ANNUAL

STATE OF KANSAS — CORPORATION COMMISSION

OCT 16 1980 Form G-2 8-7-56

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

TYPE TEST: [X] Deliverability [ ] Open Flow TEST DATE: 6 OCT 80

COMPANY: [illegible] LEASE: Titus WELL NO.: 1 NW 0150

COUNTY: Edwards LOCATION: Kansas SECTION: 11 TWP: 26 RNG: 19 ACRES:

FIELD: RESERVOIR: PIPELINE CONNECTION: K.N.G. Co.

COMPLETION DATE: PLUG BACK TOTAL DEPTH: PACKER SET AT:

CASING SIZE: WT.: I.D.: SET AT: PERF.: TO:

TUBING SIZE: WT.: I.D.: SET AT: PERF.: TO:

TYPE COMPLETION (Describe): Single (Gas) TYPE FLUID PRODUCTION:

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: BAR. PRESS — P_a: 14.4 Psia

GAS GRAVITY — G_g: .623 % CARBON DIOXIDE: % NITROGEN: API GRAVITY OF LIQUID:

VERTICAL DEPTH (H): TYPE METER CONN.: Flange (METER RUN)(PROVER) SIZE: 4"

SHUT-IN PRESSURE: SHUT IN 3 OCT 19 80 AT 1:15 (AM)(PM) TAKEN 6 OCT 19 80 AT 1:15 (AM)(PM)

FLOW TEST: STARTED 6 OCT 19 80 AT 1:15 (AM)(PM) TAKEN 7 OCT 19 80 AT 11:50 (AM)(PM)

OBSERVED DATA

DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. $(h_w)(h_d)$	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELLHEAD PRESS. psig	CASING $(P_w)(P_t)(P_c)$ psia	TUBING WELLHEAD PRESS. psig	TUBING $(P_w)(P_t)(P_c)$ psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT-IN				EST		800	814.4	Pump			
FLOW	.500	359	.5	60°		359	373.4			23	

RATE OF FLOW CALCULATIONS

COEFFICIENT $(F_b)(F_p)$ Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \times h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP. FACTOR F_t	DEVIATION FACTOR F_{pv}	RATE OF FLOW R Mcfd	GOR	G_m
1.212	373.4	13.66	1.267	1.000	1.036	22		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2$: 663.2 $(P_w)^2$: 139.4 P_d = ____ % $(P_c - 14.4) + 14.4$ = ____ $(P_a)^2 = 0.207$ $(P_d)^2$ =

$(P_c)^2-(P_a)^2$ or $(P_c)^2-(P_d)^2$	$(P_c)^2-(P_w)^2$	$\left[\frac{P_c^2-P_a^2}{P_c^2-P_w^2}\right]$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
663.0	523.8	1.266	.1023	1.000	.1023	1.266	27

OPEN FLOW ____ Mcfd @ 14.65 psia 27 DELIVERABILITY ____ Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 10 day of October, 19 80.

William E. [illegible]
For Company

Witness (if any)

For Commission

Checked by

ALLEN ROPE

STATE OF KANSAS – CORPORATION COMMISSION

FORM G-2 10-7-58

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

RECD MAR 13 10-7-58

TYPE TEST: ☐ Deliverability ☑ Open Flow TEST DATE: 10-11 MARCH 1975

COMPANY	LEASE	WELL NO.
ALLEN ROPE	TITUS	1

COUNTY	LOCATION	SECTION	TWP	RNG	ACRES
EDWARDS	SE-SW-1	11	26	19	

FIELD: | RESERVOIR: | PIPELINE CONNECTION: NONE

COMPLETION DATE	PLUG BACK TOTAL DEPTH	PACKER SET AT
		4671

CASING SIZE	WT.	I.D.	SET AT	PERF.	TO
4 1/2			4784	4726	4736

TUBING SIZE	WT.	I.D.	SET AT	PERF.	TO
2 1/16			4736		

TYPE COMPLETION (Describe): SINGLE (GAS) | TYPE FLUID PRODUCTION:

PRODUCING THRU: TUBING | RESERVOIR TEMPERATURE F | BAR. PRESS – P_a: 14.4 Psia

GAS GRAVITY – G_g: .688 | % CARBON DIOXIDE | % NITROGEN | API GRAVITY OF LIQUID

VERTICAL DEPTH (H) | TYPE METER CONN. | (METER-RUN) (PROVER) SIZE: 2"

SHUT-IN PRESSURE: SHUT IN 7 MARCH 1975 AT ____ (AM)(PM) TAKEN 10 MAR 1975 AT 10:00 (AM)(PM)

FLOW TEST: STARTED 10 MARCH 1975 AT 10:00 (AM)(PM) TAKEN 11 MAR 1975 AT 10:15 (AM)(PM)

OBSERVED DATA

DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. $(h_w)(h_d)$	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELLHEAD PRESS. psig	CASING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	TUBING WELLHEAD PRESS. psig	TUBING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT-IN						PACKER		1042	1076.4		
FLOW	1/8	378		47				378	392.4	24	10 BBLS

RATE OF FLOW CALCULATIONS

COEFFICIENT $(F_b)(F_p)$ Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m x h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP. FACTOR F_t	DEVIATION FACTOR F_{pv}	RATE OF FLOW R Mcfd	GOR	G_m
.2716	392.4		1.268	1.013	1.041	143		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2$ = 1158.6 ; $(P_w)^2$ = 1541.0 ; P_d = ____ % ; $(P_c - 14.4) + 14.4$ = ____ ; $(P_d)^2$ = 0.207 ; $(P_d)^2$ = ____

$(P_c)^2-(P_a)^2$ or $(P_c)^2-(P_d)^2$	$(P_c)^2-(P_w)^2$	$\left[\frac{P_c^2-P_a^2}{P_c^2-P_d^2}\right]$ / $\frac{P_c^2-P_w^2}{}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
1158.4	1004.6	1.153	.0618	1.000	.0618	1.153	165

OPEN FLOW 165 Mcfd @ 14.65 psia DELIVERABILITY Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 11 day of MARCH, 1975

William E Durnell
For Company

Witness (If any)

For Commission

Checked by

GLEN RUPE

STATE OF KANSAS · CORPORATION COMMISSION

MULTIPOINT BACK PRESSURE TEST

FORM C-1
8-7-58

TYPE TEST: ☒ Initial ☐ Annual ☐ Special TEST DATE: 10 MARCH 75

COMPANY: GLEN RUPE LEASE: TIWS WELL NO. 1

COUNTY: EDWARDS LOCATION: KANSAS SECTION: SE-SW 11 TWP: 26 RNG: 19 ACRES: 320

FIELD: RESERVOIR: PIPELINE CONNECTION: NONE

COMPLETION DATE: PLUG BACK TOTAL DEPTH: PACKER SET AT: 4726

CASING SIZE: 4 1/2 WT.: ID: SET AT: 4784 PERF.: 4726 TO: 4736

TUBING SIZE: 2 1/16 WT.: ID: SET AT: 4736 PERF.: TO:

TYPE COMPLETION (Describe): SINGLE (GAS) TYPE FLUID PRODUCTION:

PRODUCING THRU: TUBING RESERVOIR TEMPERATURE °F: BAR PRESS — P_a: 14.4 psia

GAS GRAVITY — G_g: .622 % CARBON DIOXIDE: % NITROGEN: API GRAVITY OF LIQUID:

VERTICAL DEPTH (H): TYPE METER CONN.: NONE (METER RUN) (PROVER) SIZE: 2"

REMARKS:

OBSERVED DATA

DURATION OF SHUT-IN 72 HR.

RATE No.	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. (h_w) (h_d)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELLHEAD PRESS. psig	CASING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	TUBING WELLHEAD PRESS. psig	TUBING WELLHEAD PRESS. $(P_w)(P_t)(P_c)$ psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT IN						PACKER		1062	1076.4		
1	3/32	577		40°				577	591.4	1½	
2	1/8	329		55°				329	343.4	1½	
3	3/16	225		60°				225	239.4	1½	
4	5/16	217		59°				217	231.4	1½	
5											

RATE OF FLOW CALCULATIONS

RATE NO.	COEFFICIENT $(F_b)(F_p)$ Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP FACTOR F_t	DEVIATION FACTOR F_{pv}	RATE OF FLOW Q Mcfd	GOR	a_m
1	.1446	591.4		1.268	1.020	1.067	111		
2	.2716	343.4		1.268	1.005	1.033	123		
3	.6237	239.4		1.268	1.000	1.023	194		
4	.6237	231.4		1.268	1.003	1.022	188		
5									

PRESSURE CALCULATIONS

RATE NO.	P_t psia	P_a psia	P_w psia	$(P_c)^2$ THOUSANDS	$(P_w)^2$ THOUSANDS	PLOTTING POINTS $(P_c)^2-(P_w)^2$ THOUSANDS	PLOTTING POINTS Q Mcfd	% SHUT-IN $100\left[\frac{P_w-P_a}{P_c-P_a}\right]$
1	591.4	1076.4	591.4	1158.6	349.8	808.8	111	
2	343.4	1076.4	343.4	1158.6	117.9	1040.7	123	
3	239.4	1076.4	239.4	1158.6	57.3	1101.3	194	
4	231.4	1076.4	231.4	1158.6	53.5	1105.1	188	
5								

INDICATED WELLHEAD OPEN FLOW 195 Mcfd @ 14.65 psia "n" = 1.000

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 11 day of MARCH, 1975.

Witness (If any)

For Commission

William E. Summers
For Company

Checked by

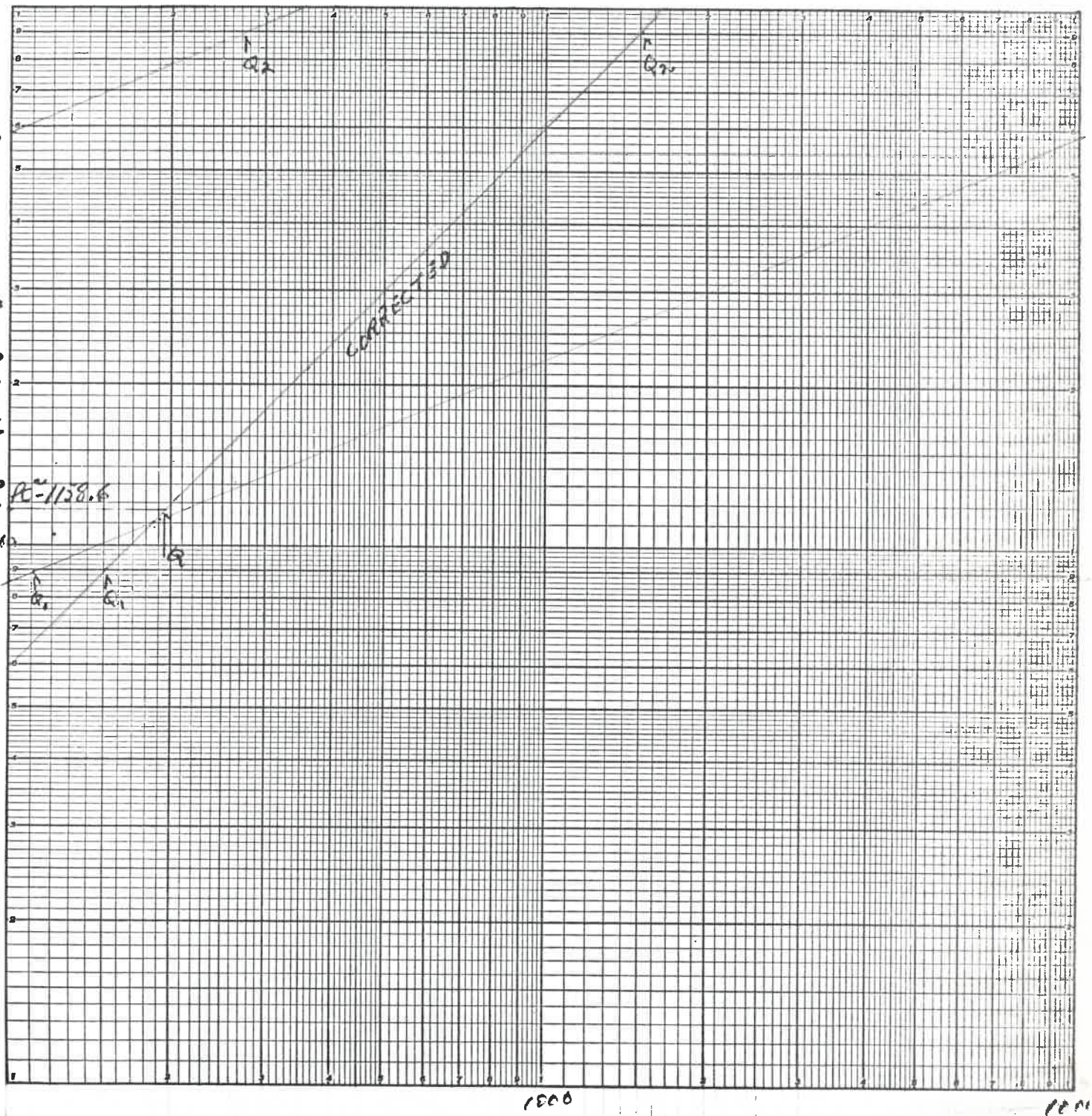
BACK PRESSURE CURVE

Operator ALLEN RUSE Lease TIMS Well No. 1

County EDWARDS Field _____ Location 11-26-19

Date of Test 10 MARCH 75 Slope "n" 1.000 W. H. _____ Abs.

Calc. W. H. Potential _____ MCF/D Calc. Abs. Potential _____ MC



Q in MCF/Day

Q = 195

Q_2 = 20,750 4.3171

Q_1 = 115 2.0607

N = 2.2564 = 2n

CORRECTED Q_2 = 1,500 = 3.1761

Q_1 = 120 = 2.1761

N = 1.0000

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STATE OF KANSAS — CORPORATION COMMISSION

8-7-58

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

OCT 6 1978

TEST: [X] Deliverability [ ] Open Flow TEST DATE: 28 SEPT 78

COMPANY	LEASE	WELL NO.
ALLEN ROPE	TITUS	1

COUNTY	LOCATION	SECTION	TWP	RNG	ACRES
EDWARDS	KANSAS	11	29	19	

FIELD	RESERVOIR	PIPELINE CONNECTION
		K.N.G.

COMPLETION DATE	PLUG BACK TOTAL DEPTH	PACKER SET AT

CASING SIZE	WT.	I.D.	SET AT	PERF.	TO

TUBING SIZE	WT.	I.D.	SET AT	PERF.	TO

TYPE COMPLETION (Describe)	TYPE FLUID PRODUCTION
SINGLE (GAS)	

PRODUCING THRU	RESERVOIR TEMPERATURE F	BAR. PRESS — P_a
CASING		14.4 Psia

GAS GRAVITY — G_g	% CARBON DIOXIDE	% NITROGEN	API GRAVITY OF LIQUID
.622			

VERTICAL DEPTH (H)	TYPE METER CONN.	(METER RUN) (PROVER) SIZE
	FRANGE	4"

SHUT-IN PRESSURE: SHUT IN 21 SEPT 19 78 AT 1240 (AM)(PM) TAKEN 28 SEPT 19 78 AT 10:24 (AM)(PM)

FLOW TEST: STARTED 28 SEPT 19 78 AT 10:24 (AM)(PM) TAKEN 29 SEPT 19 78 AT 11:15 (AM)(PM)

DURATION OF SHUT-IN 166 HR.

OBSERVED DATA

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h_w x P_m)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELL-HEAD PRESS. psig	CASING WELL-HEAD PRESS. (P_w x P_t x P_a) psia	TUBING WELL-HEAD PRESS. psig	TUBING WELL-HEAD PRESS. (P_w x P_t x P_a) psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT-IN				65		342	356.4				
FLOW	.750	340	1	60		340	354.4			26¾	

RATE OF FLOW CALCULATIONS 5% PENALTY 325 = 339.4

COEFFICIENT (F_b) (F_p) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP. FACTOR F_t	DEVIATION FACTOR F_{pv}	RATE OF FLOW R Mcfd	GOR	G_m
2.749	354.4	18.83	1.268	1.000	1.035	67		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2$ = 127.0 ; $(P_w)^2$ = 115.2 ; P_d = ____ % ; $(P_c - 14.4) + 14.4$ = ____ ; $(P_d)^2$ = 0.207 ; $(P_d)^2$ = ____

$(P_c)^2-(P_a)^2$ or $(P_c)^2-(P_d)^2$	$(P_c)^2-(P_w)^2$	$\frac{P_c^2-P_a^2}{P_c^2-P_d^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
126.8	11.8	10.75	1.031	1.060	1.031	10.75	724

OPEN FLOW Mcfd @ 14.65 psia 724 DELIVERABILITY Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 3 day of OCT, 19 78

William E. Shaw
For Company

Witness (If any)

For Commission

Checked by

marked copy

ANNUAL

Form G-2
8-7-58

STATE OF KANSAS – CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

AUG 18 1979

TYPE TEST: [X] Deliverability [ ] Open Flow TEST DATE: 13 AUG 79

COMPANY: GLEN ROSE	LEASE: TITUS			WELL NO.: 1	
COUNTY: EDWARDS	LOCATION: MANSAS	SECTION: 11	TWP: 26	RNG: 19	ACRES:
FIELD:	RESERVOIR:	PIPELINE CONNECTION: KWIC.G.			
COMPLETION DATE:	PLUG BACK TOTAL DEPTH:			PACKER SET AT:	
CASING SIZE:	WT.:	I.D.:	SET AT:	PERF.:	TO:
TUBING SIZE:	WT.:	I.D.:	SET AT:	PERF.:	TO:
TYPE COMPLETION (Describe): GAS (DRY)		TYPE FLUID PRODUCTION:			
PRODUCING THRU: CASING		RESERVOIR TEMPERATURE °F:		BAR. PRESS – P_a: 14.4 Psia	
GAS GRAVITY – G_g: .616	% CARBON DIOXIDE:	% NITROGEN:		API GRAVITY OF LIQUID:	
VERTICAL DEPTH (H):	TYPE METER CONN.: FLANGE			(METER RUN) (PROVER) SIZE: 4"	

SHUT-IN PRESSURE: SHUT IN 10 AUG 19 79 AT 10:00 (AM)(PM) TAKEN 13AUG 19 79 AT 10:00 (AM)(PM)

FLOW TEST: STARTED 13AUG 19 79 AT 10:00 (AM)(PM) TAKEN 14AUG 19 79 AT 12:00 (AM)(PM)

OBSERVED DATA

DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h_w x h_d)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELLHEAD PRESS. psig	CASING WELLHEAD PRESS. (P_w)(P_t)(P_a) psia	TUBING WELLHEAD PRESS. psig	TUBING WELLHEAD PRESS. (P_w)(P_t)(P_a) psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT-IN				ASSU.		1000	1014.4	PUMP			
FLOW	.500	320	1	60°		320	334.4			26	

RATE OF FLOW CALCULATIONS

COEFFICIENT (F_b) (F_a) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F_g	FLOWING TEMP. FACTOR F_t	DEVIATION FACTOR F_{pv}	RATE OF FLOW R Mcfd	GOR	G_m
1.212	334.4	18.29	1.274	1.000	1.032	29		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2$ = 1029.0 ; $(P_w)^2$ = 111.8 ; P_d = ____ % ; $(P_c - 14.4) + 14.4$ = ____ ; $(P_d)^2$ = $(P_w)^2$ = 0.207 = ____

$(P_c)^2-(P_a)^2$ or $(P_c)^2-(P_d)^2$	$(P_c)^2-(P_w)^2$	$\left[\frac{P_c^2-P_a^2}{P_c^2-P_d^2}\right]$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
1025.8	917.2	1.122	.0499	1.000	.0499	1.122	32

OPEN FLOW ____ Mcfd @ 14.65 psia 32 DELIVERABILITY ____ Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 15 day of August, 19 79.

William E Guerrero
For Company

Witness (If any)

For Commission

Checked by

ACID ENGINEERS, Inc.

TREATMENT REPORT

Invoice No. 22145 Station Great Bend Date 2-20-75, 19

Owner Glen Rupe Lease Titus Well No. 1

Pool _____ County Edwards State Kansas

Loc. 11--26-19 Formation Mississippi

Pipe Data—

T.D. 4752 P.B. _____
Csg. Size 4½ Wt. 7½
Csg. Depth 4752 Sks. Cement _____
Tbg. Size 2 1/16 Depth 4726
Packer Type Tension Annulus Vol. _____
Csg. Vol. _____ Tbg. Vol. 14.09 bbl

Packer 4661

Perforating Data—

Shots/Ft. _____
From 4726 To 4736
From _____ To _____
From _____ To _____
From _____ To _____
From _____ To _____

Production—

	Oil	Water
Present	_____	_____

Previous Treatments

New perfs

Detailed Record of Treatment

Materials Used

Quan.	Type	Quan.	Type
500 gal	15% SME acid		
~~5 gal.~~	~~D-10~~	~~3 gal~~	~~Clay stabilizer~~
50 lb.	KCL		

Fluids Used: acid / water

Acid	12 bbl
Breakdown	
Frac	
Flush	14 bbl

Time	Pressure Csg.	Pressure Tbg.	Bbls. of Fluid Out of Tanks	Bbls. of Fluid In Form.	Inj. Rate	Remarks
~~9:40~~						~~Hump ½ bbl acid via tbg., let fall,~~
						pull one joint tbg. set packer
~~10:00~~						Pressure line to see PSI bleed off, start acid
10:06		50	12	0		Acid in, start flush catch press, stop pump
10:10		100				Start pumpingslow
10:13		1000	13	0		Stop pump
~~10:21~~		~~900~~				Increase press to 1250 PSI stop pump
10:26		1500	13½	0		Inc. press. formation break, pump slow
10:28		1100	14	0	¼	Acid on formation
10:30		950	14¼	¼	1/8	~~1/8~~ Speed pump ~~skim~~slowly
10:42		450	20	6	½	Maintain rate
10:55		500	26	12	½	Flush complete stop pump
		300				ISIP
		250				3 minute pressure drop, shut in

Arrival Date 2-20-75 Time 9.00 Left Location: Date 2-20-75 Time 11:)3 Round Trip Miles 120

(See Reverse Side for Additional Treatment Remarks)

Equipment Used

Name	Unit No.	Name	Unit No.
B. Harris	427		
~~E.D.~~	153		

Treatment Resume

Avg. Inj. Rate	½	BPM
Avg. Trt. Press.	500	psi
Hydraulic HP Used		
Total Fluid Pumped	20	
Maximum Pressure	1500	psi
Minimum Pressure	450	psi
I. S. I. P.	300	psi

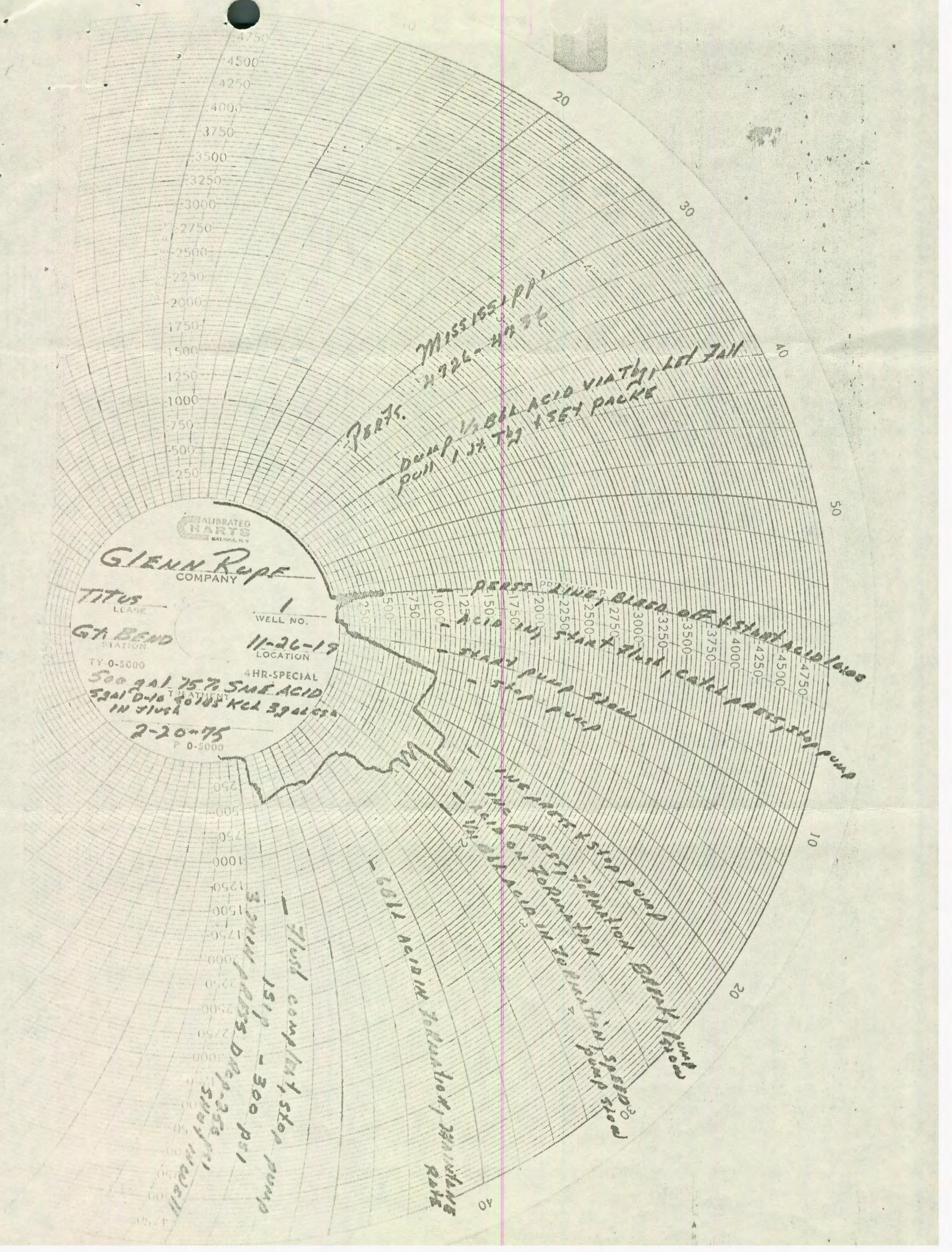
John Cecil
Owner's Representative

S. Mai
Station Manager

B. Harris
Service Engineer

(Treatment Schedule)

Time	Pressure Csg.	Pressure Tbg.	Bbls. of Fluid Out of Tanks	Bbls. of Fluid In Form.	Inj. Rate	Remarks


CALIBRATED CHARTS
GLENN Rupe
COMPANY
Titus
LEASE
1
WELL NO.
Gt. Bend
STATION
11-26-19
LOCATION
TY 0-5000
4HR-SPECIAL
500 gal 7.5% SME ACID
TREATMENT
5 gal D-10 40 lbs KCL 3 gal CSA
in flush
2-20-75
P 0-5000
Perfs. Mississippi 4726-4734
Dump ½ bbl acid via tbg, let fall
pull 1 jt tbg & set packer
Perfs. Line, bleed off & start acid
Acid in, start flush, catch press, stop pump
start pump slow
stop pump
Flush complete, stop pump
15 min - 300 psi
3 min press Drop

ACID ENGINEERS, Inc.

TREATMENT REPORT

Invoice No. 22-82 Station Gt. Bend Date 2-28-75, 19

Owner Glen Rupe Lease Titus Well No. 1

Pool Bordewicke County Edwards State Kansas

Loc. SW SE SW 11-26-19W Formation

Pipe Data—

T.D. P.B.
Csg. Size 4½ Wt.
Csg. Depth Sks. Cement
Tbg. Size 2 1/16 Depth
Packer Type Annulus Vol.
Csg. Vol. Tbg. Vol.

Perforating Data—

Shots/Ft.
From 4726 To 4736
From To
From To
From To
From To
From To

Production—

	Oil	Water
Present		

Previous Treatments

Detailed Record of Treatment

Materials Used

Quan.	Type	Quan.	Type
1000 gal SME 15%			
10% Methanol alchohol			
1 gal IB-1			

Fluids Used:

Acid
Breakdown
Frac
Flush

Time	Pressure Csg.	Pressure Tbg.	Bbls. of Fluid Out of Tanks	Bbls. of Fluid In Form.	Bbls. of Fluid Inj. Rate	Remarks
10:21		850				Job procedure and safety discussed
10:32		850				Tubing pressure
10:33		1250				Start Nx2 iva tubing
						Shut down
10:45		1225				Start N2
10:46		1550				Shut down
10:57		1525				Start acid via tubing
11:07		1500	2		.2	2 bbls acid in tubing let set
11:20		1450				Start N2
11:48		2100				Shut down
11:57		1750				Start acid @ ½ BPM with N2
12:00		1950				Feeding and breaking
12:08		1800				Speed pump to 1 BPM increase N2
12:21		2050	24		.91	1000 gal. acid in, start flush
12:25		2350	28	24	1	4 bbls water flush pumped complete
		1850				ISIP
12:30		1850				Closed in, tore down

Arrival Date 2-28-75 Time 9:00 Left Location: Date 2-28 Time 1:00 Round Trip Miles

(See Reverse Side for Additional Treatment Remarks)

Equipment Used

Name	Unit No.	Name	Unit No.
Irvin	153		
Lyle	321		

Treatment Resume

Avg. Inj. Rate	.92	BPM
Avg. Trt. Press.	2050	psi
Hydraulic HP Used		
Total Fluid Pumped	28 bbl	
Maximum Pressure	2350	psi
Minimum Pressure	1750	psi
I. S. I. P.	1850	psi

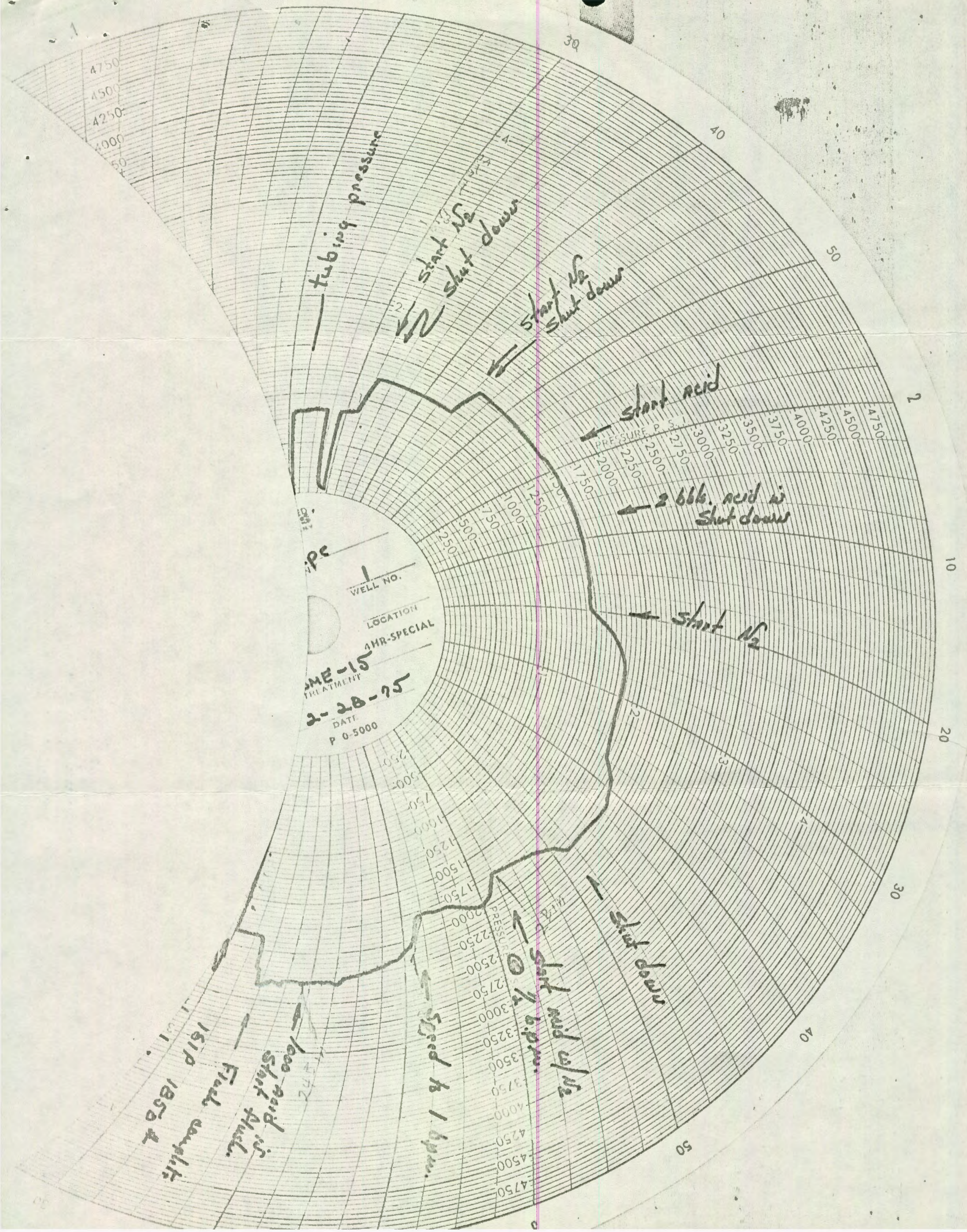
John Cecil
Owner's Representative

Stan Mai
Station Manager

Lyle Folsom
Service Engineer

(Treatment Schedule)

Time	Pressure Csg.	Pressure Tbg.	Bbls. of Fluid Out of Tanks	Bbls. of Fluid In Form.	Inj. Rate	Remarks


tubing pressure
Start N2
Shut down
Start N2
Shut down
Start acid
PRESSURE P.S.I.
2 bbl. acid in
Shut down
Start N2
WELL NO. 1
LOCATION
24HR-SPECIAL
TREATMENT
2-28-75
DATE
P 0-5000
Shut down
Start acid w/N2
@ ½ b.p.m.
Speed to 1 bpm.
1000 acid in
Start flush.
Flush complete
ISIP 1850 #

GLEN RUPE

KANSAS-NEBRASKA NATURAL GAS COMPANY, INC.
Back Pressure Field Data Sheet

Date of Test 10 MAR 1975

Lease TITUS Well No. 1 Company GLEN RUPE
Field County EDWARDS State K Location SE-SW-11-26-19
Production Casing 4½ Wt. Set at 4784 Perf. 4726 to 4736
Tubing Size 2⅟16 Set at 4736 Perf. to
Meter run NONE Conn. Shut-in Pressure 1062 psig. Well shut in 72 hrs.
Gravity .622 (Before or After)
Test Run on: ~~Casing~~, Tubing, ~~Annulus~~ (Cross out those not applicable.)
Other remarks about test set-up: PACKER SET AT 4621. NEGATIVE H_2S
TEST RUN WITH 2" PROVER OFF WELLHEAD.
BTU 1019

50 - 53
100 - 106
150 - 159
200 - 212
250 - 263

OBSERVATIONS

Date	Time	Orif. Size	Flow. Temp.	~~Meter or~~ Prover Pressure psig	Diff. h_w Inches of Water	Wellhead Working Pressure psig	Remarks
10 MAR 75	10:00	7/32		1062			
	10:15			745			
	10:30		39°	580			
	10:45		39°	533			
	11:00		40°	522			NO FLUID VISIBLE - SLOW PRESS RAIS.
	11:15		40°	552			" " " " " "
	11:30		40°	577			" " " " " "
		7/8	changed plates				
	11:45		45°	390			
	12:00		47°	282			UNLOADED SOLID STREAM INTERMITTENT
	12:15		47°	300			" " " "
	12:30		51	305			" " " "
	12:45		53	323-326			" " " "
	1:00		55	325-329			" " " "
		3/16	changed plates				
	1:15		64	318-324			" " " "
	1:30		63	278-300			" " " "
	1:45		60	245-258			" " " "
	2:00		59	227-232			" " " "
	2:15		59	221-226			" " " "
	2:30		60	220-225			" " " "
		3/16	USED	SAME PLATE			" " " "
	2:45		59	214-215			" " " "
	3:00		58	214-219	unloaded	SOLID	STREAM 27 MINUTES INTERVAL
	3:15		58	212-216			" " " "
	3:30		57	210-215			" " " "
	3:45		57	212-217			" " " "
	4:00		57	212-217			" " " "
		7/8 Changed	Plates	for 24 hr	1 Point		" " " "
11 MAR 75	9:30		46	356-378			unloads Solid Stream 7
	9:45		45-47	356-378			fluid every 7 to 15 MINUTES
	10:00		45-47	356-378			APPROXIMATELY 10 BBLS
	10:15		45-47	356-378			FLUID IN OPEN PIT OVER
							NIGHT MOSTLY WATER
							WITH OILY FILM COVER

Tested By William E Kramer

Witness John Cecil

Date 8-22-79

Company Rupe

Station Name & Location Titus 11-26-19

Measuring Station # 160100

Meter Co. No. 23522 — Type Connections Flange

Meter Mfg. No. DPTR338 — Chart Range 100"

Meter Make American — Clock Rotation 7-D

Static Source 1000 — Plate Size 4 x .500

Mic. Readings-Upstream — Downstream

AUG 31 1979

Blind Disc in By-Pass

Penarc

Shut in Test

TEMPERATURE GAUGE

Make

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST				TEMPERATURE GAUGE			
FOUND		LEFT		FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING	TEST	RECORDER	TEST	RECORDER

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE

PLATE CHANGE

Time AM PM

Out X

In X

Condition

Specific Gravity .623

BTU

9/4/79

Remarks

K186 Witness J. McFann Inspector

mailed copy to Lincoln

ORIFICE METER INSPECTION REPORT
KANSAS – NEBRASKA NATURAL GAS CO. INC.

Date 4-[illegible]-79

Company Rupe

Station Name & Location Titus 11-26-19

Measuring Station # 160100

Meter Co. No. 23522 — Type Connections Flange

Meter Mfg. No. DPTR338 — Chart Range 100"

Meter Make American — Clock Rotation 7-D

Static Source 1000 — Plate Size 4 x .500

Mic. Readings-Upstream — Downstream

Blind Disc in By-Pass

Penarc O.K

Shut in Test 4

TEMPERATURE GAUGE

Make

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST				TEMPERATURE GAUGE			
FOUND		LEFT		FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING	TEST	RECORDER	TEST	RECORDER
283	278	283	283				

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE
0	✓	44	–				
4	✓	24	✓				
14	✓	14	✓				
24	✓	4	✓				
44	✓	0	✓				
54	✓						

PLATE CHANGE

Time AM PM

Out X

In X

Condition

Specific Gravity

BTU

6/11/79

Remarks Corrected Static + Plate Insp.

JUN 1 1979

K186 Witness J. McFann Inspector

mailed copy to Lincoln

ORIFICE METER INSPECTION REPORT
KANSAS – NEBRASKA NATURAL GAS CO

MAR 3 1979

Date 2-8-79

Company Rupe

Station Name & Location Titus 11-26-19

Measuring Station # 160100

Meter Co. No. 23522 — Type Connections Flange

Meter Mfg. No. DPTR338 — Chart Range 100"

Meter Make American — Clock Rotation 7-D

Static Source 1000 — Plate Size 4 x .500

Mic. Readings-Upstream — Downstream

Blind Disc in By-Pass

Penarc 30 min Fast

Shut in Test +.5

TEMPERATURE GAUGE

Make

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST				TEMPERATURE GAUGE			
FOUND		LEFT		FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING	TEST	RECORDER	TEST	RECORDER
289	300	289	289				

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE
0	✓	44	OK				
4	OK	34	OK				
14	-.2	14	OK				
24	-.2	4	OK				
44	-.2	0	✓				
54	-.3						

PLATE CHANGE

Time AM PM

Out X

In X

Condition

Specific Gravity .616

BTU

3/13/79

Remarks Corrected Penarc & Static (Cleaned Meter - Lub. Stuffing box

K186 Witness J. McFann Inspector

mailed copy to Lincoln

ORIFICE METER INSPECTION REPORT
KANSAS – NEBRASKA NATURAL GAS CO. INC.

NOV 2 1978

Date 10-6-78

Company Rupe

Station Name & Location Titus 11-26-19

Measuring Station # 160100

Meter Co. No. 23522 — Type Connections Flange

Meter Mfg. No. DPTR 338 — Chart Range 100

Meter Make Daniel Co. — Clock Rotation 7D

Static Source 1000 — Plate Size 4 x .500

Mic. Readings-Upstream — Downstream

Blind Disc in By-Pass

Penarc 12 min Slow

Shut in Test +.8

TEMPERATURE GAUGE

Make

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST				TEMPERATURE GAUGE			
FOUND		LEFT		FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING	TEST	RECORDER	TEST	RECORDER
239	234	239	239				

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE
0	✓	32	✓	0			
4	✓	16	✓	4			
8	✓	8	✓	8			
16	✓	4	✓	16			
32	✓	0	✓	32			
46	✓			46			

PLATE CHANGE

Time AM PM

Out X

In X

Condition

Specific Gravity

BTU

11/7/78

Remarks Corrected Static + Plate

K186 Witness Inspector

mailed copy to Lincoln

ORIFICE METER INSPECTION REPORT
KANSAS – NEBRASKA NATURAL GAS CO., INC.

Date APR 20 - 76

Company Rupe

Station Name & Location 11 26-19 - TITUS

Measuring Station # 160100

Meter Co. No. 23522 Type Connections FLG.

Meter Mfg. No. DPTR-388 Chart Range 100"

Meter Make ORIFICE Clock Rotation 7D

Static Source from Plate Size 4 X .750

Mic. Readings-Upstream Downstream

Blind Disc in By-Pass

Penarc OK

Shut in Test 1 hr

TEMPERATURE GAUGE

Make

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST

FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING
282	290	282	282

FOUND		LEFT	
TEST	RECORDER	TEST	RECORDER

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE
0	—	36	.3				
4	-.1	24	.2				
8	.1	16	.2				
16	.2	8	.2				
24	.2	4	-.2				
36	.3						
46	.4						

PLATE CHANGE

Time AM / PM

Out X

In X

Condition

Specific Gravity

BTU

RECD APR 30 1976

Remarks BOTH CARBON KNOTS MERCURY ON FLAT
CLEANED MERCURY, POT & FLOAT
STATIC OK ON RECALIBRATED SPRING.

K186 Witness Inspector

MOORE BUSINESS FORMS, INC., WICHITA, KS. M

ORIFICE METER INSPECTION REPORT
KANSAS – NEBRASKA NATURAL GAS CO., INC.

Date FEB 1 1978

Company

Station Name & Location

Measuring Station #

Meter Co. No. Type Connections

Meter Mfg. No. Chart Range

Meter Make Clock Rotation

Static Source Plate Size X

Mic. Readings-Upstream Downstream

Blind Disc in By-Pass

Penarc

Shut in Test

TEMPERATURE GAUGE

Make

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST

FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING

FOUND		LEFT	
TEST	RECORDER	TEST	RECORDER

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE

PLATE CHANGE

Time AM / PM

Out X

In X

Condition

Specific Gravity .622

BTU

Remarks

K186 Witness Inspector

MOORE BUSINESS FORMS, INC., WICHITA, KS. M

ORIFICE METER INSPECTION REPORT
KANSAS – NEBRASKA NATURAL GAS CO., INC.

Date

Company

Station Name & Location TITUS

Measuring Station #

RECD NOV 2 1977

Meter Co. No. Type Connections

Meter Mfg. No. Chart Range

Meter Make Clock Rotation

Static Source Plate Size X

Mic. Readings-Upstream Downstream

Blind Disc in By-Pass

Penarc

Shut in Test

TEMPERATURE GAUGE

Make

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST

FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING

FOUND		LEFT	
TEST	RECORDER	TEST	RECORDER

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE

PLATE CHANGE

Time AM / PM

Out X

In X

Condition

Specific Gravity

BTU

Remarks

K186 Witness Inspector

MOORE BUSINESS FORMS, INC., WICHITA, KS. M

Date 10-25-79

Company Rupe

Station Name & Location TITUS #1 11-26-19

Measuring Station # 160100 Unique # 150

Meter Co. No. 23522 Type Connections FLANGE

Meter Mfg. No. DPTR 338 Chart Range 100

Meter Make AMERICAN Clock Rotation 7-D

Static Source 1000 # Plate Size 4 X .500

Mic. Readings-Upstream Downstream

RECD NOV 2 1979

Blind Disc in By Pass —

Penarc OK

Shut in Test +.4

TEMPERATURE GAUGE

Make —

Serial No.

Chart Range

Clock Rotation

STATIC PRESSURE TEST

FOUND		LEFT	
TEST GAUGE	STATIC SPRING	TEST GAUGE	STATIC SPRING
385	370	385	385

FOUND		LEFT	
TEST	RECORDER	TEST	RECORDER
—	—	—	—

DIFFERENTIAL TEST

FOUND				LEFT			
UP		DOWN		UP		DOWN	
U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE	U-TUBE	GAUGE
0	~	44	~				
4	~	34	~				
14	~	14	~				
24	~	4	~				
44	~	0	~				
54	~						

(300)

PLATE CHANGE

Time AM / PM

Out X

In X

Condition

Specific Gravity

BTU

Remarks Corrected Static

Note Insp.

K186 Witness Inspector

Tested Case 11-2-79

Mailed copy