WESTERN TESTERS

Home Office: Wichita, Kansas 67201

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

HJ

Company Big "J" Production Company — Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing — Formation Lansing — Effective Pay - Ft. — Ticket No. 9338

Date 2/19/81 — Sec. 33 — Twp. 24S — Range 14W — County Stafford — State Kansas

Test Approved by James Gribi — Western Representative Cliff Scheuerman

Formation Test No. 1 — Interval Tested from 3703 ft. to 3740 ft. — Total Depth 3740 ft.

Packer Depth 3698 ft. — Size 6 5/8 in. — Packer Depth 3703 ft. — Size 6 5/8 in.

Packer Depth - ft. — Size - in. — Packer Depth - ft. — Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3706 ft. — Recorder Number 2603 — Cap. 4400

Bottom Recorder Depth (Outside) 3709 ft. — Recorder Number 13267 — Cap. 4050

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

Drilling Contractor Merckle Drilling Co Rig #1 — Drill Collar Length - — I. D. - in.

Mud Type Premix Drispac — Viscosity 33 — Weight Pipe Length 472 — I. D. 2.7 in.

Weight 9.3 — Water Loss 9.5 cc. — Drill Pipe Length 3208 — I. D. 3.8 in.

Chlorides 30,000 P.P.M. — Test Tool Length 23 ft. — Tool Size 5½ in.

Jars: Make - — Serial Number - — Anchor Length 37 ft. — Size 5½ in.

Did Well Flow? Gas — 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 4½XH in.

Blow: Blow strong throughout test. Gas to surface in 7 minutes into final flow period. See attached sheet for gas measurements.

Recovered 150 ft. of watery mud very gas cut

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 1:15 A.M. ~~P.M.~~ — Time Started Off Bottom 4:00 A.M. ~~P.M.~~ — Maximum Temperature 118

Initial Hydrostatic Pressure			(A)	1862	P.S.I.	
Initial Flow Period	Minutes 15	(B)	144	P.S.I. to (C)	99	P.S.I.
Initial Closed In Period	Minutes 45	(D)	1318	P.S.I.		
Final Flow Period	Minutes 60	(E)	119	P.S.I. to (F)	139	P.S.I.
Final Closed In Period	Minutes 48	(G)	1307	P.S.I.		
Final Hydrostatic Pressure			(H)	1862	P.S.I.	

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GAS FLOW REPORT

Date 2/19/81 Ticket 9338 Company Big "J" Production Company

Well Name and No. Ralph Waters C-1 Dst No. 1 Interval Tested 3703-3740

County Stafford State Kansas Sec. 33 Twp. 24S Rg. 14W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
PRE FLOW						
Gas to surface in 7 minutes				**SECOND FLOW**		
	10 Min	5 PSIG	1/8" Orifice			6,390 C.F.P.D.
	20 Min	8 PSIG	1/8" Orifice			8,300 C.F.P.D.
	30 Min	20 PSIG	1/8" Orifice			14,600 C.F.P.D.
	40 Min	30 PSIG	1/8" Orifice			19,000 C.F.P.D.
	50 Min	30 PSIG	1/8" Orifice			19,000 C.F.P.D.
	60 Min	30 PSIG	1/8" Orifice			19,000 C.F.P.D.

GAS BOTTLE

Serial No. - Date Bottle Filled - Date to be Invoiced 2/19/81

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 Big "J" Production Company

Authorized by James Gribi

FORM WTC 6

WESTERN TESTING CO., INC.
Pressure Data

Date 2/19/81 Test Ticket No. 9338

Recorder No. 2603 Capacity 4400 Location 3706 Ft.

Clock No. - Elevation 1992 Kelly Bushing Well Temperature 118 °F

Point		Pressure		Time Given		Time Computed	
A	Initial Hydrostatic Mud	1862 P.S.I.	Open Tool	1:15A	M		
B	First Initial Flow Pressure	144 P.S.I.	First Flow Pressure	15	Mins.	15	Mins.
C	First Final Flow Pressure	99 P.S.I.	Initial Closed-in Pressure	45	Mins.	45	Mins.
D	Initial Closed-in Pressure	1318 P.S.I.	Second Flow Pressure	60	Mins.	60	Mins.
E	Second Initial Flow Pressure	119 P.S.I.	Final Closed-in Pressure	45	Mins.	48	Mins.
F	Second Final Flow Pressure	139 P.S.I.					
G	Final Closed-in Pressure	1307 P.S.I.					
H	Final Hydrostatic Mud	1862 P.S.I.					

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	144
P 2 5	122
P 3 10	108
P 4 15	99
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: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	99
3	489
6	844
9	1072
12	1204
15	1265
18	1292
21	1302
24	1309
27	1310
30	1313
33	1314
36	1315
39	1316
42	1317
45	1318

Second Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

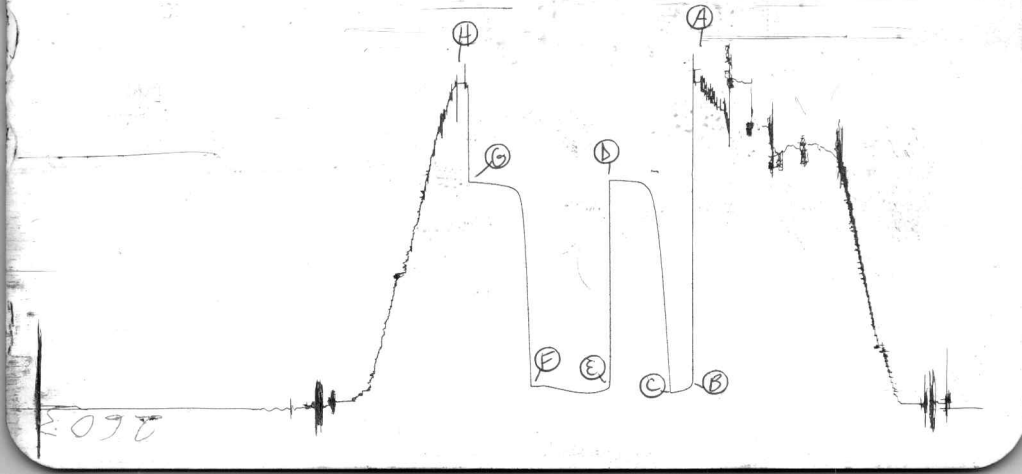
Point Minutes	Press.
0	119
5	113
10	101
15	98
20	98
25	104
30	110
35	119
40	128
45	137
50	141
55	139
60	139

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

Point Minutes	Press.
0	139
3	686
6	1064
9	1221
12	1261
15	1274
18	1282
21	1287
24	1291
27	1294
30	1296
33	1298
36	1300
39	1302
42	1304
45	1307
48	1307

TKT # 9338

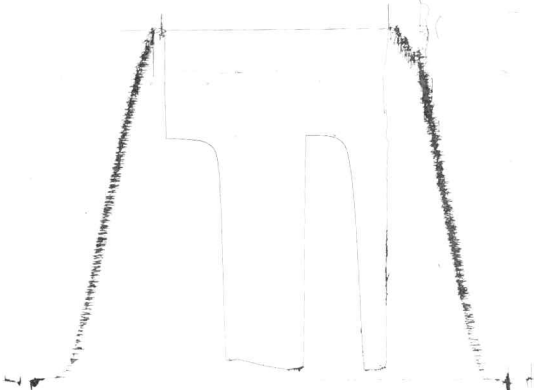
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IKT # 9338

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WESTERN TESTERS

Home Office: Wichita, Kansas 67201

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

Company Big "J" Production Company Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing Formation Lansing Effective Pay - Ft. Ticket No. 9339

Date 2/19/81 Sec. 33 Twp. 24S Range 14W County Stafford State Kansas

Test Approved by James Gribi Western Representative Cliff Scheuerman

Formation Test No. 2 Interval Tested from 3739 ft. to 3765 ft. Total Depth 3765 ft.

Packer Depth 3734 ft. Size 6 5/8 in. Packer Depth 3739 ft. Size 6 5/8 in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3757 ft. Recorder Number 2603 Cap. 4400

Bottom Recorder Depth (Outside) 3760 ft. Recorder Number 13267 Cap. 4050

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

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

Mud Type Premix Drispac Viscosity 33 Weight Pipe Length 472 I. D. 2.7 in.

Weight 9.3 Water Loss 1.1 cc. Drill Pipe Length 3244 I. D. 3.8 in.

Chlorides 30,000 P.P.M. Test Tool Length 23 ft. Tool Size 5½ in.

Jars: Make - Serial Number - Anchor Length 26 ft. Size 5½ 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 4½XH in.

Blow: Initial flow period weak but steady throughout. Final flow period no blow for five minutes then very weak for 20 minutes - then died.

Recovered 15 ft. of very slightly gas cut watery mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Hit bridge 10 stands from bottom

Time Set Packer(s) 3:20 A.M. P.M. Time Started Off Bottom 5:35 ~~A.M.~~ P.M. Maximum Temperature 113

Initial Hydrostatic Pressure		(A) 1922 P.S.I.		
Initial Flow Period	Minutes 15	(B) 122 P.S.I.	to (C) 88	P.S.I.
Initial Closed In Period	Minutes 42	(D) 1243 P.S.I.		
Final Flow Period	Minutes 30	(E) 122 P.S.I.	to (F) 92	P.S.I.
Final Closed In Period	Minutes 45	(G) 1147 P.S.I.		
Final Hydrostatic Pressure		(H) 1922 P.S.I.		

WTC-

WESTERN TESTING CO., INC.

Pressure Data

Date 2/19/81 Test Ticket No. 9339

Recorder No. 2603 Capacity 4400 Location 3757 Ft.

Clock No. - Elevation 1992 Kelly Bushing Well Temperature 113 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1922 P.S.I.	Open Tool	3:20P M	
B First Initial Flow Pressure	122 P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	88 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	1243 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	122 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	92 P.S.I.			
G Final Closed-in Pressure	1147 P.S.I.			
H Final Hydrostatic Mud	1922 P.S.I.			

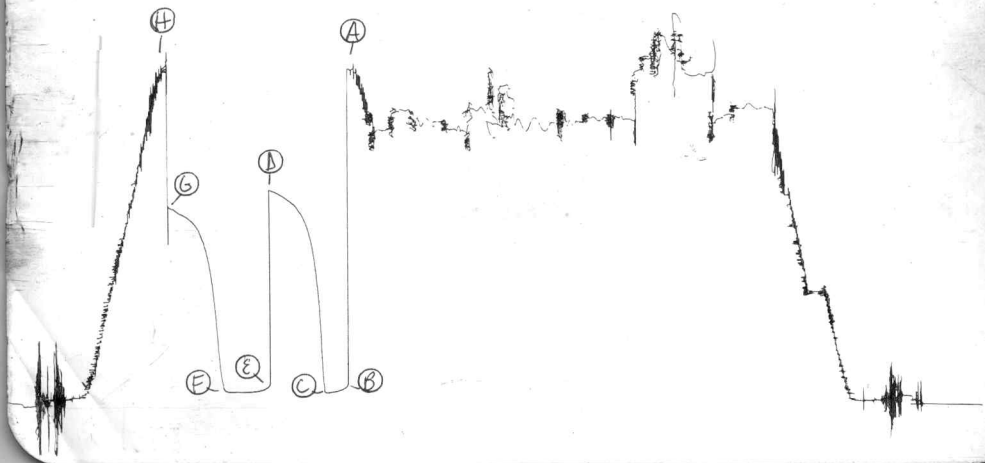
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 3 Inc. of 5 mins. and a final inc. of 0 Min.		Breakdown: 14 Inc. of 3 mins. and a final inc. of 0 Min.		Breakdown: 6 Inc. of 5 mins. and a final inc. of 0 Min.		Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	122	0	88	0	122	0	92
P 2 5	104	3	412	5	106	3	131
P 3 10	92	6	680	10	95	6	291
P 4 15	88	9	857	15	92	9	561
P 5		12	969	20	92	12	748
P 6		15	1046	25	92	15	864
P 7		18	1094	30	92	18	945
P 8		21	1132			21	1004
P 9		24	1162			24	1044
P10		27	1182			27	1068
P11		30	1197			30	1088
P12		33	1211			33	1101
P13		36	1224			36	1110
P14		39	1237			39	1127
P15		42	1243			42	1140
P16						45	1147
P17							
P18							
P19							
P20							

WTC - 4

IKT # 9339

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TKT # 9339



Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Big "J" Production Company Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing Formation Lansing Effective Pay - Ft. Ticket No. 9340

Date 2/20/81 Sec. 33 Twp. 24S Range 14W County Stafford State Kansas

Test Approved by James Gribi Western Representative Cliff Scheuerman

Formation Test No. 3 Interval Tested from 3784 ft. to 3841 ft. Total Depth 3841 ft.

Packer Depth 3779 ft. Size 6 5/8 in. Packer Depth 3784 ft. Size 6 5/8 in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3828 ft. Recorder Number 2603 Cap. 4400

Bottom Recorder Depth (Outside) 3831 ft. Recorder Number 13267 Cap. 4050

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

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

Mud Type Premix Drispac Viscosity 40 Weight Pipe Length 472 I. D. 2.7 in.

Weight 9.4 + Water Loss 31.8 cc. Drill Pipe Length 3289 I. D. 3.8 in.

Chlorides 25,000 P.P.M. Test Tool Length 23 ft. Tool Size 5½ in.

Jars: Make - Serial Number - Anchor Length 57 ft. Size 5½ in.

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

Main Hole Size 7 7/8 in. Tool Joint Size 4½XH in.

Blow: Initial flow period fair building to strong (off bottom bucket in 5 minutes) Final flow period fair building to strong (off bottom bucket in 5 minutes)

Recovered 950 ft. of slightly gas cut muddy salt water Chlorides 57,000 PPM

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 5:45 A.M. ~~P.M.~~ Time Started Off Bottom 8:30 A.M. ~~P.M.~~ Maximum Temperature 105

Initial Hydrostatic Pressure			(A)	1933	P.S.I.	
Initial Flow Period	Minutes 15		(B)	203*	P.S.I. to (C)	264 P.S.I.
Initial Closed In Period	Minutes 45		(D)	1323	P.S.I.	
Final Flow Period	Minutes 60		(E)	329	P.S.I. to (F)	537 P.S.I.
Final Closed In Period	Minutes 60		(G)	1309	P.S.I.	
Final Hydrostatic Pressure			(H)	1924	P.S.I.	

WESTERN TESTING CO., INC.
Pressure Data

Date 2/20/81 Test Ticket No. 9340

Recorder No. 2603 Capacity 4400 Location 3828 Ft.

Clock No. - Elevation 1992 Kelly Bushing Well Temperature 105 °F

Point		Pressure	
A	Initial Hydrostatic Mud	1933	P.S.I.
B	First Initial Flow Pressure	203*	P.S.I.
C	First Final Flow Pressure	264	P.S.I.
D	Initial Closed-in Pressure	1323	P.S.I.
E	Second Initial Flow Pressure	329	P.S.I.
F	Second Final Flow Pressure	537	P.S.I.
G	Final Closed-in Pressure	1309	P.S.I.
H	Final Hydrostatic Mud	1924	P.S.I.

	Time Given	Time Computed
Open Tool	5:45A M	
First Flow Pressure	15 Mins.	15 Mins.
Initial Closed-in Pressure	45 Mins.	45 Mins.
Second Flow Pressure	60 Mins.	60 Mins.
Final Closed-in Pressure	45 Mins.	60 Mins.

*Pressures questionable due to plugging action

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	203*
P 2 5	196*
P 3 10	273*
P 4 15	264
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: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	264
3	1254
6	1285
9	1294
12	1302
15	1307
18	1311
21	1314
24	1316
27	1317
30	1319
33	1320
36	1321
39	1322
42	1322
45	1323

Second Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	329
5	321
10	331
15	354
20	376
25	399
30	421
35	446
40	466
45	486
50	507
55	526
60	537

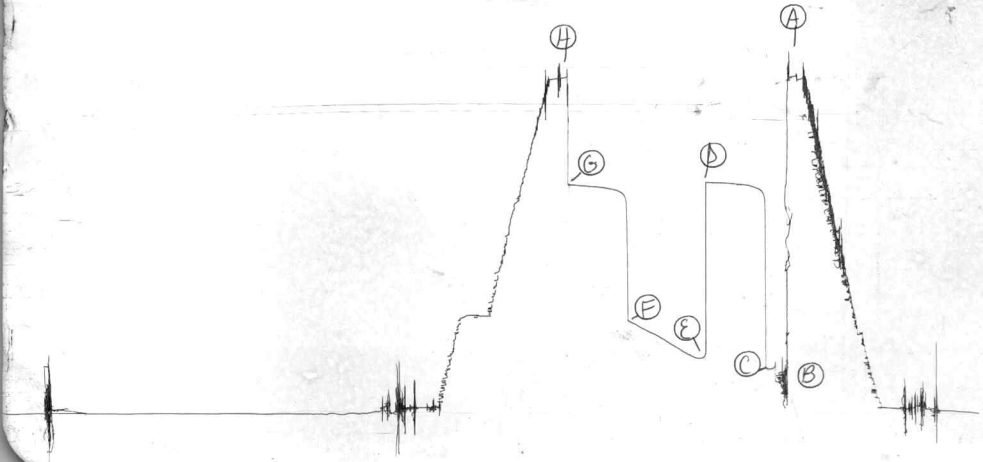
Final Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	537
3	1237
6	1265
9	1276
12	1283
15	1287
18	1292
21	1296
24	1298
27	1299
30	1300
33	1302
36	1303
39	1305
42	1308
45	1309

IKT # 9340

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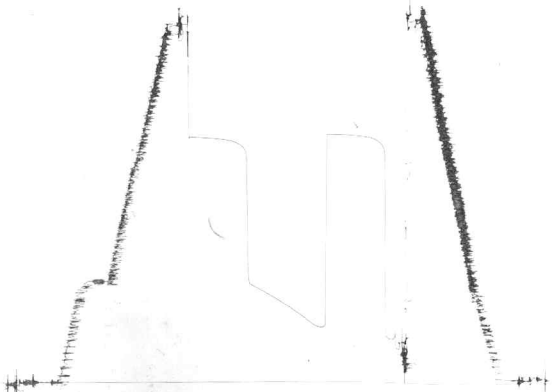
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JKT # 9340

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Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Big "J" Production Company Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing Formation Lansing Effective Pay - Ft. Ticket No. 9341

Date 2/21/81 Sec. 33 Twp. 24S Range 14W County Stafford State Kansas

Test Approved by Casey F Gallaway Western Representative Cliff Scheuerman

Formation Test No. 4 Interval Tested from 3829 ft. to 3866 ft. Total Depth 3866 ft.

Packer Depth 3824 ft. Size 6 5/8 in. Packer Depth 3829 ft. Size 6 5/8 in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3843 ft. Recorder Number 2603 Cap. 4400

Bottom Recorder Depth (Outside) 3846 ft. Recorder Number 13267 Cap. 4050

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

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

Mud Type Starch-Salt Viscosity 44 Weight Pipe Length 472 I. D. 2.7 in.

Weight 9.5 Water Loss +8.6 cc. Drill Pipe Length 3334 I. D. 3.8 in.

Chlorides 58,000 P.P.M. Test Tool Length 23 ft. Tool Size 5½ in.

Jars: Make - Serial Number - Anchor Length 37 ft. Size 5½ 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 4½XH in.

Blow: Initial flow period very weak blow hardly noticable. Final flow period dead - flushed tool - a couple bubbles - dead.

Recovered 20 ft. of muddy water very slightly gas cut with good oil spots on top fluid & tool

Recovered ft. of

Recovered ft. of Chlorides 62,000 PPM

Recovered ft. of

Recovered ft. of

Remarks: Safety chain wrapped pin rotary chain could not turn tool on final shut-in for 15 minutes 30 Open vise 15 on 2nd open.

Time Set Packer(s) 2:00 A.M. ~~P.M.~~ Time Started Off Bottom 4:15 A.M. ~~P.M.~~ Maximum Temperature 115

Initial Hydrostatic Pressure			(A)	1951	P.S.I.	
Initial Flow Period	Minutes 20	(B)	124	P.S.I. to (C)	86	P.S.I.
Initial Closed In Period	Minutes 42	(D)	1091	P.S.I.		
Final Flow Period	Minutes 30	(E)	137	P.S.I. to (F)	92	P.S.I.
Final Closed In Period	Minutes 45	(G)	945	P.S.I.		
Final Hydrostatic Pressure		(H)	1940	P.S.I.		

WTC-

WESTERN TESTING CO., INC.

Pressure Data

Date 2/21/81 Test Ticket No. 9341

Recorder No. 2603 Capacity 4400 Location 3843 Ft.

Clock No. - Elevation 1992 Kelly Bushing Well Temperature 115 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1951 P.S.I.	Open Tool	2:00A M	
B First Initial Flow Pressure	124 P.S.I.	First Flow Pressure	15 Mins.	20 Mins.
C First Final Flow Pressure	86 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	1091 P.S.I.	Second Flow Pressure	30 Mins.	30 Mins.
E Second Initial Flow Pressure	137 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	92 P.S.I.			
G Final Closed-in Pressure	945 P.S.I.			
H Final Hydrostatic Mud	1940 P.S.I.			

PRESSURE BREAKDOWN

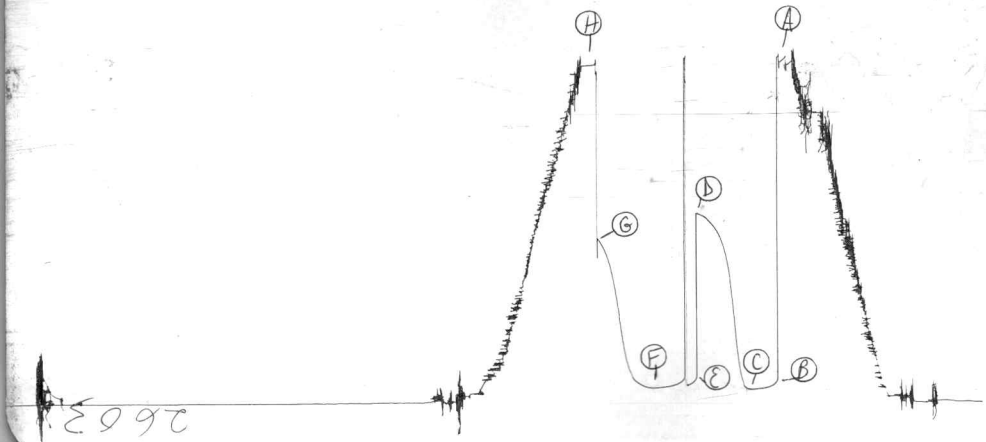
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 4 Inc.		Breakdown: 14 Inc.		Breakdown: 6 Inc.		Breakdown: 15 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	124	0	86	0	137	0	92
P 2 5	106	3	104	5	117	3	92
P 3 10	92	6	189	10	142	6	95
P 4 15	88	9	365	15	115	9	104
P 5 20	86	12	581	20	104	12	117
P 6		15	752	25	97	15	133
P 7		18	871	30	92	18	176
P 8		21	939			21	239
P 9		24	987			24	349
P10		27	1020			27	496
P11		30	1044			30	634
P12		33	1068			33	750
P13		36	1081			36	829
P14		39	1088			39	884
P15		42	1091			42	925
P16						45	945
P17							
P18							
P19							
P20							

Flushed Tool

WTC - 4

IKT # 9341

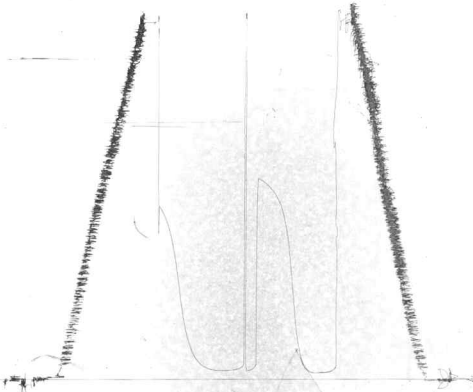
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2603

IKT # 9341

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13967

WESTERN TESTERS

Home Office: Wichita, Kansas 67201

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

Company Big "J" Production Company Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing Formation Lansing Effective Pay - Ft. Ticket No. 9342

Date 2/21/81 Sec. 33 Twp. 24S Range 14W County Stafford State Kansas

Test Approved by Casey F Gallaway Western Representative Cliff Scheuerman

Formation Test No. 5 Interval Tested from 3872 ft. to 3880 ft. Total Depth 3880 ft.

Packer Depth 3867 ft. Size 6 5/8 in. Packer Depth 3872 ft. Size 6 5/8 in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3875 ft. Recorder Number 2603 Cap. 4400

Bottom Recorder Depth (Outside) 3878 ft. Recorder Number 13267 Cap. 4050

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

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

Mud Type Starch-Gel Viscosity 45 Weight Pipe Length 472 I. D. 2.7 in.

Weight 9.5 Water Loss 12.8 cc. Drill Pipe Length 3377 I. D. 3.8 in.

Chlorides 56,000 P.P.M. Test Tool Length 23 ft. Tool Size 5½ in.

Jars: Make - Serial Number - Anchor Length 8 ft. Size 5½ in.

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

Main Hole Size 7 7/8 in. Tool Joint Size 4½XH in.

Blow: Initial flow period weak but steady. Final flow period very weak hardly noticeable-died in 10 minutes.

Recovered 5 ft. of slightly watery mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 2:15 ~~A.M.~~ P.M. Time Started Off Bottom 4:15 ~~A.M.~~ P.M. Maximum Temperature 116

Initial Hydrostatic Pressure			(A) 1962	P.S.I.		
Initial Flow Period	Minutes 20	(B) 108	P.S.I. to	(C) 63	P.S.I.	
Initial Closed In Period	Minutes 42	(D) 1175	P.S.I.			
Final Flow Period	Minutes 20	(E) 110	P.S.I. to	(F) 67	P.S.I.	
Final Closed In Period	Minutes 39	(G) 1138	P.S.I.			
Final Hydrostatic Pressure			(H) 1962	P.S.I.		

WTC-1

WESTERN TESTING CO., INC.
Pressure Data

Date 2/21/81 Test Ticket No. 9342

Recorder No. 2603 Capacity 4400 Location 3875 Ft.

Clock No. - Elevation 1992 Kelly Bushing Well Temperature 116 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1962 P.S.I.	Open Tool	2:15P M	
B	First Initial Flow Pressure	108 P.S.I.	First Flow Pressure	15 Mins.	20 Mins.
C	First Final Flow Pressure	63 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D	Initial Closed-in Pressure	1175 P.S.I.	Second Flow Pressure	15 Mins.	20 Mins.
E	Second Initial Flow Pressure	110 P.S.I.	Final Closed-in Pressure	45 Mins.	39 Mins.
F	Second Final Flow Pressure	67 P.S.I.	*Pressures questionable due tool movement		
G	Final Closed-in Pressure	1138 P.S.I.			
H	Final Hydrostatic Mud	1962 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 4 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	108
P 2 5	90
P 3 10	77
P 4 15	68
P 5 20	63
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 14 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	63
3	113
6	322
9	596
12	783
15	912
18	998
21	1050
24	1083
27	1162*
30	1163*
33	1168*
36	1172*
39	1175*
42	1175*

Second Flow Pressure
Breakdown: 4 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	110
5	90
10	74
15	68
20	67

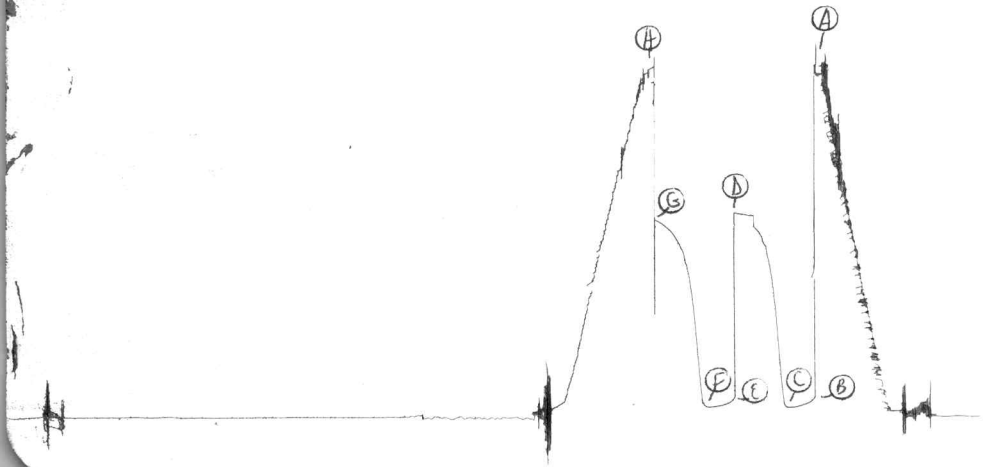
Final Shut-In
Breakdown: 13 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	67
3	119
6	396
9	638
12	807
15	910
18	975
21	1022
24	1055
27	1083
30	1103
33	1121
36	1132
39	1138

IKT # 9342

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IKT # 9342

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Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Big "J" Production Company Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 9343

Date 2/22/81 Sec. 33 Twp. 24S Range 14W County Stafford State Kansas

Test Approved by James Gribi Western Representative Cliff Scheuerman

Formation Test No. 6 Interval Tested from 4006 ft. to 4100 ft. Total Depth 4100 ft.

Packer Depth 4001 ft. Size 6 5/8 in. Packer Depth 4006 ft. Size 6 5/8 in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4008 ft. Recorder Number 2603 Cap. 4400

Bottom Recorder Depth (Outside) 4011 ft. Recorder Number 13267 Cap. 4050

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

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

Mud Type Starch Viscosity 45 Weight Pipe Length 472 I. D. 2.7 in.

Weight 9.6 Water Loss 11.2 cc. Drill Pipe Length 3511 I. D. 3.8 in.

Chlorides 47,000 P.P.M. Test Tool Length 23 ft. Tool Size 5½ in.

Jars: Make - Serial Number - Anchor Length 94 ft. Size 5½ 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 4½XH in.

Blow: Initial flow period none 1st 10 minutes then strong blow lasting 5 minutes. Final flow period strong off bottom of bucket.

Recovered 63 ft. of slightly gas cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 2:45 A.M. P.M. Time Started Off Bottom 5:30 ~~A.M.~~ P.M. Maximum Temperature 119

Initial Hydrostatic Pressure (A) 2040 P.S.I.

Initial Flow Period Minutes 15 (B) 79* P.S.I. to (C) 146 P.S.I.

Initial Closed In Period Minutes 42 (D) 558 P.S.I.

Final Flow Period Minutes 55 (E) 189 P.S.I. to (F) 385 P.S.I.

Final Closed In Period Minutes 48 (G) 838 P.S.I.

Final Hydrostatic Pressure (H) 2040 P.S.I.

WTC-1

WESTERN TESTING CO., INC.
Pressure Data

Date 2/22/81 Test Ticket No. 9343

Recorder No. 2603 Capacity 4400 Location 4008 Ft.

Clock No. - Elevation 1992 Kelly Bushing Well Temperature 119 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2040 P.S.I.	Open Tool	2:45P M	
B First Initial Flow Pressure	79* P.S.I.	First Flow Pressure	15 Mins.	15 Mins.
C First Final Flow Pressure	146 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	558 P.S.I.	Second Flow Pressure	60 Mins.	55 Mins.
E Second Initial Flow Pressure	189 P.S.I.	Final Closed-in Pressure	45 Mins.	48 Mins.
F Second Final Flow Pressure	385 P.S.I.			
G Final Closed-in Pressure	838 P.S.I.			
H Final Hydrostatic Mud	2040 P.S.I.			

*Pressures questionable due to plugging action

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	79*
P 2 5	99*
P 3 10	155*
P 4 15	146
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: 14 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	146
3	155
6	173
9	200
12	234
15	266
18	298
21	340
24	381
27	412
30	453
33	486
36	522
39	544
42	558

Second Flow Pressure
Breakdown: 11 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	189
5	169
10	158
15	160
20	162
25	186
30	246
35	295
40	324
45	347
50	369
55	385

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

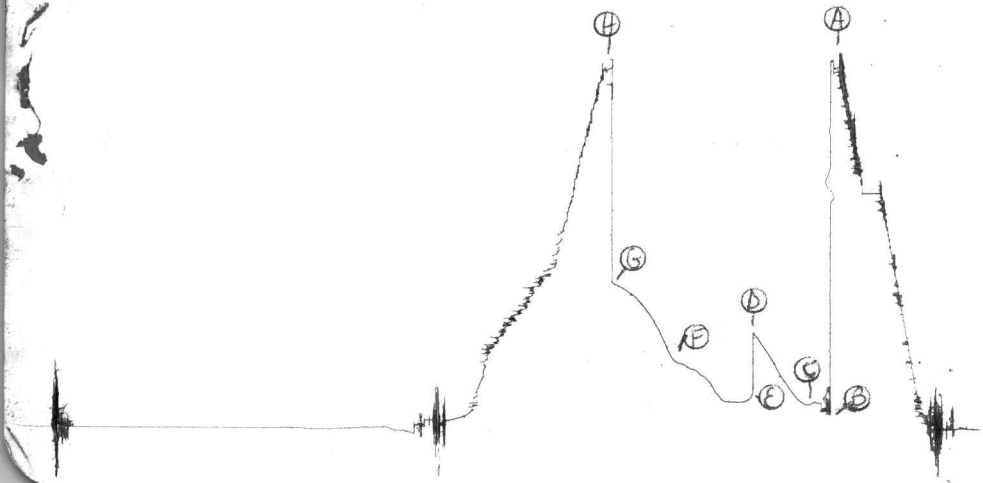
Point Minutes	Press.
0	385
3	401
6	437
9	486
12	537
15	588
18	625
21	660
24	691
27	721
30	746
33	768
36	783
39	798
42	811
45	825
48	838

WTC - 4

IKT # 9343

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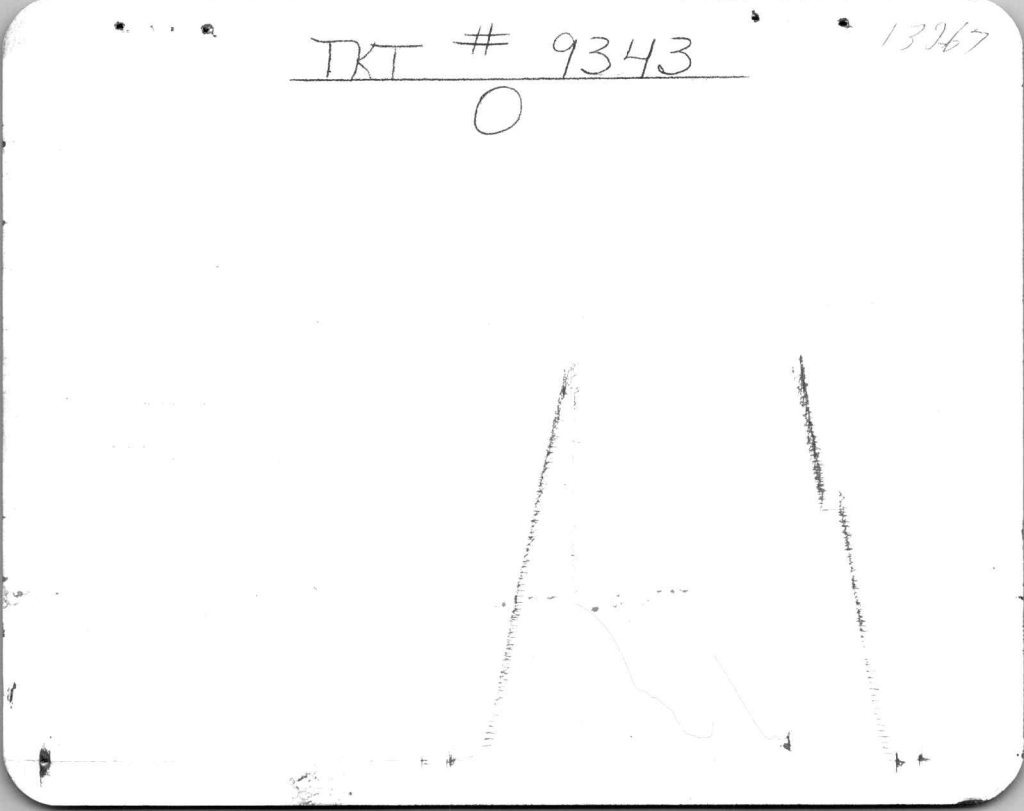
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TKT # 9343

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13967



Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Big "J" Production Company | Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing Formation Viola | Effective Pay - Ft. | Ticket No. 9344

Date 2/23/81 | Sec. 33 | Twp. 24S | Range 14W | County Stafford | State Kansas

Test Approved by James Gribi | Western Representative Cliff Scheuerman

Formation Test No. 7 | Interval Tested from 4154 ft. to 4185 ft. | Total Depth 4185 ft.

Packer Depth 4149 ft. | Size 6 5/8 in. | Packer Depth 4154 ft. | Size 6 5/8 in.

Packer Depth - ft. | Size - in. | Packer Depth - ft. | Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4172 ft. | Recorder Number 2603 | Cap. 4400

Bottom Recorder Depth (Outside) 4175 ft. | Recorder Number 13267 | Cap. 4050

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

Drilling Contractor Merckle Rig #1 | Drill Collar Length - | I. D. - in.

Mud Type Starch | Viscosity 45 | Weight Pipe Length 472 | I. D. 2.7 in.

Weight 9.6 | Water Loss 11.2 cc. | Drill Pipe Length 3559 | I. D. 3.8 in.

Chlorides 49,000 P.P.M. | Test Tool Length 23 ft. | Tool Size 5½ in.

Jars: Make - | Serial Number - | Anchor Length 31 ft. | Size 5½ 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 4½XH in.

Blow: Strong blow throughout test

Recovered 630 ft. of gas in pipe

Recovered 30 ft. of oil & gas cut mud - 27% oil; 3% water; 70% mud

Recovered 60 ft. of oil & gas cut mud - 32% oil; 2% water; 66% mud

Recovered ft. of

Recovered ft. of

Remarks: Some free oil on top of tool

Time Set Packer(s) 9:30 ~~A.M.~~ ~~P.M.~~ | Time Started Off Bottom 12:15 ~~A.M.~~ P.M. | Maximum Temperature 120

Initial Hydrostatic Pressure			(A)	2184	P.S.I.	
Initial Flow Period	Minutes	20	(B)	128	P.S.I. to (C)	92 P.S.I.
Initial Closed In Period	Minutes	42	(D)	531	P.S.I.	
Final Flow Period	Minutes	60	(E)	135	P.S.I. to (F)	101 P.S.I.
Final Closed In Period	Minutes	45	(G)	664	P.S.I.	
Final Hydrostatic Pressure			(H)	2184	P.S.I.	

WTC-1

WESTERN TESTING CO., INC.

Pressure Data

Date 2/23/81 Test Ticket No. 9344

Recorder No. 2603 Capacity 4400 Location 4172 Ft.

Clock No. -- Elevation 1992 Kelly Bushing Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2184 P.S.I.	Open Tool	9:30A M	
B First Initial Flow Pressure	128 P.S.I.	First Flow Pressure	15 Mins.	20 Mins.
C First Final Flow Pressure	92 P.S.I.	Initial Closed-in Pressure	45 Mins.	42 Mins.
D Initial Closed-in Pressure	531 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	135 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	101 P.S.I.			
G Final Closed-in Pressure	664 P.S.I.			
H Final Hydrostatic Mud	2184 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 4 Inc. of 5 mins. and a final inc. of 0 Min.

Point Mins.	Press.
P 1 0	128
P 2 5	113
P 3 10	101
P 4 15	95
P 5 20	92
P 6	
P 7	
P 8	
P 9	
P10	
P11	
P12	
P13	
P14	
P15	
P16	
P17	
P18	
P19	
P20	

Initial Shut-In
Breakdown: 14 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	92
3	95
6	101
9	113
12	126
15	146
18	191
21	232
24	273
27	311
30	354
33	394
36	437
39	486
42	531

Second Flow Pressure
Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	135
5	122
10	108
15	105
20	103
25	101
30	101
35	101
40	98
45	98
50	101
55	101
60	101

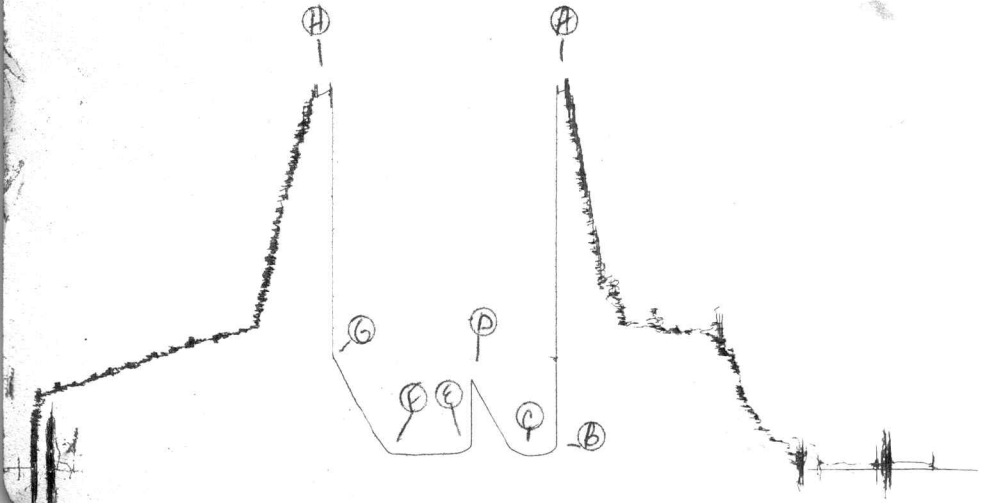
Final Shut-In
Breakdown: 15 Inc. of 3 mins. and a final inc. of 0 Min.

Point Minutes	Press.
0	101
3	117
6	149
9	182
12	316
15	261
18	304
21	347
24	383
27	421
30	471
33	513
36	561
39	607
42	645
45	664

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JK1 #5344

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Jlt # 9344

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Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Big "J" Production Company Lease & Well No. Ralph Waters C-1

Elevation 1992 Kelly Bushing Formation Viola Effective Pay - Ft. Ticket No. 9345

Date 2/24/81 Sec. 33 Twp. 24S Range 14W County Stafford State Kansas

Test Approved by R. S. ? Western Representative Cliff Scheuerman

Formation Test No. 8 Interval Tested from 4185 ft. to 4230 ft. Total Depth 4230 ft.

Packer Depth 4180 ft. Size 6 5/8 in. Packer Depth 4185 ft. Size 6 5/8 in.

Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4187 ft. Recorder Number 2603 Cap. 4400

Bottom Recorder Depth (Outside) 4190 ft. Recorder Number 13267 Cap. 4050

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

Drilling Contractor Merckle Rig #1 Drill Collar Length - I. D. - in.

Mud Type Starch Viscosity 38 Weight Pipe Length 472 I. D. 2.7 in.

Weight 9.6 Water Loss 11.6 cc. Drill Pipe Length 3690 I. D. 3.8 in.

Chlorides 51,000 P.P.M. Test Tool Length 23 ft. Tool Size 5½ in.

Jars: Make - Serial Number - Anchor Length 45 ft. Size 5½ 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 4½XH in.

Blow: Fair blow throughout test

Recovered 150 ft. of gas in pipe

Recovered 110 ft. of slightly gas cut watery mud with some oil spotting

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: 5% water- 95% mud film oil on top sample

Time Set Packer(s) 2:10 A.M. ~~P.M.~~ Time Started Off Bottom 4:55 A.M. P.M. Maximum Temperature 120

Initial Hydrostatic Pressure (A) 2239 P.S.I.

Initial Flow Period Minutes 15 (B) 198 P.S.I. to (C) 128 P.S.I.

Initial Closed In Period Minutes 45 (D) 1024 P.S.I.

Final Flow Period Minutes 60 (E) 200 P.S.I. to (F) 104 P.S.I.

Final Closed In Period Minutes 42 (G) 295 P.S.I.

Final Hydrostatic Pressure (H) 2228 P.S.I.

WTC-

WESTERN TESTING CO., INC.

Pressure Data

Date 2/24/81 Test Ticket No. 9345

Recorder No. 2603 Capacity 4400 Location 4187 Ft.

Clock No. ------ Elevation 1992 Kelly Bushing Well Temperature 120 °F

Point		Pressure			Time Given	Time Computed
A	Initial Hydrostatic Mud	2239 P.S.I.		Open Tool	2:10A M	
B	First Initial Flow Pressure	198 P.S.I.		First Flow Pressure	15 Mins.	15 Mins.
C	First Final Flow Pressure	128 P.S.I.		Initial Closed-in Pressure	45 Mins.	45 Mins.
D	Initial Closed-in Pressure	1024 P.S.I.		Second Flow Pressure	60 Mins.	60 Mins.
E	Second Initial Flow Pressure	200 P.S.I.		Final Closed-in Pressure	45 Mins.	42 Mins.
F	Second Final Flow Pressure	104 P.S.I.				
G	Final Closed-in Pressure	295 P.S.I.				
H	Final Hydrostatic Mud	2228 P.S.I.				

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 3 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.	Press.
P 1 0	198
P 2 5	167
P 3 10	140
P 4 15	128
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: 15 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	128
3	131
6	137
9	151
12	176
15	214
18	270
21	342
24	423
27	522
30	616
33	715
36	805
39	866
42	967
45	1024

Second Flow Pressure
Breakdown: 12 Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	200
5	173
10	149
15	131
20	117
25	110
30	108
35	108
40	107
45	104
50	104
55	104
60	104

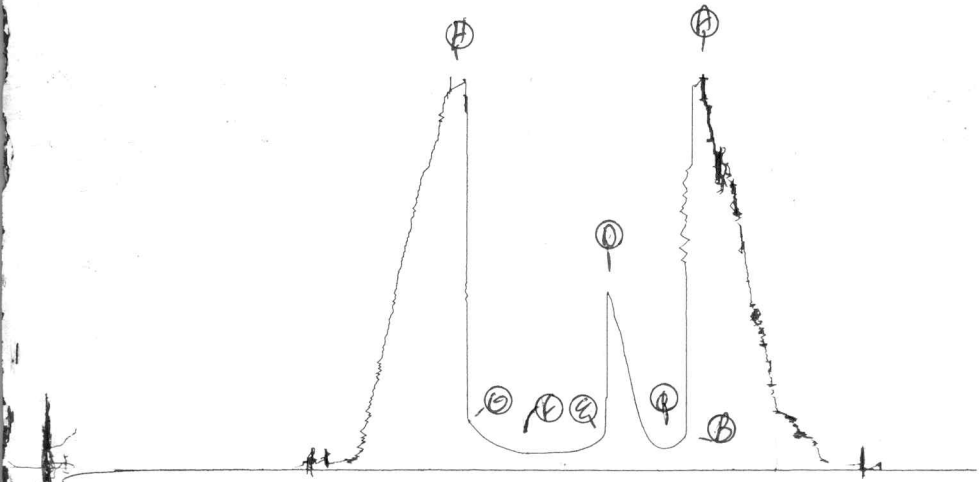
Final Shut-In
Breakdown: 14 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	104
3	106
6	113
9	119
12	126
15	135
18	142
21	151
24	164
27	180
30	198
33	221
36	248
39	270
42	295

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