

SUPERIOR TESTERS ENTERPRISES, INC.

WELL IDENTIFICATION DATA

COMPANY : GRIGGS OIL INC. WELL NAME : NORTON #1-32
ADDRESS : 714 S. HILLSIDE, WICHITA LOCATION : 32-14S-26W
STATE & COUNTY : KANSAS, GOVE FIELD :
ELEV. (GR) : 2389 (KB) : TEST DATE : 6-11-85

EQUIPMENT AND HOLE DATA

FORMATION TESTED : LANSING KC DRILL PIPE LENGTH(ft) : 3835
TEST INT. KB : 3918 to 3946 DRILL PIPE O.D. (in) : 3.82
ANCHOR LENGTH(ft) : 28 WEIGHT PIPE LENGTH(ft) : NONE
TYPE OF TEST : Conventional WEIGHT PIPE ID : NONE
TOTAL DEPTH(ft-kb) : 3946 DRILL COLLAR LENGTH(ft) : 62
MAIN HOLE SIZE(in) : 7 7/8 DRILL COLLAR I.D. (in) : 2.259
MUD WEIGHT : 9.4 TOP PACKER DEPTH(kb) : 3913
MUD VISCOSITY : 46 BOTTOM PACKER DEPTH(kb) : 3918
MUD CHLORIDES : DUAL PACKERS : YES
SURFACE CHOKE : 3/4 PACKER SIZE(in) : 6 3/4
BOTTOM CHOKE(in) : 3/4 PACKER HOLD : Yes
TOOL SIZE(O.D.) : 5 1/2 TOOL PLUG : No
TOOL JOINT SIZE(F.H.) : 4 1/2 REVERSED OUT : No
RESERVOIR TEMPERATURE(F) : 114 TEST TICKET NUMBER : 8733

EXTRA EQUIPMENT : -SAFETY JOINT

ELEMENT SERIAL NO. : 5463
RANGE : 0 - 3650 CLOCK RANGE : 12 HOURS
CAL. EQU. : $922.07 * \text{Defl.} - 2.47$

SURFACE BLOW

1st Opening : WEAK BUILDING SLOWLY 3 IN. INTO WATER
2nd Opening : WEAK BUILDING SLOWLY 1 IN. INTO WATER

RECOVERY

Recovered 80 feet of WATERY MUD

REMARKS :

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WITNESSED BY : TOOL OPERATOR : IVAN SUPPES

INTERPRETATION BY : SUPERIOR TESTERS ENTERPRISES, INC.

SUPERIOR TESTERS ENTERPRISES, INC.

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : GRIGGS OIL INC.
 DATE OF TEST : 6-11-85
 DEPTH : 3940.0

WELL NAME : NORTON #1-32
 LOCATION : 32-14S-26W
 SERIAL NO. : 5463

COMMENTS	TIME min	DEFL in	PRESSURE PSIG		
			CALC	CORR	CORRECTED
TEST NO.: 2					
Depth : 3940.0 ft-kb					
-1ST HYDROSTATIC	0.0	2.137	1968.00	-2.13	1965.87
- 0:00	0.0	.066	58.39	2.16	60.55
-20:10 1ST FLOW	0.0	.066	58.39	2.16	60.55
- 20:15	5.0	.053	46.40	2.22	48.62
- 20:19	9.0	.051	44.56	2.23	46.79
- 20:23	13.0	.051	44.56	2.23	46.79
- 20:28	18.0	.052	45.48	2.23	47.71
- 20:32	22.0	.052	45.48	2.23	47.71
- 20:37	27.0	.053	46.40	2.22	48.62
- 20:38	28.0	.053	46.40	2.22	48.62
-20:38 END FLOW	0.0	.053	46.40	2.22	48.62
- 20:41	3.0	.113	101.73	1.94	103.67
- 20:44	6.0	.635	583.05	-.48	582.57
- 20:47	9.0	.823	756.40	-1.35	755.05
- 20:48	10.0	.843	774.84	-1.44	773.39
- 20:50	12.0	.849	780.37	-1.47	778.90
- 20:53	15.0	.882	810.80	-1.62	809.17
- 20:56	18.0	.913	839.38	-1.77	837.61
- 20:59	21.0	.936	860.59	-1.88	858.72
- 21:01	23.0	.956	879.03	-1.97	877.06
- 21:04	26.0	.970	891.94	-2.03	889.91
- 21:09	31.0	.983	903.93	-2.09	901.83
-21:09 1ST SHUT-IN	0.0	.983	903.93	-2.09	901.83
-21:09 2ND FLOW	0.0	.089	79.60	2.05	81.65
- 21:14	5.0	.077	68.53	2.11	70.64
- 21:18	9.0	.074	65.77	2.12	67.89
- 21:22	13.0	.074	65.77	2.12	67.89
- 21:27	18.0	.074	65.77	2.12	67.89
- 21:31	22.0	.074	65.77	2.12	67.89
- 21:35	26.0	.074	65.77	2.12	67.89
- 21:38	29.0	.074	65.77	2.12	67.89
-21:38 END FLOW	0.0	.074	65.77	2.12	67.89
- 21:41	3.0	.087	77.75	2.06	79.82
- 21:44	6.0	.253	230.82	1.29	232.11
- 21:47	9.0	.481	441.05	.24	441.28
- 21:50	12.0	.561	514.81	-.14	514.68
- 21:53	15.0	.586	537.87	-.25	537.61
- 21:56	18.0	.602	552.62	-.33	552.29
- 21:59	21.0	.616	565.53	-.39	565.14
- 22:01	23.0	.625	573.83	-.43	573.39

SUPERIOR TESTERS ENTERPRISES, INC.

SUBSURFACE PRESSURE MEASUREMENTS

COMPANY : GRIGGS OIL INC.
DATE OF TEST : 6-11-85
DEPTH : 3940.0

WELL NAME : NORTON #1-32
LOCATION : 32-148-26W
SERIAL NO. : 5463

COMMENTS	TIME min	DEFL in	PRESSURE PSIG		
			----- CALC	CORR	CORRECTED
TEST NO.: 2					
- 22:05	27.0	.634	582.13	-.47	581.65
- 22:08	30.0	.640	587.66	-.50	587.16
-22:08 2ND SHUT-IN	0.0	.641	588.58	-.51	588.07
-2ND HYDROSTATIC	0.0	2.120	1952.32	-2.14	1950.18

SUPERIOR TESTERS ENTERPRISES, INC.

DATA SUMMARY

COMPANY : GRIGGS OIL INC.

WELL NAME : NORTON #1-32

DATE OF TEST : 6-11-85

LOCATION : 32-14S-26W

RECOVERY INFORMATION

LIQUID RECOVERY

Total Fluid Recovered : 80

Recovered 80 feet of WATERY MUD

GAS RECOVERY

Measured With :

Riser :

(

)

Time (min.)

Reading

Surface Choke (in.)

Cubic feet/day

FLUID PROPERTIES

Viscosity (cp)

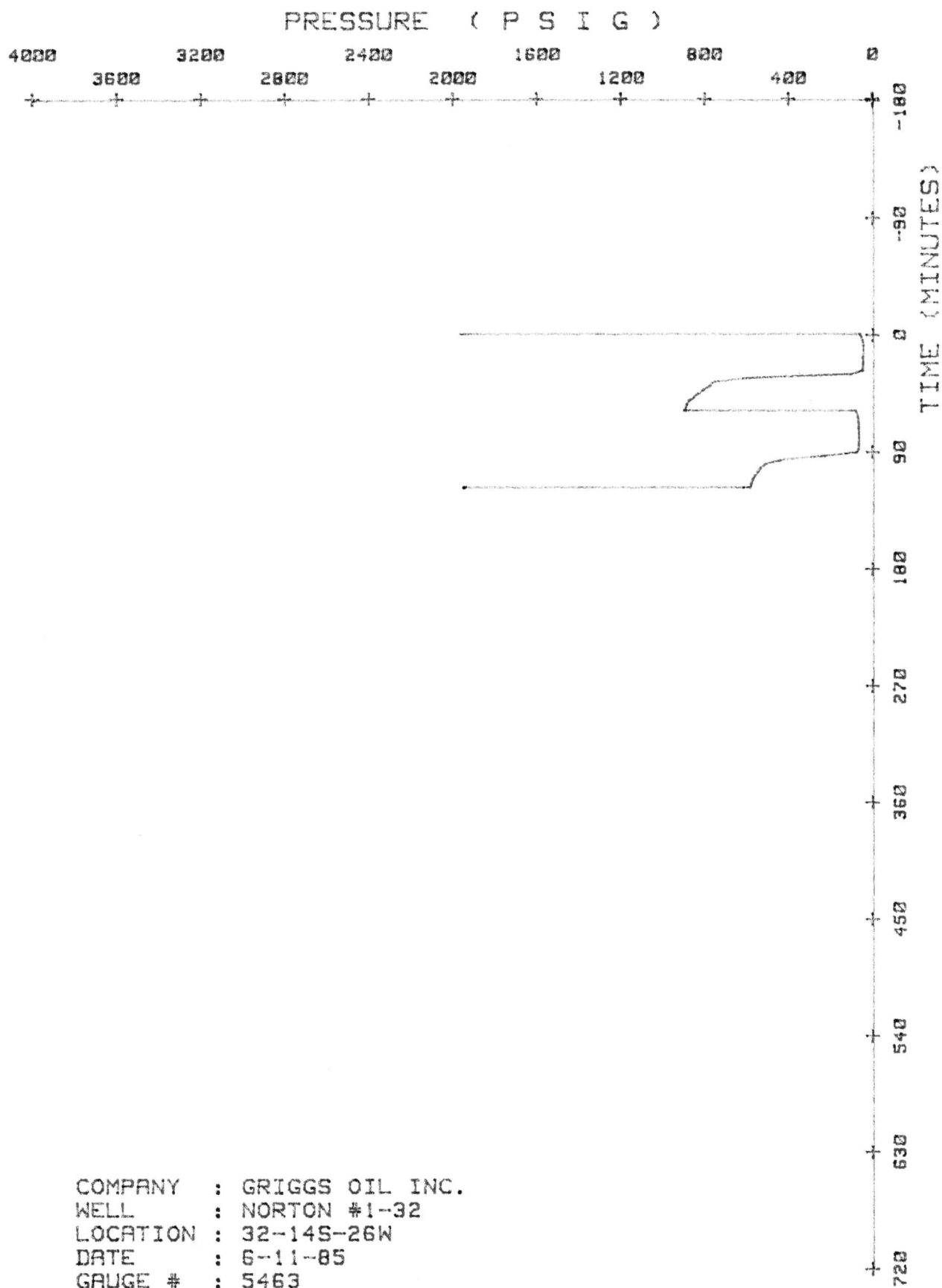
Compressibility (psi-1)

Pore Space Saturation

Oil

Gas

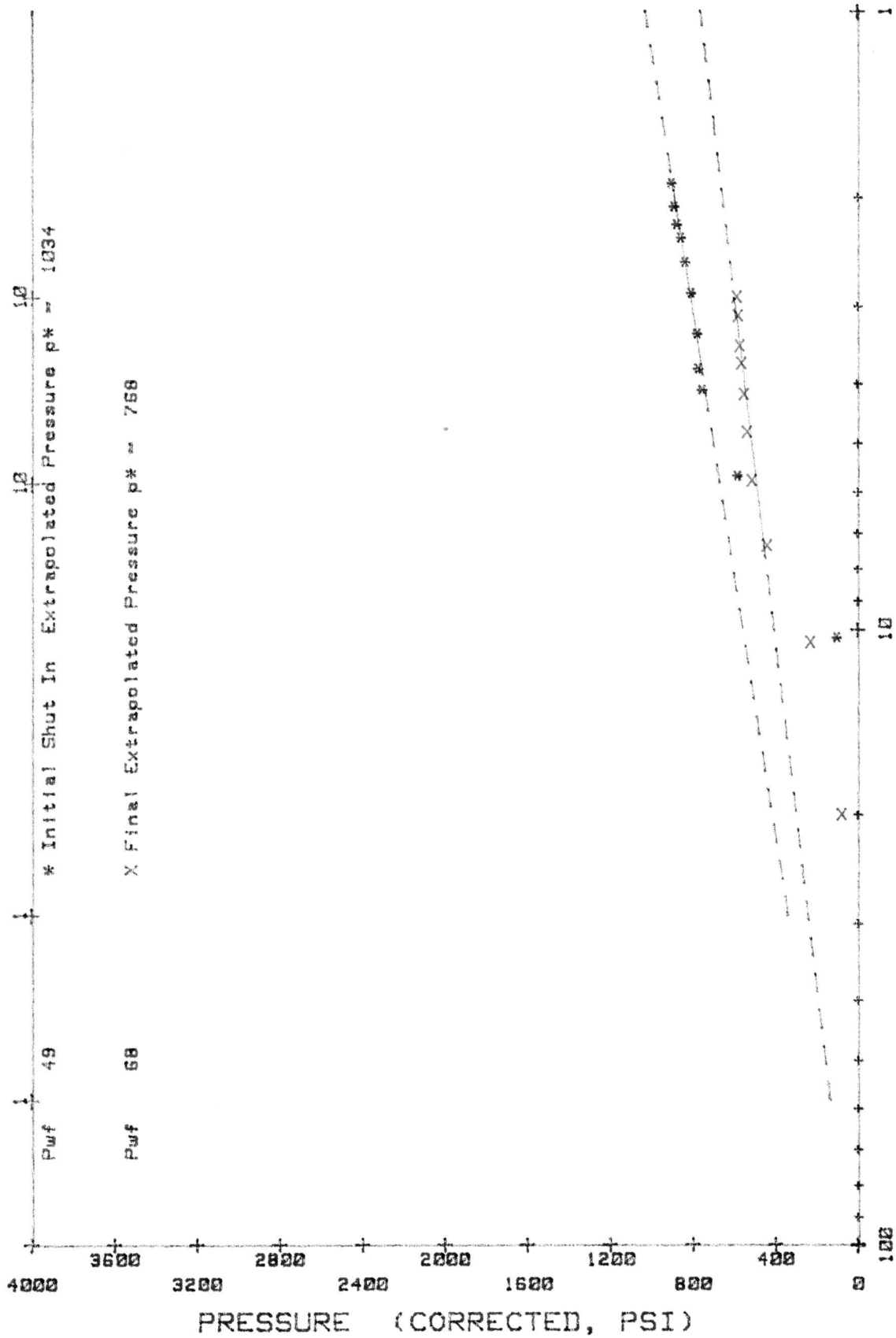
Water



LOCATION : 32-14S-26W

DATE : 6-11-85

GAUGE # : 5463



TIME (MINUTES) : $(T+dt)/dt$ -- (Semilog scale)

SUPERIOR TESTERS ENTERPRISES, INC.

HORNER ANALYSIS

COMPANY : GRIGGS OIL INC.
 WELL NAME : NORTON #1-32
 LOCATION : 32-14S-26W
 STATE & COUNTY : KANSAS, GOVE
 DATE OF TEST : 6-11-85
 TEST INT. KB : 3918 to 3946
 TOTAL INTERVAL (ft) K.B. : 28.00
 ELEV. (GR) : 2389 (KB) :
 FIELD :

ELEMENT SERIAL NO. : 5463
 LATEST CALIBRATION :

COMMENTS	TIME min	(T+dt)/dt min	----- PRESSURES CORR PSIG	-----
Refer. depth :	3940.0 ft-kb			
-20:38 END FLOW	0.00	0.00	48.62	
	3.00	10.33	103.67	
	6.00	5.67	582.57	
	9.00	4.11	755.05	
	10.00	3.80	773.39	
	12.00	3.33	778.90	
	15.00	2.87	809.17	
	18.00	2.56	837.61	
	21.00	2.33	858.72	
	23.00	2.22	877.06	
	26.00	2.08	889.91	
	31.00	1.90	901.83	
-21:09 1ST SHUT-IN	0.00	0.00	901.83	

INTERPRETATION BY : SUPERIOR TESTERS INC.

SUPERIOR TESTERS ENTERPRISES, INC..

DATA SUMMARY

COMPANY : GRIGGS OIL INC.
DATE OF TEST : 6-11-85
DST. NO : 2

WELL NAME : NORTON #1-32
LOCATION : 32-14S-26W
SHUT-IN PERIOD : 1

INTERPRETIVE DATA (OIL)

EXTRAPOLATED RESERVOIR PRESSURE (psi):	1034.00
Slope of Build-up Curve (psi/log cycle):	472.76
Effective Producing Time (min):	28.00

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HORNER ANALYSIS

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 WELL NAME : NORTON #1-32
 LOCATION : 32-14S-26W
 STATE & COUNTY : KANSAS, GOVE
 DATE OF TEST : 6-11-85
 TEST INT. KB : 3918 to 3946
 TOTAL INTERVAL (ft) K.B. : 28.00
 ELEV.(GR) : 2389 (KB) :
 FIELD :

ELEMENT SERIAL NO. : 5463
 LATEST CALIBRATION :

COMMENTS	TIME min	(T+dt)/dt min	----- PRESSURES CORR PSIG
Refer. depth :	3940.0 ft-kb		
-21:38 END FLOW	0.00	0.00	67.89
	3.00	20.00	79.82
	6.00	10.50	232.11
	9.00	7.33	441.28
	12.00	5.75	514.68
	15.00	4.80	537.61
	18.00	4.17	552.29
	21.00	3.71	565.14
	23.00	3.48	573.39
	27.00	3.11	581.65
	30.00	2.90	587.16
-22:08 2ND SHUT-IN	0.00	0.00	588.07

INTERPRETATION BY : SUPERIOR TESTERS INC.

SUPERIOR TESTERS ENTERPRISES, INC.

DATA SUMMARY

COMPANY : GRIGGS OIL INC.
DATE OF TEST : 6-11-85
DST. NO : 2

WELL NAME : NORTON #1-32
LOCATION : 32-14S-26W
SHUT-IN PERIOD : 2

INTERPRETIVE DATA (OIL)

EXTRAPOLATED RESERVOIR PRESSURE (psi):	768.00
Slope of Build-up Curve (psi/log cycle):	355.93
Effective Producing Time (min):	57.00

INTERPRETATION BY : SUPERIOR TESTERS INC.

DATA SUMMARY

COMPANY : GRIGGS OIL INC.
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DST. NO : 2

WELL NAME : NORTON #1-32
LOCATION : 32-14S-26W
SHUT-IN PERIOD : 2

INTERPRETIVE DATA (OIL)

TRANSMISSIBILITY

Oil (md.ft/cp): 0.00
Gas (md.ft/cp): 0.00

EFFECTIVE PERMEABILITY

Oil (md): 0.00
Gas (md): 0.00

TOTAL MOBILITY (md/cp): 0.00

TOTAL COMPRESSIBILITY (psi-1): 0.00E+00

ESTIMATED DAMAGE RATIO:45

CALCULATED DAMAGE RATIO: 0.00

Reservoir Temperature (F): 114.00

Formation Porosity : 0.00

Formation Thickness (ft): 10.00

Wellbore Radius (in): 3.94

Reservoir Compressibility (psi-1): 0.00E+00

Calculated Skin Factor : 0.00

PRODUCTION WITH DAMAGE REMOVED (bbl/D): 0.00

PRODUCTIVITY INDEX (bbl/psi): 0.00

Final Flow Pressure (psi): 67.89

APPROXIMATE RADIUS OF INVESTIGATION (ft): 0.00

Total Flowing Time (min): 57.00

EXTRAPOLATED RESERVOIR PRESSURE (psi): 768.00

Slope of Build-up Curve (psi/log cycle): 355.93

Effective Producing Time (min): 57.00

INTERPRETATION BY : SUPERIOR TESTERS INC.

COMPANY GRIGGS OIL INC.LEASE - WELL NO NORTON #1-32SEC 32TWP 14RGE 26TEST NO 2DATE 6-11-85

POINT	PRESSURE		
	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	2079	1965	P.S.I.
(B) First Initial Flow Pressure	46	60	P.S.I.
(C) First Final Flow Pressure	46	48	P.S.I.
(D) Initial Closed-in Pressure	908	901	P.S.I.
(E) Second Initial Flow Pressure	55	81	P.S.I.
(F) Second Final Flow Pressure	55	67	P.S.I.
(G) Final Closed-in Pressure	586	588	P.S.I.
(H) Final Hydrostatic Mud	2070	1950	P.S.I.

SUPERIOR TESTERS
RR #1, Box 295B, Great Bend, Kansas

Date 6-11-85 Location 32 14^s 26" Elevation 2389 GP County Gove
Company Griggs Oil, Inc. Number of Copies _____
Address 714 S. Hillside Wichita, Kansas 67211

Charts Mailed to _____

Invoice Mailed to _____

Lease Norton Well No. 1-32 Formation Tested Lansing K.C. Test No. #2

Depth 3946' Tested from 3918' to 3946' Packer Size 6 3/4 Anchor Length 28'

Top Packer Depth 3913' ft. Bottom Packer Depth 3918' ft. Dual Packers yes

Tool Joint Size 4 1/2 F.H. Tool Size 5' 20.0 Hole Size 2 3/8 Did Packer Hold yes

Drilling Contractor Murfin Drilling Rig #21

Length Drill Pipe 3835' I.D. Drill Pipe 3.80 Tool Joint Size 4 1/2 x H.

Length Weight Pipe None I.D. Weight Pipe _____ Tool Joint Size _____

Length Drill Collars 62' I.D. Drill Collars 2.25 Tool Joint Size 4 1/2 x H.

Tool Open I.F.P. from 8:10 P.m to 2:40 P.m 30 min

Tool Closed I.C.I.P. from 2:40 P.m to 2:10 P.m 30 min

Tool Open F.F.P. from 2:10 P.m to 2:40 P.m 30 min

Tool Closed F.C.I.P. from 2:40 P.m to 10:10 P.m 30 min

from [B]	<u>46</u>	P.S.I. to [C]	<u>46</u>	P.S.I.
[D]	<u>908</u>			P.S.I.
from [E]	<u>55</u>	P.S.I. to [F]	<u>55</u>	P.S.I.
[G]	<u>586</u>			P.S.I.

Initial Hydrostatic Pressure [A] 2079 P.S.I. Final Hydrostatic Pressure [H] 2070 P.S.I. Maximum Temp 114 °F

Initial Blow Weak Blow - Building slowly 3" into water

Final Blow Weak Blow - Building slowly 1" into water

Gas to Surface None Min. Oil to Surface None Min. Mut Weight 9 1/4 Viscosity 46

Gas Guaged None

Recovery 80' watery mud

Remarks _____

Extra Equipment-Jars None Safety Joint 60' wip Extra Packer None Straddle None Hook Wall None

Top Recorder No. 5463 Clock no. 23932 Depth 3940' Cir. Sub _____ Sampler None

Bottom Recorder No. 4333 Clock No. 9096 Depth 3943' Chlorides - pits _____ D.S.T. _____

Price of Job \$660.00

Tool Operator Ivan Supper

Approved By _____

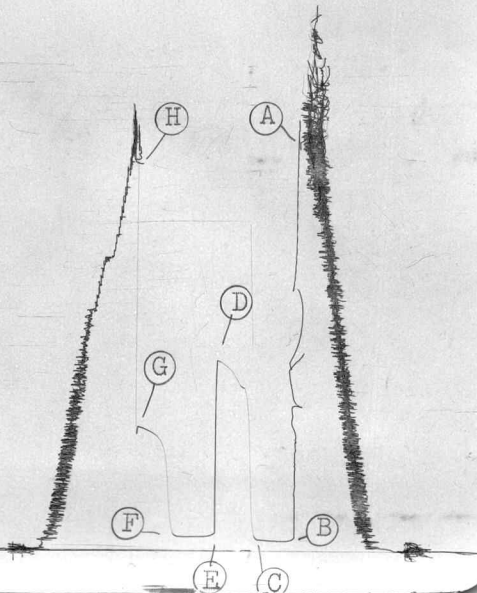
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Ticket N^o 8733

5463

AST #

8733



4333

DST

8733

