initial Opening 10 Final Flow 10

(H) Final Hydrostatic Mud 1867.4 PSI Initial Shut-in 30 Final Shut-in

Our Representative HARRY SCHMIDT

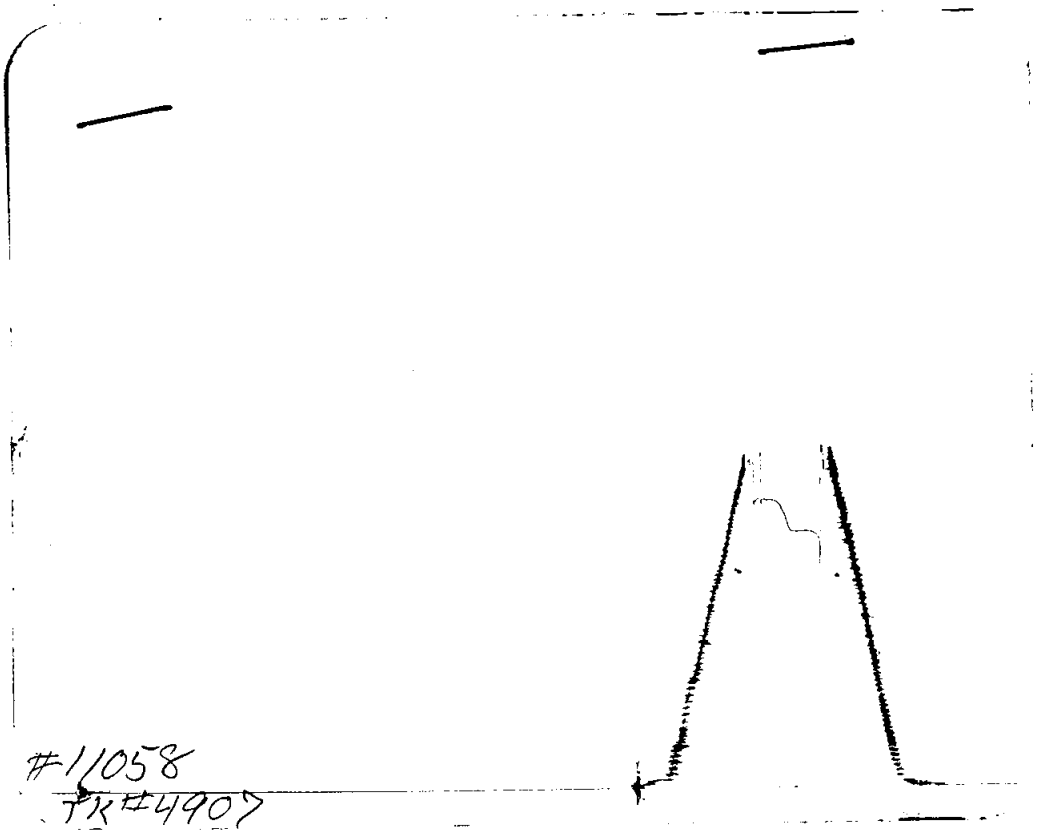
CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1862	1871.3
(B) FIRST INITIAL FLOW PRESSURE	30	34.5
(C) FIRST FINAL FLOW PRESSURE	30	34.5
(D) INITIAL CLOSED-IN PRESSURE	1079	1085.9
(E) SECOND INITIAL FLOW PRESSURE	30	34.5
(F) SECOND FINAL FLOW PRESSURE	40	42.9
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD	1860	1867.4

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING

(A) INITIAL HYDROSTATIC MUD

(B) FIRST INITIAL FLOW PRESSURE

(C) FIRST FINAL FLOW PRESSURE

(D) INITIAL CLOSED-IN PRESSURE

(E) SECOND INITIAL FLOW PRESSURE

(F) SECOND FINAL FLOW PRESSURE

(G) FINAL CLOSED-IN PRESSURE

(H) FINAL HYDROSTATIC MUD

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 4907

Well Name & No. MESCHBERGER HEIRS 1-6 Test No. TWO Date 5-20-92

Company RANKEN ENERGY CORP. Zone Tested VIOLA

Address 2325 SW 15TH ST. EDMOND OK 73013 Elevation 1845 GL

Co. Rep./Geo. DAVEY BELLIS Cont. EMPHASIS #7 Est. Ft. of Pay

Location: Sec. 06 Twp. 24S Rge. 11W Co. STAFFORD State KS

No. of Copies 5 Distribution Sheet ____ Yes ____ (No) Turnkey ____ Yes ____ (No) Evaluation

Interval Tested 3800 TO 3832 Drill Pipe Size 4 1/2" XH

Anchor Length 32' Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3800 Hole Size — 7 7/8" ____ Rubber Size — 6 3/4" ____

Bottom Packer Depth 3832 Wt. Pipe I.D. — 2.7 Ft. Run ____

Total Depth 3915 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.0 lb/gal. Viscosity 46 Filtrate 11.2

Tool Open @ 6:45 P Initial Blow VERY WEAK FOR 7 MIN. DEAD

Final Blow SAME AS INITIAL

Recovery — Total Feet 15 Feet of Gas in Pipe ____ Flush Tool? YES

Rec. 15	Feet Of MUD	%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
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud

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

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides 8000 ppm System

(A) Initial Hydrostatic Mud	1862 PSI	AK1 Recorder No.	22150	Range	3925
(B) First Initial Flow Pressure	30 PSI	@ (depth)	3817	w/Clock No.	17640
(C) First Final Flow Pressure	30 PSI	AK1 Recorder No.	10248	Range	4400
(D) Initial Shut-In Pressure	1079 PSI	@ (depth)	3827	w/Clock No.	19960
(E) Second Initial Flow Pressure	30 PSI	AK1 Recorder No.	11058	Range	4500
(F) Second Final Flow Pressure	40 PSI	@ (depth)	3915	w/Clock No.	696969
(G) Final Shut-In Pressure	____ PSI	Initial Opening	10	Test	550 OW
(H) Final Hydrostatic Mud	1860 PSI	Initial Shut-In	30	Jars	200 OW
		Final Flow	10	Safety Joint	50 OW
		Final Shut-In	____	Straddle	250 OW
				Circ. Sub	____
				Sampler	____
				Extra Packer	____
				Other	____
				TOTAL PRICE $	1050 OW

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Approved By Doug Bellis

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