P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

Ground Level TICKET No. 7060 Kansas City

Elevation 1782 G.L. Formation KC. Eff. Pay — Ft.

District Great Bend Date 8-11-80 Customer Order No. —

COMPANY NAME P.V. Properties Inc.

ADDRESS 360 Sutton Place, Wichita, Kansas 67202

LEASE AND WELL NO. Staudinger #1 COUNTY Russell STATE Kansas Sec. 3 Twp. 15 S Rge. 12 W

Mail Invoice To Same as above Co. Name Address Copy to Musgrove No. Copies Requested 5

Mail Charts To Same as above Address No. Copies Requested 5

Formation Test No. 1 Interval Tested from 2958 ft. to 2994 ft. Total Depth 2994 ft.

Packer Depth 2953 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Packer Depth 2958 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2984 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 2987 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg Co Rig #5 Drill Collar Length — I. D. — in.

Mud Type Starch Salt Clay Viscosity 44 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 15.0 cc. Drill Pipe Length 1954 I. D. 3.8 in.

Chlorides 72 000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make — Serial Number — Anchor Length 36 ft. Size 5 1/2 OD in. 3/4

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

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

Blow: Strong blow throughout both Flow periods

Recovered 1260 ft. of Gas in pipe

Recovered 30 ft. of SLIGHTLY OIL CUT MUD

Recovered 60 ft. of OIL & GAS CUT MUD

Recovered 60 ft. of Heavy oil & GAS CUT MUD (Show of free oil) (Trace water)

Recovered 120 ft. of very Heavy OILS GAS CUT MUD (Show of free oil) (Trace water)

Remarks: Driller Picked up too high on 1st Shut-in 33% oil, 3% water 64% mud

Time Set Packer(s) 5:45 A.M. (P.M.) Time Started Off Bottom 8:15 A.M. (P.M.) Maximum Temperature 99

Initial Hydrostatic Pressure			(A) 1571	P.S.I.		
Initial Flow Period	Minutes 45	(B) 51	P.S.I. to	(C) 89	P.S.I.	
Initial Closed In Period	Minutes 30	(D) 728	P.S.I.			
Final Flow Period	Minutes 45	(E) 102	P.S.I. to	(F) 140	P.S.I.	
Final Closed In Period	Minutes 30	(G) 639	P.S.I.			
Final Hydrostatic Pressure		(H) 1558	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 Jim Musgrove

Signature of Customer or his authorized representative

AUG 19 1980

Western Representative Werner Wondra

Thank You

FIELD INVOICE

Open Hole Test	$ 550 00
Misrun	$ —
Straddle Test	$ —
Jars	$ —
Selective Zone	$ —
Safety Joint	$ —
Standby	$ —
Evaluation	$ —
Extra Packer	$ —
Circ. Sub.	$ —
Mileage 40 miles	$ 30 00
Fluid Sampler	$ —
Extra Charts	$ —
TOTAL	$ 580 00

WESTERN TESTING CO., INC.
Pressure Data

P/Projection Test 1

Date 8-11-80 Test Ticket No. 7060

Recorder No. 6074 Capacity 5100 Location 2984 Ft.

Clock No. Elevation 1782 GL Well Temperature 99 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1638 P.S.I.	Open Tool	5:45 P M	
B	First Initial Flow Pressure	61 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C	First Final Flow Pressure	107 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	752 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	123 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	151 P.S.I.			
G	Final Closed-in Pressure	647 P.S.I.			
H	Final Hydrostatic Mud	1592 P.S.I.			

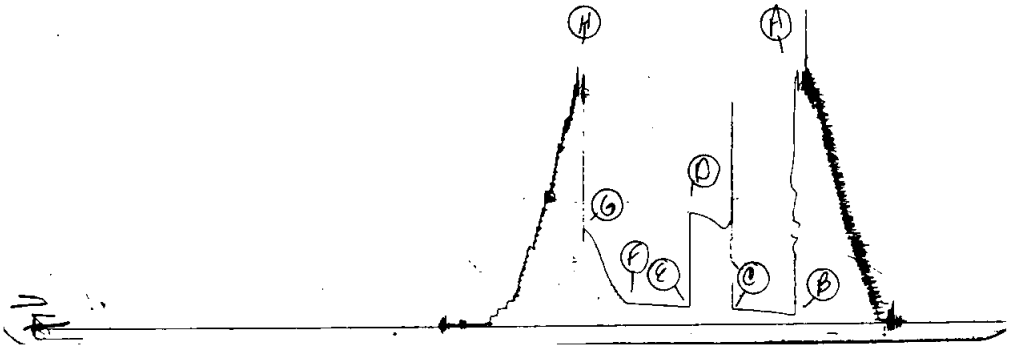
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 9 Inc.		Breakdown: 10 Inc.		Breakdown: 9 Inc.		Breakdown: 10 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 0	61	0	107	0	123	0	151
P 2 5	68	3	673	5	125	3	179
P 3 10	77	6	645	10	130	6	210
P 4 15	82	9	655	15	133	9	256
P 5 20	87	12	678	20	136	12	302
P 6 25	92	15	701	25	140	15	356
P 7 30	97	18	716	30	143	18	430
P 8 35	100	21	726	35	146	21	512
P 9 40	102	24	737	40	149	24	570
P10 45	107	27	744	45	151	27	611
P11 50		30	752	50		30	647
P12 55		33		55		33	
P13 60		36		60		36	
P14		39		65		39	
P15		42		70		42	
P16		45		75		45	
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

WTC - 4

Ref # 7060

I



Company P. V. Properties, Inc. Lease & Well No. Standinger #1

Elevation 1782 Ground Level Formation Kansas City Effective Pay ---- Ft. Ticket No. 7060

Date 8/11/80 Sec. 3 Twp. 15S Range 12W County Russell State Kansas

Test Approved by Jim Musgrove Western Representative Vernon Wondra

Formation Test No. 1 Interval Tested from 2958 ft. to 2994 ft. Total Depth 2994 ft.

Packer Depth 2953 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 2958 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2984 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 2987 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Co. Rig #5 Drill Collar Length - I. D. - in.

Mud Type starch-salt-clay Viscosity 44 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 15.0 cc. Drill Pipe Length 1954 I. D. 3.8 in.

Chlorides 77,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make -- Serial Number - Anchor Length 36 ft. Size 5½OD 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 4½FH in.

Blow: Strong blow throughout both flow periods.

Recovered 1260 ft. of gas in pipe

Recovered 30 ft. of slightly oil cut mud

Recovered 60 ft. of oil and gas cut mud

Recovered 60 ft. of heavy oil and gas cut mud (show of free oil-trace of water

Recovered 120 ft. of very heavy oil and gas cut mud (show of free oil-33% oil;3% water;64% mud)

Remarks: Driller picked up too high on first shut-in

Time Set Packer(s) 5:45 ~~A.M.~~ P.M. Time Started Off Bottom 8:15 ~~A.M.~~ P.M. Maximum Temperature 99°

Initial Hydrostatic Pressure			(A) 1638	P.S.I.		
Initial Flow Period	Minutes 45	(B) 61	P.S.I. to	(C) 107	P.S.I.	
Initial Closed In Period	Minutes 30	(D) 752	P.S.I.			
Final Flow Period	Minutes 45	(E) 123	P.S.I. to	(F) 151	P.S.I.	
Final Closed In Period	Minutes 30	(G) 647	P.S.I.			
Final Hydrostatic Pressure			(H) 1592	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 8-11-80 Test Ticket No. 7060

Recorder No. 6074 Capacity 5100 Location 2984 Ft.

Clock No. ------- Elevation 1782 Ground Level Well Temperature 99 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1638 P.S.I.	Open Tool	5:45 P. M	
B	First Initial Flow Pressure	61 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C	First Final Flow Pressure	107 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	752 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	123 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	151 P.S.I.			
G	Final Closed-in Pressure	647 P.S.I.			
H	Final Hydrostatic Mud	1592 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 9 Inc.		Breakdown: 10 Inc.		Breakdown: 9 Inc.		Breakdown: 10 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 0	60	0	107	0	123	0	151
P 2 5	68	3	673	5	125	3	179
P 3 10	77	6	645	10	130	6	210
P 4 15	82	9	655	15	133	9	256
P 5 20	87	12	678	20	136	12	302
P 6 25	92	15	701	25	140	15	356
P 7 30	97	18	716	30	143	18	430
P 8 35	100	21	726	35	146	21	512
P 9 40	102	24	737	40	149	24	570
P10 45	107	27	744	45	151	27	611
P11		30	752			30	647
P12							
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET Nº 7061

Elevation Ground Level 1782 G.L. Formation K.C. Kansas City Eff. Pay — Ft.

District Great Bend Date 8-12-80 Customer Order No. —

COMPANY NAME P.V. Properties Inc.

ADDRESS 360 Sutton Place, Wichita, Kansas 67202

LEASE AND WELL NO. Staudinger #1 COUNTY Russell STATE Kansas Sec. 3 Twp. 15 S Rge. 12 W

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

Mail Charts To Same as above Address Copy to Jim Musgrove No. Copies Requested 5

Formation Test No. 2 Interval Tested from 3002 ft. to 3021 ft. Total Depth 3021 ft.

Packer Depth 2997 ft. Size 6¾ in. Packer Depth — ft. Size — in.

Packer Depth 3002 ft. Size 6¾ in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 3011 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3014 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Co. Rig #5 Drill Collar Length — I. D. — in.

Mud Type Starch-Salt Viscosity 47 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 15.0 cc. Drill Pipe Length 1989 I. D. 3.8 in.

Chlorides 77,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 ½ XH in.

Jars: Make — Serial Number — Anchor Length 19 ft. Size 5 ½ XH in.

Did Well Flow? No Reversed Out No Surface Choke Size ¾ in. Bottom Choke Size ¾ in.

Main Hole Size 7⅞ in. Tool Joint Size 4 ½ FH in.

Blow: Fair blow increased to strong blow by end of 1st Flow period (initial)
Fair 4" blow throughout 2nd Flow period (final)

Recovered 60 ft. of GAS IN PIPE

Recovered 120 ft. of SLIGHTLY OIL & GAS CUT MUDDY WATER

Recovered 540 ft. of WATER (Show of Oil)

Recovered 240 ft. of WATER (Chlorides 162,000 ppm)

Recovered — ft. of —

Remarks: —

RECEIVED
SEP 19 1980

Time Set Packer(s) 9:15 A.M. P.M. Time Started Off Bottom 10:00 A.M. P.M. Maximum Temperature 99

Initial Hydrostatic Pressure			(A) 1609	P.S.I.		
Initial Flow Period	Minutes 45	(B) 76	P.S.I. to	(C) 332	P.S.I.	
Initial Closed In Period	Minutes 30	(D) 818	P.S.I.			
Final Flow Period	Minutes 45	(E) 345	P.S.I. to	(F) 498	P.S.I.	
Final Closed In Period	Minutes 45	(G) 805	P.S.I.			
Final Hydrostatic Pressure		(H) 1584	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 Jim Musgrove
Signature of Customer or his authorized representative

Western Representative Vernon Wondra

Thank You

FIELD INVOICE

Open Hole Test	$ 530.00
Misrun	$ —
Straddle Test	$ —
Jars	$ —
Selective Zone	$ —
Safety Joint	$ —
Standby	$ —
Evaluation	$ —
Extra Packer	$ —
Circ. Sub.	$ —
Mileage	$ 50 m
Fluid Sampler	$ —
Extra Charts	$ —
TOTAL	$ 580.00

WESTERN TESTING CO., INC.
Pressure Data

Date 8-12-80 Test Ticket No. 7061

Recorder No. 6074 Capacity 5700 Location 3011 Ft.

Clock No. Elevation 1782 GL Well Temperature 99 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	1648 P.S.I.		Open Tool	7:15 A M	
B	First Initial Flow Pressure	59 P.S.I.		First Flow Pressure	45 Mins.	45 Mins.
C	First Final Flow Pressure	312 P.S.I.		Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	803 P.S.I.		Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	337 P.S.I.		Final Closed-in Pressure	45 Mins.	45 Mins.
F	Second Final Flow Pressure	495 P.S.I.				
G	Final Closed-in Pressure	811 P.S.I.				
H	Final Hydrostatic Mud	1599 P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	59
P 2 5	84
P 3 10	123
P 4 15	161
P 5 20	192
P 6 25	220
P 7 30	243
P 8 35	267
P 9 40	294
P10 45	312
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	312
3	726
6	754
9	770
12	780
15	785
18	793
21	797
24	801
27	802
30	803
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

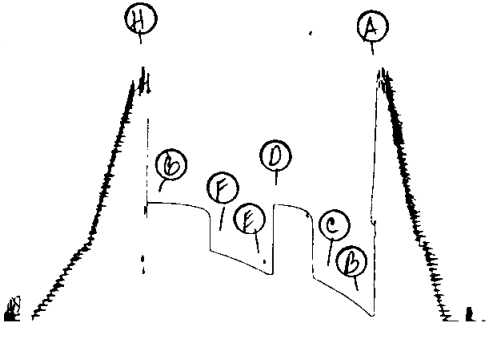
Second Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	337
5	343
10	371
15	394
20	414
25	432
30	450
35	468
40	481
45	495
50	
55	
60	
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	495
3	757
6	770
9	780
12	788
15	793
18	798
21	801
24	804
27	806
30	808
33	809
36	809
39	810
42	810
45	811
48	
51	
54	
57	
60	

Pbl # 7061



Company P. V. Properties, Inc. Lease & Well No. Standinger #1

Elevation 1782 Ground Level Formation Kansas City Effective Pay --- Ft. Ticket No. 7061

Date 8/12/80 Sec. 3 Twp. 15S Range 12 W County Russell State Kansas

Test Approved by Jim Musgrove Western Representative Vernon Wondra

Formation Test No. 2 Interval Tested from 3002 ft. to 3021 ft. Total Depth 3021 ft.

Packer Depth 2997 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3002 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3011 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3014 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Co. Rig #5 Drill Collar Length - I. D. - in.

Mud Type starch-salt-clay Viscosity 44 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 15.0 cc. Drill Pipe Length 1989 I. D. 3.8 in.

Chlorides 77,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make --- Serial Number - Anchor Length 19 ft. Size 5½ODin.

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 4½FH in.

Blow: Fair blow increased to strong blow by end of initial flow period. Fair four inch blow throughout final flow period.

Recovered 60 ft. of gas in pipe

Recovered 120 ft. of slightly oil and gas cut muddy water

Recovered 540 ft. of water with show of oil

Recovered 240 ft. of water (Chlorides 162,000 ppm)

Recovered ft. of

Remarks:

Time Set Packer(s) 7:15 A.M. ~~P.M.~~ Time Started Off Bottom 10:00 A.M. ~~P.M.~~ Maximum Temperature 99°

Initial Hydrostatic Pressure			(A) 1648	P.S.I.		
Initial Flow Period	Minutes 45	(B) 59	P.S.I. to	(C) 312	P.S.I.	
Initial Closed In Period	Minutes 30	(D) 803	P.S.I.			
Final Flow Period	Minutes 45	(E) 337	P.S.I. to	(F) 495	P.S.I.	
Final Closed In Period	Minutes 45	(G) 811	P.S.I.			
Final Hydrostatic Pressure			(H) 1599	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 8-12-80 Test Ticket No. 7061

Recorder No. 6074 Capacity 5100 Location 3011 Ft.

Clock No. ------ Elevation 1782 Ground Level Well Temperature 99 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1648 P.S.I.	Open Tool	7:15 A. M	
B	First Initial Flow Pressure	59 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C	First Final Flow Pressure	312 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	803 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	337 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F	Second Final Flow Pressure	495 P.S.I.			
G	Final Closed-in Pressure	811 P.S.I.			
H	Final Hydrostatic Mud	1599 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	59
P 2 5	84
P 3 10	123
P 4 15	161
P 5 20	192
P 6 25	220
P 7 30	243
P 8 35	267
P 9 40	294
P10 45	312
P11	
P12	
P13	
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	312
3	726
6	754
9	770
12	780
15	785
18	793
21	797
24	801
27	802
30	803

Second Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	337
5	343
10	371
15	394
20	414
25	432
30	450
35	468
40	481
45	495

Final Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	495
3	757
6	770
9	780
12	788
15	793
18	798
21	801
24	804
27	806
30	808
33	809
36	809
39	810
42	810
45	811

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET Nº 7062

P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

Elevation 1782 Ground Level Formation K.C. Kansas City Eff. Pay — Ft.

District Great Bend Date 8-12-80 Customer Order No. —

COMPANY NAME P.V. Properties Inc.

ADDRESS 360 Sutton Place, Wichita, Kansas 67202

LEASE AND WELL NO. Staudinger #1 COUNTY Russell STATE Kansas Sec. 3 Twp. 15S Rge. 12W

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

Mail Charts To Same as above (Address) Copy Musgrove (Address) No. Copies Requested 5

Formation Test No. 3 Interval Tested from 3021 ft. to 3026 ft. Total Depth 3026 ft.

Packer Depth 3016 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Packer Depth 3021 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 3016 ft. Recorder Number 6014 Cap. 5100

Bottom Recorder Depth (Outside) 3019 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Co. Rig #1

Mud Type Starch Viscosity 45

Weight 9.7 Water Loss 12.0 cc.

Chlorides 85,000 P.P.M.

Jars: Make — Serial Number —

Did Well Flow? No Reversed Out No

Drill Collar Length — I. D. — in.

Weight Pipe Length 983 I. D. 2.7 in.

Drill Pipe Length 2007 I. D. 3.8 in.

Test Tool Length 21 ft. Tool Size 5 1/2 XH in.

Anchor Length 15 ft. Size 5 1/2 XH in. 3/4

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 both flow periods test.

Recovered 1020 ft. of Gas in Pipe

Recovered 35 ft. of Muddy oil

Recovered 120 ft. of Frothy muddy oil

Recovered ft. of

Recovered ft. of

Remarks:

RECEIVED AUG 14 1980

Time Set Packer(s) 7:00 A.M. (P.M.) Time Started Off Bottom 10:00 A.M. (P.M.) Maximum Temperature 102°

Initial Hydrostatic Pressure			(A)	1635	P.S.I.	
Initial Flow Period	Minutes	45	(B)	38	P.S.I. to (C)	63 P.S.I.
Initial Closed In Period	Minutes	45	(D)	780	P.S.I.	
Final Flow Period	Minutes	45	(E)	63	P.S.I. to (F)	89 P.S.I.
Final Closed In Period	Minutes	45	(G)	728	P.S.I.	
Final Hydrostatic Pressure			(H)	1596	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 Jim Musgrove
Signature of Customer or his authorized representative

Western Representative Vernon Wendel

Thank You

FIELD INVOICE

Open Hole Test	$ 530.00
Misrun	$
Straddle Test	$
Jars	$
Selective Zone	$
Safety Joint	$
Standby	$
Evaluation	$
Extra Packer	$
Circ. Sub.	$
Mileage Miles	$ 50.00
Fluid Sampler	$
Extra Charts	$
TOTAL	$ 580.00

WESTERN TESTING CO., INC.
Pressure Data

J Rogerson Lot 3

Date 8-12-80 Test Ticket No. 4062

Recorder No. 6074 Capacity 5100 Location 3016 Ft.

Clock No. Elevation 1782 GL Well Temperature 102 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1686 P.S.I.	Open Tool	7100 Prod M	
B	First Initial Flow Pressure	46 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C	First Final Flow Pressure	64 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D	Initial Closed-in Pressure	795 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	84 P.S.I.	Final Closed-in Pressure	45 Mins.	48 Mins.
F	Second Final Flow Pressure	97 P.S.I.			
G	Final Closed-in Pressure	760 P.S.I.			
H	Final Hydrostatic Mud	1633 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.		Press.
P 1	0	46
P 2	5	42
P 3	10	42
P 4	15	46
P 5	20	49
P 6	25	54
P 7	30	56
P 8	35	61
P 9	40	64
P10	45	64
P11	50	
P12	55	
P13	60	
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	64
3	100
6	153
9	223
12	330
15	435
18	527
21	604
24	652
27	696
30	729
33	749
36	767
39	780
42	790
45	795
48	
51	
54	
57	
60	

Second Flow Pressure
Breakdown: 9 Inc.
of 5 mins. and a
final inc. of 0 Min.

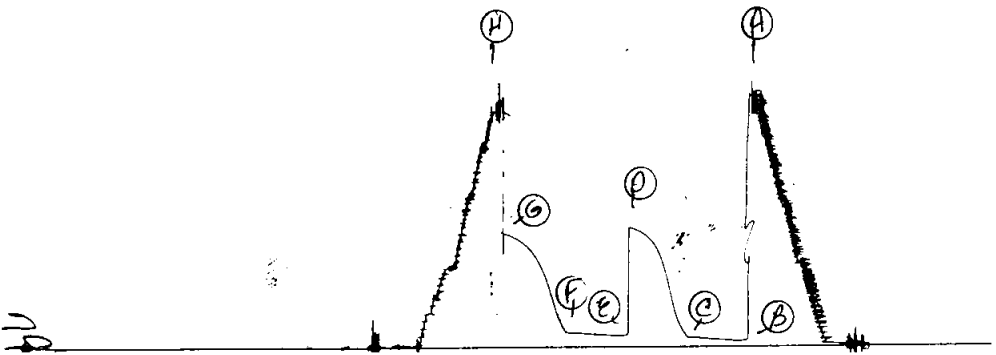
Point Minutes	Press.
0	84
5	79
10	79
15	82
20	84
25	87
30	90
35	93
40	95
45	97
50	
55	
60	
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 16 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	97
3	136
6	192
9	281
12	358
15	442
18	512
21	565
24	609
27	642
30	673
33	696
36	716
39	731
42	742
45	752
48	760
51	
54	
57	
60	

Jkt # 1062

I



Company P. V. Properties, Inc. Lease & Well No. Staudinger #1

Elevation 1782 Ground Level Formation Kansas City Effective Pay ---- Ft. Ticket No. 7062

Date 8/12/80 Sec. 3 Twp. 15S Range 12W County Russell State Kansas

Test Approved by Jim Musgrove Western Representative Vernon Wondra

Formation Test No. 3 Interval Tested from 3021 ft. to 3026 ft. Total Depth 3026 ft.

Packer Depth 3016 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3021 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3016 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3019 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drilling Co. Rig #1 Drill Collar Length - I. D. - in.

Mud Type starch Viscosity 45 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.7 Water Loss 12.0 cc. Drill Pipe Length 2007 I. D. 3.8 in.

Chlorides 85,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make - Serial Number - Anchor Length 15 ft. Size 5½OD 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 4½FH in.

Blow: Strong blow throughout test.

Recovered 1020 ft. of gas in pipe

Recovered 35 ft. of muddy oil

Recovered 120 ft. of frothy muddy oil

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 7:00 A.M. P.M. Time Started Off Bottom 10:00 A.M. P.M. Maximum Temperature 102°

Initial Hydrostatic Pressure (A) 1686 P.S.I.

Initial Flow Period Minutes 45 (B) 46 P.S.I. to (C) 64 P.S.I.

Initial Closed In Period Minutes 45 (D) 795 P.S.I.

Final Flow Period Minutes 45 (E) 84 P.S.I. to (F) 97 P.S.I.

Final Closed In Period Minutes 48 (G) 760 P.S.I.

Final Hydrostatic Pressure (H) 1633 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 8-12-80 Test Ticket No. 7062

Recorder No. 6074 Capacity 5100 Location 3016 Ft.

Clock No. ------ Elevation 1782 Ground Level Well Temperature 102 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1686 P.S.I.	Open Tool	7:00 P. M	
B	First Initial Flow Pressure	46 P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
C	First Final Flow Pressure	64 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
D	Initial Closed-in Pressure	795 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
E	Second Initial Flow Pressure	84 P.S.I.	Final Closed-in Pressure	45 Mins.	48 Mins.
F	Second Final Flow Pressure	97 P.S.I.			
G	Final Closed-in Pressure	760 P.S.I.			
H	Final Hydrostatic Mud	1633 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	46
P 2 5	42
P 3 10	42
P 4 15	46
P 5 20	49
P 6 25	54
P 7 30	56
P 8 35	61
P 9 40	64
P10 45	64
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	64
3	100
6	153
9	223
12	330
15	435
18	527
21	604
24	652
27	696
30	729
33	749
36	767
39	780
42	790
45	795

Second Flow Pressure
Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	84
5	79
10	79
15	82
20	84
25	87
30	90
35	93
40	95
45	97

Final Shut-In
Breakdown: 16 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	97
3	136
6	192
9	281
12	358
15	442
18	512
21	565
24	609
27	642
30	673
33	696
36	716
39	731
42	742
45	752
48	760

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET Nº 7063

P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

Ground Level Kansas City

Elevation 1782 Formation K.C. Eff. Pay — Ft.

District Great Bend Date 8-13-80 Customer Order No. —

COMPANY NAME P.V. Properties Inc.

ADDRESS 360 Sutton Place, Wichita, Kansas 67202

LEASE AND WELL NO. Staudinger #1 COUNTY Russell STATE Kansas Sec. 3 Twp. 15 S Rge. 12 W

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

Mail Charts To Same as above (Address) No. Copies Requested 5

Formation Test No. 4 Interval Tested from 3100 ft. to 3135 ft. Total Depth 3135 ft.

Packer Depth 3095 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Packer Depth 3100 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 3125 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3128 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Co. Rig #5 Drill Collar Length — I. D. — in.

Mud Type Starch Viscosity 47 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 10.4 cc. Drill Pipe Length 2096 I. D. 3.8 in.

Chlorides 79,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 OD in.

Jars: Make — Serial Number — Anchor Length 35 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: Very weak blow died in 10 min on 1st Flow, Flushed tool on 2nd opening - few bubbles died. Initial flow period final flow period

Recovered 20 ft. of Mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

AUG 19 1980

Time Set Packer(s) 8:00 AM P.M. Time Started Off Bottom 10:00 AM P.M. Maximum Temperature 102

Initial Hydrostatic Pressure		(A)	1698	P.S.I.		
Initial Flow Period	Minutes 30	(B)	38	P.S.I. to (C)	38	P.S.I.
Initial Closed In Period	Minutes 30	(D)	895	P.S.I.		
Final Flow Period	Minutes 30	(E)	51	P.S.I. to (F)	51	P.S.I.
Final Closed In Period	Minutes 30	(G)	767	P.S.I.		
Final Hydrostatic Pressure		(H)	1623	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 Jim Musgrove
Signature of Customer or his authorized representative

Western Representative Vernon Worden

No pump required

Thank You

FIELD INVOICE

Open Hole Test	$ 550.00
Misrun	$ —
Straddle Test	$ —
Jars	$ —
Selective Zone	$ —
Safety Joint	$ —
Standby	$ —
Evaluation	$ —
Extra Packer	$ —
Circ. Sub.	$ —
Mileage 40 mi	$ 30.00
Fluid Sampler	$ —
Extra Charts	$ —
TOTAL	$ 580.00

WESTERN TESTING CO., INC.
Pressure Data

P.I. Properties Test 4

Date 8-13-80 Test Ticket No. 7063

Recorder No. 6074 Capacity 5100 Location 3625 Ft.

Clock No. Elevation 1782 GL Well Temperature 102 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1947 P.S.I.	Open Tool	8:00 PM	
B First Initial Flow Pressure	49 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	45 P.S.I.	Initial Closed-in Pressure	30 Mins.	33 Mins.
D Initial Closed-in Pressure	918 P.S.I.	Second Flow Pressure	30 Mins.	25 Mins.
E Second Initial Flow Pressure	64 P.S.I.	Final Closed-in Pressure	30 Mins.	27 Mins.
F Second Final Flow Pressure	61 P.S.I.			
G Final Closed-in Pressure	775 P.S.I.			
H Final Hydrostatic Mud	1691 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	49
P 2 5	41
P 3 10	41
P 4 15	41
P 5 20	43
P 6 25	45
P 7 30	45
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: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	45
3	55
6	77
9	133
12	225
15	373
18	731
21	811
24	854
27	882
30	904
33	918
36	
39	
42	
45	
48	
51	
54	
57	
60	

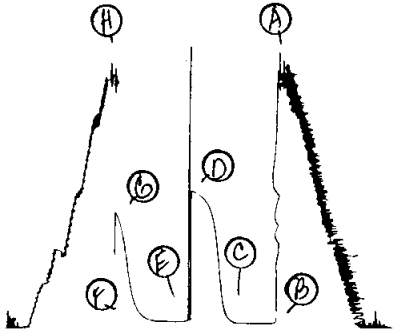
Second Flow Pressure
Breakdown: 5 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	64
5	Flushed Tool 59
10	
15	
20	59
25	61
30	
35	
40	
45	
50	
55	
60	
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	61
3	74
6	90
9	115
12	159
15	263
18	407
21	573
24	696
27	775
30	
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

Ibt #2063
I



Company P. V. Properties, Inc. Lease & Well No. Staudinger #1

Elevation 1782 Ground Level Formation Kansas City Effective Pay - Ft. Ticket No. 7063

Date 8/13/80 Sec. 3 Twp. 15S Range 12W County Russell State Kansas

Test Approved by Jim Musgrove Western Representative Vernon Wondra

Formation Test No. 4 Interval Tested from 3100 ft. to 3135 ft. Total Depth 3135 ft.

Packer Depth 3095 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3100 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3125 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3128 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drilling Co. Rig #5 Drill Collar Length - I. D. - in.

Mud Type starch Viscosity 47 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 10.4 cc. Drill Pipe Length 2096 I. D. 3.8 in.

Chlorides 79,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make -- Serial Number - Anchor Length 35 ft. Size 5½OD 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 4½FH in.

Blow: Very weak blow;died in ten minutes on initial flow period. Flushed tool on final flow perio
Few bubbles, died.

Recovered 20 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 8:00 ~~A.M.~~ P.M. Time Started Off Bottom 10:00 ~~A.M.~~ P.M. Maximum Temperature 102°

Initial Hydrostatic Pressure ..... (A) 1747 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 49 P.S.I. to (C) 45 P.S.I.

Initial Closed In Period ..... Minutes 33 (D) 918 P.S.I.

Final Flow Period ..... Minutes 25 (E) 64 P.S.I. to (F) 61 P.S.I.

Final Closed In Period ..... Minutes 27 (G) 775 P.S.I.

Final Hydrostatic Pressure ..... (H) 1691 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 8-13-80 Test Ticket No. 7063

Recorder No. 6074 Capacity 5100 Location 3125 Ft.

Clock No. ------ Elevation 1782 Ground Level Well Temperature 102 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1747	P.S.I.
B	First Initial Flow Pressure	49	P.S.I.
C	First Final Flow Pressure	45	P.S.I.
D	Initial Closed-in Pressure	918	P.S.I.
E	Second Initial Flow Pressure	64	P.S.I.
F	Second Final Flow Pressure	61	P.S.I.
G	Final Closed-in Pressure	775	P.S.I.
H	Final Hydrostatic Mud	1691	P.S.I.

	Time Given	Time Computed
Open Tool	8:00 P. M	
First Flow Pressure	30 Mins.	30 Mins.
Initial Closed-in Pressure	30 Mins.	33 Mins.
Second Flow Pressure	30 Mins.	25 Mins.
Final Closed-in Pressure	30 Mins.	27 Mins.

PRESSURE BREAKDOWN

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

Point Mins.	Press.
P 1 0	49
P 2 5	41
P 3 10	41
P 4 15	41
P 5 20	43
P 6 25	45
P 7 30	45
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 11 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	45
3	55
6	77
9	133
12	325
15	573
18	731
21	811
24	854
27	882
30	904
33	918

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

Point Minutes	Press.
0	64
5	59 Flushed Tool
10	59
15	59
20	59
25	61

Final Shut-In
Breakdown: 9 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	61
3	74
6	90
9	115
12	159
15	263
18	407
21	573
24	696
27	775

P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

Ground Level

TICKET Nº 7064

Elevation 1782 G.L. Formation Gorham Sand Eff. Pay — Ft.

District Great Bend Date 8-14-80 Customer Order No. —

COMPANY NAME P.V. Properties Inc.

ADDRESS 360 Sutton Place, Wichita, Kansas 67202

LEASE AND WELL NO. Staudinger #1 COUNTY Russell STATE Kansas Sec. 3 Twp 15 Rge 12W

Mail Invoice To Same as above No. Copies Requested 5

Co. Name Address

Mail Charts To Same as above [redacted] No. Copies Requested 5

Address

Formation Test No. 5 Interval Tested from 3190 ft. to 3224 ft. Total Depth 3224 ft.

Packer Depth 3219 ft. Size 6¾ in. Packer Depth — ft. Size — in.

Packer Depth 3224 ft. Size 6¾ in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 3214 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3217 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Rig #5 Drill Collar Length — I. D. — in.

Mud Type Starch Viscosity 48 Weight Pipe Length 983 I. D. 2.7 in.

Weight 10.0 Water Loss 10.4 cc. Drill Pipe Length 2186 I. D. 3.8 in.

Chlorides 76,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½ OD in.

Jars: Make — Serial Number — Anchor Length 34 ft. Size 5½ OD in.

Did Well Flow? No Reversed Out No Surface Choke Size ¾ in. Bottom Choke Size ¾ in.

Main Hole Size 7⅞ in. Tool Joint Size 4½ FH in.

Blow: Very weak blow died in 10 min. on Initial Flow Period, Flushed tool- Few Bubbles died, No blow on 2nd Flow period,

Recovered 10 ft. of Mud with few spots of oil - final

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

AUG 19 1980

Time Set Packer(s) 7:40 AM PM Time Started Off Bottom 9:40 AM PM Maximum Temperature 102

Initial Hydrostatic Pressure		(A)	1737	P.S.I.		
Initial Flow Period	Minutes 30	(B)	51	P.S.I. to	(C) 51	P.S.I.
Initial Closed In Period	Minutes 30	(D)	562	P.S.I.		
Final Flow Period	Minutes 30	(E)	51	P.S.I. to	(F) 51	P.S.I.
Final Closed In Period	Minutes 30	(G)	485	P.S.I.		
Final Hydrostatic Pressure		(H)	1724	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 Will Price. Will Price

Signature of Customer or his authorized representative

Western Representative Vernon Wonder

Thank You

FIELD INVOICE

Open Hole Test	$ 530.00
Misrun	$ —
Straddle Test	$ —
Jars	$ —
Selective Zone	$ —
Safety Joint	$ —
Standby	$ —
Evaluation	$ —
Extra Packer	$ —
Circ. Sub.	$ —
Mileage 40 miles	$ 40.00
Fluid Sampler	$ —
Extra Charts	$ —
TOTAL	$ 580.00

WESTERN TESTING CO., INC.
Pressure Data

Date 8-14-80 Test Ticket No. 2064

Recorder No. 6074 Capacity 5100 Location 3214 Ft.

Clock No. Elevation 1782 Gr. Well Temperature 102 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1765	P.S.I.	Open Tool 7:40 P M	
B	First Initial Flow Pressure	60	P.S.I.	First Flow Pressure 30 Mins.	30 Mins.
C	First Final Flow Pressure	56	P.S.I.	Initial Closed-in Pressure 30 Mins.	30 Mins.
D	Initial Closed-in Pressure	559	P.S.I.	Second Flow Pressure 30 Mins.	25 Mins.
E	Second Initial Flow Pressure	64	P.S.I.	Final Closed-in Pressure 30 Mins.	30 Mins.
F	Second Final Flow Pressure	59	P.S.I.		
G	Final Closed-in Pressure	496	P.S.I.		
H	Final Hydrostatic Mud	1737	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	60
P 2	5	58
P 3	10	58
P 4	15	58 Flushed Tool
P 5	20	58
P 6	25	56
P 7	30	56
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	56
3	68
6	87
9	120
12	176
15	247
18	312
21	379
24	458
27	517
30	559
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

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

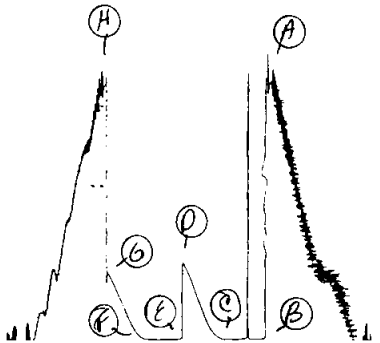
Point Minutes	Press.
0	64
5	59
10	
15	
20	
25	59
30	
35	
40	
45	
50	
55	
60	
65	
70	
75	
80	
85	
90	

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

Point Minutes	Press.
0	59
3	74
6	97
9	141
12	189
15	248
18	312
21	373
24	427
27	471
30	496
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

JK # 7064

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Company P. V. Properties, Inc. Lease & Well No. Staudinger #1

Elevation 1782 Ground Level Formation Gorham Sand Effective Pay - Ft. Ticket No. 7064

Date 8/14/80 Sec. 3 Twp. 15S Range 12W County Russell State Kansas

Test Approved by Will Price Western Representative Vernon Wondra

Formation Test No. 5 Interval Tested from 3190 ft. to 3224 ft. Total Depth 3224 ft.

Packer Depth 3219 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3224 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3214 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3217 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drilling Rig #5 Drill Collar Length - I. D. - in.

Mud Type starch Viscosity 48 Weight Pipe Length 983 I. D. 2.7 in.

Weight 10.0 Water Loss 10.4 cc. Drill Pipe Length 2186 I. D. 3.8 in.

Chlorides 76,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make -- Serial Number -- Anchor Length 34 ft. Size 5½OD 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 4½FH in.

Blow: Very weak blow;died in ten minutes on initial flow period;flushed tool, few bubbles, died. No blow on final flow period.

Recovered 10 ft. of mud with few spots of oil

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 7:40 ~~A.M.~~ P.M. Time Started Off Bottom 9:40 ~~A.M.~~ P.M. Maximum Temperature 102°

Initial Hydrostatic Pressure (A) 1765 P.S.I.

Initial Flow Period Minutes 30 (B) 60 P.S.I. to (C) 56 P.S.I.

Initial Closed In Period Minutes 30 (D) 559 P.S.I.

Final Flow Period Minutes 25 (E) 64 P.S.I. to (F) 59 P.S.I.

Final Closed In Period Minutes 30 (G) 496 P.S.I.

Final Hydrostatic Pressure (H) 1737 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 8-14-80 Test Ticket No. 7064

Recorder No. 6074 Capacity 5100 Location 3214 Ft.

Clock No. ----- Elevation 1782 Ground Level Well Temperature 102 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1765 P.S.I.	Open Tool	7:40 P. M	
B	First Initial Flow Pressure	60 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C	First Final Flow Pressure	56 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	559 P.S.I.	Second Flow Pressure	30 Mins.	25 Mins.
E	Second Initial Flow Pressure	64 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	59 P.S.I.			
G	Final Closed-in Pressure	496 P.S.I.			
H	Final Hydrostatic Mud	1737 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	60
P 2 5	58
P 3 10	58
P 4 15	58 Flushed Tool
P 5 20	58
P 6 25	56
P 7 30	56
P 8	
P 9	
P10	
P11	
P12	
P13	
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	56
3	68
6	87
9	120
12	176
15	247
18	312
21	379
24	458
27	517
30	559

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

Point Minutes	Press.
0	64
5	59
10	59
15	59
20	59
25	59

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

Point Minutes	Press.
0	59
3	74
6	97
9	141
12	189
15	248
18	312
21	373
24	427
27	471
30	496

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET No 7065

P. O. BOX 1599 PHONE (316) 838-0601
WICHITA, KANSAS 67201

Grand Cove I

Elevation 1782 G.L. Formation Gorham Sand Eff. Pay — Ft.

District Great Bend Date 8-15-80 Customer Order No. —

COMPANY NAME P.V. Properties, Inc.

ADDRESS 360 Sutton Place, Wichita, Kansas 67202

LEASE AND WELL NO. Staudinger #1 COUNTY Russell STATE Kansas Sec. 3 Twp. 15 S Rge. 12W

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

Mail Charts To Same as above copy Musgrove (Address) No. Copies Requested 5

Formation Test No. 6 Interval Tested from 3190 ft. to 3231 ft. Total Depth 3231 ft.

Packer Depth 3232 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Packer Depth 3230 ft. Size 6 3/4 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 3193 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3196 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Co. Rig #5 Drill Collar Length — I. D. — in.

Mud Type Starch Viscosity 42 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 9.6 cc. Drill Pipe Length 2186 I. D. 3.8 in.

Chlorides 62,000 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2-OH in.

Jars: Make — Serial Number — Anchor Length 41 ft. Size 5 1/2 FH 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: Fair 4" blow throughout both flow periods.

Recovered [redacted] ft. of [redacted]

Recovered 540 ft. of muddy water

Recovered 180 ft. of water & Chlorides - 27000 ppm

Recovered — ft. of —

Recovered — ft. of —

Remarks:

Time Set Packer(s) 8:40 A.M. P.M. Time Started Off Bottom 11:40 A.M. P.M. Maximum Temperature 103

Initial Hydrostatic Pressure			(A)	1698	P.S.I.	
Initial Flow Period	Minutes	45	(B)	51	P.S.I. to (C)	217 P.S.I.
Initial Closed In Period	Minutes	45	(D)	1035	P.S.I.	
Final Flow Period	Minutes	45	(E)	217	P.S.I. to (F)	358 P.S.I.
Final Closed In Period	Minutes	45	(G)	1035	P.S.I.	
Final Hydrostatic Pressure			(H)	1653	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 Jim Musgrove
Signature of Customer or his authorized representative

Western Representative Vernon Vondra

FIELD INVOICE

Open Hole Test	$ 550.00
Misrun	$ —
Straddle Test	$ —
Jars	$ —
Selective Zone	$ —
Safety Joint	$ —
Standby	$ —
Evaluation	$ —
Extra Packer	$ —
Circ. Sub.	$ —
Mileage 40mi.	$ 40.00
Fluid Sampler	$ —
Extra Charts	$ —
TOTAL	$ 580.00

WESTERN TESTING CO., INC.
Pressure Data

RB Properties Test 6

Date 8-15-80 Test Ticket No. 7065

Recorder No. 6074 Capacity 5100 Location 3193 Ft.

Clock No. Elevation 1783 GL Well Temperature 103 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1724	P.S.I.
B	First Initial Flow Pressure	64*	P.S.I.
C	First Final Flow Pressure	233	P.S.I.
D	Initial Closed-in Pressure	1055	P.S.I.
E	Second Initial Flow Pressure	243	P.S.I.
F	Second Final Flow Pressure	379	P.S.I.
G	Final Closed-in Pressure	1056	P.S.I.
H	Final Hydrostatic Mud	1709	P.S.I.

	Time Given	Time Computed
Open Tool	8:40 A M	
First Flow Pressure	45 Mins.	45 Mins.
Initial Closed-in Pressure	45 Mins.	45 Mins.
Second Flow Pressure	45 Mins.	45 Mins.
Final Closed-in Pressure	45 Mins.	45 Mins.

* Readings questionable due to plugging action.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.		Press.
P 1	0	64 *
P 2	5	90 *
P 3	10	115 *
P 4	15	125
P 5	20	148
P 6	25	164
P 7	30	184
P 8	35	213 *
P 9	40	223
P10	45	233
P11	50	
P12	55	
P13	60	
P14		
P15		
P16		
P17		
P18		
P19		
P20		

Initial Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	233
3	918
6	974
9	1005
12	1018
15	1028
18	1036
21	1041
24	1045
27	1047
30	1048
33	1050
36	1051
39	1052
42	1054
45	1055
48	
51	
54	
57	
60	

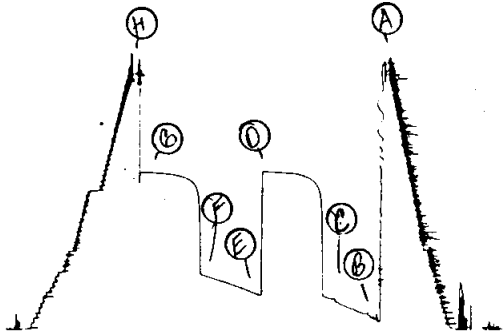
Second Flow Pressure
Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	243
5	256
10	276
15	294
20	309
25	327
30	343
35	358
40	371
45	379
50	
55	
60	
65	
70	
75	
80	
85	
90	

Final Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	379
3	936
6	987
9	1008
12	1020
15	1031
18	1038
21	1041
24	1044
27	1048
30	1051
33	1052
36	1053
39	1054
42	1055
45	1056
48	
51	
54	
57	
60	

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Company P. V. Properties, Inc. Lease & Well No. Staudinger #1

Elevation 1782 Ground Level Formation Gorham Sand Effective Pay - Ft. Ticket No. 7065

Date 8/15/80 Sec. 3 Twp. 15S Range 12W County Russell State Kansas

Test Approved by Jim Musgrove Western Representative Vernon Wondra

Formation Test No. 6 Interval Tested from 3190 ft. to 3237 ft. Total Depth 3237 ft.

Packer Depth 3232 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3230 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3193 ft. Recorder Number 6074 Cap. 5100

Bottom Recorder Depth (Outside) 3196 ft. Recorder Number 1563 Cap. 4200

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

Drilling Contractor Red Tiger Drlg. Co. Rig #5 Drill Collar Length - I. D. - in.

Mud Type starch Viscosity 42 Weight Pipe Length 983 I. D. 2.7 in.

Weight 9.9 Water Loss 9.6 cc. Drill Pipe Length 2186 I. D. 3.8 in.

Chlorides 67,000 P.P.M. Test Tool Length 21 ft. Tool Size 5½OD in.

Jars: Make -- Serial Number - Anchor Length 47 ft. Size 5½OD 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 4½FH in.

Blow: Fair four inch blow throughout both flow periods.

Recovered 540 ft. of muddy water

Recovered 180 ft. of water (Chlorides 27,000 ppm)

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 8:40 A.M. P.M. Time Started Off Bottom 11:40 A.M. ~~P.M.~~ Maximum Temperature 103°

Initial Hydrostatic Pressure			(A) 1724	P.S.I.		
Initial Flow Period	Minutes 45	(B) 64*	P.S.I. to	(C) 233	P.S.I.	
Initial Closed In Period	Minutes 45	(D) 1055	P.S.I.			
Final Flow Period	Minutes 45	(E) 243	P.S.I. to	(F) 379	P.S.I.	
Final Closed In Period	Minutes 45	(G) 1056	P.S.I.			
Final Hydrostatic Pressure		(H) 1709	P.S.I.			

WTC-

WESTERN TESTING CO., INC.
Pressure Data

Date 8-15-80 Test Ticket No. 7065

Recorder No. 6074 Capacity 5100 Location 3193 Ft.

Clock No. ------- Elevation 1782 Ground Level Well Temperature 103 °F

Point	Pressure		Time Given	Time Computed
Initial Hydrostatic Mud	1724 P.S.I.	Open Tool	8:40 A. M	
First Initial Flow Pressure	64* P.S.I.	First Flow Pressure	45 Mins.	45 Mins.
First Final Flow Pressure	233 P.S.I.	Initial Closed-in Pressure	45 Mins.	45 Mins.
Initial Closed-in Pressure	1055 P.S.I.	Second Flow Pressure	45 Mins.	45 Mins.
Second Initial Flow Pressure	243 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
Second Final Flow Pressure	379 P.S.I.			
Final Closed-in Pressure	1056 P.S.I.			
Final Hydrostatic Mud	1709 P.S.I.			

*Readings questionable due to plugging action

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.

Point ns.	Press.
1 0	64*
2 5	90*
3 10	115*
4 15	125
5 20	148
6 25	164
7 30	184
8 35	213*
9 40	223
0 45	233
1	
2	
3	
4	
5	
6	
7	
8	
9	
0	

Initial Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	233
3	918
6	974
9	1005
12	1018
15	1028
18	1036
21	1041
24	1045
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Second Flow Pressure
Breakdown: 9 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	243
5	256
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Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

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3	936
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33	1052
36	1053
39	1054
42	1055
45	1056