



P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

Nº 18727

Elevation 2762 KB Formation L KC K Eff. Pay Ft.

District Colby Date 4 23 93 Customer Order No. _____

COMPANY NAME Ritchie Exploration, Inc

ADDRESS 125 N Market Suite 1000 Wichita KS. 67202

LEASE AND WELL NO. #1 O. Hineman COUNTY lane STATE KS. Sec. 23 Twp. R Rge. 28

Mail Invoice To Same Co. Name #1 D Hineman Address _____ No. Copies Requested reg

Mail Charts To Same Address _____ No. Copies Requested reg

Formation Test No. 1 Interval Tested From 4296 ft. to 4307 ft. Total Depth 4307 ft.

Packer Depth 4291 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4296 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4299 ft. Recorder Number 6233 Cap. 4000

Bottom Recorder Depth (Outside) 4302 ft. Recorder Number 13400 Cap. 3950

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Duke Rig #4 Drill Collar Length 117 I. D. 2.2 in.

Mud Type _____ Viscosity 43 Weight Pipe Length 225 I. D. 3.2 in.

Weight 9.5 Water Loss 11.0 cc. Drill Pipe Length 3934 I. D. 3.8 in.

Chlorides 3000 P.P.M. Test Tool Length 20 ft. Tool Size 5/200 in.

Jars: Make no Serial Number - Anchor Length 11 ft. Size 5/200 in.

Did Well Flow? no Reversed Out yes Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7/8 in. Tool Joint Size 4/200 in.

Blow: IFP- Strong blow- bottom of bucket in 2 min

FFD- Strong blow- bottom of bucket in 5 min

Recovered 240 ft. of Gas in pipe

Recovered 45 ft. of oil Gravity 39 at 60°

Recovered 60 ft. of 500m 54% oil 95% mud

Recovered 180 ft. of 500m water 14% oil 10% mud 89% wtr

Recovered 1185 ft. of water few oil spots- oil less than 1%

Chlorides 36.000 P.P.M. Sample Jars used _____ Remarks: _____

APR 30 1993

Time On Location 300 A.M. Time Pick Up Tool 400 A.M. Time Off Location _____ A.M.

Time Set Packer(s) 5 25 A.M. Time Started Off Bottom 725 A.M. Maximum Temperature 136 P.M.

Initial Hydrostatic Pressure _____ (A) 2137 P.S.I.

Initial Flow Period _____ Minutes 30 (B) 182 P.S.I. to (C) 567 P.S.I.

Initial Closed In Period _____ Minutes 30 (D) 736 P.S.I.

Final Flow Period _____ Minutes 30 (E) 607 P.S.I. to (F) 717 P.S.I.

Final Closed In Period _____ Minutes 30 (G) 736 P.S.I.

Final Hydrostatic Pressure _____ (H) 2107 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to 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, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Mike Shulert
Signature of Customer or his authorized representative

Western Representative Mike Shulert

Thank you folks!

FIELD INVOICE

Open Hole Test	\$
Misrun	\$
Straddle Test	\$
Jars	\$
Selective Zone	\$
Safety Joint	\$
Standby	\$
Evaluation	\$
Extra Packer	\$
Circ. Sub.	\$
Mileage	\$
Fluid Sampler	\$
Extra Charts	\$
Insurance	\$
Telecopier	\$
TOTAL	\$

WESTERN TESTING CO., INC.

Pressure Data

Date 4-23-93

Test Ticket No. 18727

Recorder No. _____ Capacity _____ Location 4299 Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2147</u> P.S.I.	<u>5:25</u> M	
B First Initial Flow Pressure	<u>189</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>586</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>745</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>629</u> P.S.I.	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>717</u> P.S.I.		
G Final Closed-in Pressure	<u>749</u> P.S.I.		
H Final Hydrostatic Mud	<u>2127</u> P.S.I.		

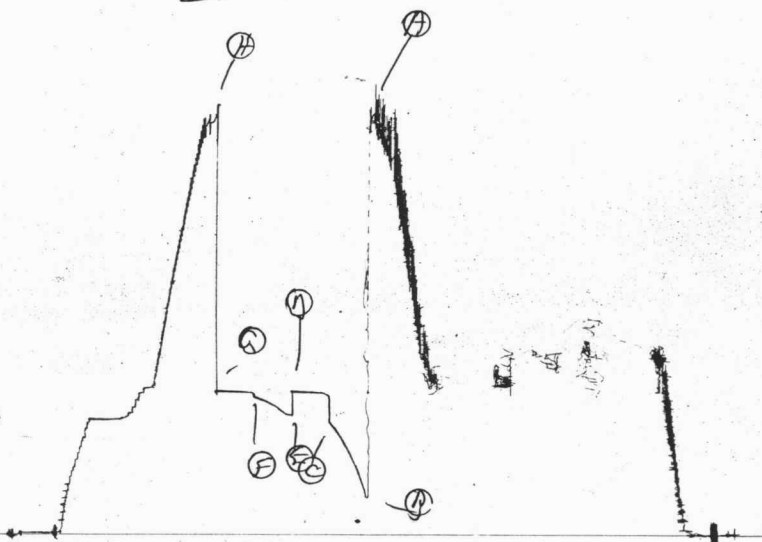
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>189</u>	0	<u>586</u>	0	<u>629</u>	0	<u>717</u>
P 2 5	<u>278</u>	3	<u>737</u>	5	<u>631</u>	3	<u>745</u>
P 3 10	<u>362</u>	6	<u>740</u>	10	<u>659</u>	6	<u>747</u>
P 4 15	<u>437</u>	9	<u>740</u>	15	<u>681</u>	9	<u>747</u>
P 5 20	<u>500</u>	12	<u>741</u>	20	<u>697</u>	12	<u>747</u>
P 6 25	<u>534</u>	15	<u>741</u>	25	<u>709</u>	15	<u>748</u>
P 7 30	<u>586</u>	18	<u>742</u>	30	<u>717</u>	18	<u>748</u>
P 8 35		21	<u>742</u>	35		21	<u>748</u>
P 9 40		24	<u>743</u>	40		24	<u>749</u>
P 10 45		27	<u>744</u>	45		27	<u>749</u>
P 11 50		30	<u>745</u>	50		30	<u>749</u>
P 12 55		33		55		33	
P 13 60		36		60		36	
P 14 65		39		65		39	
P 15 70		42		70		42	
P 16 75		45		75		45	
P 17 80		48		80		48	
P 18 85		51		85		51	
P 19 90		54		90		54	
P 20 95		57		95		57	
100		60		100		60	

6233
DS 7221

K+18727

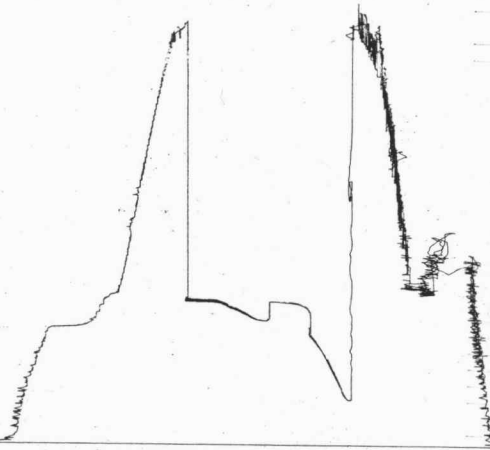
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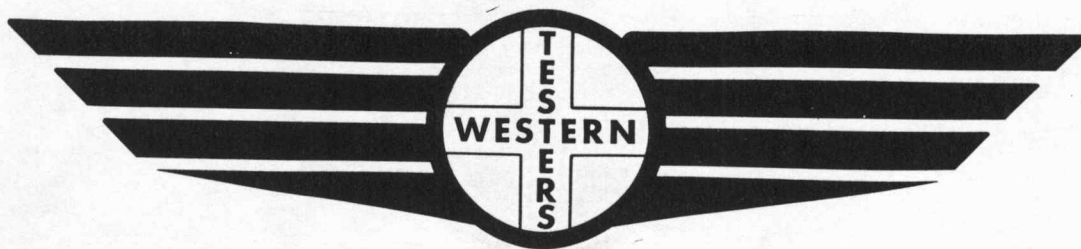
6233
DS 7221

K+18727

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone **1 - 800-688- 7021**

DST REPORT

GENERAL INFORMATION

DATE	: 4/23/93	TICKET	: 18727
CUSTOMER	: RITCHIE EXPLORATION INC.	LEASE	: O HINEMAN
WELL	: #1	TEST: 1	GEOLOGIST: NOAH
ELEVATION	: 2762 KB	FORMATION	: L KANSAS CITY K
SECTION	: 23	TOWNSHIP	: 19S
RANGE	: 28W	COUNTY: LANE	STATE : KS
GAUGE SN#	: 6233	RANGE : 4000	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4296.00 ft	TO:	4307.00 ft	TVD:	4307.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4299.0 ft		4302.0 ft		
TEMPERATURE:	136.0				
DRILL COLLAR LENGTH:	117.0 ft	I.D.:		2.200 in	
WEIGHT PIPE LENGTH :	225.0 ft	I.D.:		3.200 in	
DRILL PIPE LENGTH :	3934.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	11.0 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:	4291.0 ft	SIZE:		6.750 in	
PACKER DEPTH:	4296.0 ft	SIZE:		6.750 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	VISCOSITY :	43.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	11.000 cc
WEIGHT :	9.500 ppg	SERIAL NUMBER:	
CHLORIDES :	3000 ppm	REVERSED OUT?:	YES
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF
BUCKET IN 2 MINUTES. FINAL FLOW PERIOD STRONG
BLOW - BOTTOM OF BUCKET IN 5 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
45.0	100.0	0.0	0.0	0.0	OIL
0.0	0.0	0.0	0.0	0.0	GRAVITY 39 @ 60 DEGREES
60.0	5.0	0.0	0.0	95.0	SL OIL CUT MUD
180.0	1.0	0.0	89.0	10.0	S OIL CUT MUDDY WATER
1185.0	0.0	0.0	100.0	0.0	WATER-FEW OIL SPOTS <1%
0.0	0.0	0.0	0.0	0.0	CHLORIDES 36000 PPM
0.0	0.0	0.0	0.0	0.0	240 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.6985 STB	TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	36.0197 STB/D
MUD VOLUME:	1.0520 STB	AVERAGE WATER RATE:	410.6152 STB/D
WATER VOLUME:	16.8593 STB		
TOTAL FLUID :	18.6098 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2137.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	182.00	567.00
INITIAL SHUT-IN	30.00		736.00
FINAL FLOW	30.00	607.00	717.00
FINAL SHUT-IN	30.00		736.00

FINAL HYDROSTATIC PRESSURE: 2107.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2147.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	189.00	586.00
INITIAL SHUT-IN	30.00		745.00
FINAL FLOW	30.00	629.00	717.00
FINAL SHUT-IN	30.00		749.00

FINAL HYDROSTATIC PRESSURE: 2127.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 4/23/93	TICKET : 18727
CUSTOMER : RITCHIE EXPLORATION INC.	LEASE : O HINEMAN
WELL : #1 TEST: 1	GEOLOGIST: NOAH
ELEVATION: 2762 KB	FORMATION: L KANSAS CITY K
SECTION : 23	TOWNSHIP : 19S
RANGE : 28W COUNTY: LANE	STATE : KS
GAUGE SN#: 6233 RANGE : 4000	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	189.00	189.00
5.00	278.00	89.00
10.00	362.00	84.00
15.00	437.00	75.00
20.00	500.00	63.00
25.00	554.00	54.00
30.00	586.00	32.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	737.00	737.00	0.00
6.00	740.00	3.00	0.00
9.00	740.00	0.00	0.00
12.00	741.00	1.00	0.00
15.00	741.00	0.00	0.00
18.00	742.00	1.00	0.00
21.00	742.00	0.00	0.00
24.00	743.00	1.00	0.00
27.00	744.00	1.00	0.00
30.00	745.00	1.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	629.00	629.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
5.00	631.00	2.00
10.00	659.00	28.00
15.00	681.00	22.00
20.00	697.00	16.00
25.00	709.00	12.00
30.00	717.00	8.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	745.00	745.00	0.00
6.00	747.00	2.00	0.00
9.00	747.00	0.00	0.00
12.00	747.00	0.00	0.00
15.00	748.00	1.00	0.00
18.00	748.00	0.00	0.00
21.00	748.00	0.00	0.00
24.00	749.00	1.00	0.00
27.00	749.00	0.00	0.00
30.00	749.00	0.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N^o 18728

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 2762 KB Formation 6 KC M.C. 16 Eff. Pay Ft.

District Colby Date 4-24-93 Customer Order No.

COMPANY NAME Ritchie Exploration, Inc

ADDRESS 125 N Market Suite 1000 Wichita KS. 67202

LEASE AND WELL NO. #1.0 Hineman COUNTY lane STATE KS. Sec. 23 Twp. 19 Rge. 28

Mail Invoice To Same Co. Name #1 0 Hineman No. Copies Requested Reg

Mail Charts To Same Address No. Copies Requested Reg

Formation Test No. 2 Interval Tested From 4334 ft. to 4346 ft. Total Depth 4346 ft.

Packer Depth 4329 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Packer Depth 4334 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4337 ft. Recorder Number 6233 Cap. 4000

Bottom Recorder Depth (Outside) 4340 ft. Recorder Number 13400 Cap. 3950

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Duke Rig #4 Drill Collar Length 117 I. D. 2.2 in.

Mud Type Chemical Viscosity 46 Weight Pipe Length 225 I. D. 3.2 in.

Weight 9.2 + Water Loss 10.8 cc. Drill Pipe Length 3972 I. D. 3.8 in.

Chlorides 3.000 P.P.M. Test Tool Length 20 ft. Tool Size 5/200 in.

Jars: Make NO Serial Number Anchor Length 12 ft. Size 5/200 in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7/8 in. Tool Joint Size 1/2 XH in.

Blow: IFP - Weak surface blow - died in 15 min - flushed tool - surged & died

FFP - NO blow - flushed tool - surged & died

Recovered 10 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks:

APR 30 1993

Time On Location 8 00 A.M. Time Pick Up Tool 8 30 A.M. Time Off Location 2 00 A.M.

Time Set Packer(s) 10 00 A.M. Time Started Off Bottom 12 00 A.M. Maximum Temperature 137

Initial Hydrostatic Pressure (A) 2177 P.S.I.

Initial Flow Period Minutes 30 (B) 10 P.S.I. to (C) 10 P.S.I.

Initial Closed In Period Minutes 30 (D) 376 P.S.I.

Final Flow Period Minutes 30 (E) 10 P.S.I. to (F) 10 P.S.I.

Final Closed In Period Minutes 30 (G) 325 P.S.I.

Final Hydrostatic Pressure (H) 2147 P.S.I.

COMPANY TERMS

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All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Mike Shubert
Signature of Customer or his authorized representative

Western Representative Mike Shubert

Thank You

FIELD INVOICE

Open Hole Test \$
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$

WESTERN TESTING CO., INC.

Pressure Data

Date 4-24-93

Test Ticket No. 18728

Recorder No. _____ Capacity _____ Location _____

Clock No. _____ Elevation _____ Well Temperature 137

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2183</u>	P.S.I.	<u>10:00A</u>	M
B First Initial Flow Pressure	<u>36</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
C First Final Flow Pressure	<u>15</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
D Initial Closed-in Pressure	<u>382</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
E Second Initial Flow Pressure	<u>47</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
F Second Final Flow Pressure	<u>18</u>	P.S.I.	<u>30</u> Mins.	<u>27</u> Min
G Final Closed-in Pressure	<u>335</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2143</u>	P.S.I.		

Open Tool

First Flow Pressure

Initial Closed-in Pressure

Second Flow Pressure

Final Closed-in Pressure

*Flushed tool initial
flow period 10 min +
final flow period*

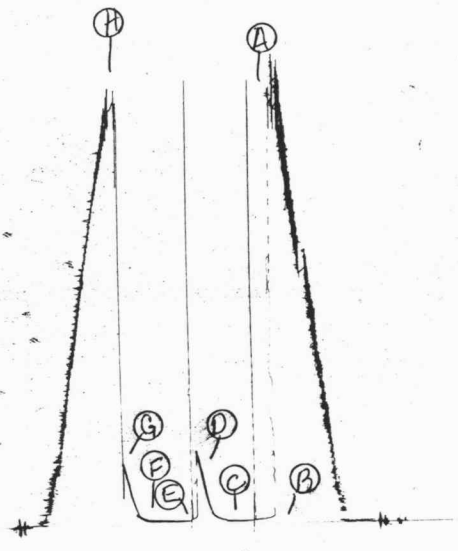
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>36</u>	0	<u>15</u>	0	<u>18</u>	0	<u>18</u>
P 2 5	<u>22</u>	3	<u>15</u>	5	<u>18</u>	3	<u>18</u>
P 3 10	<u>20</u>	6	<u>22</u>	10	<u>18</u>	6	<u>24</u>
P 4 15	<u>16</u>	9	<u>28</u>	15	<u>18</u>	9	<u>33</u>
P 5 20	<u>15</u>	12	<u>35</u>	20	<u>18</u>	12	<u>47</u>
P 6 25	<u>15</u>	15	<u>52</u>	25	<u>18</u>	15	<u>108</u>
P 7 30	<u>15</u>	18	<u>108</u>	30	<u>18</u>	18	<u>175</u>
P 8 35		21	<u>187</u>	35		21	<u>250</u>
P 9 40		24	<u>285</u>	40		24	<u>319</u>
P 10 45		27	<u>380</u>	45		27	<u>335</u>
P 11 50		30	<u>382</u>	50		30	
P 12 55		33		55		33	
P 13 60		36		60		36	
P 14 65		39		65		39	
P 15 70		42		70		42	
P 16 75		45		75		45	
P 17 80		48		80		48	
P 18 85		51		85		51	
P 19 90		54		90		54	
P 20 95		57		95		57	
100		60		100		60	

13400
#2

TK#18728

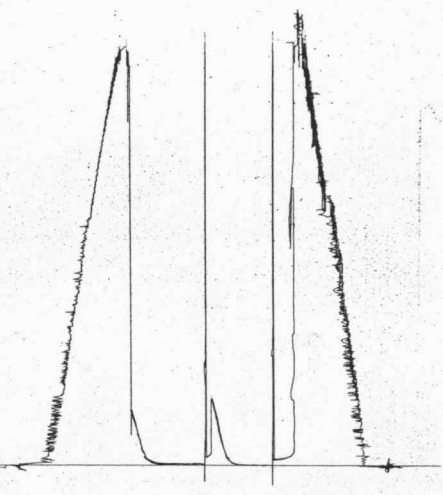
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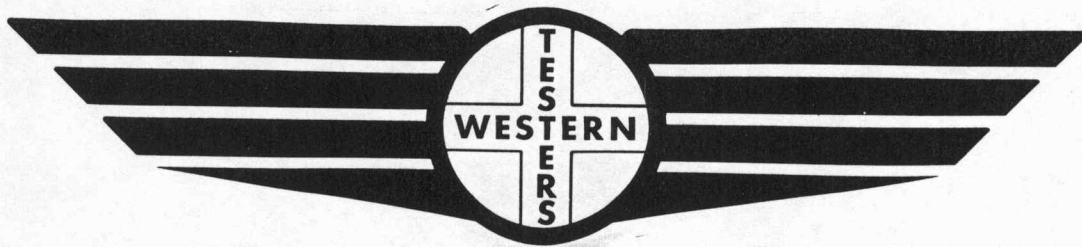
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TK#18728

O.



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone **1 - 800-688-7021**

DST REPORT

GENERAL INFORMATION

DATE	: 4/24/93	TICKET	: 18728
CUSTOMER	: RITCHIE EXPLORATION INC.	LEASE	: O HINEMAN
WELL	: #1	TEST: 2	GEOLOGIST: NOAH
ELEVATION	: 2762 KB	FORMATION	: L KANSAS CITY M.C. L
SECTION	: 23	TOWNSHIP	: 19S
RANGE	: 28W	STATE	: KS
GAUGE SN#	: 6233	RANGE	: 4000
		CLOCK	: 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4334.00 ft	TO:	4346.00 ft	TVD:	4346.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4337.0 ft		4340.0 ft		
TEMPERATURE:	137.0				
DRILL COLLAR LENGTH:	117.0 ft	I.D.:		2.200 in	
WEIGHT PIPE LENGTH :	225.0 ft	I.D.:		3.200 in	
DRILL PIPE LENGTH :	3972.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	12.0 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:	4329.0 ft	SIZE:		6.750 in	
PACKER DEPTH:	4334.0 ft	SIZE:		6.750 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	VISCOSITY :	46.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	10.800 cc
WEIGHT :	9.200 ppg	SERIAL NUMBER:	
CHLORIDES :	3000 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK SURFACE BLOW - DIED IN
15 MINUTES-FLUSHED TOOL-SURGED & DIED. FINAL FLOW
PERIOD NO BLOW-FLUSHED TOOL-SURGED & DIED.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
10.0	0.0	0.0	0.0	100.0	MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	60.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.0470	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.0470	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2177.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	10.00	10.00
INITIAL SHUT-IN	30.00		376.00
FINAL FLOW	30.00	10.00	10.00
FINAL SHUT-IN	30.00		325.00

FINAL HYDROSTATIC PRESSURE: 2147.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2183.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	36.00	15.00
INITIAL SHUT-IN	30.00		382.00
FINAL FLOW	30.00	31.00	18.00
FINAL SHUT-IN	27.00		335.00

FINAL HYDROSTATIC PRESSURE: 2143.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 4/24/93	TICKET : 18728
CUSTOMER : RITCHIE EXPLORATION INC.	LEASE : O HINEMAN
WELL : #1	GEOLOGIST: NOAH
ELEVATION: 2762 KB	FORMATION: L KANSAS CITY M.C. L
SECTION : 23	TOWNSHIP : 19S
RANGE : 28W	STATE : KS
COUNTY: LANE	CLOCK : 12
GAUGE SN#: 6233	RANGE : 4000

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	36.00	36.00
5.00	22.00	-14.00
10.00	20.00	-2.00
15.00	16.00	-4.00
20.00	15.00	-1.00
25.00	15.00	0.00
30.00	15.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	15.00	15.00	0.00
6.00	22.00	7.00	0.00
9.00	28.00	6.00	0.00
12.00	35.00	7.00	0.00
15.00	52.00	17.00	0.00
18.00	108.00	56.00	0.00
21.00	187.00	79.00	0.00
24.00	285.00	98.00	0.00
27.00	380.00	95.00	0.00
30.00	382.00	2.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	31.00	31.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
5.00	18.00	-13.00
10.00	18.00	0.00
15.00	18.00	0.00
20.00	18.00	0.00
25.00	18.00	0.00
30.00	18.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	18.00	18.00	0.00
6.00	24.00	6.00	0.00
9.00	33.00	9.00	0.00
12.00	47.00	14.00	0.00
15.00	108.00	61.00	0.00
18.00	175.00	67.00	0.00
21.00	250.00	75.00	0.00
24.00	319.00	69.00	0.00
27.00	335.00	16.00	0.00



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

LAST
No 18729

P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

Elevation 2762 KB

Formation Johnson

Eff. Pay F

District Colby

Date 4-25-93

Customer Order No.

COMPANY NAME

Ritchie Exploration, Inc.

ADDRESS

125 N. Market Suite 1000 Wichita KS. 67202

LEASE AND WELL NO.

#1 O. Hineman

COUNTY Lane

STATE KS.

Sec. 23

Twp. 19

Rge. 20

Mail Invoice To

Co. Name

Same

Address

No. Copies Requested

Reg

Mail Charts To

Same

Address

No. Copies Requested

Reg

Formation Test No. 3

Interval Tested From 4377

ft. to 4630

ft. Total Depth 4630

ft.

Packer Depth 4372

ft.

Size 6 3/4

in.

Packer Depth

ft.

Size

in.

Packer Depth 4377

ft.

Size 6 3/4

in.

Packer Depth

ft.

Size

in.

Depth of Selective Zone Set

Top Recorder Depth (Inside)

4380

ft.

Recorder Number 4233

Cap.

4000

Bottom Recorder Depth (Outside)

4383

ft.

Recorder Number 13400

Cap.

3950

Below Straddle Recorder Depth

-

ft.

Recorder Number

Cap.

Drilling Contractor

Duke

#4

Drill Collar Length

I. D.

-

in.

Mud Type Chemical

Viscosity

49

Weight Pipe Length

I. D.

-

in.

Weight 9.4

Water Loss

12.0

cc.

Drill Pipe Length 4357

I. D.

3.8

in.

Chlorides

3000

P.P.M.

Test Tool Length

20

ft.

Tool Size

5 1/2" OD

in.

Jars: Make

No

Serial Number

-

Anchor Length

253

ft.

Size

5 1/2" OD

in.

Did Well Flow? No

Reversed Out

No

Surface Choke Size 3 1/4

in.

Bottom Choke Size 3 1/4

in.

Main Hole Size 7 7/8

in.

Tool Joint Size 4 1/2" KH

in.

Blow: IFFP-

Weak blow - 1/2" in water

FFP-

Weak surface blow

Recovered 40

ft. of

mud w few oil spots - oil less than 1%

Recovered

ft. of

Recovered

ft. of

Recovered

ft. of

Recovered

ft. of

Chlorides

P.P.M. Sample Jars used

Remarks:

APR 30 1993

Time On Location

3:00

A.M.
P.M.

Time Pick Up Tool

5:15

A.M.
P.M.

Time Off Location

A.M.
P.M.

Time Set Packer(s)

6:30

A.M.
P.M.

Time Started Off Bottom

8:30

A.M.
P.M.

Maximum Temperature 138

Initial Hydrostatic Pressure

(A) 2217 P.S.I.

Initial Flow Period

Minutes 30

(B)

30

P.S.I. to (C) 30 P.S.I.

Initial Closed In Period

Minutes 30

(D)

936

P.S.I.

Final Flow Period

Minutes 30

(E)

40

P.S.I. to (F) 40 P.S.I.

Final Closed In Period

Minutes 30

(G)

557

P.S.I.

Final Hydrostatic Pressure

(H) 2197 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to 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, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By

Signature of Customer or his authorized representative

Western Representative

Mike Shubert

Thanks!

FIELD INVOICE

Open Hole Test	\$
Misrun	\$
Straddle Test	\$
Jars	\$
Selective Zone	\$
Safety Joint	\$
Standby	\$
Evaluation	\$
Extra Packer	\$
Circ. Sub.	\$
Mileage	\$
Fluid Sampler	\$
Extra Charts	\$
Insurance	\$
Telecopier	\$
TOTAL	\$

WESTERN TESTING CO., INC.
Pressure Data

Date 4-25-93 Test Ticket No. 18729
Recorder No. 6233 Capacity _____ Location Ø 4380
Clock No. _____ Elevation _____ Well Temperature _____

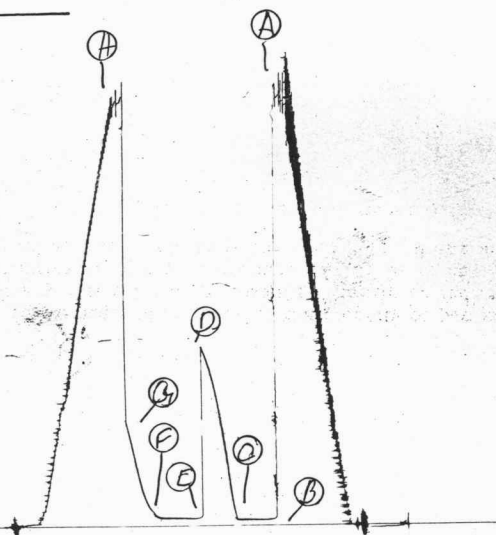
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2219</u>	P.S.I.	<u>6:30</u> M	
B First Initial Flow Pressure	<u>42</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
C First Final Flow Pressure	<u>33</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
D Initial Closed-in Pressure	<u>934</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
E Second Initial Flow Pressure	<u>50</u>	P.S.I.	<u>30</u> Mins.	<u>30</u> Min
F Second Final Flow Pressure	<u>42</u>	P.S.I.		
G Final Closed-in Pressure	<u>552</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2193</u>	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>42</u>	0	<u>33</u>	0	<u>50</u>	0	<u>42</u>
P 2 5	<u>33</u>	3	<u>124</u>	5	<u>42</u>	3	<u>50</u>
P 3 10	<u>33</u>	6	<u>280</u>	10	<u>42</u>	6	<u>73</u>
P 4 15	<u>↓</u>	9	<u>384</u>	15	<u>↓</u>	9	<u>102</u>
P 5 20	<u>↓</u>	12	<u>508</u>	20	<u>↓</u>	12	<u>138</u>
P 6 25	<u>↓</u>	15	<u>604</u>	25	<u>↓</u>	15	<u>193</u>
P 7 30	<u>33</u>	18	<u>693</u>	30	<u>42</u>	18	<u>274</u>
P 8 35		21	<u>777</u>	35		21	<u>362</u>
P 9 40		24	<u>843</u>	40		24	<u>457</u>
P10 45		27	<u>904</u>	45		27	<u>572</u>
P11 50		30	<u>934</u>	50		30	<u>552</u>
P12 55		33		55		33	
P13 60		36		60		36	
P14 65		39		65		39	
P15 70		42		70		42	
P16 75		45		75		45	
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	

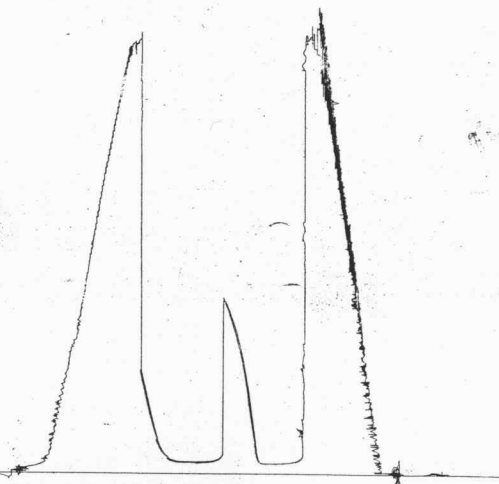
6233
#3

TK# 18729
I.

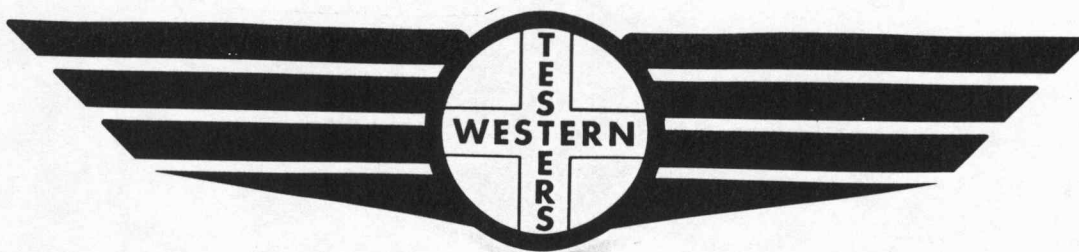


13010
#3

TK# 18729
O.



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688- 7021

DST REPORT

GENERAL INFORMATION

DATE : 4/25/93
CUSTOMER : RITCHIE EXPLORATION INC.
WELL : #1 TEST: 3
ELEVATION: 2762 KB
SECTION : 23
RANGE : 28W COUNTY: LANE
GAUGE SN#: 6233 RANGE : 4000

TICKET : 18729
LEASE : O HINEMAN
GEOLOGIST: NOAH
FORMATION: JOHNSON
TOWNSHIP : 19S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4377.00 ft TO: 4630.00 ft TVD: 4630.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4380.0 ft 4383.0 ft
TEMPERATURE: 138.0

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 :	4357.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	253.0 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:	4372.0 ft	SIZE:	6.750 in
PACKER DEPTH:	4377.0 ft	SIZE:	6.750 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
WEIGHT : 9.400 ppg
CHLORIDES : 3000 ppm
JARS-MAKE :
DID WELL FLOW?: NO

VISCOSITY : 49.00 cp
WATER LOSS: 12.000 cc

SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW - 1/2 INCH IN WATER
FINAL FLOW PERIOD WEAK SURFACE BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
40.0	0.0	0.0	0.0	100.0	MUD W/FEW OIL SPOTS<1%

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	0.0000	SCF		
MUD VOLUME:	0.5611	STB	TOTAL FLOW TIME:	60.0000 min.
WATER VOLUME:	0.0000	STB	AVERAGE OIL RATE:	0.0000 STB/D
TOTAL FLUID :	0.5611	STB	AVERAGE WATER RATE:	0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2217.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	30.00	30.00
INITIAL SHUT-IN	30.00		936.00
FINAL FLOW	30.00	40.00	40.00
FINAL SHUT-IN	30.00		557.00

FINAL HYDROSTATIC PRESSURE: 2197.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2219.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	42.00	33.00
INITIAL SHUT-IN	30.00		934.00
FINAL FLOW	30.00	50.00	42.00
FINAL SHUT-IN	30.00		552.00

FINAL HYDROSTATIC PRESSURE: 2193.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 4/25/93	TICKET	: 18729
CUSTOMER	: RITCHIE EXPLORATION INC.	LEASE	: O HINEMAN
WELL	: #1	GEOLOGIST	: NOAH
ELEVATION	: 2762 KB	FORMATION	: JOHNSON
SECTION	: 23	TOWNSHIP	: 19S
RANGE	: 28W	STATE	: KS
GAUGE SN#	: 6233	CLOCK	: 12
	COUNTY: LANE		
	RANGE : 4000		

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	42.00	42.00
5.00	33.00	-9.00
10.00	33.00	0.00
15.00	33.00	0.00
20.00	33.00	0.00
25.00	33.00	0.00
30.00	33.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	124.00	124.00	0.00
6.00	280.00	156.00	0.00
9.00	384.00	104.00	0.00
12.00	508.00	124.00	0.00
15.00	604.00	96.00	0.00
18.00	693.00	89.00	0.00
21.00	777.00	84.00	0.00
24.00	843.00	66.00	0.00
27.00	904.00	61.00	0.00
30.00	934.00	30.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	50.00	50.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
5.00	42.00	-8.00
10.00	42.00	0.00
15.00	42.00	0.00
20.00	42.00	0.00
25.00	42.00	0.00
30.00	42.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	50.00	50.00	0.00
6.00	73.00	23.00	0.00
9.00	102.00	29.00	0.00
12.00	138.00	36.00	0.00
15.00	193.00	55.00	0.00
18.00	274.00	81.00	0.00
21.00	362.00	88.00	0.00
24.00	457.00	95.00	0.00
27.00	512.00	55.00	0.00
30.00	552.00	40.00	0.00