

Home Office: Great Bend, Kansas

P. O. Box 793

GLadstone 3-7903

Company Sterling Drilling Company Lease & Well No. Spangenberg #1 Tkt. #1161

Date 8-20-61 Sec. 4 Twp. 23S Range 12W County Stafford State Kansas

Test Approved by George A. McCaleb Western Representative W. M. Nothing

Formation Test No. 1 O.K. ☒ Misrun ☐ Interval Tested From 3458' to 3486' Total Depth 3486'
Size Main Hole 7 7/8" Rat Hole ☐ Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☐ No ☐
Packer Depth 3458 Ft. Size 6 3/4 Packer Depth ☐ Ft. Size ☐
Straddle ☐ Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☐ No ☐
Packer Depth ☐ Ft. Size ☐
Tool Size 5 1/2" O.D. Tool Jt. Size 4 1/2" P.H. Anchor Length 28 Ft. Size 5 1/2" O.D.

RECORDERS	Depth <u>3476</u> Ft.	Clock No. <u>-</u>	Depth <u>3478</u> Ft.	Clock No. <u>-</u>
	Top Make <u>Western</u> Cap. <u>4000/</u> No. <u>10</u>	<u>Inside</u>	Bottom Make <u>Western</u> Cap. <u>4000/</u> No. <u>9</u>	<u>Inside</u>
		<u>Outside</u>		<u>Outside</u>
	Below Straddle: Depth <u>-</u> Clock No. <u>-</u>	<u>Inside</u>	Depth <u>-</u> Ft. Clock No. <u>-</u>	<u>Inside</u>
		<u>Outside</u>		<u>Outside</u>
	Top Make <u>-</u> Cap. <u>-</u> No. <u>-</u>	<u>Inside</u>	Bottom Make <u>-</u> Cap. <u>-</u> No. <u>-</u>	<u>Inside</u>
		<u>Outside</u>		<u>Outside</u>

Time Set Packer 2:55 A M
Tool Open I.F.P. From 2:58 A M. to 3:00A M. - Hr. 3 Min. From (B) 20 P.S.I. To (C) 20 P.S.I.
Tool Closed I.C.I.P. From 3:00A M. to 3:20A M. - Hr. 20 Min. (D) 1435 P.S.I.
Tool Open F.F.P. From 3:20 A M. to 4:21 A M. 1 Hr. 1 Min From (E) 20 P.S.I. To (F) 20 P.S.I.
Tool Closed F.C.I.P. From 4:21A M. to 4:42A M. - Hr. 21 Min. (G) 1380 P.S.I.
Initial Hydrostatic Pressure (A) 1970 P.S.I. Final Hydrostatic Pressure (H) 1970 P.S.I.

SURFACE Size Choke 1 In. Max. Press. P.S.I. - Time - Description of Flow 171,000 Cu.Ft. Gas
INFORMATION Throughout test 2 1/2" Water
- M. - M. - M.

BLOW Strong gas to surface 3 mins. Bottom Choke Size 3/4 in.
Did Well Flow ☐ Yes ☒ No. Recovery Total Ft. 25 Oil ☐ Gas ☐ Water ☐
25' Gas out mud Mud ☐
Reversed Out ☐ Yes ☐ No Mud Type Starch Viscosity 39 Weight 9.9 Maximum Temp. Not taken °F
EXTRA EQUIPMENT: Dual Packers ☐ Safety Joint ☐ Jars: Size - Make - Ser. No. -
Type Circ. Sub. Plug Did Tool Plug? ☐ Where? - Did Packer Hold? ☒

Remarks

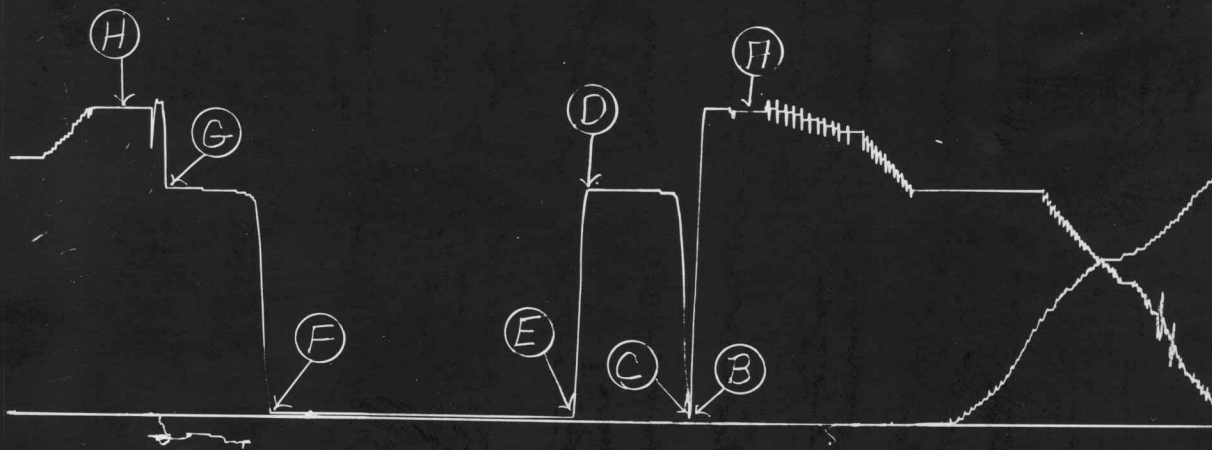
Rattlesnake out of banks - 2' Water all around rig.

Sterling Drlg. Co.

Test #1

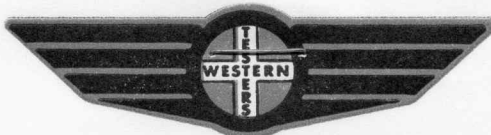
Spangenberg #1

Test #1161



This is an actual photograph of recorder chart.

Point	Pressure	
(A) Initial Hydrostatic Mud	1970	PSI
(B) First Initial Flow Pressure	20	PSI
(C) First Final Flow Pressure	20	PSI
(D) Initial Closed-in Pressure	1435	PSI
(E) Second Initial Flow Pressure	20	PSI
(F) Second Final Flow Pressure	20	PSI
(G) Final Closed-in Pressure	1380	PSI
(H) Final Hydrostatic Mud	1970	PSI



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Gladstone 3-7903

Company Sterling Drilling Company Lease & Well No. Spangenberg #1 Tkt. #1162

Date 8-24-61 Sec. 4 Twp. 23S Range 12W County Stafford State Kansas

Test Approved by George A. McCaleb Western Representative W. M. Nething

Formation Test No. 2 O.K. ☒ Misrun ☐ Interval Tested From 3606' to 3630' Total Depth 3630'
Size Main Hole 7 7/8" Rat Hole ☐ Conv. ☒ B.T. ☐ Damaged ☐ Yes ☒ No ☐ Conv. ☐ B.T. ☒ Damaged ☐ Yes ☒ No ☐
Packer Depth 3625 Ft. Size 6 3/4" Packer Depth 3630 Ft. Size 6 3/4"
Straddle ☐ Yes ☒ No ☐ Conv. ☐ B.T. ☐ Damaged ☐ Yes ☐ No ☐
Packer Depth ☐ Ft. Size ☐
Tool Size 5 1/2" O.D. Tool Jt. Size 4 1/2" F.H. Anchor Length 24 Ft. Size 5 1/2" O.D.

RECORDERS	Depth <u>3618</u>	Ft.	Clock No. <u>-</u>	Depth <u>3620</u>	Ft.	Clock No. <u>-</u>
	Top Make <u>Western</u>	Cap. <u>4000#</u>	No. <u>10</u>	Bottom Make <u>Western</u>	Cap. <u>4000#</u>	No. <u>9</u>
			<u>Inside</u>			<u>Inside</u>
			<u>Outside</u>			<u>Outside</u>
Below Straddle: Depth <u>-</u>	Clock No. <u>-</u>		<u>Inside</u>	Depth <u>-</u>	Ft.	Clock No. <u>-</u>
			<u>Outside</u>			<u>Inside</u>
Top Make <u>-</u>	Cap. <u>-</u>	No. <u>-</u>	<u>Inside</u>	Bottom Make <u>-</u>	Cap. <u>-</u>	No. <u>-</u>
			<u>Outside</u>			<u>Outside</u>

Time Set Packer 7:56 A M
Tool Open I.F.P. From 8:00A M. to 8:05A M. - Hr. 5 Min. From (B) 25 P.S.I. To (C) 25 P.S.I.
Tool Closed I.C.I.P. From 8:05A M. to 8:26A M. - Hr. 21 Min. (D) 1280 P.S.I.
Tool Open F.F.P. From 8:26 A M. to 9:26 A M. 1 Hr. - Min From (E) 25 P.S.I. To (F) 60 P.S.I.
Tool Closed F.C.I.P. From 9:26A M. to 9:47 A M. - Hr. 21 Min. (G) 1200 P.S.I.
Initial Hydrostatic Pressure (A) 2030 P.S.I. Final Hydrostatic Pressure (H) 2030 P.S.I.

SURFACE	Size Choke <u>1/2</u> In.	Max. Press. P.S.I.	Time	Description of Flow
INFORMATION			<u>M.</u>	
			<u>M.</u>	
			<u>M.</u>	

BLOW Good blow throughout test Bottom Choke Size 3/4 in.
Did Well Flow ☒ Yes ☐ No. Recovery Total Ft. 165 Oil 1200' Gas ☐ Water ☐
15' Oil & G.C. Mud, 30' H.O. & G.C.M., 60' V.H.O. & G.C.M., 60' Gassy, froggy oil Mud
Reversed Out ☐ Yes ☐ No Mud Type Starch Viscosity 40 Weight 9.7 Maximum Temp. Not taken °F
EXTRA EQUIPMENT: Dual Packers Dual Safety Joint No Jars: Size - Make - Ser. No. -
Type Circ. Sub. Plug Did Tool Plug? No Where? - Did Packer Hold? Yes

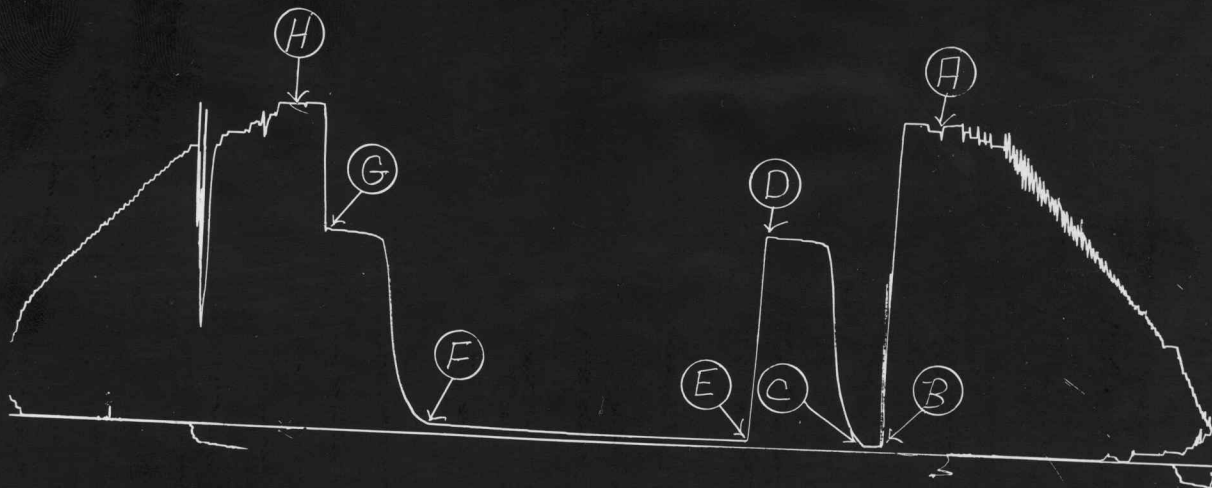
Remarks

Sterling Drilling Co.

Test # 2

Spangenberg #1

T.K.T. # 1162



This is an actual photograph of recorder chart.

Point

Pressure

(A)	Initial Hydrostatic Mud	2030	PSI
(B)	First Initial Flow Pressure	25	PSI
(C)	First Final Flow Pressure	25	PSI
(D)	Initial Closed-in Pressure	1200	PSI
(E)	Second Initial Flow Pressure	25	PSI
(F)	Second Final Flow Pressure	60	PSI
(G)	Final Closed-in Pressure	1200	PSI
(H)	Final Hydrostatic Mud	2030	PSI