WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No. 7446

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

Elevation 1427 K.B Formation Miss Eff. Pay ____ Ft.

District Pratt Date 12/16/84 Customer Order No. ____

COMPANY NAME Pickrell Drlg Co.

ADDRESS ____

LEASE AND WELL NO. Kopf "K" #2 COUNTY Kingman STATE Ks Sec. 14 Twp. 30 S Rge. 7W

Mail Invoice To Same (Co. Name) (Address) No. Copies Requested 5

Mail Charts To Same #2 "E" KOPF (Address) No. Copies Requested 5

Formation Test No. 1 Interval Tested From 4112 ft. to 4125 ft. Total Depth 4125 ft.

Packer Depth 4107 ft. Size 6 5/8 in. Packer Depth – ft. Size – in.

Packer Depth 4112 ft. Size 6 5/8 in. Packer Depth – ft. Size – in.

Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 4115 ft. Recorder Number 13552 Cap. 4050

Bottom Recorder Depth (Outside) 4118 ft. Recorder Number 3086 Cap. 4500

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

Drilling Contractor Pickrell Rig #10 Drill Collar Length 186 I. D. 2 1/4 in.

Mud Type Drispac Viscosity 50 Weight Pipe Length – I. D. – in.

Weight 9.3 Water Loss 9.6 cc. Drill Pipe Length 3905 I. D. 3.8 in.

Chlorides 16,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make – Serial Number – Anchor Length 13 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 20 min on first flow period
Weak blow died in 10 min on second flow Died in 10 min after flush

Recovered 30 ft. of Drlg Mud

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

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

RECEIVED

Time On Location 9:30 A.M. ~~P.M.~~ Time Pick Up Tool 11:00 A.M. ~~P.M.~~ Time Off Location 4:00 ~~A.M.~~ P.M.

Time Set Packer(s) 12:15 ~~A.M.~~ P.M. Time Started Off Bottom 2:15 ~~A.M.~~ P.M. Maximum Temperature 120°

Initial Hydrostatic Pressure ..... (A) 1983 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 60 P.S.I. to (C) 60 P.S.I.

Initial Closed In Period ..... Minutes 30 (D) 71 P.S.I.

Final Flow Period ..... Minutes 30 (E) 60 P.S.I. to (F) 60 P.S.I.

Final Closed In Period ..... Minutes 30 (G) 81 P.S.I.

Final Hydrostatic Pressure ..... (H) 1963 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 Glenn A. Tracy
Signature of Customer or his authorized representative

Western Representative Jim Wondra Thank You 2376

FIELD INVOICE

Open Hole Test	$ 595.00
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 12/16 Test Ticket No. 74446

Recorder No. 13552 Capacity 4050 Location

Clock No. — — — — Elevation Well Temperature

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1983	P.S.I.	Open Tool	M	
B	First Initial Flow Pressure	61	P.S.I.	First Flow Pressure	30 Mins.	Mir
C	First Final Flow Pressure	64	P.S.I.	Initial Closed-in Pressure	30 Mins.	Mir
D	Initial Closed-in Pressure	67	P.S.I.	Second Flow Pressure	30 Mins.	Mir
E	Second Initial Flow Pressure	62	P.S.I.	Final Closed-in Pressure	30 Mins.	Mir
F	Second Final Flow Pressure	71	P.S.I.			
G	Final Closed-in Pressure	93	P.S.I.			
H	Final Hydrostatic Mud	1963	P.S.I.			

* flush tool

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	61
P 2	5	1
P 3	10	
P 4	15	61
P 5	20	62
P 6	25	63
P 7	30	64
P 8	35	
P 9	40	
P10	45	
P11	50	
P12	55	
P13	60	
P14		
P15		
P16		
P17		
P18		
P19		
P20		

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

Point	Minutes	Press.
	0	64
	3	65
	6	65
	9	66
	12	66
	15	67
	18	1
	21	
	24	
	27	67
	30	
	33	
	36	
	39	
	42	
	45	
	48	
	51	
	54	
	57	
	60	

Second Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point	Minutes	Press.
	0	62
	5	1
	10	62
	15	72*
	20	72
	25	72
	30	71
	35	
	40	
	45	
	50	
	55	
	60	
	65	
	70	
	75	
	80	
	85	
	90	

Final Shut-In
Breakdown: 12 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point	Minutes	Press.
	0	71
	3	72
	6	73
	9	74
	12	75
	15	76
	18	78
	21	80
	24	82
	27	84
	30	87
	33	93
	36	
	39	
	42	
	45	
	48	
	51	
	54	
	57	
	60	

TKT # 7446

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TKT # 7446

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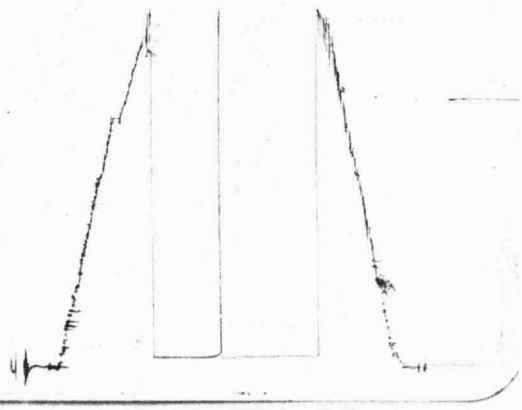
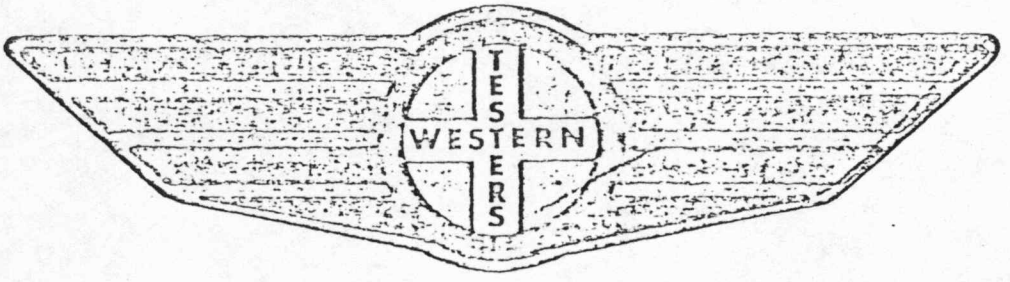


FORMATION TEST REPORT



Home Office: Wichita, Kansas 67201

P.O. Box 1599 Phone (316) 262-5861

Company PICKRELL DRILLING COMPANY Lease and Well No. #2 "E" KOPF Sec. 14 Twp. 30S Rge. 7W Test No. 1 Date 12/16

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 12/16/84 TICKET #7446
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 1 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

INTERVAL TEST FROM: 4112 FT TO: 4125 FT TOTAL DEPTH: 4125 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4107 FT SIZE: 6 5/8 IN PACKER DEPTH: 4112 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: PICKRELL
MUD TYPE: DRISPAC VISCOSITY: 50
WEIGHT: 9.3 WATER LOSS (CC): 9.6
CHLORIDES (P.P.M.): 16000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 186 FT I.D.: 2 1/4 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3905 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 21 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 13 FT SIZE: 5 1/2 OD IN
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: INITIAL FLOW PERIOD WEAK BLOW DIED IN 20 MINUTES
FINAL FLOW PERIOD WEAK BLOW DIED IN 10 MINUTES
(DIED IN 10 MINUTES AFTER FLUSH)

RECOVERED: 30 FT OF: DRILLING MUD
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS: FLUSHED TOOL IN FINAL FLOW PERIOD

TIME SET PACKER(S): 12:15 PM TIME STARTED OFF BOTTOM: 2:15 PM
WELL TEMPERATURE: 120 'F
INITIAL HYDROSTATIC PRESSURE: (A) 1983 PSI
INITIAL FLOW PERIOD MIN: 30 (B) 61 PSI TO (C) 64 PSI
INITIAL CLOSED IN PERIOD MIN: 27 (D) 67 PSI
FINAL FLOW PERIOD MIN: 30 (E) 62 PSI TO (F) 71 PSI
FINAL CLOSED IN PERIOD MIN: 33 (G) 93 PSI
FINAL HYDROSTATIC PRESSURE (H) 1963 PSI

WESTERN TESTING COMPANY INC.
PRESSURE DATA

DATE: 12/16/84 TICKET #7446
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 1 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE:	1983	PSI
(B) FIRST INITIAL FLOW PRESSURE:	61	PSI
(C) FIRST FINAL FLOW PRESSURE:	64	PSI
(D) INITIAL CLOSED-IN PRESSURE:	67	PSI
(E) SECOND INITIAL FLOW PRESSURE:	62	PSI
(F) SECOND FINAL FLOW PRESSURE:	71	PSI
(G) FINAL CLOSED-IN PRESSURE:	93	PSI
(H) FINAL HYDROSTATIC PRESSURE:	1963	PSI
WELL TEMPERATURE:	120	'F

OPEN TOOL: 12:15 PM

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	30 MIN	30 MIN
INITIAL CLOSED-IN PRESSURE:	30 MIN	27 MIN
SECOND FLOW PRESSURE:	30 MIN	30 MIN
FINAL CLOSED-IN PRESSURE:	30 MIN	33 MIN

PRESSURE BREAKDOWN

	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
PT	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	61	0	64	0	62	0	71
2	5	61	3	65	5	62	3	72
3	10	61	6	65	10	62	6	73
4	15	61	9	66	15	72	9	74
5	20	62	12	66	20	72	12	75
6	25	63	15	67	25	72	15	76
7	30	64	18	67	30	71	18	78
8			21	67			21	80
9			24	67			24	82
10			27	67			27	84
11							30	87
12							33	93
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WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No. 7447

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

Elevation 1427 K.B. Formation Miss Eff. Pay Ft.

District Pratt Date 12/17/84 Customer Order No.

COMPANY NAME P&B Pickrell Drlg Co.

ADDRESS

LEASE AND WELL NO. Kopf "E" #2 COUNTY Ringman STATE Ks Sec. 14 Twp. 30 Rge. 7W

Mail Invoice To Same No. Copies Requested 5

Mail Charts To Co. Name Same #2 'E' KOPF Address No. Copies Requested 5

Address

Formation Test No. 2 Interval Tested From 4125 ft. to 4135 ft. Total Depth 4135 ft.

Packer Depth 4120 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 4125 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4126 ft. Recorder Number 13552 Cap. 4050

Bottom Recorder Depth (Outside) 4129 ft. Recorder Number 3086 Cap. 4500

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

Drilling Contractor Pickrell Rig #10 Drill Collar Length 186 I. D. 2 1/4 in.

Mud Type Prispac Viscosity 50 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 9.6 cc. Drill Pipe Length 3918 I. D. 3.8 in.

Chlorides 16,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make - Serial Number - Anchor Length 10 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 increased to strong blow on first flow period
Strong blow throughout second flow period

Recovered 70 ft. of Drlg Mud (Scum of oil)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

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

RECEIVED

Time On Location 10:00 A.M. P.M. Time Pick Up Tool 10:30 A.M. P.M. Time Off Location 6:30 A.M. P.M.

Time Set Packer(s) 11:50 A.M. P.M. Time Started Off Bottom 4:20 A.M. P.M. Maximum Temperature 120°

Initial Hydrostatic Pressure		(A)	1983	P.S.I.		
Initial Flow Period	Minutes 30	(B)	60	P.S.I. to (C)	60	P.S.I.
Initial Closed In Period	Minutes 60	(D)	243	P.S.I.		
Final Flow Period	Minutes 90	(E)	60	P.S.I. to (F)	71	P.S.I.
Final Closed In Period	Minutes 90	(G)	376	P.S.I.		
Final Hydrostatic Pressure		(H)	1963	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 Glenn D. Tacy
Signature of Customer or his authorized representative

Western Representative Jim Woods Thank You 2376

FIELD INVOICE

Open Hole Test	$ 595.00
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 12/7/84 Test Ticket No. 7447

Recorder No. 13552 Capacity 4050 Location Ft

Clock No. — — — — Elevation Well Temperature °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1983 P.S.I.	Open Tool	M	
B First Initial Flow Pressure	55 P.S.I.	First Flow Pressure	30 Mins.	Mins
C First Final Flow Pressure	56 P.S.I.	Initial Closed-in Pressure	60 Mins.	Mins
D Initial Closed-in Pressure	240 P.S.I.	Second Flow Pressure	90 Mins.	Mins
E Second Initial Flow Pressure	63 P.S.I.	Final Closed-in Pressure	90 Mins.	Mins
F Second Final Flow Pressure	73 P.S.I.			
G Final Closed-in Pressure	315 P.S.I.			
H Final Hydrostatic Mud	1963 P.S.I.			

PRESSURE BREAKDOWN

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

Point	Mins.	Press.
P 1	0	55
P 2	5	/
P 3	10	/
P 4	15	55
P 5	20	56
P 6	25	56
P 7	30	
P 8	35	
P 9	40	
P10	45	
P11	50	
P12	55	
P13	60	
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 21 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	56
3	61
6	69
9	73
12	77
15	77
18	78
21	89
24	105
27	126
30	140
33	152
36	162
39	169
42	175
45	186
48	199
51	211
54	224
57	234
60	240

Second Flow Pressure
Breakdown: 19 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	63
5	/
10	/
15	63
20	64
25	65
30	66
35	67
40	68
45	69
50	70
55	71
60	71
65	72
70	72
75	72
80	73
85	73
90	73

Final Shut-In
Breakdown: 32 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	73
3	85
6	100
9	118
12	133
15	147
18	157
21	163
24	168
27	172
30	173
33	174
36	175
39	176
42	177
45	178
48	179
51	180
54	181
57	183
60	185

WESTERN TESTING CO., INC.

Pressure Data

Date _____ Test Ticket No. _____

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 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1		63				63	189
P 2		66				66	195
P 3		69				69	206
P 4		72				72	223
P 5		75				75	237
P 6		78				78	256
P 7		81				81	270
P 8		84				84	287
P 9		87				87	302
P10		90				90	314
P11		93				93	315
P12		96				96	
P13		99				99	
P14		102				102	
P15		105				105	
P16		108				108	
P17		111				111	
P18		114				114	
P19		117				117	
P20		120				120	

IKT # 7447

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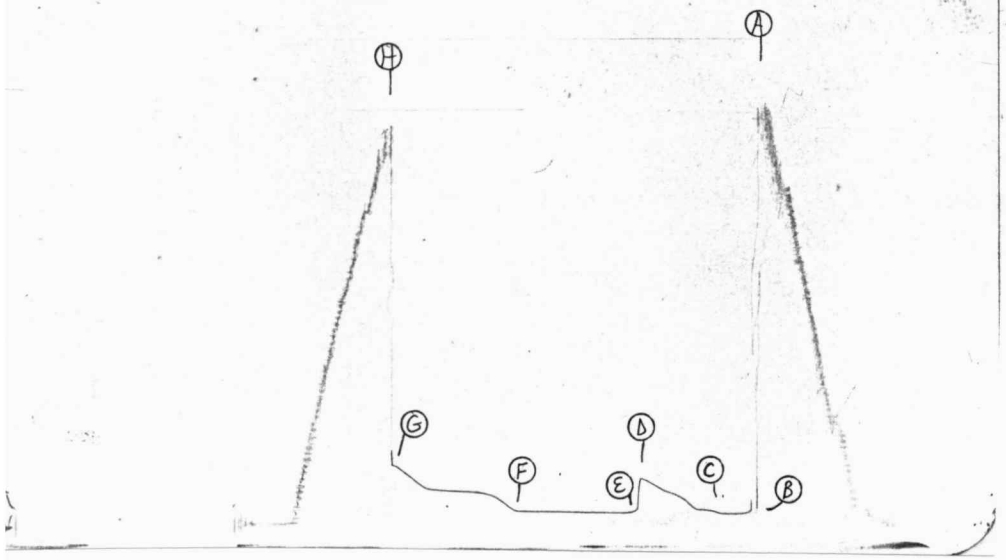

IKT # 7447

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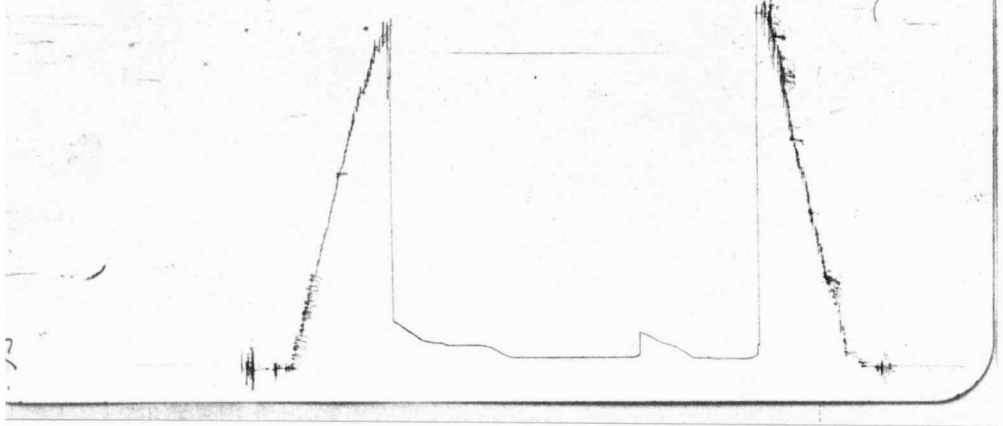
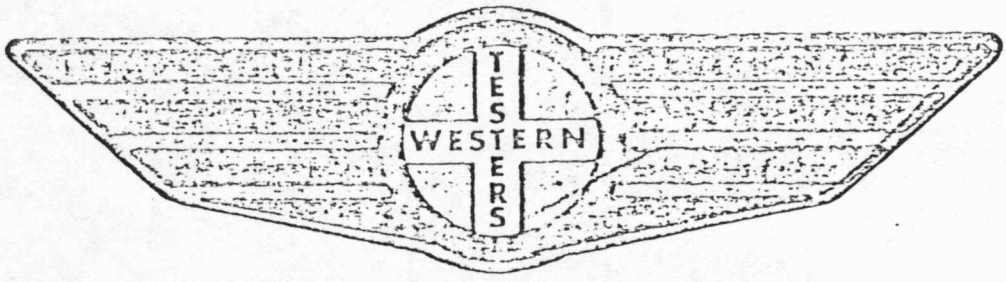


FORMATION TEST REPORT



Home Office: Wichita, Kansas 67201

P.O. Box 1599 Phone (316) 262-5861

Company PICKRELL DRILLING COMPANY Lease and Well No. #2 "E" KOPF Sec. 14 Twp. 30S Rge. 7W Test No. 2 Date 12/17/8

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 12/17/84 TICKET #7447
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 2 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

INTERVAL TEST FROM: 4125 FT TO: 4135 FT TOTAL DEPTH: 4135 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4120 FT SIZE: 6 5/8 IN PACKER DEPTH: 4125 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: PICKRELL
MUD TYPE: DRISPAC VISCOSITY: 50
WEIGHT: 9.3 WATER LOSS (CC): 9.6
CHLORIDES (P.P.M.): 16000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 186 FT I.D.: 2 1/4 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3918 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 21 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 10 FT SIZE: 5 1/2 OD IN
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: INITIAL FLOW PERIOD WEAK INCREASED TO STRONG BLOW
FINAL FLOW PERIOD STRONG BLOW

RECOVERED: 70 FT OF: DRLG MUD (SCUM OF OIL)
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 11:50 PM TIME STARTED OFF BOTTOM: 4:20 AM
WELL TEMPERATURE: 120 'F

INITIAL HYDROSTATIC PRESSURE:		(A) 1983	PSI	
INITIAL FLOW PERIOD	MIN: 25	(B) 55	PSI TO (C) 56	PSI
INITIAL CLOSED IN PERIOD	MIN: 60	(D) 240	PSI	
FINAL FLOW PERIOD	MIN: 90	(E) 63	PSI TO (F) 73	PSI
FINAL CLOSED IN PERIOD	MIN: 93	(G) 315	PSI	
FINAL HYDROSTATIC PRESSURE		(H) 1963	PSI	

WESTERN TESTING COMPANY INC.
PRESSURE DATA

DATE: 12/17/84 TICKET #7447
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 2 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE:	1983	PSI
(B) FIRST INITIAL FLOW PRESSURE:	55	PSI
(C) FIRST FINAL FLOW PRESSURE:	56	PSI
(D) INITIAL CLOSED-IN PRESSURE:	240	PSI
(E) SECOND INITIAL FLOW PRESSURE:	63	PSI
(F) SECOND FINAL FLOW PRESSURE:	73	PSI
(G) FINAL CLOSED-IN PRESSURE:	315	PSI
(H) FINAL HYDROSTATIC PRESSURE:	1963	PSI
WELL TEMPERATURE:	120	'F

OPEN TOOL: 11:50 PM

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	30 MIN	25 MIN
INITIAL CLOSED-IN PRESSURE:	60 MIN	60 MIN
SECOND FLOW PRESSURE:	90 MIN	90 MIN
FINAL CLOSED-IN PRESSURE:	90 MIN	93 MIN

PRESSURE BREAKDOWN

	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
PT	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	55	0	56	0	63	0	73
2	5	55	3	61	5	63	3	85
3	10	55	6	69	10	63	6	100
4	15	55	9	73	15	63	9	118
5	20	56	12	77	20	64	12	133
6	25	56	15	77	25	65	15	147
7			18	78	30	66	18	157
8			21	89	35	67	21	163
9			24	105	40	68	24	168
10			27	126	45	69	27	172
11			30	140	50	70	30	173
12			33	152	55	71	33	174
13			36	162	60	71	36	175
14			39	169	65	72	39	176
15			42	175	70	72	42	177
16			45	186	75	72	45	178
17			48	199	80	73	48	179
18			51	211	85	73	51	180
19			54	224	90	73	54	181
20			57	234			57	183
21			60	240			60	185
22							63	189
23							66	195
24							69	206
25							72	223
26							75	237
27							78	256
28							81	270
29							84	287
30							87	302

PRESSURE BREAKDOWN - CONT. TICKET #7447

PT	FIRST FLOW MIN	FIRST FLOW PRESSURE	INITIAL SHUT-IN MIN	INITIAL SHUT-IN PRESSURE	SECOND FLOW MIN	SECOND FLOW PRESSURE	FINAL SHUT-IN MIN	FINAL SHUT-IN PRESSURE
31							90	314
32							93	315
33								
34								
35								
36								
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WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET Nº 7448

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

Elevation 1427 K.B Formation Miss Eff. Pay ____ Ft.

District Pratt Date 12/17/84 Customer Order No. ____

COMPANY NAME Pickrell Drlg Co

ADDRESS 205 Litwin Bldg. 110 N. Market

LEASE AND WELL NO. Kopf "E" #2 COUNTY Kingman STATE Ks Sec. 14 Twp. 30 Rge. 7 W

Mail Invoice To Same (Co. Name) (Address) No. Copies Requested 5

Mail Charts To Same #2 'E' KOPF (Address) No. Copies Requested 5

Formation Test No. 3 Interval Tested From 4133 ft. to 4142 ft. Total Depth 4142 ft.

Packer Depth 4128 ft. Size 6 5/8 in. Packer Depth – ft. Size – in.

Packer Depth 4133 ft. Size 6 5/8 in. Packer Depth ____ ft. Size ____ in.

Depth of Selective Zone Set –

Top Recorder Depth (Inside) 4134 ft. Recorder Number 13552 Cap. 4050

Bottom Recorder Depth (Outside) 4137 ft. Recorder Number 3086 Cap. 4500

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

Drilling Contractor Pickrell Rig #10 Drill Collar Length 186 I. D. 2 1/4 in.

Mud Type Drispac Viscosity 59 Weight Pipe Length – I. D. – in.

Weight 9.0 Water Loss 10.4 cc. Drill Pipe Length 3926 I. D. 3.8 in.

Chlorides 20,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make – Serial Number – Anchor Length 9 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 throughout first flow period
Weak increased to strong blow on second flow period

Recovered 1700 ft. of Gas in Pipe

Recovered 210 ft. of Gas Cut Mud

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Recovered ____ ft. of ____

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

RECEIVED

Time On Location 12:00 ~~A.M.~~ P.M. Time Pick Up Tool 12:30 ~~A.M.~~ P.M. Time Off Location 9:00 ~~A.M.~~ P.M.

Time Set Packer(s) 1:40 ~~A.M.~~ P.M. Time Started Off Bottom 7:10 ~~A.M.~~ P.M. Maximum Temperature 120°

Initial Hydrostatic Pressure		(A)	1993	P.S.I.	
Initial Flow Period	Minutes 30	(B)	132	P.S.I. to (C)	152 P.S.I.
Initial Closed In Period	Minutes 60	(D)	1085	P.S.I.	
Final Flow Period	Minutes 150	(E)	132	P.S.I. to (F)	132 P.S.I.
Final Closed In Period	Minutes 90	(G)	1034	P.S.I.	
Final Hydrostatic Pressure		(H)	1973	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 Glenn A. Tracy
Signature of Customer or his authorized representative

Western Representative Jim Wondra Thank You 2376

FIELD INVOICE

Open Hole Test	$ 1595.00
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 12/17 Test Ticket No. 7448

Recorder No. 13552 Capacity 4050 Location Ft.

Clock No. — — — — Elevation Well Temperature °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1986 P.S.I.	Open Tool		M	
B	First Initial Flow Pressure	136 P.S.I.	First Flow Pressure		30 Mins.	Mins.
C	First Final Flow Pressure	172 P.S.I.	Initial Closed-in Pressure		60 Mins.	Mins
D	Initial Closed-in Pressure	1089 P.S.I.	Second Flow Pressure		150 Mins.	Mins
E	Second Initial Flow Pressure	120 P.S.I.	Final Closed-in Pressure		90 Mins.	Mins
F	Second Final Flow Pressure	129 P.S.I.				
G	Final Closed-in Pressure	1026 P.S.I.				
H	Final Hydrostatic Mud	1964 P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	136
P 2	5	
P 3	10	136
P 4	15	154
P 5	20	225 ok
P 6	25	221
P 7	30	172
P 8	35	
P 9	40	
P10	45	
P11	50	
P12	55	
P13	60	
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 19 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	172
3	474
6	769
9	822
12	874
15	901
18	928
21	969
24	998
27	1015
30	1030
33	1044
36	1054
39	1062
42	1072
45	1080
48	1085
51	1089
54	1089
57	
60	

Second Flow Pressure
Breakdown: 29 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	120
5	
10	
15	
20	
25	
30	
35	
40	
45	
50	
55	
60	120
65	121
70	121
75	121
80	122
85	122
90	123
100	123
105	124

Final Shut-In
Breakdown: 33 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	129
3	209
6	326
9	417
12	486
15	556
18	621
21	670
24	715
27	750
30	783
33	812
36	837
39	860
42	880
45	898
48	914
51	928
54	939
57	952
60	962

WESTERN TESTING CO., INC.

Pressure Data

Date _____ Test Ticket No. _____

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
Breakdown: _____ Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1	
P 2	
P 3	
P 4	
P 5	
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

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

Point Minutes	Press.
63	
66	
69	
72	
75	
78	
81	
84	
87	
90	
93	
96	
99	
102	
105	
108	
111	
114	
117	
120	

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

Point Minutes	Press.
1110	124
1115	125
1120	125
1125	126
1130	126
1135	127
1140	128
1145	129
~~1150~~	

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

Point Minutes	Press.
63	972
66	982
69	989
72	996
75	1004
78	1010
81	1014
84	1018
87	1021
90	1023
93	1025
96	1026
99	
102	
105	
108	
111	
114	
117	
120	

IKT # 7448

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IKT # 7448

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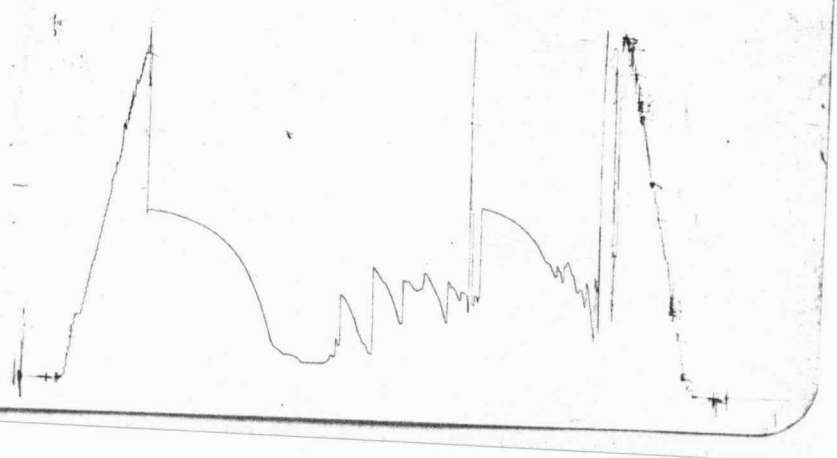
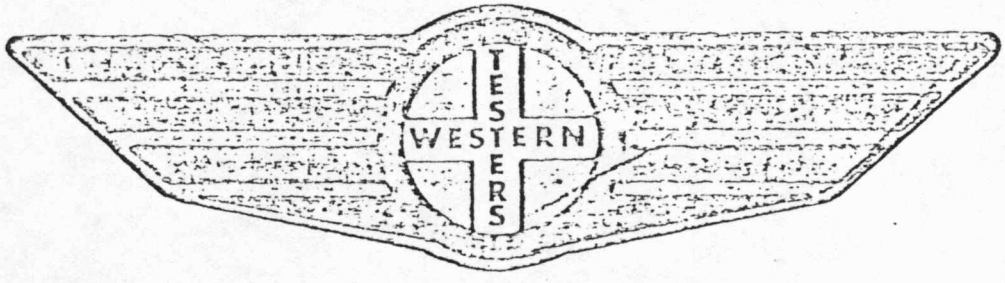


FORMATION TEST REPORT



Home Office: Wichita, Kansas 67201

P.O. Box 1599 Phone (316) 262-5861

Company PICKRELL DRILLING COMPANY Lease and Well No. #2 "E" KOPF Sec. 14 Twp. 30S Rge. 7W Test No. 3 Date 12/17/

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 12/17/84 TICKET #7448
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 3 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

INTERVAL TEST FROM: 4133 FT TO: 4142 FT TOTAL DEPTH: 4142 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4128 FT SIZE: 6 5/8 IN PACKER DEPTH: 4133 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: PICKRELL
MUD TYPE: DRISPAC VISCOSITY: 59
WEIGHT: 9.0 WATER LOSS (CC): 10.4
CHLORIDES (P.P.M.): 20000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 186 FT I.D.: 2 1/4 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3926 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 21 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 9 FT SIZE: 5 1/2 OD IN
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: INITIAL FLOW PERIOD WEAK BLOW
FINAL FLOW PERIOD WEAK INCREASED TO STRONG BLOW

RECOVERED: 1700 FT OF: GAS IN PIPE
RECOVERED: 210 FT OF: GAS CUT MUD
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 1:40 PM TIME STARTED OFF BOTTOM: 7:10 PM
WELL TEMPERATURE: 120 'F

INITIAL HYDROSTATIC PRESSURE:		(A) 1986	PSI	
INITIAL FLOW PERIOD	MIN: 30	(B) 136	PSI TO (C) 172	PSI
INITIAL CLOSED IN PERIOD	MIN: 54	(D) 1089	PSI	
FINAL FLOW PERIOD	MIN: 140	(E) 120	PSI TO (F) 129	PSI
FINAL CLOSED IN PERIOD	MIN: 96	(G) 1026	PSI	
FINAL HYDROSTATIC PRESSURE		(H) 1964	PSI	

WESTERN TESTING COMPANY INC.
PRESSURE DATA

DATE: 12/17/84 TICKET #7448
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 3 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE:	1986	PSI
(B) FIRST INITIAL FLOW PRESSURE:	136	PSI
(C) FIRST FINAL FLOW PRESSURE:	172	PSI
(D) INITIAL CLOSED-IN PRESSURE:	1089	PSI
(E) SECOND INITIAL FLOW PRESSURE:	120	PSI
(F) SECOND FINAL FLOW PRESSURE:	129	PSI
(G) FINAL CLOSED-IN PRESSURE:	1026	PSI
(H) FINAL HYDROSTATIC PRESSURE:	1964	PSI
WELL TEMPERATURE:	120	'F

OPEN TOOL: 1:40 PM

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	30 MIN	30 MIN
INITIAL CLOSED-IN PRESSURE:	60 MIN	54 MIN
SECOND FLOW PRESSURE:	150 MIN	140 MIN
FINAL CLOSED-IN PRESSURE:	90 MIN	96 MIN

PRESSURE BREAKDOWN

	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
PT	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	136	0	172	0	120	0	129
2	5	136	3	474	5	120	3	209
3	10	136	6	769	10	120	6	326
4	15	154	9	822	15	120	9	417
5	20	225	12	874	20	120	12	486
6	25	221	15	901	25	120	15	556
7	30	172	18	928	30	120	18	621
8			21	969	35	120	21	670
9			24	998	40	120	24	715
10			27	1015	45	120	27	750
11			30	1030	50	120	30	783
12			33	1044	55	120	33	812
13			36	1054	60	120	36	837
14			39	1062	65	121	39	860
15			42	1072	70	121	42	880
16			45	1080	75	121	45	898
17			48	1085	80	122	48	914
18			51	1089	85	122	51	928
19			54	1089	90	123	54	939
20					95	123	57	952
21					100	124	60	962
22					105	124	63	972
23					110	125	66	982
24					115	125	69	989
25					120	126	72	996
26					125	126	75	1004
27					130	127	78	1010
28					135	128	81	1014
29					140	129	84	1018
30							87	1021

PRESSURE BREAKDOWN - CONT. TICKET #7448

	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
PT	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
31							90	1023
32							93	1025
33							96	1026
34								
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37								
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WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET Nº 7449

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

Elevation 1427 K.B Formation Miss Eff. Pay ____ Ft.

District Pratt Date 12/18/84 Customer Order No. ____

COMPANY NAME Pickrell Drilling Co.

ADDRESS 205 Litwin Bldg. 110 N Market

LEASE AND WELL NO. Kopf "E" #2 COUNTY Kingman STATE Ks Sec. 14 Twp. 30 Rge. 7 W

Mail Invoice To Same (Co. Name) (Address) No. Copies Requested 5

Mail Charts To Same #2 'E' KOPF (Address) No. Copies Requested 5

Formation Test No. 4 Interval Tested From 4134 ft. to 4145 ft. Total Depth 4145 ft.

Packer Depth 4129 ft. Size 6 5/8 in. Packer Depth – ft. Size – in.

Packer Depth 4134 ft. Size 6 5/8 in. Packer Depth – ft. Size – in.

Depth of Selective Zone Set –

Top Recorder Depth (Inside) 4135 ft. Recorder Number 13552 Cap. 4050

Bottom Recorder Depth (Outside) 4138 ft. Recorder Number 3086 Cap. 4500

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

Drilling Contractor Pickrell Rig #10 Drill Collar Length 186 I. D. 2 1/4 in.

Mud Type Drispac Viscosity 51 Weight Pipe Length – I. D. – in.

Weight 9.0 Water Loss 13.4 cc. Drill Pipe Length 3927 I. D. 3.8 in.

Chlorides 20,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make – Serial Number – Anchor Length 11 ft. Size 5 1/2 OD in.

Did Well Flow? Yes 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: Strong blow throughout flow periods
Gas to surface in 35 min on second flow

Recovered 60 ft. of Sli Oil & Gas Cut Mud (5% oil)

Recovered 120 ft. of Oil & Gas Cut Mud (10% oil) (10% water)

Recovered 60 ft. of Oil & Gas Cut Watery Mud (20% oil) (30% water)

Recovered ____ ft. of ____

Recovered ____ ft. of ____

Chlorides 35,000 P.P.M. Sample Jars used ____ Remarks: ____

Time On Location 3:00 A.M. ~~P.M.~~ Time Pick Up Tool 3:30 A.M. ~~P.M.~~ Time Off Location 1:00 ~~A.M.~~ P.M.

Time Set Packer(s) 5:30 A.M. ~~P.M.~~ Time Started Off Bottom 10:00 A.M. ~~P.M.~~ Maximum Temperature 121°

Initial Hydrostatic Pressure ..... (A) 1993 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 60 P.S.I. to (C) 81 P.S.I.

Initial Closed In Period ..... Minutes 60 (D) 1034 P.S.I.

Final Flow Period ..... Minutes 90 (E) 91 P.S.I. to (F) 91 P.S.I.

Final Closed In Period ..... Minutes 90 (G) 1105 P.S.I.

Final Hydrostatic Pressure ..... (H) 1973 P.S.I.

RECEIVED

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 Glenn A. Tracy
Signature of Customer or his authorized representative

2376

Western Representative Jim Wondra Thank You

FIELD INVOICE

Open Hole Test	$ 1595.00
Misrun	$
Straddle Test	$
Jars	$
Selective Zone	$
Safety Joint	$
Standby	$
Evaluation	$
Extra Packer	$
Circ. Sub.	$
Mileage	$
Fluid Sampler	$
Extra Charts	$
Insurance	$
Telecopier	$
TOTAL	$

Phone 316 262-5861

P. O. Box 1599

WICHITA, KANSAS 67201

Nº 3898

GAS FLOW REPORT

Date 12/18/84 Ticket 7449 Company Pickrell

Well Name and No. Kopf "E" #2 Dst No. 4 Interval Tested 4134-4145

County Ringman State Ks Sec. 14 Twp. 30 Rg. 7

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					
SECOND FLOW					Gas to surface in 35 min
40	8 H²O	1/4"			4,760 C.F.P.D.
50	12 "	"			5,860 "
60	15 "	"			6,550 "
70	17 "	"			6,930 "
80	18 "	"			7,120 "
90	"	"			" "

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 1½% 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

FORM WTC 9

WESTERN TESTING CO., INC.

Pressure Data

Date 12/18/84 Test Ticket No. 7449

Recorder No. 13552 Capacity 4050 Location Ft.

Clock No. — — — — Elevation Well Temperature °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	2026	P.S.I.	Open Tool M	
B	First Initial Flow Pressure	64	P.S.I.	First Flow Pressure 30 Mins.	Mins.
C	First Final Flow Pressure	87	P.S.I.	Initial Closed-in Pressure 60 Mins.	Mins.
D	Initial Closed-in Pressure	1030	P.S.I.	Second Flow Pressure 90 Mins.	Mins.
E	Second Initial Flow Pressure	89	P.S.I.	Final Closed-in Pressure 90 Mins.	Mins.
F	Second Final Flow Pressure	97	P.S.I.		
G	Final Closed-in Pressure	1107	P.S.I.		
H	Final Hydrostatic Mud	1990	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 7 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point	Mins.	Press.
P 1	0	64
P 2	5	64
P 3	10	66
P 4	15	71
P 5	20	77
P 6	25	82
P 7	30	87
P 8	35	
P 9	40	
P10	45	
P11	50	
P12	55	
P13	60	
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 21 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	87
3	145
6	221
9	299
12	377
15	455
18	534
21	602
24	672
27	723
30	766
33	808
36	842
39	871
42	895 OK
45	909
48	944
51	977
54	995
57	1018
60	1030

Second Flow Pressure
Breakdown: 18 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	89
5	/
10	/
15	89
20	/
25	/
30	89
35	90
40	/
45	90
50	91
55	/
60	91
65	92
70	93
75	94
80	95
85	97
~~90~~	

Final Shut-In
Breakdown: 31 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	97
3	246
6	500
9	705
12	814
15	889
18	945
21	984
24	1011
27	1032
30	1048
33	1059
36	1068
39	1075
42	1081
45	1085
48	1090
51	1093
54	1095
57	1096
60	1097

WESTERN TESTING CO., INC.

Pressure Data

Date _____ Test Ticket No. 7249

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 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1		63				63	1098
P 2		66				66	1099
P 3		69				69	1100
P 4		72				72	1101
P 5		75				75	1102
P 6		78				78	1103
P 7		81				81	1104
P 8		84				84	1105
P 9		87				87	1106
P10		90				90	1107
P11		93				93	
P12		96				96	
P13		99				99	
P14		102				102	
P15		105				105	
P16		108				108	
P17		111				111	
P18		114				114	
P19		117				117	
P20		120				120	

IKT # 7449

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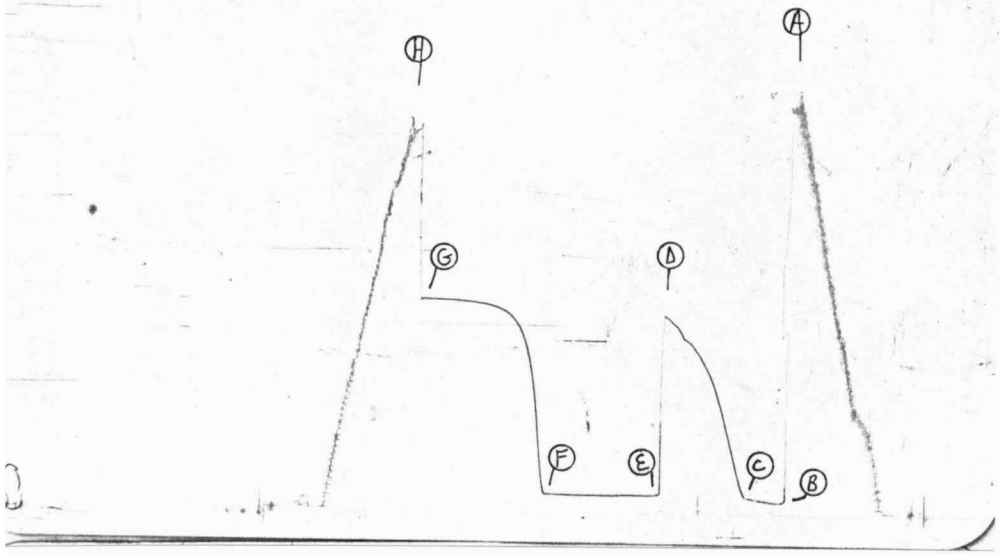

IKT # 7449

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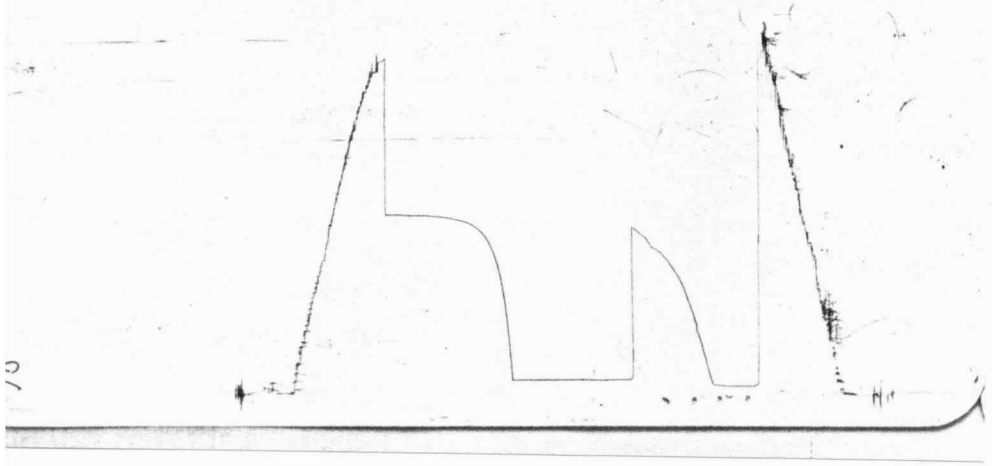
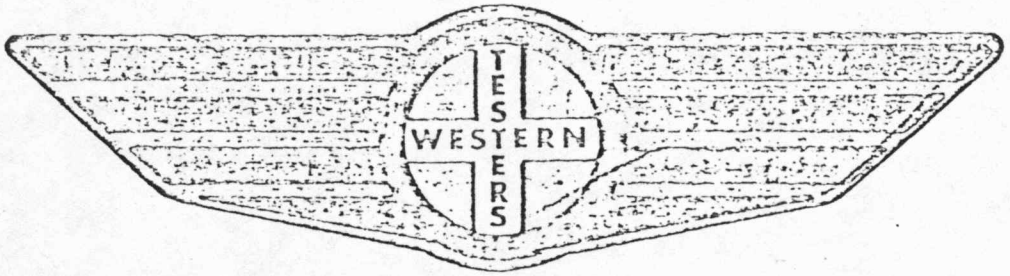


FORMATION TEST REPORT



Home Office: Wichita, Kansas 67201

P.O. Box 1599 Phone (316) 262-5861

Company PICKRELL DRILLING COMPANY Lease and Well No. #2 "E" KOPF Sec. 14 Twp. 30S Rge. 7W Test No. 4 Date 2/18/

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 12/18/84 TICKET #7449
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 4 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

INTERVAL TEST FROM: 4134 FT TO: 4145 FT TOTAL DEPTH: 4145 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4129 FT SIZE: 6 5/8 IN PACKER DEPTH: 4134 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: PICKRELL
MUD TYPE: DRISPAC VISCOSITY: 51
WEIGHT: 9.0 WATER LOSS (CC): 13.4
CHLORIDES (P.P.M.): 20000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? YES REVERSED OUT? NO

DRILL COLLAR LENGTH:	186	FT	I.D.:	2 1/4	IN
WEIGHT PIPE LENGTH:		FT	I.D.:		IN
DRILL PIPE LENGTH:	3927	FT	I.D.:	3.8	IN
TEST TOOL LENGTH:	21	FT	TOOL SIZE:	5 1/2 OD	IN
ANCHOR LENGTH:	11	FT	SIZE:	5 1/2 OD	IN
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: STRONG BLOW THROUGHOUT FLOW PERIODS -GAS TO SURFACE IN 35 MINUTES ON SECOND FLOW

RECOVERED:	60	FT	OF: SLI OIL & GAS CUT MUD (5% OIL)
RECOVERED:	120	FT	OF: OIL & GAS CUT MUD (10% OIL; 10% WATER)
RECOVERED:	60	FT	OF: OIL & GAS CUT WATERY MUD (20% OIL; 30% WATER)
RECOVERED:		FT	OF:
RECOVERED:		FT	OF:
RECOVERED:		FT	OF:
RECOVERED:		FT	OF:
RECOVERED:		FT	OF:
RECOVERED:		FT	OF:

REMARKS: CHLORIDES 35000 P.P.M.

TIME SET PACKER(S): 5:30 AM TIME STARTED OFF BOTTOM: 10:00 AM
WELL TEMPERATURE: 121 'F

INITIAL HYDROSTATIC PRESSURE:		(A) 2026	PSI
INITIAL FLOW PERIOD	MIN: 30	(B) 64	PSI TO (C) 87 PSI
INITIAL CLOSED IN PERIOD	MIN: 60	(D) 1030	PSI
FINAL FLOW PERIOD	MIN: 85	(E) 89	PSI TO (F) 97 PSI
FINAL CLOSED IN PERIOD	MIN: 90	(G) 1107	PSI
FINAL HYDROSTATIC PRESSURE		(H) 1970	PSI

WESTERN TESTING COMPANY INC.
PRESSURE DATA

DATE: 12/18/84 TICKET #7449
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 4 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

(A) INITIAL HYDROSTATIC PRESSURE:	2026	PSI
(B) FIRST INITIAL FLOW PRESSURE:	64	PSI
(C) FIRST FINAL FLOW PRESSURE:	87	PSI
(D) INITIAL CLOSED-IN PRESSURE:	1030	PSI
(E) SECOND INITIAL FLOW PRESSURE:	89	PSI
(F) SECOND FINAL FLOW PRESSURE:	97	PSI
(G) FINAL CLOSED-IN PRESSURE:	1107	PSI
(H) FINAL HYDROSTATIC PRESSURE:	1970	PSI
WELL TEMPERATURE:	121	'F

OPEN TOOL: 5:30 AM

	TIME - GIVEN	TIME - ACTUAL
FIRST FLOW PRESSURE:	30 MIN	30 MIN
INITIAL CLOSED-IN PRESSURE:	60 MIN	60 MIN
SECOND FLOW PRESSURE:	90 MIN	85 MIN
FINAL CLOSED-IN PRESSURE:	90 MIN	90 MIN

PRESSURE BREAKDOWN

	FIRST FLOW		INITIAL SHUT-IN		SECOND FLOW		FINAL SHUT-IN	
PT	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE	MIN	PRESSURE
1	0	64	0	87	0	89	0	97
2	5	64	3	145	5	89	3	246
3	10	66	6	221	10	89	6	500
4	15	71	9	299	15	89	9	705
5	20	77	12	377	20	89	12	814
6	25	83	15	455	25	89	15	889
7	30	87	18	534	30	89	18	945
8			21	602	35	90	21	984
9			24	672	40	90	24	1011
10			27	723	45	90	27	1032
11			30	766	50	91	30	1048
12			33	808	55	91	33	1059
13			36	842	60	91	36	1068
14			39	871	65	92	39	1075
15			42	895	70	93	42	1081
16			45	909	75	94	45	1086
17			48	944	80	95	48	1090
18			51	977	85	97	51	1093
19			54	995			54	1095
20			57	1018			57	1096
21			60	1030			60	1097
22							63	1098
23							66	1099
24							69	1100
25							72	1101
26							75	1102
27							78	1103
28							81	1104
29							84	1105
30							87	1106

PRESSURE BREAKDOWN - CONT. TICKET #7449

PT	FIRST FLOW MIN	FIRST FLOW PRESSURE	INITIAL SHUT-IN MIN	INITIAL SHUT-IN PRESSURE	SECOND FLOW MIN	SECOND FLOW PRESSURE	FINAL SHUT-IN MIN	FINAL SHUT-IN PRESSURE
31							90	1107

WESTERN TESTING COMPANY INC.
GAS FLOW REPORT

DATE: 12/18/84 TICKET #7449
CUSTOMER: PICKRELL DRILLING CO. LEASE: 'E' KOPF
WELL: 2 TEST: 4 GEOLOGIST: TRACY
ELEVATION (KB): 1427 FORMATION: MISSISSIPPI
SECTION: 14 TOWNSHIP: 30S
RANGE: 7W COUNTY: KINGMAN STATE: KS
GAUGE SN #13552 RANGE: 4050 CLOCK: 12

TIME GAUGE (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
		SECOND FLOW		
40	MERLA	1/4"	8" WTR	4760 CFPD
50	"	"	12" "	5860 " "
60	"	"	15" "	6550 " "
70	"	"	17" "	6930 " "
80	"	"	18" "	7120 " "
90	"	"	"	" " "

GAS BOTTLE SN #:
DATE BOTTLE FILLED:
DATE TO BE INVOICED: