FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	____ @ ____ °F.		____ ppm
Recovery Mud	____ @ ____ °F.		____ ppm
Recovery Mud Filtrate	____ @ ____ °F.		____ ppm
Mud Pit Sample	____ @ ____ °F.		____ ppm
Mud Pit Sample Filtrate	____ @ ____ °F.		____ ppm
Mud Weight	9.2	vis	42 sec.

Date 2-25-81
Ticket Number 941299
Kind of D.S.T. OPEN HOLE
Halliburton Location EL DORADO
Tester J. DEVENA
Witness M. RUSSELL
Drilling Contractor H-30 RIG #7
sm

EQUIPMENT & HOLE DATA

Formation Tested Mississippi
Elevation 1497' Ft.
Net Productive Interval - Ft.
All Depths Measured From Kelly bushing
Total Depth 3436' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 60' I.D. 2.267"
Drill Pipe Length 3343' I.D. 3.826"
Packer Depth(s) 3419-3424' Ft.
Depth Tester Valve 3408' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve
Surface Choke 1/2" Bottom Choke 3/4"

Recovered 75 Feet of mud and water
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET...Charts indicate partial plugging of anchor perforations during flow periods.

TEMPERATURE	Gauge No. 7350	Gauge No. 7349	Gauge No.	TIME (00:00-24:00 hrs.)
	Depth: 3410 Ft.	Depth: 3433 Ft.	Depth: Ft.	
	12 Hour Clock	12 Hour Clock	Hour Clock	Tool Opened 1419
Est. 3431 °F.	Blanked Off no	Blanked Off yes	Blanked Off	Opened Bypass 1753
Actual 97 °F.	Pressures	Pressures	Pressures	

	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	1646	1632.6	1670.6	1639.1			—	—
First Period Flow Initial	41	20.4		235.1			32	31
First Period Flow Final	41	44.0		198.0			31	30
First Period Closed in	1003.1	1012.2	1011.6	1012.5			—	—
Second Period Flow Initial	30.8	34.8		312.4			60	61
Second Period Flow Final	51.3	49.1	190.7	198.0			91	92
Second Period Closed in	1003.1	1008.1	1001.1	1009.4			—	—
Third Period Flow Initial								
Third Period Flow Final								
Third Period Closed in							—	—
Final Hydrostatic	1615.4	1623.4	1639.2	1637.0				

Legal Location Sec. - Twp. - Rng. 17 25S 5W
Lease Name GEFFERT
Well No. 1
Test No. 2
Tested Interval 3424 - 3436'
Field Area
County RENO
State KANSAS
Lease Owner/Company Name AURORA, INCORPORATED

FORM 181-R2 — PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

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941299

Casing perfs._____ Bottom choke_____ Surf. temp_____ °F Ticket No._____

Gas gravity_____ Oil gravity_____ GOR_____

Spec. gravity_____ Chlorides_____ ppm Res._____ @_____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED_____

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
1419	3/4"				Opened tool
1445					Gas to the surface
1450		1	76		
1451					Closed tool
1522	1/2"				Opened tool
1527		4	68		
1532		4½+	73		
1537		4½+	76		
1542		5½+	83		
1547		5½	81		
1557		5½+	84		
1602		5½+	83		
1607		5½	81		
1612		5½	81		
1617		5½	81		
1622		5½	81		Closed tool
1753					Tool off bottom

FORM 182-R1—PRINTED IN U.S.A.

PRODUCTION TEST DATA

LITTLE'S 96672 5M 8/74

Gauge No.	7350	Depth	3410'	Clock No.	12869	12 hour	Ticket No.	941299	

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.0000	20.4	.0000		44.0	.0000	34.8	.0000		49.1					
1	.2080	44.0	.0135		931.4	.0721*	39.9	.0526**		949.9					
2			.0271		971.3	.1377	42.0	.0921		967.2					
3	Plugging		.0406		983.6	.2033	50.2	.1315		977.5					
4			.0541		989.7	.2689	46.1	.1710		983.6					
5			.0677		994.8	.3344	47.1	.2104		988.7					
6			.0812		997.9	.4000	49.1	.2499		991.8					
7			.0947		1001.0			.2894		995.9					
8			.1082		1003.0			.3288		997.9					
9			.1218		1006.1			.3683		1000.0					
10			.1353		1007.1			.4077		1003.0					
11			.1488		1008.1			.4472		1004.0					
12			.1624		1010.2			.4867		1005.1					
13			.1759		1011.2			.5261		1006.1					
14			.1894		1012.2			.5656		1007.1					
15			.2030		1012.2			.6050		1008.1					

Gauge No.	7349	Depth	3433'	Clock No.	7101	12 hour								
0	.0000	235.1	.0000		198.0	.0000	312.4	.0000		198.0					
1	.2060	198.0	.0135		912.9	.4050	198.0	.0530**		949.6					
2			.0271		967.4			.0927		967.4					
3	Plugging		.0406		982.1	Plugging		.1324		976.9					
4			.0541		988.4			.1721		983.2					
5			.0677		993.7			.2118		988.4					
6			.0812		998.9			.2516		992.6					
7			.0947		1001.0			.2913		995.7					
8			.1082		1003.1			.3310		997.8					
9			.1218		1005.2			.3707		1001.0					
10			.1353		1007.3			.4104		1002.1					
11			.1488		1008.3			.4502		1004.1					
12			.1624		1010.4			.4899		1006.2					
13			.1759		1011.5			.5296		1007.3					
14			.1894		1011.5			.5693		1008.3					
15			.2030		1012.5			.6090		1009.4					
Reading Interval			2			10		6							Minutes

REMARKS: *First interval is equal to 11 minutes. ** = 8 minutes.

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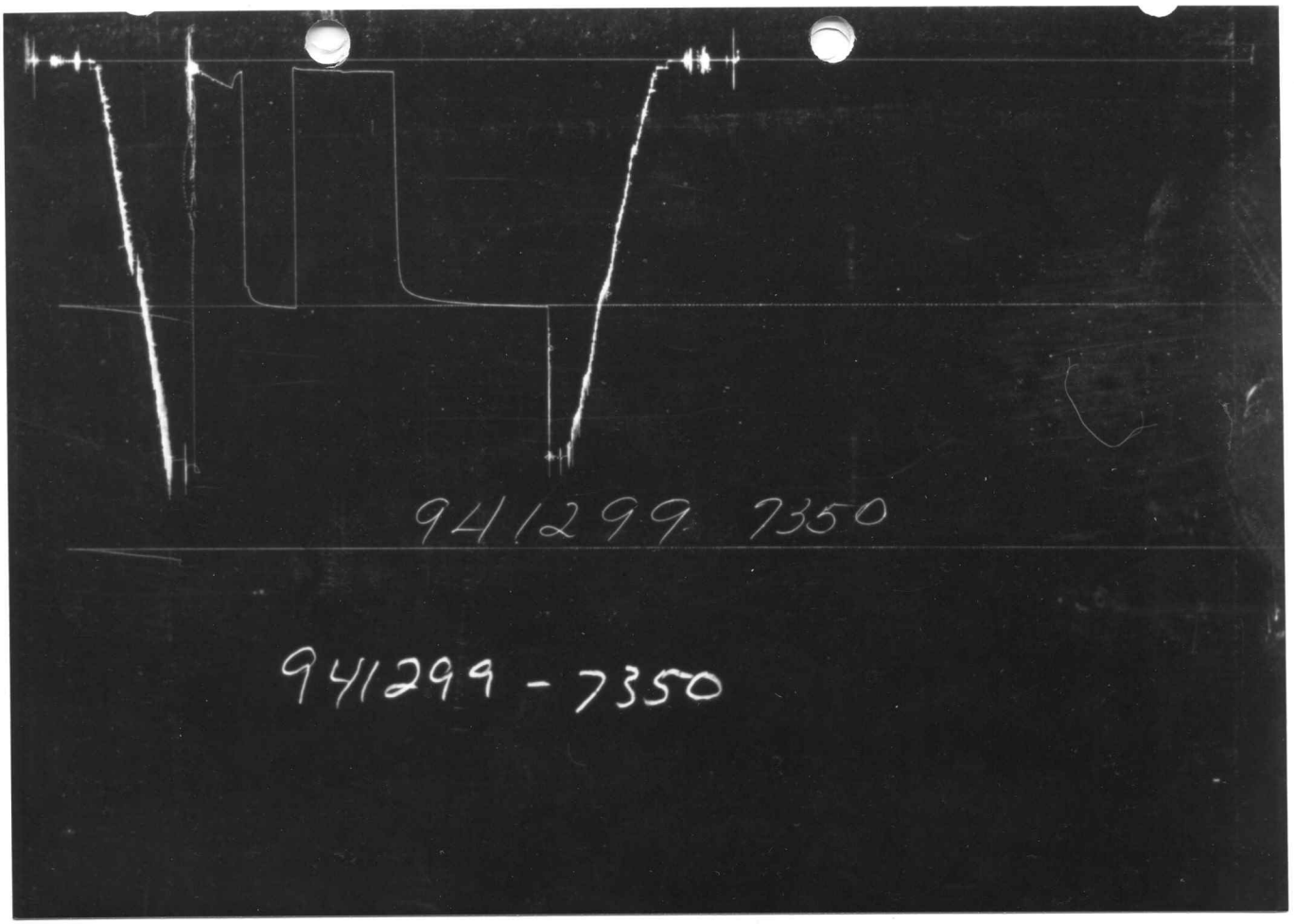
SPECIAL PRESSURE DATA

LITTLE'S 96673 75C 8/74

TICKET NO. 941299

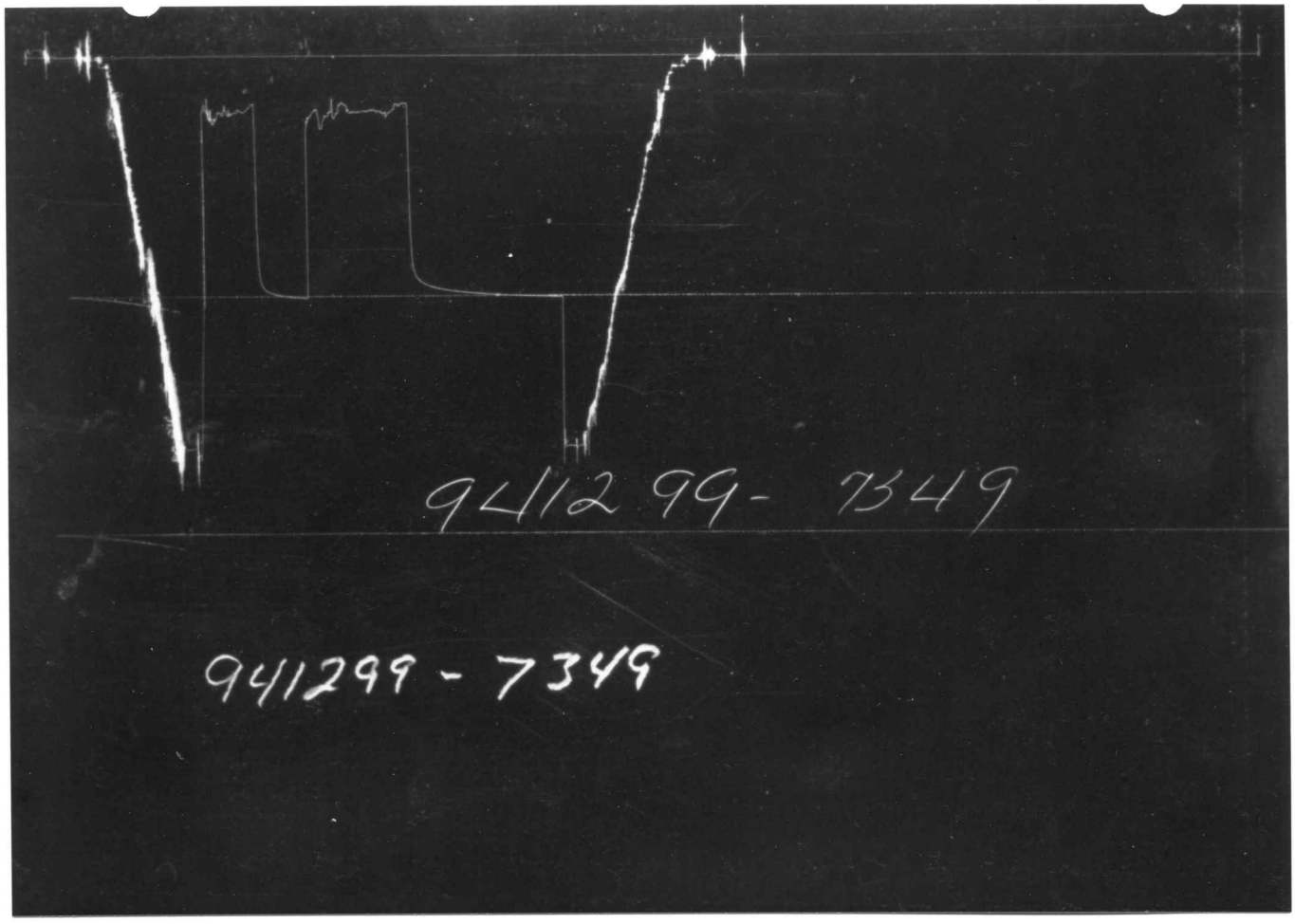


	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Drill Collars				
Reversing Sub	5 3/4"	2.75"	1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	3343'	
Drill Collars	6"	2.267"	60'	
Handling Sub & Choke Assembly				
Dual CIP Valve	6"	.87"	6'	3403'
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	3408'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.75"	4'	3410'
Hydraulic Jar				
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	5'	3419'
Distributor				
Packer Assembly	6 3/4"	1.53"	5'	3424'
Flush Joint Anchor	5"	2.37"	5'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
HT 500 Flush Joint Anchor	5"		1.5'	3431'
Blanked-Off B.T. Running Case	5"	2.75"	4'	3433'
Total Depth				3436'

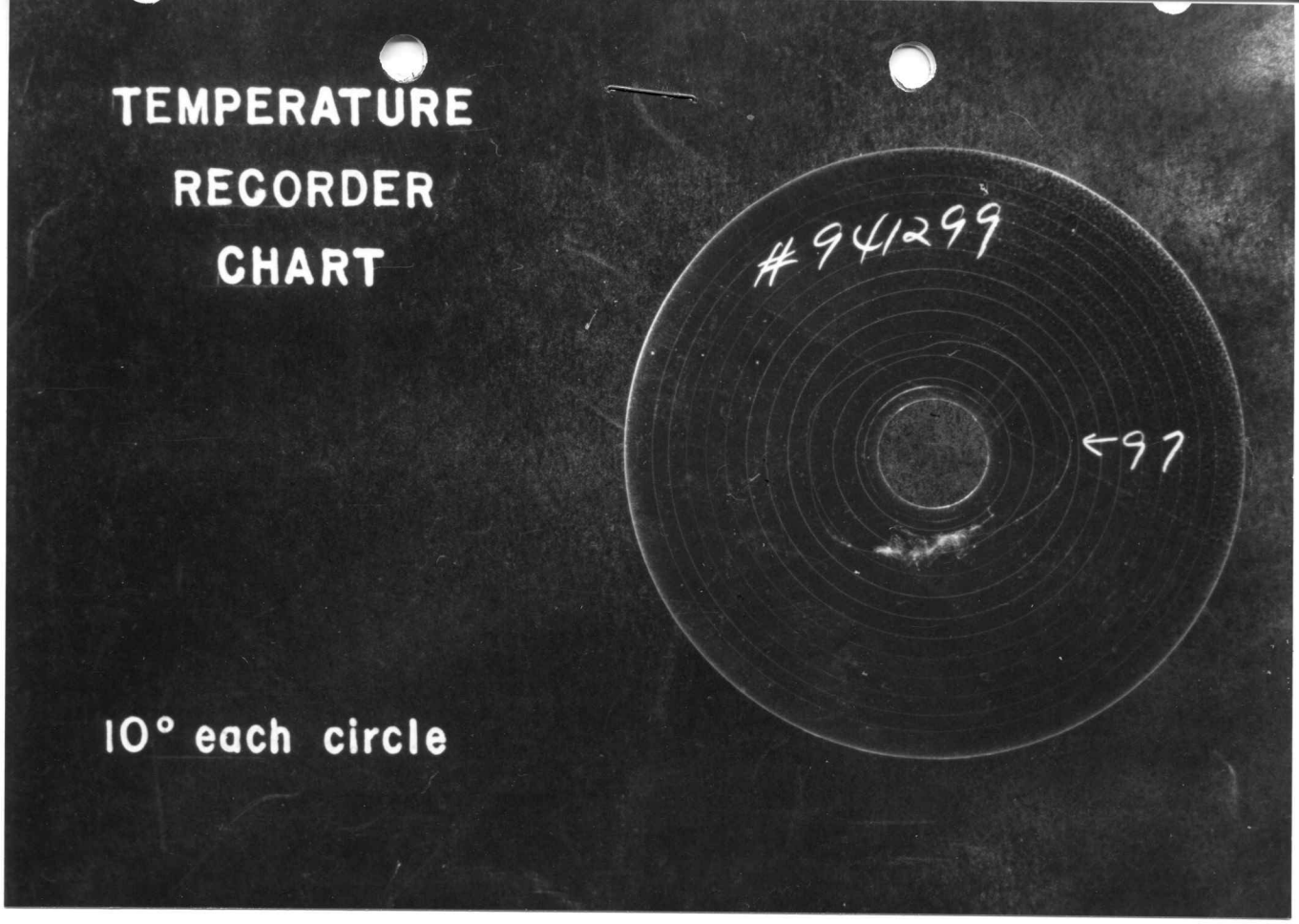


PRESSURE

TIME



Each Horizontal Line Equal to 1000 p.s.i.



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_{ot} = 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_o = Total Flow Time . . . . . Minutes

T = Temperature Rankine . . . . . °R

Z = Compressibility Factor . . . . . ——

μ = Viscosity Gas or Liquid . . . . . CP

Log = Common Log

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

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	____	@ ____	°F.	____ ppm
Recovery Mud	____	@ ____	°F.	____ ppm
Recovery Mud Filtrate	____	@ ____	°F.	____ ppm
Mud Pit Sample	____	@ ____	°F.	____ ppm
Mud Pit Sample Filtrate	____	@ ____	°F.	____ ppm

Mud Weight 9.2 vis 44 sec.

Date 2-26-81 Ticket Number 941300
Kind of D.S.T. OPEN HOLE Halliburton Location EL DORADO
Tester MR. DEVENA Witness MR. RUSSELL
Drilling Contractor H-30 DRILLING COMPANY RIG #7 bj

EQUIPMENT & HOLE DATA

Formation Tested Viola
Elevation 1497' Ft.
Net Productive Interval - Ft.
All Depths Measured From Kelly Bushing
Total Depth 3831' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length - I.D. -
Drill Pipe Length 3789' I.D. 3.826"
Packer Depth(s) 3793' 3798' Ft.
Depth Tester Valve 3782' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve — Surface Choke 1.00" Bottom Choke 3/4"

Recovered 300 Feet of slightly oil and gas cut muddy water.
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Mea. From Tester Valve

Remarks SEE PRODUCTION TEST DATA SHEET....

* TIME COMPUTED AND TIME REPORTED DOES NOT AGREE....

TEMPERATURE	Gauge No. 7350 Depth: 3784' Ft.	Gauge No. 7349 Depth: 3828' Ft.	Gauge No. Depth: Ft.	TIME (00:00-24:00 hrs.)
Est. °F.	12 Hour Clock	12 Hour Clock	Hour Clock	Tool Opened 2150
3826' Actual 114 °F.	Blanked Off NO	Blanked Off YES	Blanked Off	Opened Bypass 0121

		Pressures Field	Pressures Office	Pressures Field	Pressures Office	Pressures Field	Pressures Office	Reported Minutes	Computed Minutes
Initial Hydrostatic			1814.2	1848.4	1835.7				
First Period	Flow Initial		15.3	42.4	36.0			___	___
	Flow Final		71.7	95.4	86.8			31	38*
	Closed in		1421.4	1430	1438.2			30	31
Second Period	Flow Initial		76.8	106	97.4			___	___
	Flow Final		156.7	169.5	175.8			60	59
	Closed in		1422.4	1440.4	1439.3			90	90
Third Period	Flow Initial							___	___
	Flow Final								
	Closed in								
Final Hydrostatic			1773.4	1785.6	1796.0			___	___

Legal Location Sec. - Twp. - Rng. 17 25S 5W
Lease Name GEFFERT
Well No. 1
Test No. 3
Tested Interval 3798' to 3831'
Field Area
County RENO
State KANSAS
Lease Owner/Company Name AURORA, INCORPORATED

FORM 181-R2 — PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S

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Casing perfs._____ Bottom choke_____ Surf. temp._____ °F Ticket No. 941300

Gas gravity_____ Oil gravity_____ GOR_____

Spec. gravity_____ Chlorides_____ ppm Res._____ @_____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED_____

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
1715					Tester called. Ready now.
1815					On location, rig coming out of hole for DST #3.
1940					Started making up tools.
2015					Tool made up.
2020					Tool through table.
2144					Tool on bottom.
2150					Tool opened on 1/4" bubble-building to 8" bubble.
2221					Closed tool. Bubble still building.
2251					Opened tool 1/4" bubble-building to 6" bubble.
2351					Closed tool for final CIP period.
0121					Off bottom.
0255					Tool out.
0400					Off location.

FORM 182-R1—PRINTED IN U.S.A.

PRODUCTION TEST DATA

LITTLE'S 96672 5M 8/74

Gauge No.	7350	Depth	3784'	Clock No.	12869	12 hour	Ticket No.	941300	

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.0000	15.3	.0000		71.7	.0000	76.8	.0000		156.7					
1	.0537*	25.6	.0196**		1289.7	.0595***	87.0	.0402		1356.1					
2	.0939	34.8	.0327		1348.9	.1256	102.4	.0804		1377.5					
3	.1342	45.0	.0458		1371.4	.1917	115.7	.1206		1389.7					
4	.1745	54.3	.0589		1383.6	.2578	130.1	.1608		1396.9					
5	.2147	62.5	.0720		1391.8	.3239	143.4	.2010		1402.0					
6	.2550	71.7	.0851		1402.0	.3900	156.7	.2412		1406.1					
7			.0982		1404.0			.2814		1409.1					
8			.1113		1407.1			.3216		1412.2					
9			.1244		1410.2			.3618		1414.2					
10			.1375		1412.2			.4020		1416.3					
11			.1505		1414.2			.4422		1417.3					
12			.1636		1417.3			.4824		1419.3					
13			.1767		1418.3			.5226		1420.4					
14			.1898		1419.3			.5628		1421.4					
15			.2030		1421.4			.6030		1422.4					

Gauge No.	7349		Depth	3828'		Clock No.	7101	12 hour						
0	.0000	36.0	.0000		86.8	.0000	97.4	.0000		175.8					
1	.0537*	40.2	.0198**		1291.8	.0598***	105.9	.0398		1354.5					
2	.0939	49.7	.0331		1359.8	.1262	119.7	.0796		1392.2					
3	.1342	59.3	.0463		1384.9	.1927	133.4	.1194		1405.8					
4	.1745	68.8	.0595		1399.5	.2591	147.2	.1592		1413.1					
5	.2147	77.3	.0727		1408.9	.3256	161.0	.1990		1418.4					
6	.2550	86.8	.0859		1414.2	.3920	175.8	.2388		1422.5					
7			.0992		1419.4			.2786		1425.7					
8			.1124		1423.6			.3184		1428.8					
9			.1256		1425.7			.3582		1430.9					
10			.1388		1428.8			.3980		1433.0					
11			.1520		1430.9			.4378		1434.0					
12			.1653		1433.0			.4776		1437.2					
13			.1785		1435.1			.5174		1437.2					
14			.1917		1436.1			.5572		1438.2					
15			.2050		1438.2			.5970		1439.3					
Reading Interval	6		2			10		6							Minutes

REMARKS: * INTERVAL = 8 MINUTES ** INTERVAL = 3 MINUTES *** INTERVAL = 9 MINUTES

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SPECIAL PRESSURE DATA

TICKET NO. 941300



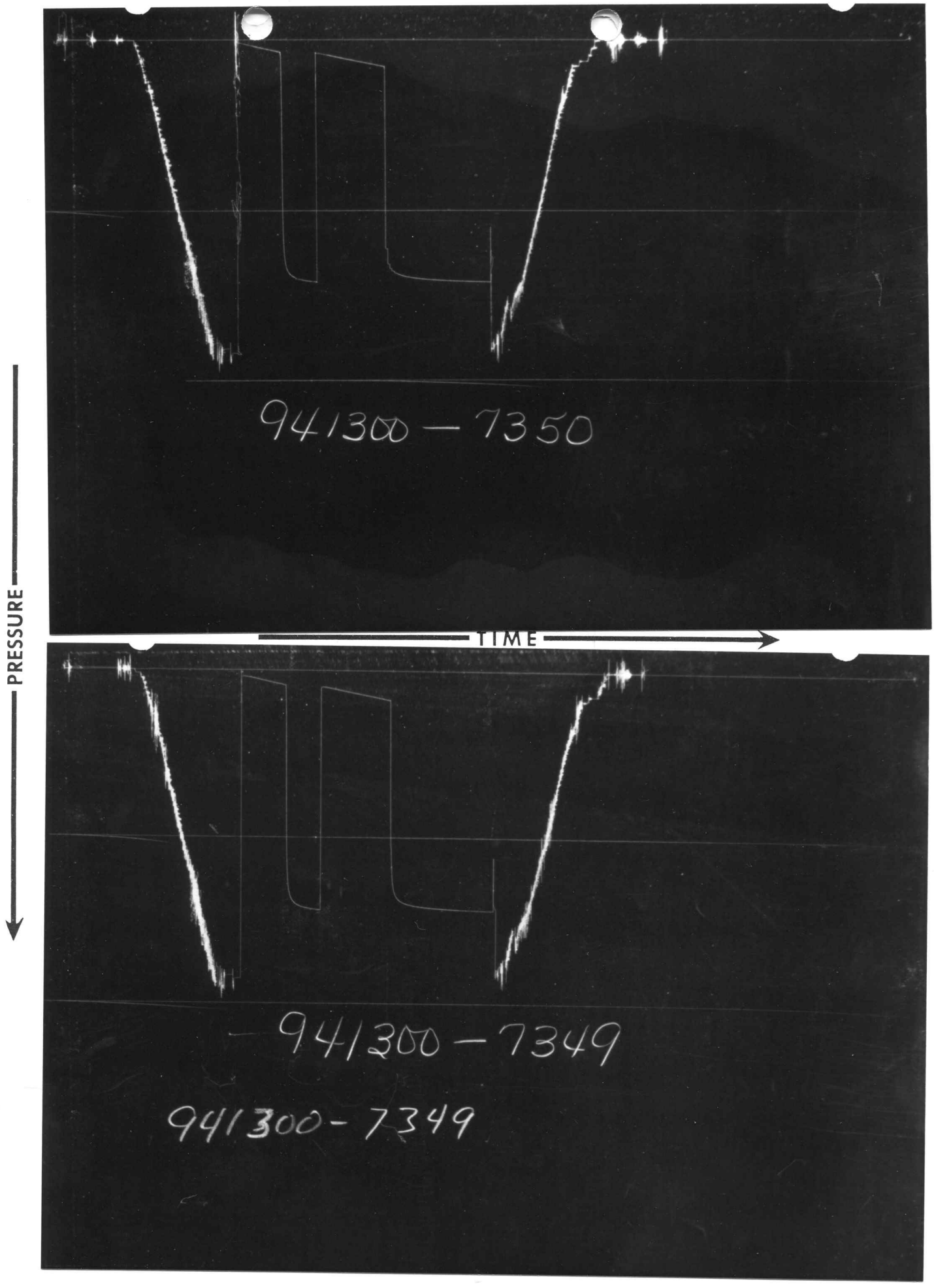
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Drill Collars				
Reversing Sub	5.75"	2.75"	1.00'	
Water Cushion Valve				
Drill Pipe	4.50"	3.826"	3789'	
Drill Collars				
Handling Sub & Choke Assembly				
Dual CIP Valve	5.00"	.87"	6.00'	3778'
Dual CIP Sampler				
Hydro-Spring Tester	5.00"	.75"	5.00'	3782'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5.00"	3.75"	4.00'	3784'
Hydraulic Jar				
VR Safety Joint	5.00"	1.00"	3.00'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5.00'	3793'
Distributor				
Packer Assembly	6.75"	1.53"	5.00'	3798'
Flush Joint Anchor	5.00"	2.37"	24'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor HT 500 TEMP.	5.00"		1.50'	3826'
Blanked-Off B.T. Running Case	5.00"	2.75"	4.00'	3828'
Total Depth				3831'

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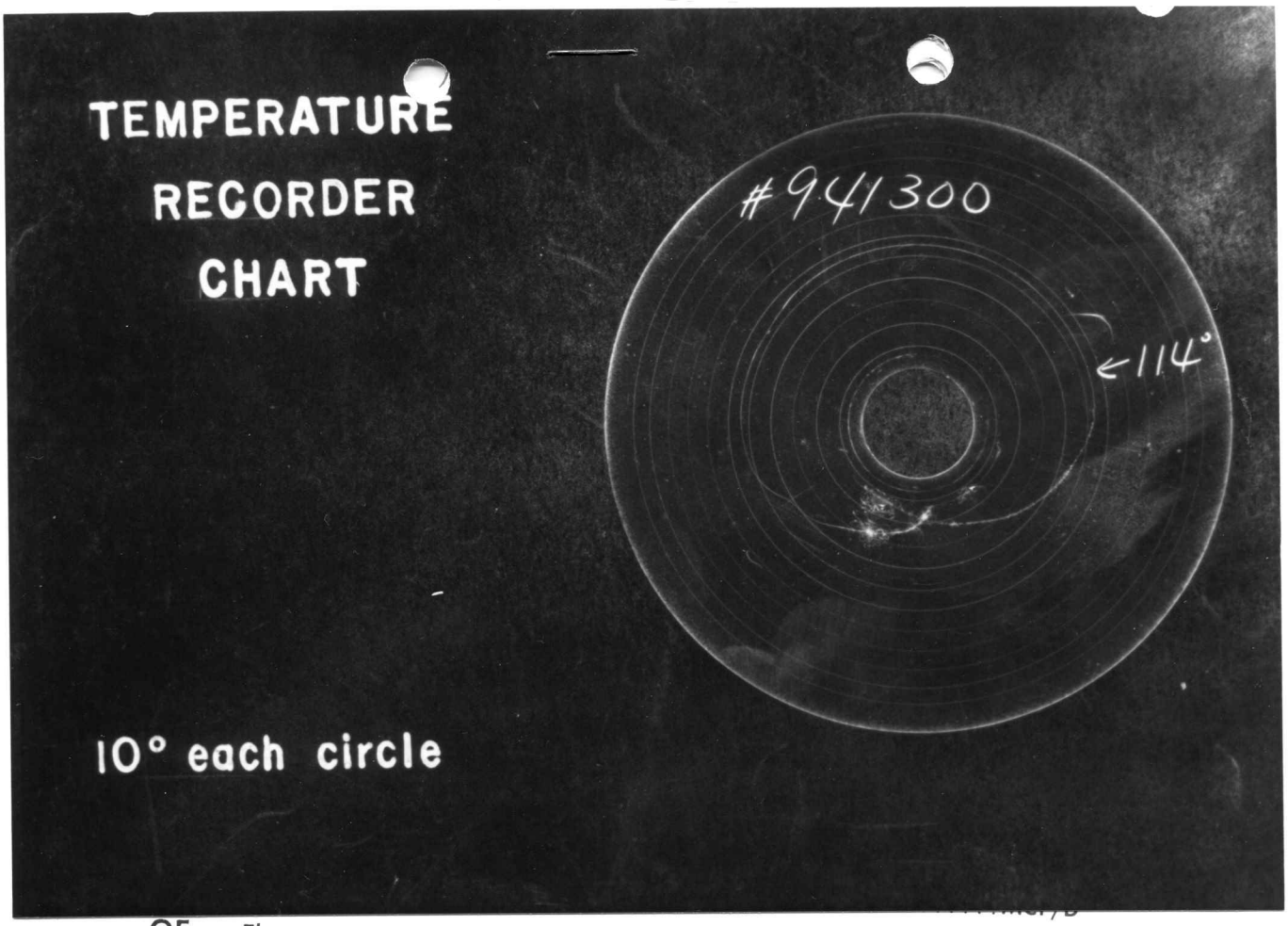
EQUIPMENT DATA

LITTLE'S 111036 75C 2/80

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Each Horizontal Line Equal to 1000 p.s.i.



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_{ot} = 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_o = Total Flow Time . . . . . Minutes

T = Temperature Rankine . . . . . °R

Z = Compressibility Factor . . . . . ——

μ = Viscosity Gas or Liquid . . . . . CP

Log = Common Log

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