



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 18587

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

Elevation 1536 KB Formation L/UC Eff. Pay Ft.

District Augusta Date 1-7-93 Customer Order No.
COMPANY NAME Pickrell Drilling Company, Inc.
ADDRESS 110 n Market Suite 205 Wichita Ks 67202
LEASE AND WELL NO. Cox "B" #5 COUNTY Kingman STATE Ks Sec. 19 Twp 29s Rge 6w
Mail Invoice To Same Co. Name Co. Name Cox B #5 Address No. Copies Requested 1
Mail Charts To Same Co. Name Cox B #5 Address No. Copies Requested 5

Formation Test No. AST#1 Interval Tested From 3525 ft. to 3565 ft. Total Depth 3565 ft.
Packer Depth 3520 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Packer Depth 3525 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set
Top Recorder Depth (Inside) 3562 ft. Recorder Number 10979 Cap. 4100
Bottom Recorder Depth (Outside) 3559 ft. Recorder Number 3354 Cap. 4200
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Pickrell Rig 1 Drill Collar Length 240 I. D. 2.25 in.
Mud Type Chem Viscosity 52 Weight Pipe Length - I. D. - in.
Weight 8.7 Water Loss 11.2 cc. Drill Pipe Length 3265 I. D. 3.8 in.
Chlorides 2800 P.P.M. Test Tool Length 20 ft. Tool Size 5/8 in.
Jars: Make - Serial Number - Anchor Length 40 ft. Size 5/8 in.
Did Well Flow? - Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Wash to a Day Stay below 3 min off bottom of bucket on (EP)

Recovered 1800 ft. of gas in pipe
Recovered 330 ft. of gassy oil gas mud 15% gas 20% oil 65% mud
Recovered 120 ft. of gassy oil salt water 45% water 30% gas 30% mud
Recovered 840 ft. of salt water
Chlorides 156,000 P.P.M. Sample Jars used 5 Remarks: JAN 07 1993 JAN 07 1993

Time On Location 11:00 A.M. Time Pick Up Tool 12:01 P.M. Time Off Location A.M.
Time Set Packer(s) 1:30 A.M. Time Started Off Bottom 6:00 P.M. Maximum Temperature 126°F
Initial Hydrostatic Pressure (A) 1655 P.S.I.
Initial Flow Period Minutes 30 (B) 125 P.S.I. to (C) 290 P.S.I.
Initial Closed In Period Minutes 60 (D) 1380 P.S.I.
Final Flow Period Minutes 90 (E) 355 P.S.I. to (F) 1690 P.S.I.
Final Closed In Period Minutes 90 (G) 1560 P.S.I.
Final Hydrostatic Pressure (H) 1645 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] Signature of Customer or his authorized representative

Western Representative [Signature]

FIELD INVOICE

Open Hole Test \$ 600
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 1-7-8 Test Ticket No. 18587
 Recorder No. 10929 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>11467</u> P.S.I.		
B First Initial Flow Pressure	<u>1346</u> P.S.I.		
C First Final Flow Pressure	<u>1384</u> P.S.I.		
D Initial Closed-in Pressure	<u>1385</u> P.S.I.		
E Second Initial Flow Pressure	<u>1400</u> P.S.I.		
F Second Final Flow Pressure	<u>1483</u> P.S.I.		
G Final Closed-in Pressure	<u>13764</u> P.S.I.		
H Final Hydrostatic Mud	<u>14234</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>1246</u>	0	<u>1286</u>	0	<u>1400</u>	0	<u>1483</u>
P 2 5	<u>1244</u>	3	<u>1319</u>	5	<u>1403</u>	3	<u>1459</u>
P 3 10	<u>1269</u>	6	<u>1330</u>	10	<u>1428</u>	6	<u>1469</u>
P 4 15	<u>1246</u>	9	<u>1389</u>	15	<u>1492</u>	9	<u>1498</u>
P 5 20	<u>1246</u>	12	<u>1311</u>	20	<u>1415</u>	12	<u>1307</u>
P 6 25	<u>1255</u>	15	<u>1325</u>	25	<u>1419</u>	15	<u>1324</u>
P 7 30	<u>1286</u>	18	<u>1326</u>	30	<u>1458</u>	18	<u>1328</u>
P 8 35		21	<u>1345</u>	35	<u>1480</u>	21	<u>1325</u>
P 9 40		24	<u>1352</u>	40	<u>1505</u>	24	<u>1340</u>
P10 45		27	<u>1356</u>	45	<u>1516</u>	27	<u>1345</u>
P11 50		30	<u>1363</u>	50	<u>1547</u>	30	<u>1348</u>
P12 55		33	<u>1367</u>	55	<u>1565</u>	33	<u>1351</u>
P13 60		36	<u>1369</u>	60	<u>1584</u>	36	<u>1353</u>
P14 65		39	<u>1371</u>	65	<u>1603</u>	39	<u>1355</u>
P15 70		42	<u>1372</u>	70	<u>1619</u>	42	<u>1357</u>
P16 75		45	<u>1375</u>	75	<u>1627</u>	45	<u>1359</u>
P17 80		48	<u>1377</u>	80	<u>1650</u>	48	<u>1361</u>
P18 85		51	<u>1379</u>	85	<u>1669</u>	51	<u>1363</u>
P19 90		54	<u>1381</u>	90	<u>1683</u>	54	<u>1365</u>
P20 95		57	<u>1383</u>	95		57	<u>1366</u>
100		60	<u>1385</u>	100		60	<u>1367</u>

WESTERN TESTING CO., INC.

Pressure Data

Date _____

Test Ticket No. 8587

Recorder No. _____ Capacity _____ Location _____ Ft.

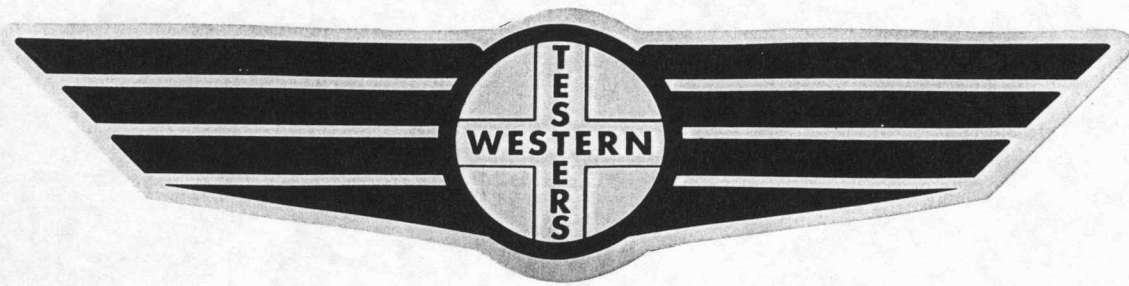
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____	P.S.I.	Open Tool _____	M _____	
B First Initial Flow Pressure _____	P.S.I.	First Flow Pressure _____	Mins. _____	Mins. _____
C First Final Flow Pressure _____	P.S.I.	Initial Closed-in Pressure _____	Mins. _____	Mins. _____
D Initial Closed-in Pressure _____	P.S.I.	Second Flow Pressure _____	Mins. _____	Mins. _____
E Second Initial Flow Pressure _____	P.S.I.	Final Closed-in Pressure _____	Mins. _____	Mins. _____
F Second Final Flow Pressure _____	P.S.I.			
G Final Closed-in Pressure _____	P.S.I.			
H Final Hydrostatic Mud _____	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 _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105		63		105		63	1368
P 2 110		66		110		66	1369
P 3 115		69		115		69	1370
P 4 120		72		120		72	1371
P 5 125		75		125		75	1372
P 6 130		78		130		78	1373
P 7 135		81		135		81	1374
P 8 140		84		140		84	1375
P 9 145		87		145		87	1376
P10 150		90		150		90	1377
P11 155		93		155		93	1378
P12 160		96		160		96	
P13 165		99		165		99	
P14 170		102		170		102	
P15 175		105		175		105	
P16 180		108		180		108	
P17 185		111		185		111	
P18 190		114		190		114	
P19 195		117		195		117	
P20 200		120		200		120	

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

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

DST REPORT

GENERAL INFORMATION

DATE	: 1/7/93	TICKET	: 18587
CUSTOMER	: PICKRELL DRILLING CO, INC	LEASE	: COX B
WELL	: #5	TEST:	1
ELEVATION:	1536 KB	GEOLOGIST:	FUNK
SECTION	: 19	FORMATION:	L/KANSAS CITY
RANGE	: 6W	TOWNSHIP	: 29S
GAUGE SN#:	10979	STATE	: KS
		CLOCK	: 12
	COUNTY: KINGMAN		
	RANGE : 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	3525.00 ft	TO:	3565.00 ft	TVD:	3565.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3562.0 ft		3559.0 ft		
TEMPERATURE:	126.0				
DRILL COLLAR LENGTH:	240.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	3265.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	40.0 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:	3520.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3525.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	

MUD INFORMATION

DRILLING CON. :	PICKRELL RIG 1	VISCOSITY :	52.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	11.200 cc
WEIGHT :	8.700 ppg		
CHLORIDES :	2800 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK TO VERY STRONG BLOW IN
3 MINUTES - OFF BOTTOM OF BUCKET.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
330.0	20.0	40.0	0.0	40.0	GASSY OIL CUT MUD
120.0	0.0	40.0	40.0	20.0	GAS & MUD CUT SALTWATER
840.0	0.0	0.0	100.0	0.0	SALTWATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 156000 PPM
0.0	0.0	0.0	0.0	0.0	1800 FT GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.9257	STB		
GAS VOLUME:	14.1764	SCF		
MUD VOLUME:	2.1881	STB		
WATER VOLUME:	10.2693	STB		
TOTAL FLUID :	13.3831	STB		
			TOTAL FLOW TIME:	120.0000 min.
			AVERAGE OIL RATE:	33.3266 STB/D
			AVERAGE WATER RATE:	127.2709 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1655.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	125.00	290.00
INITIAL SHUT-IN	60.00		1380.00
FINAL FLOW	90.00	355.00	690.00
FINAL SHUT-IN	90.00		1560.00

FINAL HYDROSTATIC PRESSURE: 1645.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1667.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	126.00	286.00
INITIAL SHUT-IN	60.00		1385.00
FINAL FLOW	90.00	360.00	683.00
FINAL SHUT-IN	93.00		1376.00

FINAL HYDROSTATIC PRESSURE: 1634.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/7/93	TICKET : 18587
CUSTOMER : PICKRELL DRILLING CO, INC	LEASE : COX B
WELL : #5	GEOLOGIST: FUNK
ELEVATION: 1536 KB	FORMATION: L/KANSAS CITY
SECTION : 19	TOWNSHIP : 29S
RANGE : 6W	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: KINGMAN	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	126.00	126.00
5.00	144.00	18.00
10.00	169.00	25.00
15.00	196.00	27.00
20.00	226.00	30.00
25.00	255.00	29.00
30.00	286.00	31.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	819.00	819.00	11.00
6.00	1230.00	411.00	6.00
9.00	1289.00	59.00	4.33
12.00	1311.00	22.00	3.50
15.00	1325.00	14.00	3.00
18.00	1336.00	11.00	2.67
21.00	1345.00	9.00	2.43
24.00	1352.00	7.00	2.25
27.00	1356.00	4.00	2.11
30.00	1363.00	7.00	2.00
33.00	1367.00	4.00	1.91
36.00	1369.00	2.00	1.83
39.00	1371.00	2.00	1.77
42.00	1373.00	2.00	1.71
45.00	1375.00	2.00	1.67
48.00	1377.00	2.00	1.63
51.00	1379.00	2.00	1.59
54.00	1381.00	2.00	1.56
57.00	1383.00	2.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1385.00	2.00	1.50

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	360.00	360.00
5.00	363.00	3.00
10.00	373.00	10.00
15.00	392.00	19.00
20.00	415.00	23.00
25.00	439.00	24.00
30.00	458.00	19.00
35.00	480.00	22.00
40.00	505.00	25.00
45.00	526.00	21.00
50.00	547.00	21.00
55.00	565.00	18.00
60.00	584.00	19.00
65.00	603.00	19.00
70.00	619.00	16.00
75.00	637.00	18.00
80.00	650.00	13.00
85.00	669.00	19.00
90.00	683.00	14.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	1159.00	1159.00	21.00
6.00	1269.00	110.00	11.00
9.00	1298.00	29.00	7.67
12.00	1307.00	9.00	6.00
15.00	1321.00	14.00	5.00
18.00	1328.00	7.00	4.33
21.00	1335.00	7.00	3.86
24.00	1340.00	5.00	3.50
27.00	1345.00	5.00	3.22
30.00	1348.00	3.00	3.00

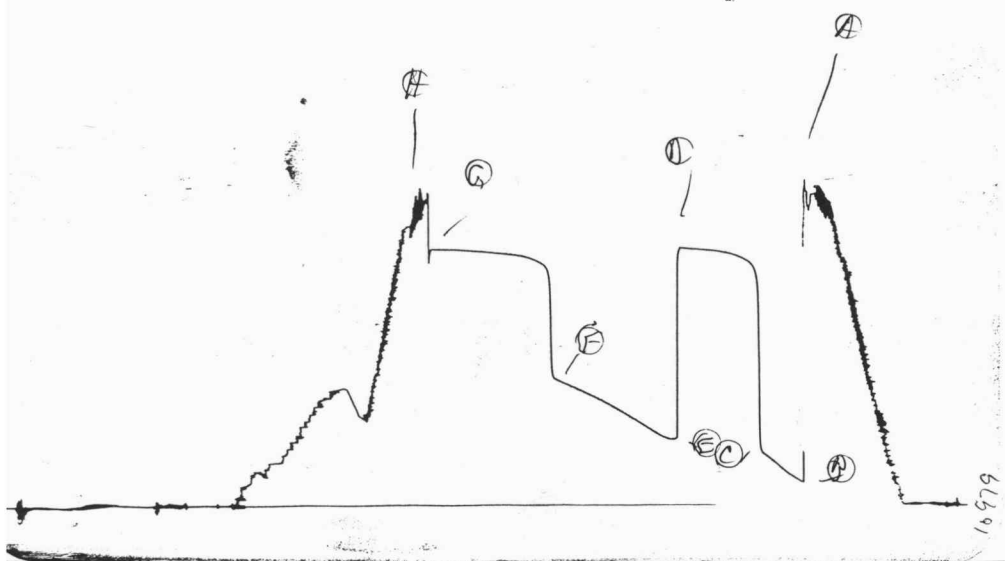
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
33.00	1351.00	3.00	2.82
36.00	1353.00	2.00	2.67
39.00	1355.00	2.00	2.54
42.00	1357.00	2.00	2.43
45.00	1359.00	2.00	2.33
48.00	1361.00	2.00	2.25
51.00	1363.00	2.00	2.18
54.00	1365.00	2.00	2.11
57.00	1366.00	1.00	2.05
60.00	1367.00	1.00	2.00
63.00	1368.00	1.00	1.95
66.00	1369.00	1.00	1.91
69.00	1370.00	1.00	1.87
72.00	1371.00	1.00	1.83
75.00	1372.00	1.00	1.80
78.00	1373.00	1.00	1.77
81.00	1374.00	1.00	1.74
84.00	1375.00	1.00	1.71
87.00	1376.00	1.00	1.69
90.00	1376.00	0.00	1.67
93.00	1376.00	0.00	1.65

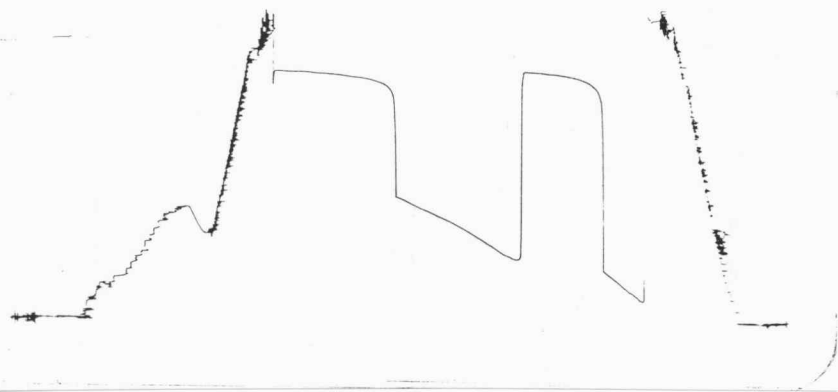
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P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 18588

Elevation 1536 UB Formation Suope Zone Eff. Pay Ft.

District Augusta Date 1-8-93 Customer Order No.

COMPANY NAME Pickrell Drilling Company, Inc.

ADDRESS 110 n market, Suite 205 Wichita Ks 67202

LEASE AND WELL NO. Cox B #5 COUNTY Kingman STATE KS Sec. 19 Twp 29 Rge 6 W

Mail Invoice To Same Co. Name Cox B #5 Address No. Copies Requested 1

Mail Charts To Same Co. Name Cox B #5 Address No. Copies Requested 5

Formation Test No. 45TH #2 Interval Tested From 3694 ft. to 3718 ft. Total Depth 3718 ft.

Packer Depth 3689 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 3694 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3712 ft. Recorder Number 10979 Cap. 4100

Bottom Recorder Depth (Outside) 3715 ft. Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Pickrell Rpt Drill Collar Length 240 I. D. 2.25 in.

Mud Type Chem Viscosity 57 Weight Pipe Length I. D. in.

Weight 8.8 Water Loss 16.8 cc. Drill Pipe Length 3434 I. D. 3.8 in.

Chlorides 11,500 P.P.M. Test Tool Length 20 ft. Tool Size 5 7/8 in.

Jars: Make Serial Number Anchor Length 24 ft. Size 5 7/8 in.

Did Well Flow? Reversed Out Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 1/8 in. Tool Joint Size 4 1/2 + H in.

Blow: Weak to a Very Strong Blow bottom of packer in 3 min on (IFD)

Recovered 1410 ft. of gas in pipe

Recovered 150 ft. of gray oil and 50% oil 20% mud 30% gas

Recovered 630 ft. of salt water

Recovered ft. of

Recovered ft. of

Chlorides 146,000 P.P.M. Sample Jars used 3 Remarks:

JAN 12 1993

Time On Location Stand-by A.M. Time Pick Up Tool 1:00 P.M. Time Off Location A.M.

Time Set Packer(s) 2:00 A.M. Time Started Off Bottom 6:30 P.M. Maximum Temperature 126°R P.M.

Initial Hydrostatic Pressure (A) 1705 P.S.I.

Initial Flow Period Minutes 30 (B) 85 P.S.I. to (C) 145 P.S.I.

Initial Closed In Period Minutes 60 (D) 1120 P.S.I.

Final Flow Period Minutes 90 (E) 190 P.S.I. to (F) 325 P.S.I.

Final Closed In Period Minutes 90 (G) 1120 P.S.I.

Final Hydrostatic Pressure (H) 1695 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 Thomas Smith
Signature of Customer of his authorized representative

Western Representative Jeffrey A Pith

FIELD INVOICE

Open Hole Test \$ 600
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 1-8-53 Test Ticket No. 18588
 Recorder No. 10975 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1729</u> P.S.I.		M
B First Initial Flow Pressure	<u>108</u> P.S.I.		Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>168</u> P.S.I.		Mins. <u>60</u> Mins.
D Initial Closed-in Pressure	<u>112</u> P.S.I.		Mins. <u>90</u> Mins.
E Second Initial Flow Pressure	<u>215</u> P.S.I.		Mins. <u>90</u> Mins.
F Second Final Flow Pressure	<u>342</u> P.S.I.		
G Final Closed-in Pressure	<u>1104</u> P.S.I.		
H Final Hydrostatic Mud	<u>1705</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>108</u>	0	<u>118</u>	0	<u>215</u>	0	<u>342</u>
P 2 5	<u>108</u>	3	<u>1242</u>	5	<u>215</u>	3	<u>212</u>
P 3 10	<u>125</u>	6	<u>820</u>	10	<u>219</u>	6	<u>828</u>
P 4 15	<u>144</u>	9	<u>906</u>	15	<u>219</u>	9	<u>889</u>
P 5 20	<u>149</u>	12	<u>942</u>	20	<u>238</u>	12	<u>918</u>
P 6 25	<u>156</u>	15	<u>980</u>	25	<u>245</u>	15	<u>946</u>
P 7 30	<u>168</u>	18	<u>1005</u>	30	<u>253</u>	18	<u>964</u>
P 8 35		21	<u>1020</u>	35	<u>264</u>	21	<u>983</u>
P 9 40		24	<u>1037</u>	40	<u>272</u>	24	<u>998</u>
P10 45		27	<u>1049</u>	45	<u>282</u>	27	<u>1005</u>
P11 50		30	<u>1058</u>	50	<u>290</u>	30	<u>1015</u>
P12 55		33	<u>1068</u>	55	<u>299</u>	33	<u>1022</u>
P13 60		36	<u>1074</u>	60	<u>305</u>	36	<u>1027</u>
P14 65		39	<u>1077</u>	65	<u>314</u>	39	<u>1034</u>
P15 70		42	<u>1085</u>	70	<u>320</u>	42	<u>1046</u>
P16 75		45	<u>1088</u>	75	<u>316</u>	45	<u>1054</u>
P17 80		48	<u>1092</u>	80	<u>322</u>	48	<u>1059</u>
P18 85		51	<u>1097</u>	85	<u>329</u>	51	<u>1065</u>
P19 90		54	<u>1102</u>	90	<u>342</u>	54	<u>1070</u>
P20 95		57	<u>1107</u>	95		57	<u>1074</u>
100		60	<u>1112</u>	100		60	<u>1076</u>

WESTERN TESTING CO., INC.

Pressure Data

Date: _____

Test Ticket No. 18588

Recorder No. _____ Capacity _____ Location _____ Ft.

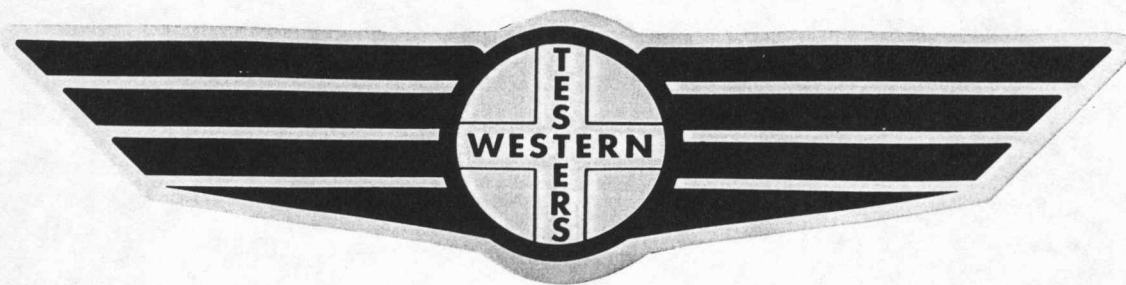
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____ P.S.I.		Open Tool _____ M		
B First Initial Flow Pressure _____ P.S.I.		First Flow Pressure _____ Mins. _____ Mins.		
C First Final Flow Pressure _____ P.S.I.		Initial Closed-in Pressure _____ Mins. _____ Mins.		
D Initial Closed-in Pressure _____ P.S.I.		Second Flow Pressure _____ Mins. _____ Mins.		
E Second Initial Flow Pressure _____ P.S.I.		Final Closed-in Pressure _____ Mins. _____ Mins.		
F Second Final Flow Pressure _____ P.S.I.				
G Final Closed-in Pressure _____ P.S.I.				
H Final Hydrostatic Mud _____ 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 _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105		63		105		63	1079
P 2 110		66		110		66	1082
P 3 115		69		115		69	1086
P 4 120		72		120		72	1090
P 5 125		75		125		75	1094
P 6 130		78		130		78	1096
P 7 135		81		135		81	1098
P 8 140		84		140		84	1100
P 9 145		87		145		87	1102
P10 150		90		150		90	1104
P11 155		93		155		93	
P12 160		96		160		96	
P13 165		99		165		99	
P14 170		102		170		102	
P15 175		105		175		105	
P16 180		108		180		108	
P17 185		111		185		111	
P18 190		114		190		114	
P19 195		117		195		117	
P20 200		120		200		120	

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

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

DST REPORT

GENERAL INFORMATION

DATE	: 1/8/93	TICKET	: 18588
CUSTOMER	: PICKRELL DRILLING CO INC.	LEASE	: COX B
WELL	: 5	TEST:	2
ELEVATION:	1536 KB	GEOLOGIST:	THOMAS FUNK
SECTION	: 19	FORMATION:	SWOPE
RANGE	: 6W	TOWNSHIP	: 29S
GAUGE SN#:	10979	STATE	: KS
COUNTY:	KINGMAN	CLOCK	: 12
RANGE	: 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	3694.00 ft	TO:	3718.00 ft	TVD:	3718.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3712.0 ft		3715.0 ft		
TEMPERATURE:	126.0				
DRILL COLLAR LENGTH:	240.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	3434.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	24.0 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:	3689.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3694.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	

MUD INFORMATION

DRILLING CON. :	PICKRELL RIG 1	VISCOSITY :	57.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	16.800 cc
WEIGHT :	8.800 ppg		
CHLORIDES :	11500 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK TO A VERY STRONG BLOW,
BOTTOM OF BUCKET IN 5 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
150.0	50.0	30.0	0.0	20.0	GASSY OIL CUT MUD
630.0	0.0	0.0	100.0	0.0	SALT WATER
0.0	0.0	0.0	0.0	0.0	1410' OF GAS ABOVE FLUID
0.0	0.0	0.0	0.0	0.0	CHLORIDES 146000 P.P.M.

RATE INFORMATION

OIL VOLUME:	1.0520 STB	
GAS VOLUME:	3.5441 SCF	
MUD VOLUME:	0.4208 STB	
WATER VOLUME:	6.6505 STB	
TOTAL FLUID :	8.1232 STB	
		TOTAL FLOW TIME: 120.0000 min.
		AVERAGE OIL RATE: 17.6732 STB/D
		AVERAGE WATER RATE: 79.8057 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1705.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	85.00	145.00
INITIAL SHUT-IN	60.00		1120.00
FINAL FLOW	90.00	190.00	325.00
FINAL SHUT-IN	90.00		1120.00

FINAL HYDROSTATIC PRESSURE: 1695.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1729.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	108.00	168.00
INITIAL SHUT-IN	60.00		1112.00
FINAL FLOW	90.00	215.00	342.00
FINAL SHUT-IN	90.00		1104.00

FINAL HYDROSTATIC PRESSURE: 1705.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/8/93	TICKET : 18588
CUSTOMER : PICKRELL DRILLING CO INC.	LEASE : COX B
WELL : 5 TEST: 2	GEOLOGIST: THOMAS FUNK
ELEVATION: 1536 KB	FORMATION: SWOPE
SECTION : 19	TOWNSHIP : 29S
RANGE : 6W COUNTY: KINGMAN	STATE : KS
GAUGE SN#: 10979 RANGE : 4100	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	108.00	108.00
5.00	108.00	0.00
10.00	125.00	17.00
15.00	141.00	16.00
20.00	149.00	8.00
25.00	156.00	7.00
30.00	168.00	12.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	642.00	642.00	0.00
6.00	820.00	178.00	0.00
9.00	906.00	86.00	0.00
12.00	943.00	37.00	0.00
15.00	980.00	37.00	0.00
18.00	1005.00	25.00	0.00
21.00	1020.00	15.00	0.00
24.00	1037.00	17.00	0.00
27.00	1049.00	12.00	0.00
30.00	1058.00	9.00	0.00
33.00	1068.00	10.00	0.00
36.00	1074.00	6.00	0.00
39.00	1077.00	3.00	0.00
42.00	1085.00	8.00	0.00
45.00	1088.00	3.00	0.00
48.00	1092.00	4.00	0.00
51.00	1097.00	5.00	0.00
54.00	1102.00	5.00	0.00
57.00	1107.00	5.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1112.00	5.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	215.00	215.00
5.00	215.00	0.00
10.00	219.00	4.00
15.00	229.00	10.00
20.00	238.00	9.00
25.00	245.00	7.00
30.00	253.00	8.00
35.00	264.00	11.00
40.00	272.00	8.00
45.00	282.00	10.00
50.00	290.00	8.00
55.00	299.00	9.00
60.00	305.00	6.00
65.00	314.00	9.00
70.00	320.00	6.00
75.00	326.00	6.00
80.00	333.00	7.00
85.00	339.00	6.00
90.00	342.00	3.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	717.00	717.00	0.00
6.00	828.00	111.00	0.00
9.00	889.00	61.00	0.00
12.00	918.00	29.00	0.00
15.00	946.00	28.00	0.00
18.00	964.00	18.00	0.00
21.00	983.00	19.00	0.00
24.00	998.00	15.00	0.00
27.00	1005.00	7.00	0.00
30.00	1015.00	10.00	0.00

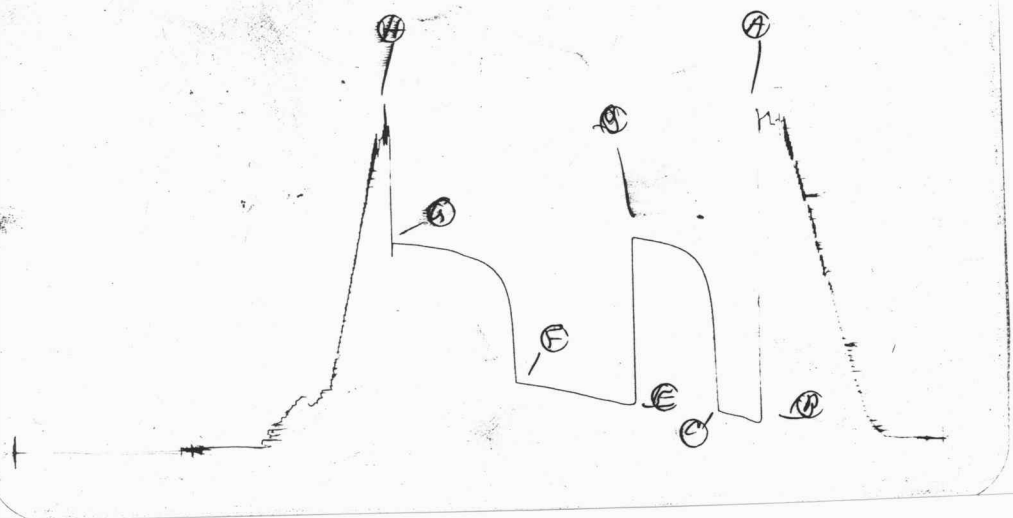
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
33.00	1022.00	7.00	0.00
36.00	1027.00	5.00	0.00
39.00	1034.00	7.00	0.00
42.00	1046.00	12.00	0.00
45.00	1054.00	8.00	0.00
48.00	1059.00	5.00	0.00
51.00	1065.00	6.00	0.00
54.00	1070.00	5.00	0.00
57.00	1074.00	4.00	0.00
60.00	1076.00	2.00	0.00
63.00	1079.00	3.00	0.00
66.00	1082.00	3.00	0.00
69.00	1086.00	4.00	0.00
72.00	1090.00	4.00	0.00
75.00	1094.00	4.00	0.00
78.00	1096.00	2.00	0.00
81.00	1098.00	2.00	0.00
84.00	1100.00	2.00	0.00
87.00	1102.00	2.00	0.00
90.00	1104.00	2.00	0.00

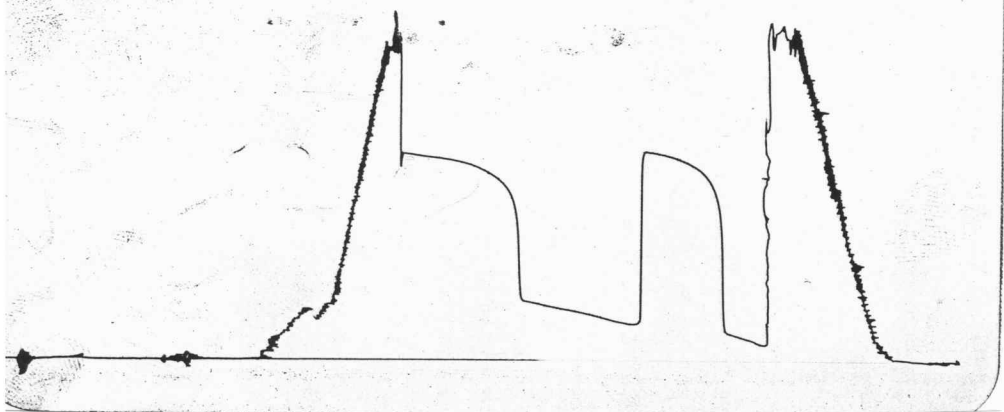
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P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

No 18589

Elevation 1536 KB Formation *Hertha* Eff. Pay Ft.

District *Augusta* Date *1-9-93* Customer Order No.
COMPANY NAME *Pickrell Drilling Company Inc.*
ADDRESS *110 N Market Suite 205 Wichita KS 67202*
LEASE AND WELL NO. *Cox B #5* COUNTY *Kingman* STATE *KS* Sec. *19* Twp. *27* Rge *64*
Mail Invoice To *Same* Co. Name *COX B #5* Address No. Copies Requested *1*
Mail Charts To *Same* Address No. Copies Requested *5*

Formation Test No. *OST#3* Interval Tested From *3730* ft. to *3760* ft. Total Depth *3760* ft.
Packer Depth *3725* ft. Size *6 5/8* in. Packer Depth *—* ft. Size *—* in.
Packer Depth *3730* ft. Size *6 7/8* in. Packer Depth *—* ft. Size *—* in.
Depth of Selective Zone Set
Top Recorder Depth (Inside) *3754* ft. Recorder Number *10999* Cap. *4100*
Bottom Recorder Depth (Outside) *3757* ft. Recorder Number *3354* Cap. *4200*
Below Straddle Recorder Depth *—* ft. Recorder Number *—* Cap. *—*
Drilling Contractor *Pickrell Rig 1* Drill Collar Length *240* I. D. *2.25* in.
Mud Type *Chem* Viscosity *47* Weight Pipe Length *—* I. D. *—* in.
Weight *8.9* Water Loss *20.0* cc. Drill Pipe Length *3470* I. D. *3.8* in.
Chlorides *14,800* P.P.M. Test Tool Length *30* ft. Tool Size *5 1/2* in.
Jars: Make *—* Serial Number *—* Anchor Length *30* ft. Size *5 1/2* in.
Did Well Flow? *—* Reversed Out *—* Surface Choke Size *34* in. Bottom Choke Size *34* in.
Main Hole Size *7 1/2* in. Tool Joint Size *4 1/2* in.

Blow: *Weak blow thru-out test on (IFP) (FFP) 8' in into bricht*

Recovered *260* ft. of *Gas in pipe*
Recovered *110* ft. of *Gas, Oil cut mud* *18% gas 10% oil 72% mud*
Recovered *110* ft. of *Salt water*
Recovered *—* ft. of
Recovered *—* ft. of
Chlorides *110,000* P.P.M. Sample Jars used *3* Remarks: **JAN 12 1993**

Time On Location *Stand by* A.M. P.M. Time Pick Up Tool *4:00* A.M. P.M. Time Off Location A.M. P.M.
Time Set Packer(s) *5:00* A.M. P.M. Time Started Off Bottom *9:30* A.M. P.M. Maximum Temperature *120°R*
Initial Hydrostatic Pressure (A) *1705* P.S.I.
Initial Flow Period Minutes *30* (B) *75* P.S.I. to (C) *85* P.S.I.
Initial Closed In Period Minutes *60* (D) *960* P.S.I.
Final Flow Period Minutes *90* (E) *115* P.S.I. to (F) *165* P.S.I.
Final Closed In Period Minutes *90* (G) *960* P.S.I.
Final Hydrostatic Pressure (H) *1695* P.S.I. *10929*

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 *Sharon Lamb*
Signature of Customer or his authorized representative

Western Representative *Jerry Smith*

FIELD INVOICE

Open Hole Test \$ *600*
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 1-9-92 Test Ticket No. 18589
 Recorder No. 10979 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>183</u> P.S.I.		M
B First Initial Flow Pressure	<u>72</u> P.S.I.		Mins. <u>30</u> Mins.
C First Final Flow Pressure	<u>102</u> P.S.I.		Mins. <u>66</u> Mins.
D Initial Closed-in Pressure	<u>980</u> P.S.I.		Mins. <u>30</u> Mins.
E Second Initial Flow Pressure	<u>124</u> P.S.I.		Mins. <u>39</u> Mins.
F Second Final Flow Pressure	<u>171</u> P.S.I.		
G Final Closed-in Pressure	<u>955</u> P.S.I.		
H Final Hydrostatic Mud	<u>1776</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>22</u>	0	<u>102</u>	0	<u>124</u>	0	<u>171</u>
P 2 5	<u>23</u>	3	<u>110</u>	5	<u>124</u>	3	<u>176</u>
P 3 10	<u>23</u>	6	<u>121</u>	10	<u>124</u>	6	<u>222</u>
P 4 15	<u>86</u>	9	<u>124</u>	15	<u>124</u>	9	<u>224</u>
P 5 20	<u>90</u>	12	<u>518</u>	20	<u>130</u>	12	<u>618</u>
P 6 25	<u>95</u>	15	<u>564</u>	25	<u>135</u>	15	<u>742</u>
P 7 30	<u>102</u>	18	<u>726</u>	30	<u>140</u>	18	<u>725</u>
P 8 35		21	<u>815</u>	35	<u>146</u>	21	<u>824</u>
P 9 40		24	<u>858</u>	40	<u>152</u>	24	<u>848</u>
P10 45		27	<u>882</u>	45	<u>157</u>	27	<u>860</u>
P11 50		30	<u>902</u>	50	<u>160</u>	30	<u>872</u>
P12 55		33	<u>915</u>	55	<u>162</u>	33	<u>884</u>
P13 60		36	<u>927</u>	60	<u>164</u>	36	<u>892</u>
P14 65		39	<u>934</u>	65	<u>167</u>	39	<u>902</u>
P15 70		42	<u>945</u>	70	<u>169</u>	42	<u>908</u>
P16 75		45	<u>950</u>	75	<u>171</u>	45	<u>915</u>
P17 80		48	<u>958</u>	80		48	<u>921</u>
P18 85		51	<u>968</u>	85		51	<u>926</u>
P19 90		54	<u>971</u>	90		54	<u>929</u>
P20 95		57	<u>974</u>	95		57	<u>932</u>
100		60	<u>976</u>	100		60	<u>934</u>
		<u>62</u>	<u>978</u>				
		<u>66</u>	<u>980</u>				

WESTERN TESTING CO., INC.

Pressure Data

Date _____

Test Ticket No. 18589

Recorder No. _____ Capacity _____ Location _____ Ft.

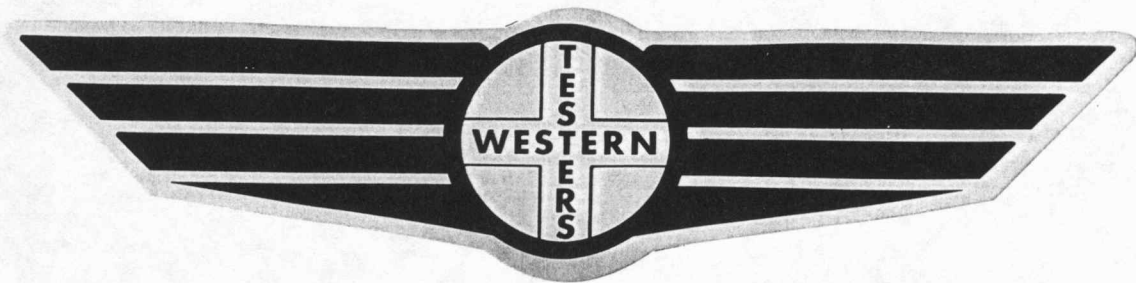
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____	P.S.I.	Open Tool _____	M _____	
B First Initial Flow Pressure _____	P.S.I.	First Flow Pressure _____	Mins. _____	Mins. _____
C First Final Flow Pressure _____	P.S.I.	Initial Closed-in Pressure _____	Mins. _____	Mins. _____
D Initial Closed-in Pressure _____	P.S.I.	Second Flow Pressure _____	Mins. _____	Mins. _____
E Second Initial Flow Pressure _____	P.S.I.	Final Closed-in Pressure _____	Mins. _____	Mins. _____
F Second Final Flow Pressure _____	P.S.I.			
G Final Closed-in Pressure _____	P.S.I.			
H Final Hydrostatic Mud _____	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 _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105		63		105		63	939
P 2 110		66		110		66	941
P 3 115		69		115		69	943
P 4 120		72		120		72	945
P 5 125		75		125		75	947
P 6 130		78		130		78	949
P 7 135		81		135		81	951
P 8 140		84		140		84	953
P 9 145		87		145		87	954
P10 150		90		150		90	955
P11 155		93		155		93	
P12 160		96		160		96	
P13 165		99		165		99	955
P14 170		102		170		102	
P15 175		105		175		105	
P16 180		108		180		108	
P17 185		111		185		111	
P18 190		114		190		114	
P19 195		117		195		117	
P20 200		120		200		120	

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

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

DST REPORT

GENERAL INFORMATION

DATE	: 1/9/93	TICKET	: 18589
CUSTOMER	: PICKRELL DRILLING CO INC.	LEASE	: COX B
WELL	: 5	TEST:	3
ELEVATION:	1536 KB	GEOLOGIST:	THOMAS FUNK
SECTION	: 19	FORMATION:	HERTHA
RANGE	: 6W	TOWNSHIP	: 29S
Gauge SN#:	10979	STATE	: KS
		CLOCK	: 12
	COUNTY: KINGMAN		
	RANGE : 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	3730.00 ft	TO:	3760.00 ft	TVD:	3760.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3754.0 ft		3757.0 ft		
TEMPERATURE:	120.0				
DRILL COLLAR LENGTH:	240.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	3470.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	30.0 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:	3725.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3730.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	

MUD INFORMATION

DRILLING CON. :	PICKRELL RIG 1	VISCOSITY :	47.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	20.000 cc
WEIGHT :	8.900 ppg		
CHLORIDES :	14800 ppm	SERIAL NUMBER:	
JARS-MAKE :		REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

WEAK BLOW THROUGHOUT TEST, 8 INCH IN BUCKET, ON
BOTH FLOW PERIODS.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
110.0	10.0	18.0	0.0	72.0	GASSY OIL CUT MUD
110.0	0.0	0.0	100.0	0.0	SALT WATER
0.0	0.0	0.0	0.0	0.0	260 FT OF GAS ABOVE FLUID
0.0	0.0	0.0	0.0	0.0	CHLORIDES 110000 P.P.M.

RATE INFORMATION

OIL VOLUME: 0.0541 STB
 GAS VOLUME: 0.5467 SCF
 MUD VOLUME: 0.3895 STB
 WATER VOLUME: 0.5409 STB
 TOTAL FLUID : 0.9845 STB

TOTAL FLOW TIME: 105.0000 min.
 AVERAGE OIL RATE: 6.0831 STB/D
 AVERAGE WATER RATE: 7.4184 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1705.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	75.00	85.00
INITIAL SHUT-IN	60.00		960.00
FINAL FLOW	90.00	115.00	165.00
FINAL SHUT-IN	90.00		960.00

FINAL HYDROSTATIC PRESSURE: 1695.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1831.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	73.00	102.00
INITIAL SHUT-IN	66.00		980.00
FINAL FLOW	75.00	126.00	171.00
FINAL SHUT-IN	99.00		955.00

FINAL HYDROSTATIC PRESSURE: 1776.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/9/93	TICKET : 18589
CUSTOMER : PICKRELL DRILLING CO INC.	LEASE : COX B
WELL : 5	GEOLOGIST: THOMAS FUNK
ELEVATION: 1536 KB	FORMATION: HERTHA
SECTION : 19	TOWNSHIP : 29S
RANGE : 6W	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: KINGMAN	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	73.00	73.00
5.00	73.00	0.00
10.00	73.00	0.00
15.00	86.00	13.00
20.00	90.00	4.00
25.00	95.00	5.00
30.00	102.00	7.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	110.00	110.00	0.00
6.00	121.00	11.00	0.00
9.00	194.00	73.00	0.00
12.00	318.00	124.00	0.00
15.00	564.00	246.00	0.00
18.00	726.00	162.00	0.00
21.00	815.00	89.00	0.00
24.00	858.00	43.00	0.00
27.00	882.00	24.00	0.00
30.00	902.00	20.00	0.00
33.00	915.00	13.00	0.00
36.00	927.00	12.00	0.00
39.00	934.00	7.00	0.00
42.00	945.00	11.00	0.00
45.00	950.00	5.00	0.00
48.00	958.00	8.00	0.00
51.00	967.00	9.00	0.00
54.00	971.00	4.00	0.00
57.00	974.00	3.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
60.00	976.00	2.00	0.00
63.00	978.00	2.00	0.00
66.00	980.00	2.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	126.00	126.00
5.00	126.00	0.00
10.00	126.00	0.00
15.00	126.00	0.00
20.00	130.00	4.00
25.00	135.00	5.00
30.00	140.00	5.00
35.00	146.00	6.00
40.00	152.00	6.00
45.00	157.00	5.00
50.00	160.00	3.00
55.00	162.00	2.00
60.00	164.00	2.00
65.00	167.00	3.00
70.00	169.00	2.00
75.00	171.00	2.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	196.00	196.00	0.00
6.00	273.00	77.00	0.00
9.00	424.00	151.00	0.00
12.00	618.00	194.00	0.00
15.00	742.00	124.00	0.00
18.00	795.00	53.00	0.00
21.00	824.00	29.00	0.00
24.00	848.00	24.00	0.00
27.00	860.00	12.00	0.00
30.00	872.00	12.00	0.00
33.00	886.00	14.00	0.00

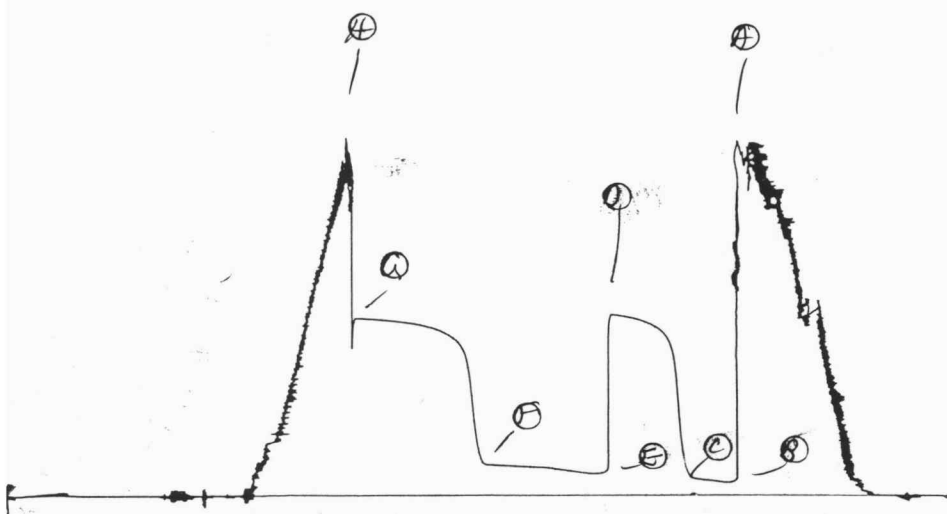
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
36.00	892.00	6.00	0.00
39.00	902.00	10.00	0.00
42.00	908.00	6.00	0.00
45.00	915.00	7.00	0.00
48.00	921.00	6.00	0.00
51.00	926.00	5.00	0.00
54.00	929.00	3.00	0.00
57.00	932.00	3.00	0.00
60.00	936.00	4.00	0.00
63.00	939.00	3.00	0.00
66.00	941.00	2.00	0.00
69.00	943.00	2.00	0.00
72.00	945.00	2.00	0.00
75.00	947.00	2.00	0.00
78.00	949.00	2.00	0.00
81.00	951.00	2.00	0.00
84.00	953.00	2.00	0.00
87.00	954.00	1.00	0.00
90.00	955.00	1.00	0.00
93.00	955.00	0.00	0.00
96.00	955.00	0.00	0.00
99.00	955.00	0.00	0.00

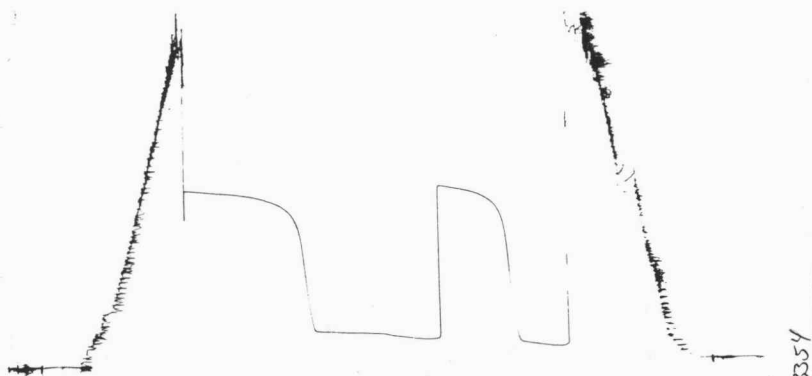
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3354



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 18590

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

Elevation 15364B Formation Miss Eff. Pay Ft.

District Augusty Date 1-10-93 Customer Order No.
COMPANY NAME Pickrell Drilling Co, Inc
ADDRESS 110 N Market Suite 205 Wichita Ks 67202
LEASE AND WELL NO. Cox B #5 COUNTY Kingman STATE Ks Sec. 19 Twp. 29s Rge 6w
Mail Invoice To Same Co. Name COX B #5 Address No. Copies Requested 1
Mail Charts To Same Address No. Copies Requested 5

Formation Test No. 154 #4 Interval Tested From 4087 ft. to 4108 ft. Total Depth 4108 ft.
Packer Depth 4082 ft. Size 6 7/8 in. Packer Depth - ft. Size - in.
Packer Depth 4087 ft. Size 6 7/8 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4102 ft. Recorder Number 10979 Cap. 4100
Bottom Recorder Depth (Outside) 4105 ft. Recorder Number 3354 Cap. 4200
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Pickrell Drilling Kjt Drill Collar Length 240 I. D. 2.25 in.
Mud Type Chem Viscosity 60 Weight Pipe Length - I. D. - in.
Weight 9.1 Water Loss 9.6 cc. Drill Pipe Length 3827 I. D. 3.8 in.
Chlorides 12,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.
Jars: Make - Serial Number - Anchor Length 21 ft. Size 5 1/2 in.
Did Well Flow? - Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 1/2 in. Tool Joint Size 4 1/2 in.

Blow: Very Strong blow gas to surface in 6 min on (IFP) & throw-out test

Recovered 3920 ft. of gas in pipe
Recovered 80 ft. of drilling mud
Recovered 60 ft. of thin drilling mud
Recovered ft. of
Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks: gas report 245,000

JAN 12 1993

Time On Location Stand by A.M. Time Pick Up Tool 5:00 A.M. Time Off Location A.M.
Time Set Packer(s) 6:00 P.M. Time Started Off Bottom 10:30 P.M. Maximum Temperature 126°F
Initial Hydrostatic Pressure (A) 1945 P.S.I.
Initial Flow Period Minutes 30 (B) 105 P.S.I. to (C) 95 P.S.I.
Initial Closed In Period Minutes 60 (D) 595 P.S.I.
Final Flow Period Minutes 90 (E) 95 P.S.I. to (F) 95 P.S.I.
Final Closed In Period Minutes 90 (G) 565 P.S.I.
Final Hydrostatic Pressure (H) 1935 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 Thomas Paul
Signature of Customer or his authorized representative

Western Representative Jeffery A. Pitt

FIELD INVOICE

Open Hole Test \$ 600
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$

N^o 3987

GAS FLOW REPORT

Date 1-10-93 Ticket 18590 Company Pickrell Drilling Inc
 Well Name and No. Co #5 Dst No. Asr #4 Interval Tested 4087- 4108
 County Kingman State Ks Sec. 19 Twp. 29 Rg. 6W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
PRE FLOW					
6 mi.	5 ¹⁶	1 ¹			319,000
10	5 ¹⁶	1			319,000
15	2.5	1			220,000
20	8	1/2			101,000
25	16	1/2			153,000
30	20	1/2			177,000

SECOND FLOW					
30	5.5	3/4			185,000
35	8.5	3/4			236,000
40	9	3/4			245,000
45	10	3/4			259,000
50	9	3/4			245,000
55	9	3/4			245,000
60	9	3/4			245,000
65	9	3/4			245,000
70	9	3/4			245,000
80	9	3/4			245,000
90	9	3/4			245,000
100	9	3/4			245,000
110	9	3/4			245,000
120	9	3/4			245,000

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 11½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME

Authorized by

Sharon Furl

WESTERN TESTING CO., INC.

Pressure Data

Date 1-10-93 Test Ticket No. 18590
 Recorder No. 10979 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1996</u> P.S.I.	Open Tool	M	
B First Initial Flow Pressure	<u>105</u> P.S.I.	First Flow Pressure	Mins. <u>20</u>	Mins.
C First Final Flow Pressure	<u>110</u> P.S.I.	Initial Closed-in Pressure	Mins. <u>40</u>	Mins.
D Initial Closed-in Pressure	<u>597</u> P.S.I.	Second Flow Pressure	Mins. <u>95</u>	Mins.
E Second Initial Flow Pressure	<u>105</u> P.S.I.	Final Closed-in Pressure	Mins. <u>90</u>	Mins.
F Second Final Flow Pressure	<u>106</u> P.S.I.			
G Final Closed-in Pressure	<u>525</u> P.S.I.			
H Final Hydrostatic Mud	<u>1971</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>105</u>	0	<u>110</u>	0	<u>105</u>	0	<u>106</u>
P 2 5	<u>2</u>	3	<u>418</u>	5	<u>2</u>	3	<u>587</u>
P 3 10	<u>2</u>	6	<u>514</u>	10	<u>2</u>	6	<u>460</u>
P 4 15	<u>2</u>	9	<u>535</u>	15	<u>2</u>	9	<u>487</u>
P 5 20	<u>105</u>	12	<u>549</u>	20	<u>105</u>	12	<u>501</u>
P 6 25	<u>107</u>	15	<u>558</u>	25	<u>106</u>	15	<u>512</u>
P 7 30	<u>110</u>	18	<u>564</u>	30	<u>106</u>	18	<u>520</u>
P 8 35		21	<u>575</u>	35	<u>2</u>	21	<u>530</u>
P 9 40		24	<u>580</u>	40	<u>2</u>	24	<u>536</u>
P10 45		27	<u>583</u>	45	<u>106</u>	27	<u>540</u>
P11 50		30	<u>585</u>	50	<u>2</u>	30	<u>548</u>
P12 55		33	<u>587</u>	55	<u>2</u>	33	<u>550</u>
P13 60		36	<u>589</u>	60	<u>2</u>	36	<u>552</u>
P14 65		39	<u>590</u>	65	<u>2</u>	39	<u>557</u>
P15 70		42	<u>591</u>	70	<u>2</u>	42	<u>555</u>
P16 75		45	<u>592</u>	75	<u>2</u>	45	<u>556</u>
P17 80		48	<u>593</u>	80	<u>2</u>	48	<u>557</u>
P18 85		51	<u>594</u>	85	<u>2</u>	51	<u>558</u>
P19 90		54	<u>595</u>	90	<u>2</u>	54	<u>560</u>
P20 95		57	<u>596</u>	95	<u>106</u>	57	<u>564</u>
100		60	<u>597</u>	100		60	<u>569</u>

WESTERN TESTING CO., INC.

Pressure Data

Date _____

Test Ticket No. 18590

Recorder No. _____ Capacity _____ Location _____ Ft. _____

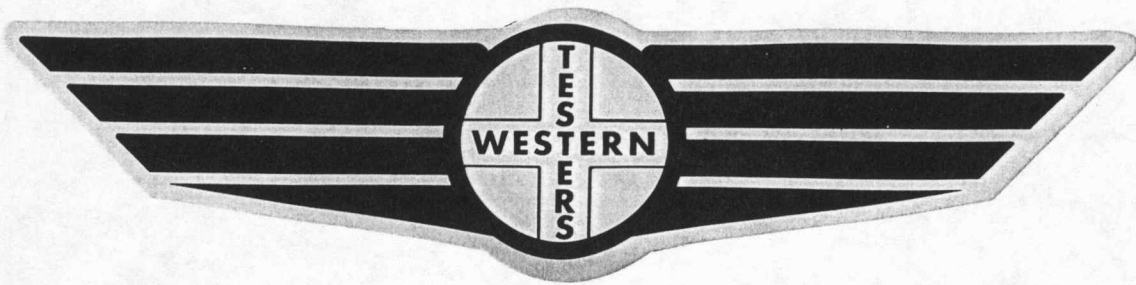
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____	P.S.I.	Open Tool	_____	M _____
B First Initial Flow Pressure _____	P.S.I.	First Flow Pressure	_____	Mins. _____ Mins.
C First Final Flow Pressure _____	P.S.I.	Initial Closed-in Pressure	_____	Mins. _____ Mins.
D Initial Closed-in Pressure _____	P.S.I.	Second Flow Pressure	_____	Mins. _____ Mins.
E Second Initial Flow Pressure _____	P.S.I.	Final Closed-in Pressure	_____	Mins. _____ Mins.
F Second Final Flow Pressure _____	P.S.I.			
G Final Closed-in Pressure _____	P.S.I.			
H Final Hydrostatic Mud _____	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 _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105	_____	63	_____	105	_____	63	5 66
P 2 110	_____	66	_____	110	_____	66	5 68
P 3 115	_____	69	_____	115	_____	69	5 70
P 4 120	_____	72	_____	120	_____	72	5 72
P 5 125	_____	75	_____	125	_____	75	5 74
P 6 130	_____	78	_____	130	_____	78	5 75
P 7 135	_____	81	_____	135	_____	81	5 75
P 8 140	_____	84	_____	140	_____	84	5
P 9 145	_____	87	_____	145	_____	87	5
P10 150	_____	90	_____	150	_____	90	5 75
P11 155	_____	93	_____	155	_____	93	_____
P12 160	_____	96	_____	160	_____	96	_____
P13 165	_____	99	_____	165	_____	99	_____
P14 170	_____	102	_____	170	_____	102	_____
P15 175	_____	105	_____	175	_____	105	_____
P16 180	_____	108	_____	180	_____	108	_____
P17 185	_____	111	_____	185	_____	111	_____
P18 190	_____	114	_____	190	_____	114	_____
P19 195	_____	117	_____	195	_____	117	_____
P20 200	_____	120	_____	200	_____	120	_____

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

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

DST REPORT

GENERAL INFORMATION

DATE	: 1/10/93	TICKET	: 18590
CUSTOMER	: PICKRELL DRILLING CO INC.	LEASE	: COX B
WELL	: 5	TEST: 4	GEOLOGIST: THOMAS FUNK
ELEVATION	: 1536 KB	FORMATION	: MISSISSIPPI
SECTION	: 19	TOWNSHIP	: 29S
RANGE	: 6W	STATE	: KS
GAUGE SN#	: 10979	CLOCK	: 12
COUNTY	: KINGMAN		
RANGE	: 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM:	4087.00 ft	TO:	4108.00 ft	TVD:	4108.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	GAS
DEPTH OF RECORDERS:	4102.0 ft		4105.0 ft		
TEMPERATURE:	126.0				
DRILL COLLAR LENGTH:	240.0 ft	I.D.:	2.250 in		
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in		
DRILL PIPE LENGTH :	3827.0 ft	I.D.:	3.800 in		
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :	5.500 in		
ANCHOR LENGTH :	21.0 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:	4082.0 ft	SIZE:	6.630 in		
PACKER DEPTH:	4087.0 ft	SIZE:	6.630 in		
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in		
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in		

MUD INFORMATION

DRILLING CON. :	PICKRELL RIG 1	VISCOSITY :	60.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	9.600 cc
WEIGHT :	9.100 ppg	SERIAL NUMBER:	
CHLORIDES :	12000 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

VERY STRONG BLOW, GAS TO SURFACE IN 6 MINUTES ON
INITIAL FLOW PERIOD AND THROUGHOUT TEST.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
80.0	0.0	0.0	0.0	100.0	DRILLING MUD
60.0	0.0	0.0	0.0	100.0	THIN DRILLING MUD
0.0	0.0	0.0	0.0	0.0	3920' OF GAS ABOVE FLUID

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	0.0000	SCF		
MUD VOLUME:	0.6884	STB		
WATER VOLUME:	0.0000	STB		
TOTAL FLUID :	0.6884	STB		
			TOTAL FLOW TIME:	125.0000 min.
			AVERAGE OIL RATE:	0.0000 STB/D
			AVERAGE WATER RATE:	0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1945.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	105.00	95.00
INITIAL SHUT-IN	60.00		595.00
FINAL FLOW	90.00	95.00	95.00
FINAL SHUT-IN	90.00		565.00

FINAL HYDROSTATIC PRESSURE: 1935.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1996.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	105.00	110.00
INITIAL SHUT-IN	60.00		597.00
FINAL FLOW	95.00	105.00	106.00
FINAL SHUT-IN	90.00		575.00

FINAL HYDROSTATIC PRESSURE: 1971.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/10/93	TICKET : 18590
CUSTOMER : PICKRELL DRILLING CO INC.	LEASE : COX B
WELL : 5	GEOLOGIST: THOMAS FUNK
ELEVATION: 1536 KB	FORMATION: MISSISSIPPI
SECTION : 19	TOWNSHIP : 29S
RANGE : 6W	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: KINGMAN	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	105.00	105.00
5.00	105.00	0.00
10.00	105.00	0.00
15.00	105.00	0.00
20.00	105.00	0.00
25.00	107.00	2.00
30.00	110.00	3.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	418.00	418.00	0.00
6.00	514.00	96.00	0.00
9.00	535.00	21.00	0.00
12.00	549.00	14.00	0.00
15.00	558.00	9.00	0.00
18.00	564.00	6.00	0.00
21.00	575.00	11.00	0.00
24.00	580.00	5.00	0.00
27.00	583.00	3.00	0.00
30.00	585.00	2.00	0.00
33.00	587.00	2.00	0.00
36.00	589.00	2.00	0.00
39.00	590.00	1.00	0.00
42.00	591.00	1.00	0.00
45.00	592.00	1.00	0.00
48.00	593.00	1.00	0.00
51.00	594.00	1.00	0.00
54.00	595.00	1.00	0.00
57.00	596.00	1.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	597.00	1.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	105.00	105.00
5.00	105.00	0.00
10.00	105.00	0.00
15.00	105.00	0.00
20.00	105.00	0.00
25.00	106.00	1.00
30.00	106.00	0.00
35.00	106.00	0.00
40.00	106.00	0.00
45.00	106.00	0.00
50.00	106.00	0.00
55.00	106.00	0.00
60.00	106.00	0.00
65.00	106.00	0.00
70.00	106.00	0.00
75.00	106.00	0.00
80.00	106.00	0.00
85.00	106.00	0.00
90.00	106.00	0.00
95.00	106.00	0.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	387.00	387.00	0.00
6.00	460.00	73.00	0.00
9.00	487.00	27.00	0.00
12.00	501.00	14.00	0.00
15.00	512.00	11.00	0.00
18.00	523.00	11.00	0.00
21.00	530.00	7.00	0.00
24.00	536.00	6.00	0.00
27.00	540.00	4.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
30.00	548.00	8.00	0.00
33.00	550.00	2.00	0.00
36.00	552.00	2.00	0.00
39.00	554.00	2.00	0.00
42.00	555.00	1.00	0.00
45.00	556.00	1.00	0.00
48.00	557.00	1.00	0.00
51.00	558.00	1.00	0.00
54.00	560.00	2.00	0.00
57.00	562.00	2.00	0.00
60.00	564.00	2.00	0.00
63.00	566.00	2.00	0.00
66.00	568.00	2.00	0.00
69.00	570.00	2.00	0.00
72.00	572.00	2.00	0.00
75.00	573.00	1.00	0.00
78.00	574.00	1.00	0.00
81.00	575.00	1.00	0.00
84.00	575.00	0.00	0.00
87.00	575.00	0.00	0.00
90.00	575.00	0.00	0.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 1/10/93	TICKET : 18590
CUSTOMER : PICKRELL DRILLING CO INC.	LEASE : COX B
WELL : 5	TEST: 4
ELEVATION: 1536 KB	GEOLOGIST: THOMAS FUNK
SECTION : 19	FORMATION: MISSISSIPPI
RANGE : 6W	TOWNSHIP : 29S
COUNTY: KINGMAN	STATE : KS
GAUGE SN#: 10979	RANGE : 4100
	CLOCK : 12

PRE FLOW

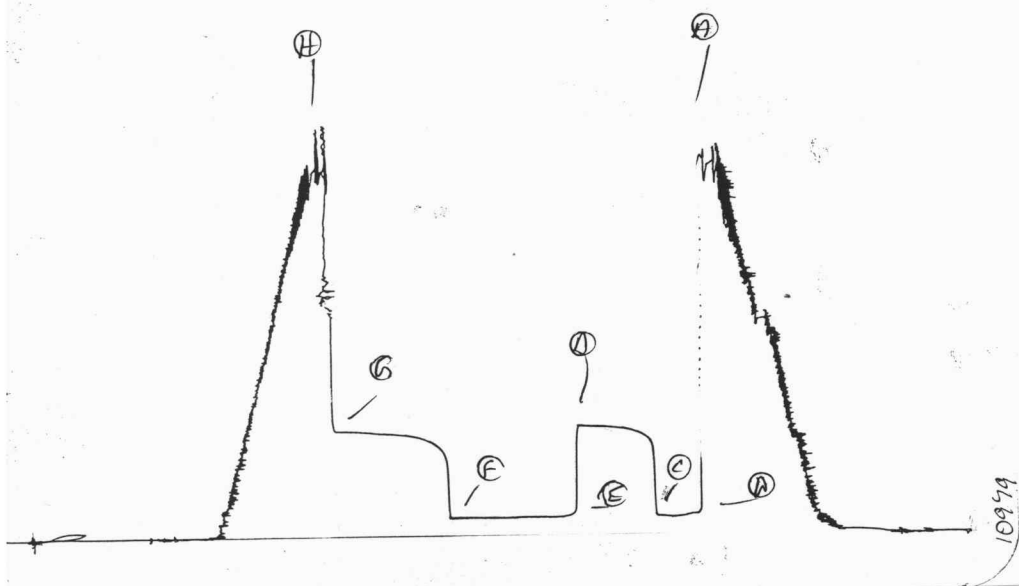
Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
06 MIN.	MERLA	1.000	5 PSIG	319000 SCF/D
10 MIN.	MERLA	1.000	5 PSIG	319000 SCF/D
15 MIN.	MERLA	1.000	2.5 PSIG	220000 SCF/D
20 MIN.	MERLA	0.500	8 PSIG	101000 SCF/D
25 MIN.	MERLA	0.500	16 PSIG	153000 SCF/D
30 MIN.	MERLA	0.500	20 PSIG	177000 SCF/D

SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
30 MIN.	MERLA	0.750	5.5 PSIG	185000 SCF/D
35 MIN.	MERLA	0.750	8.5 PSIG	236000 SCF/D
40 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
45 MIN.	MERLA	0.750	10 PSIG	259000 SCF/D
50 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
55 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
60 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
65 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
70 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
80 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
90 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
100 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
110 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D
120 MIN.	MERLA	0.750	9 PSIG	245000 SCF/D

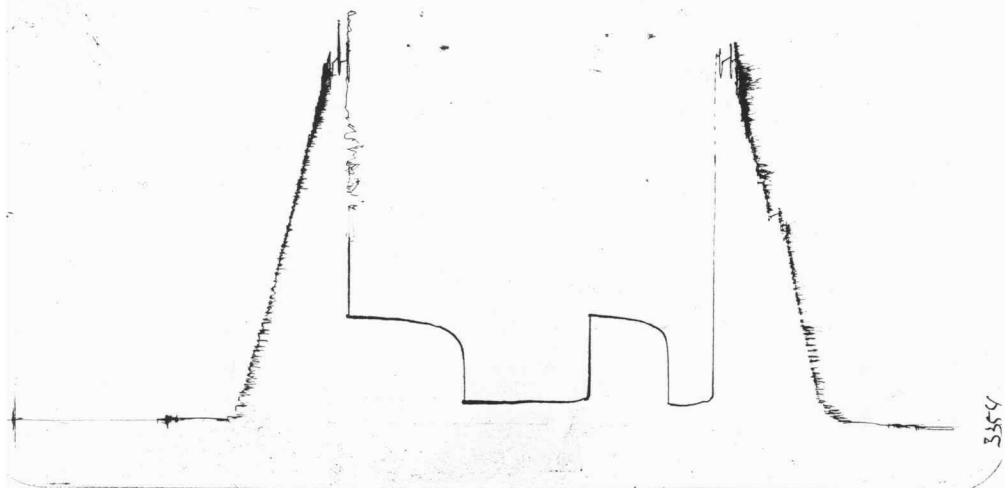
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7K+18590

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WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET

No. 18591

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

WICHITA, KANSAS 67201

Elevation 1536 1/2

Formation Miss

Eff. Pay Ft.

District Augusta

Date 1-11-93

Customer Order No.

COMPANY NAME Pickrell Drilling Co Inc.

ADDRESS 110 N Market Suite 205 Wichita Ks 67202

LEASE AND WELL NO. Cor B #5 COUNTY Kingman STATE KS Sec. 19 Twp. 29 Rge. 60

Mail Invoice To Same Co. Name Cor B #5 Address No. Copies Requested 1

Mail Charts To Same Address No. Copies Requested 5

Formation Test No. DS #5 Interval Tested From 4179 ft. to 4194 ft. Total Depth 4194 ft.

Packer Depth 4174 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4179 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4187 ft.

Recorder Number 10999 Cap. 4100

Bottom Recorder Depth (Outside) 4191 ft.

Recorder Number 3354 Cap. 4200

Below Straddle Recorder Depth - ft.

Recorder Number - Cap. -

Drilling Contractor Pickrell Rig 1

Drill Collar Length 240 I. D. 2.25 in.

Mud Type Chem Viscosity 60

Weight Pipe Length - I. D. - in.

Weight 91 Water Loss 9.6 cc.

Drill Pipe Length 3919 I. D. 3.8 in.

Chlorides 12.000 P.P.M.

Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number -

Anchor Length 15 ft. Size 5 1/2 in.

Did Well Flow? - Reversed Out -

Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 1/2 in. Tool Joint Size 4 1/2 in.

Blow: Weak to a string below on (EFP) 10' in into bucket) (EFP)

Recovered 160 ft. of drilling mud with trace of Oil. Oil spots

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

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

JAN 12 1993

Time On Location Standby A.M. Time Pick Up Tool 12:30 P.M. Time Off Location A.M. P.M.

Time Set Packer(s) 1:30 P.M. Time Started Off Bottom 6:00 P.M. Maximum Temperature 130°F

Initial Hydrostatic Pressure (A) 2020 P.S.I.

Initial Flow Period Minutes 30 (B) 40 P.S.I. to (C) 40 P.S.I.

Initial Closed In Period Minutes 60 (D) 720 P.S.I.

Final Flow Period Minutes 90 (E) 75 P.S.I. to (F) 95 P.S.I.

Final Closed In Period Minutes 90 (G) 825 P.S.I.

Final Hydrostatic Pressure (H) 2010 P.S.I.

FIELD INVOICE

Open Hole Test \$ 1000
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$

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

WESTERN TESTING CO., INC.

Pressure Data

Date 1-11-92 Test Ticket No. 1859
 Recorder No. 10979 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	~~2000~~ 2104 P.S.I.		M
B First Initial Flow Pressure	49 P.S.I.		Mins. <u>10</u> Mins.
C First Final Flow Pressure	52 P.S.I.		Mins. <u>20</u> Mins.
D Initial Closed-in Pressure	240 P.S.I.		Mins. <u>20</u> Mins.
E Second Initial Flow Pressure	88 P.S.I.		Mins. <u>87</u> Mins.
F Second Final Flow Pressure	110 P.S.I.		
G Final Closed-in Pressure	811 P.S.I.		
H Final Hydrostatic Mud	2027 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	49	0	52	0	88	0	110
P 2 5		3	58	5		3	122
P 3 10		6	66	10		6	142
P 4 15	49	9	84	15	88	9	166
P 5 20	50	12	99	20	89	12	197
P 6 25	51	15	122	25	89 90	15	200
P 7 30	52	18	149	30	90 91	18	222
P 8 35		21	175	35	92	21	202
P 9 40		24	210	40	92	24	235
P10 45		27	252	45	94	27	272
P11 50		30	314	50	95	30	402
P12 55		33	360	55	96	33	426
P13 60		36	411	60	98	36	469
P14 65		39	460	65	100	39	500
P15 70		42	508	70	102	42	529
P16 75		45	547	75	104	45	558
P17 80		48	600	80	106	48	584
P18 85		51	632	85	108	51	612
P19 90		54	669	90	110	54	636
P20 95		57	701	95		57	658
100		60	740	100		60	677

WESTERN TESTING CO., INC.

Pressure Data

Date: _____

Test Ticket No. 18591

Recorder No. _____ Capacity _____ Location _____ Ft.

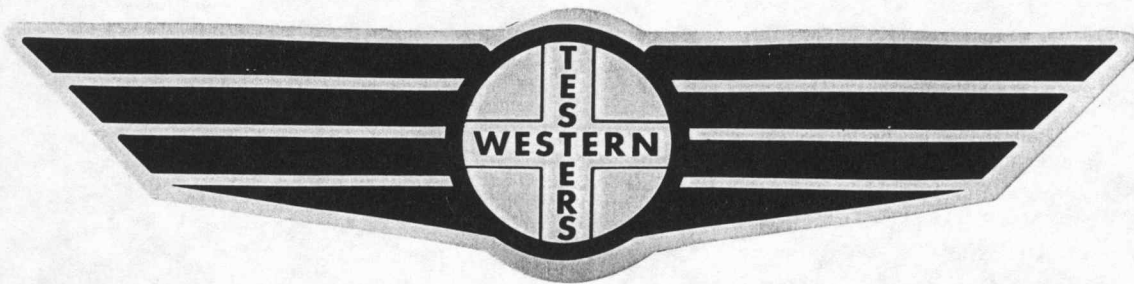
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____ P.S.I.		Open Tool		M _____
B First Initial Flow Pressure _____ P.S.I.		First Flow Pressure	_____ Mins.	_____ Mins.
C First Final Flow Pressure _____ P.S.I.		Initial Closed-in Pressure	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure _____ P.S.I.		Second Flow Pressure	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure _____ P.S.I.		Final Closed-in Pressure	_____ Mins.	_____ Mins.
F Second Final Flow Pressure _____ P.S.I.				
G Final Closed-in Pressure _____ P.S.I.				
H Final Hydrostatic Mud _____ 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 _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105	_____	63	_____	105	_____	63	699
P 2 110	_____	66	_____	110	_____	66	719
P 3 115	_____	69	_____	115	_____	69	754
P 4 120	_____	72	_____	120	_____	72	746
P 5 125	_____	75	_____	125	_____	75	765
P 6 130	_____	78	_____	130	_____	78	779
P 7 135	_____	81	_____	135	_____	81	788
P 8 140	_____	84	_____	140	_____	84	798
P 9 145	_____	87	_____	145	_____	87	811
P10 150	_____	90	_____	150	_____	90	_____
P11 155	_____	93	_____	155	_____	93	_____
P12 160	_____	96	_____	160	_____	96	_____
P13 165	_____	99	_____	165	_____	99	_____
P14 170	_____	102	_____	170	_____	102	_____
P15 175	_____	105	_____	175	_____	105	_____
P16 180	_____	108	_____	180	_____	108	_____
P17 185	_____	111	_____	185	_____	111	_____
P18 190	_____	114	_____	190	_____	114	_____
P19 195	_____	117	_____	195	_____	117	_____
P20 200	_____	120	_____	200	_____	120	_____

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

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

DST REPORT

GENERAL INFORMATION

DATE	: 1/11/93	TICKET	: 18591
CUSTOMER	: PICKRELL DRILLING CO INC.	LEASE	: COX B
WELL	: 5	TEST: 5	GEOLOGIST: THOMAS FUNK
ELEVATION	: 1536 KB	FORMATION	: MISSISSIPPI
SECTION	: 19	TOWNSHIP	: 29S
RANGE	: 6W	STATE	: KS
GAUGE SN#	: 10979	CLOCK	: 12
COUNTY	: KINGMAN		
RANGE	: 4100		

WELL INFORMATION

PERFORATION INTERVAL FROM: 4179.00 ft TO: 4194.00 ft TVD: 4194.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4187.0 ft 4191.0 ft
TEMPERATURE: 130.0

DRILL COLLAR LENGTH:	240.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH :	3919.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	20.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	15.0 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:	4174.0 ft	SIZE:	6.630 in
PACKER DEPTH:	4179.0 ft	SIZE:	6.630 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. :	PICKRELL RIG 1	VISCOSITY :	60.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	9.600 cc
WEIGHT :	9.100 ppg	SERIAL NUMBER:	
CHLORIDES :	12000 ppm	REVERSED OUT?:	NO
JARS-MAKE :			
DID WELL FLOW?:	NO		

COMMENTS

Comment

WEAK TO A STRONG BLOW, 10 INCH INTO BUCKET, ON
BOTH FLOW PERIODS.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
160.0	0.0	0.0	0.0	100.0	DRILLING MUD W/TRACE OF
0.0	0.0	0.0	0.0	0.0	OIL SPOTS

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	120.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.7868	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.7868	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2020.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	40.00	40.00
INITIAL SHUT-IN	60.00		720.00
FINAL FLOW	90.00	75.00	95.00
FINAL SHUT-IN	90.00		825.00

FINAL HYDROSTATIC PRESSURE: 2010.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2104.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	49.00	52.00
INITIAL SHUT-IN	60.00		740.00
FINAL FLOW	90.00	88.00	110.00
FINAL SHUT-IN	87.00		811.00

FINAL HYDROSTATIC PRESSURE: 2037.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/11/93	TICKET : 18591
CUSTOMER : PICKRELL DRILLING CO INC.	LEASE : COX B
WELL : 5	GEOLOGIST: THOMAS FUNK
ELEVATION: 1536 KB	FORMATION: MISSISSIPPI
SECTION : 19	TOWNSHIP : 29S
RANGE : 6W	STATE : KS
GAUGE SN#: 10979	CLOCK : 12
COUNTY: KINGMAN	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	49.00	49.00
5.00	49.00	0.00
10.00	49.00	0.00
15.00	49.00	0.00
20.00	50.00	1.00
25.00	51.00	1.00
30.00	52.00	1.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	58.00	58.00	0.00
6.00	66.00	8.00	0.00
9.00	84.00	18.00	0.00
12.00	99.00	15.00	0.00
15.00	122.00	23.00	0.00
18.00	149.00	27.00	0.00
21.00	175.00	26.00	0.00
24.00	210.00	35.00	0.00
27.00	253.00	43.00	0.00
30.00	314.00	61.00	0.00
33.00	360.00	46.00	0.00
36.00	411.00	51.00	0.00
39.00	460.00	49.00	0.00
42.00	508.00	48.00	0.00
45.00	547.00	39.00	0.00
48.00	600.00	53.00	0.00
51.00	632.00	32.00	0.00
54.00	669.00	37.00	0.00
57.00	701.00	32.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	740.00	39.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	88.00	88.00
5.00	88.00	0.00
10.00	88.00	0.00
15.00	88.00	0.00
20.00	89.00	1.00
25.00	90.00	1.00
30.00	91.00	1.00
35.00	92.00	1.00
40.00	93.00	1.00
45.00	94.00	1.00
50.00	95.00	1.00
55.00	96.00	1.00
60.00	98.00	2.00
65.00	100.00	2.00
70.00	102.00	2.00
75.00	104.00	2.00
80.00	106.00	2.00
85.00	108.00	2.00
90.00	110.00	2.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	122.00	122.00	0.00
6.00	142.00	20.00	0.00
9.00	166.00	24.00	0.00
12.00	197.00	31.00	0.00
15.00	230.00	33.00	0.00
18.00	263.00	33.00	0.00
21.00	303.00	40.00	0.00
24.00	335.00	32.00	0.00
27.00	372.00	37.00	0.00
30.00	403.00	31.00	0.00

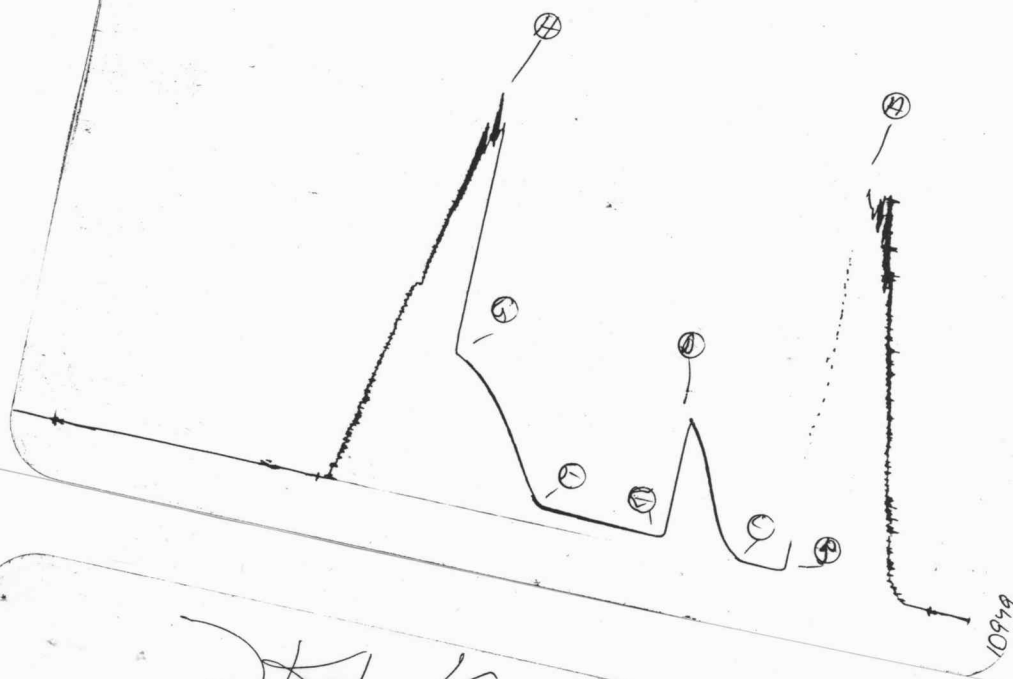
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
33.00	436.00	33.00	0.00
36.00	469.00	33.00	0.00
39.00	500.00	31.00	0.00
42.00	529.00	29.00	0.00
45.00	558.00	29.00	0.00
48.00	584.00	26.00	0.00
51.00	612.00	28.00	0.00
54.00	636.00	24.00	0.00
57.00	658.00	22.00	0.00
60.00	677.00	19.00	0.00
63.00	699.00	22.00	0.00
66.00	719.00	20.00	0.00
69.00	736.00	17.00	0.00
72.00	746.00	10.00	0.00
75.00	765.00	19.00	0.00
78.00	779.00	14.00	0.00
81.00	788.00	9.00	0.00
84.00	798.00	10.00	0.00
87.00	811.00	13.00	0.00

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