WESTERN TESTERS

Home Office: Wichita, Kansas 67201

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

Company Don E Pratt Oil Operations Lease & Well No. Schwarzenberger #1-14

Elevation N/A Formation N/A Effective Pay - Ft. Ticket No. 14341

Date 11/22/81 Sec. 14 Twp. 9S Range 28W County Sheridan State Kansas

Test Approved by Bill Wyn (driller) Western Representative Doug Clore

Formation Test No. 1 Interval Tested from 3918 ft. to 3966 ft. Total Depth 3966 ft.

Packer Depth 3913 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3918 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3933 ft. Recorder Number 2608 Cap. 4150

Bottom Recorder Depth (Outside) 3936 ft. Recorder Number 3473 Cap. 4000

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

Drilling Contractor Murfin Rig #21 Drill Collar Length 91 I. D. 2.2 in.

Mud Type Chemical Viscosity 42 Weight Pipe Length - I. D. - in.

Weight 8.8 Water Loss N/A cc. Drill Pipe Length 3807 I. D. 3.8 in.

Chlorides N/A P.P.M. Test Tool Length 20 ft. Tool Size 5½OD in.

Jars: Make No Serial Number - Anchor Length 48 ft. Size 5½OD in.

Did Well Flow? - Reversed Out - 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: Initial flow period strong in 10 minutes.

Final flow period strong in 10 minutes.

Recovered 620 ft. of muddy water Chlorides 40,000 PPM

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Read bottom recorder

Time Set Packer(s) 2:00 ~~A.M.~~ P.M. Time Started Off Bottom 4:30 ~~A.M.~~ P.M. Maximum Temperature 118

Initial Hydrostatic Pressure			(A) 1945	P.S.I.		
Initial Flow Period	Minutes 20	(B) 84	P.S.I. to	(C) 133	P.S.I.	
Initial Closed In Period	Minutes 30	(D) 1020	P.S.I.			
Final Flow Period	Minutes 55	(E) 186	P.S.I. to	(F) 287	P.S.I.	
Final Closed In Period	Minutes 30	(G) 988	P.S.I.			
Final Hydrostatic Pressure			(H) 1925	P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

Date 11/22/81 Test Ticket No. 14341

Recorder No. 3473 Capacity 4000 Location 3936 Ft.

Clock No. - Elevation - Well Temperature 118 °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1945 P.S.I.	Open Tool	2:00P M	
B	First Initial Flow Pressure	84 P.S.I.	First Flow Pressure	30 Mins.	20 Mins.
C	First Final Flow Pressure	133 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D	Initial Closed-in Pressure	1020 P.S.I.	Second Flow Pressure	60 Mins.	55 Mins.
E	Second Initial Flow Pressure	186 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F	Second Final Flow Pressure	287 P.S.I.			
G	Final Closed-in Pressure	988 P.S.I.			
H	Final Hydrostatic Mud	1925 P.S.I.			

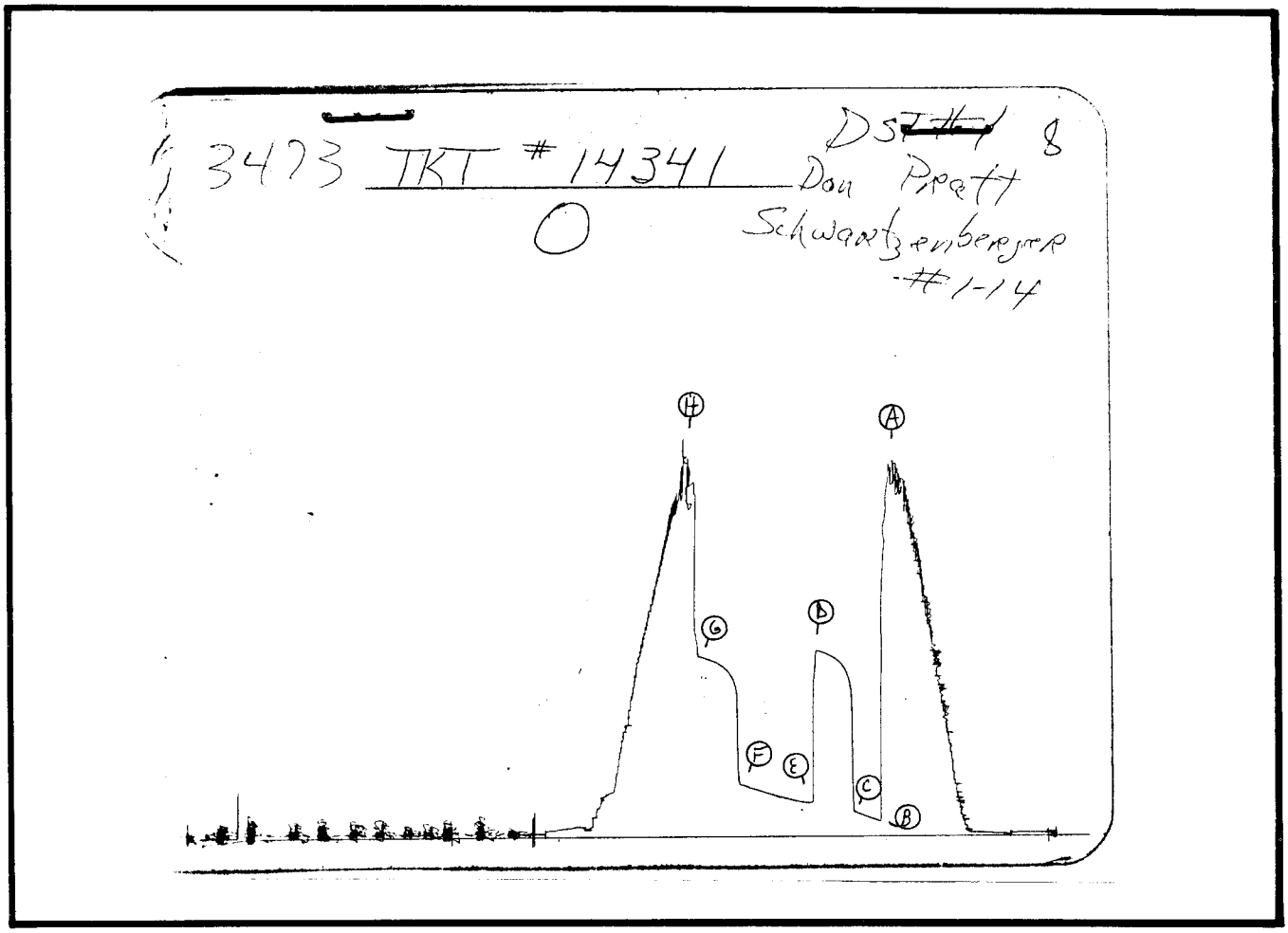
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 4 Inc.		Breakdown: 10 Inc.		Breakdown: 11 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	84	0	133	0	186	0	287
P 2 5	94	3	841	5	186	3	815
P 3 10	105	6	911	10	191	6	874
P 4 15	119	9	941	15	199	9	907
P 5 20	133	12	963	20	209	12	927
P 6		15	982	25	217	15	943
P 7		18	992	30	227	18	955
P 8		21	1004	35	238	21	965
P 9		24	1012	40	250	24	973
P10		27	1018	45	260	27	980
P11		30	1020	50	274	30	988
P12				55	287		
P13							
P14							
P15							
P16							
P17							
P18							
P19							
P20							

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b^1	= Approximate Radius of Investigation (Net Pay Zone h^1)	Feet
D.R.	= Damage Ratio	——
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h^1	= Net Pay Thickness	Feet
K	= Permeability	md
K^1	= Permeability (From Net Pay Zone h^1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF^1	= Maximum Indicated Flow Rate	MCF/D
OF^2	= Minimum Indicated Flow Rate	MCF/D
OF^3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF^4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P^S	= Extrapolated Static Pressure	Psig.
P^F	= Final Flow Pressure	Psig.
$P^{\circ T}$	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q^1	= Theoretical Production w/Damage Removed	bbls/day
Q^g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r^w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t°	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	——
u	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	1955	1945	PSI
(B)	First Initial Flow Pressure	92	84	PSI
(C)	First Final Flow Pressure	153	133	PSI
(D)	Initial Closed-in Pressure	1020	1020	PSI
(E)	Second Initial Flow Pressure	194	186	PSI
(F)	Second Final Flow Pressure	286	287	PSI
(G)	Final Closed-in Pressure	1000	988	PSI
(H)	Final Hydrostatic Mud	1945	1925	PSI

COMPANY____ LEASE AND WELL NO.____ SEC.____ TWP.____ RGE.____ TEST NO.____ DATE____

WESTERN TESTERS

Home Office: Wichita, Kansas 67201

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

Company Don E Pratt Oil Operations Lease & Well No. Schwarzenberger #1-14

Elevation N/A Formation N/A Effective Pay - Ft. Ticket No. 14342

Date 11/23/81 Sec. 14 Twp. 9S Range 28W County Sheridan State Kansas

Test Approved by ? Western Representative Doug Clore

Formation Test No. 2 Interval Tested from 3965 ft. to 3990 ft. Total Depth 3990 ft.

Packer Depth 3960 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3965 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3977 ft. Recorder Number 3473 Cap. 4000

Bottom Recorder Depth (Outside) 3980 ft. Recorder Number 2608 Cap. 4150

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

Drilling Contractor Murfin Rig #21 Drill Collar Length 150 I. D. 2.2 in.

Mud Type Chemical Viscosity 78 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss 10.5 cc. Drill Pipe Length 3795 I. D. 3.8 in.

Chlorides 1400 P.P.M. Test Tool Length 20 ft. Tool Size 5½OD in.

Jars: Make No Serial Number - Anchor Length 25 ft. Size 5½OD in.

Did Well Flow? - Reversed Out - 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:

Recovered 650 ft. of drilling mud Chlorides 1500 PPM

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: PACKER SEAT FAILURE - when tool was flushed

Read outside chart MISRUN

Time Set Packer(s) 3:08 A.M. ~~P.M.~~ Time Started Off Bottom 3:30 A.M. ~~P.M.~~ Maximum Temperature 119

Initial Hydrostatic Pressure (A) 2002 P.S.I.

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

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

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

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

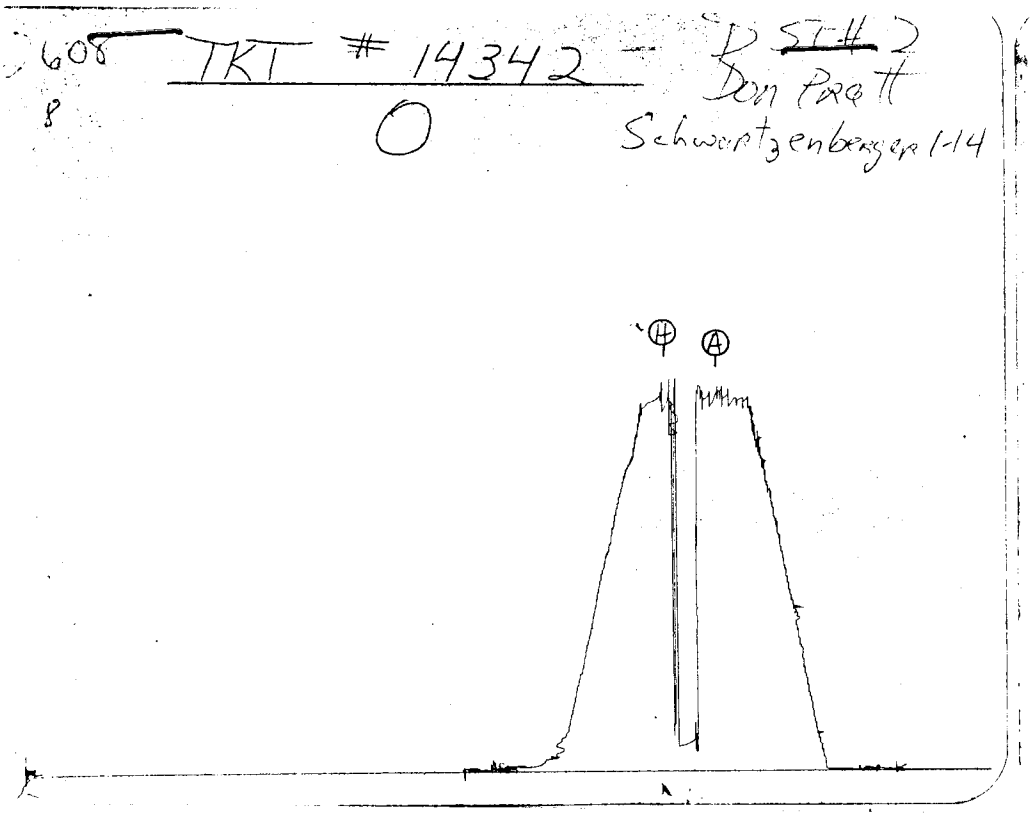
Final Hydrostatic Pressure (H) 2002 P.S.I.

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NOMENCLATURE

b	=	Approximate Radius of Investigation	Feet
b^1	=	Approximate Radius of Investigation (Net Pay Zone h^1)	Feet
D.R.	=	Damage Ratio	——
El	=	Elevation	Feet
GD	=	B.T. Gauge Depth (From Surface Reference)	Feet
h	=	Interval Tested	Feet
h^1	=	Net Pay Thickness	Feet
K	=	Permeability	md
K^1	=	Permeability (From Net Pay Zone h^1)	md
m	=	Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF^1	=	Maximum Indicated Flow Rate	MCF/D
OF^2	=	Minimum Indicated Flow Rate	MCF/D
OF^3	=	Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF^4	=	Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P^S	=	Extrapolated Static Pressure	Psig.
P^F	=	Final Flow Pressure	Psig.
$P^{\circ T}$	=	Potentiometric Surface (Fresh Water*)	Feet
Q	=	Average Adjusted Production Rate During Test	bbls/day
Q^1	=	Theoretical Production w/Damage Removed	bbls/day
Q^g	=	Measured Gas Production Rate	MCF/D
R	=	Corrected Recovery	bbls
r^w	=	Radius of Well Bore	Feet
t	=	Flow Time	Minutes
t°	=	Total Flow Time	Minutes
T	=	Temperature Rankine	°R
Z	=	Compressibility Factor	——
u	=	Viscosity Gas or Liquid	CP
Log	=	Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.



This is an actual photograph of recorder chart.

POINT		PRESSURE Field Reading	Office Reading	
(A)	Initial Hydrostatic Mud	-	2002	PSI
(B)	First Initial Flow Pressure	-	-	PSI
(C)	First Final Flow Pressure	-	-	PSI
(D)	Initial Closed-in Pressure	-	-	PSI
(E)	Second Initial Flow Pressure	-	-	PSI
(F)	Second Final Flow Pressure	-	-	PSI
(G)	Final Closed-in Pressure	-	-	PSI
(H)	Final Hydrostatic Mud	-	2002	PSI