



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 8709

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

WICHITA, KANSAS 67201

Elevation 2140 KBushing Formation Conglomerate Eff. Pay — Ft.District Great Bend Date 11-10-80 Customer Order No. —COMPANY NAME OR K+E Petroleum Inc.ADDRESS 816 Union Center Bldg., Wichita, Kansas 67202LEASE AND WELL NO. Hagerman #1 COUNTY Pawnee STATE Kansas Sec. 28 Twp. 20S Rge. 20WMail Invoice To Same as above No. Copies Requested 5Co. Name — Address —Mail Charts To Same as above No. Copies Requested 5Address —Formation Test No. — Interval Tested from 4266 ft. to 4300 ft. Total Depth 4300 ft.Packer Depth 4266 ft. Size 6 7/8 in. Packer Depth — ft. Size — in.Packer Depth 4266 ft. Size 6 7/8 in. Packer Depth — ft. Size — in.Depth of Selective Zone Set —Top Recorder Depth (Inside) 4290 ft. Recorder Number 6074 Cap. 5100Bottom Recorder Depth (Outside) 4293 ft. Recorder Number 10979 Cap. 4100Below Straddle Recorder Depth — ft. Recorder Number — Cap. —Drilling Contractor Husky Drilling Co. Rig #1 Drill Collar Length — I. D. — in.Mud Type Starch Viscosity 4.3 Weight Pipe Length 603 I. D. 2.7 in.Weight 10.4 Water Loss 7.2 cc. Drill Pipe Length 3642 I. D. 3.8 in.Chlorides 38,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.Jars: Make W.T.C. Serial Number 492 Anchor Length 34 ft. Size 5 1/2 in.Did Well Flow? No Reversed Out No Surface Choke Size 7/8 in. Bottom Choke Size 7/8 in.Main Hole Size 7/8 in. Tool Joint Size 4 1/2 in.Blow: Weak blow died in 12 min. on 1st flow period. No blow on 2nd flow period.Recovered 70 ft. of MudRecovered — ft. of —Recovered — ft. of —Recovered — ft. of —Recovered — ft. of —Remarks: —Time On Location 10:30 A.M. Time Pick Up Tool 3:30 A.M. Time Off Location — A.M.Time Set Packer(s) 5:15 P.M. Time Started Off Bottom 7:15 P.M. Maximum Temperature 126Initial Hydrostatic Pressure — (A) 2337 P.S.I.Initial Flow Period 30 Minutes (B) 76 P.S.I. to (C) 76 P.S.I.Initial Closed In Period 30 Minutes (D) 1061 P.S.I.Final Flow Period 30 Minutes (E) 76 P.S.I. to (F) 76 P.S.I.Final Closed In Period 30 Minutes (G) 933 P.S.I.Final Hydrostatic Pressure — (H) 2312 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 EB Donnelly Signature of Customer or his authorized representativeWestern Representative Vernon WondraThank You

FIELD INVOICE

Open Hole Test \$ 600.00Misrun \$ —Straddle Test \$ —Jars \$ 300.00Selective Zone \$ —Safety Joint \$ 50.00Standby \$ —Evaluation \$ —Extra Packer \$ —Circ. Sub. \$ —Mileage 44 \$ 44.00Fluid Sampler \$ —Extra Charts \$ —Insurance \$ —TOTAL \$ 983.00

WESTERN TESTING CO., INC.

Pressure Data

Date 11-10 Test Ticket No. 8709
 Recorder No. 6074 Capacity 5100 Location 4290 Ft.
 Clock No. Elevation 2140 KB Well Temperature 126 °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2353</u> P.S.I.		<u>5:15</u> A.M.	
B First Initial Flow Pressure	<u>82</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>82</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1077</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>87</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>86</u> P.S.I.	* Pressures questionable due to plugging action.		
G Final Closed-in Pressure	<u>957</u> P.S.I.			
H Final Hydrostatic Mud	<u>2317</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 6 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Initial Shut-In
 Breakdown: 10 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

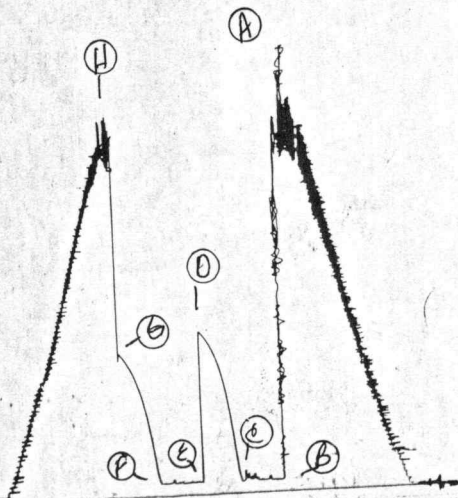
Second Flow Pressure
 Breakdown: 6 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 10 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	82	0	82	0	87	0	86
P 2 5	83	3	225	5	87	3	187
P 3 10	86	6	458	10	86	6	358
P 4 15	86	9	632	15	86	9	514
P 5 20	97 *	12	762	20	86	12	639
P 6 25	100 *	15	862	25	86	15	721
P 7 30	82	18	934	30	86	18	795
P 8 35		21	992	35		21	852
P 9 40		24	1036	40		24	898
P 10 45		27	1066	45		27	939
P 11 50		30	1077	50		30	957
P 12 55		33		55		33	
P 13 60		36		60		36	
P 14		39		65		39	
P 15		42		70		42	
P 16		45		75		45	
P 17		48		80		48	
P 18		51		85		51	
P 19		54		90		54	
P 20		57				57	
		60				60	

JK# 8709

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Company K & E Petroleum, Inc. Lease & Well No. Hagerman #1
Elevation 2140 Kelly Bushing Formation Conglomerate Effective Pay - Ft. Ticket No. 8709
Date 11-10-80 Sec. 28 Twp. 20S Range 20W County Pawnee State Kansas
Test Approved by E B Donnelly Western Representative Vernon Wondra
Formation Test No. 1 Interval Tested from 4266 ft. to 4300 ft. Total Depth 4300 ft.
Packer Depth 4261 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Packer Depth 4266 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 4290 ft. Recorder Number 6074 Cap. 5100
Bottom Recorder Depth (Outside) 4293 ft. Recorder Number 10979 Cap. 4100
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Husky Drilling Co Rig #1 Drill Collar Length - I. D. - in.
Mud Type Starch Viscosity 43 Weight Pipe Length 603 I. D. 2.7 in.
Weight 10.4 Water Loss 7.2 cc. Drill Pipe Length 3642 I. D. 3.8 in.
Chlorides 38,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.
Jars: Make WTC Serial Number 402 Anchor Length 34 ft. Size 5 1/2 OD in.
Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Weak blow died in 12 minutes on initial flow period. No blow on final flow period.

Recovered 70 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 5:15 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 7:15 ~~P.M.~~ ^{A.M.} Maximum Temperature 126
Initial Hydrostatic Pressure (A) 2353 P.S.I.
Initial Flow Period Minutes 30 (B) 82 P.S.I. to (C) 82 P.S.I.
Initial Closed In Period Minutes 30 (D) 1077 P.S.I.
Final Flow Period Minutes 30 (E) 87 P.S.I. to (F) 86 P.S.I.
Final Closed In Period Minutes 30 (G) 957 P.S.I.
Final Hydrostatic Pressure (H) 2317 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 11-10-80 Test Ticket No. 8709
 Recorder No. 6074 Capacity 5100 Location 4290 Ft.
 Clock No. - Elevation 2140 Kelly Bushing Well Temperature 126 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2353</u> P.S.I.	Open Tool	<u>5:15A</u> M	
B First Initial Flow Pressure	<u>82</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>82</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1077</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>87</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
F Second Final Flow Pressure	<u>86</u> P.S.I.			
G Final Closed-in Pressure	<u>957</u> P.S.I.			
H Final Hydrostatic Mud	<u>2317</u> P.S.I.			

*Pressures questionable due to plugging action.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> 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 <u>0</u>	<u>82</u>	<u>0</u>	<u>82</u>	<u>0</u>	<u>87</u>	<u>0</u>	<u>86</u>
P 2 <u>5</u>	<u>83</u>	<u>3</u>	<u>225</u>	<u>5</u>	<u>87</u>	<u>3</u>	<u>187</u>
P 3 <u>10</u>	<u>86</u>	<u>6</u>	<u>458</u>	<u>10</u>	<u>86</u>	<u>6</u>	<u>358</u>
P 4 <u>15</u>	<u>86</u>	<u>9</u>	<u>632</u>	<u>15</u>	<u>86</u>	<u>9</u>	<u>514</u>
P 5 <u>20</u>	<u>97*</u>	<u>12</u>	<u>762</u>	<u>20</u>	<u>86</u>	<u>12</u>	<u>639</u>
P 6 <u>25</u>	<u>100*</u>	<u>15</u>	<u>862</u>	<u>25</u>	<u>86</u>	<u>15</u>	<u>721</u>
P 7 <u>30</u>	<u>82</u>	<u>18</u>	<u>934</u>	<u>30</u>	<u>86</u>	<u>18</u>	<u>795</u>
P 8 _____	_____	<u>21</u>	<u>992</u>	_____	_____	<u>21</u>	<u>852</u>
P 9 _____	_____	<u>24</u>	<u>1036</u>	_____	_____	<u>24</u>	<u>898</u>
P10 _____	_____	<u>27</u>	<u>1066</u>	_____	_____	<u>27</u>	<u>939</u>
P11 _____	_____	<u>30</u>	<u>1077</u>	_____	_____	<u>30</u>	<u>957</u>
P12 _____	_____	_____	_____	_____	_____	_____	_____
P13 _____	_____	_____	_____	_____	_____	_____	_____
P14 _____	_____	_____	_____	_____	_____	_____	_____
P15 _____	_____	_____	_____	_____	_____	_____	_____
P16 _____	_____	_____	_____	_____	_____	_____	_____
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____