

9-13-8E

GEOLOGICAL DEPARTMENT
SOUTHWESTERN GAS COMPANY

INDEPENDENCE, KANSAS

LOG OF WELL

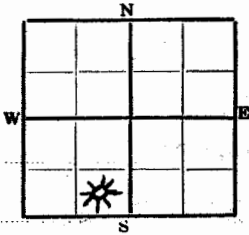
Company..... Empire Farm..... Henry Stellwagon Well No.....
 State..... Kansas County..... Geary S. 9 T. 13 R. 8
 Commenced Drilling..... Completed..... Elev.....
 Shot..... Qts. from..... to..... I. P..... R. P.....
 Casing:..... Casing:..... Casing:.....
 Casing:..... Casing:..... Casing:.....
 Tubing..... Caged at..... Packer at.....
 Contractor.....

surface	6	lime	1135
lime	14	shale	1155
flint	30	lime	1175
shale	57	coal	1178
red rock	110	lime	1222
shale	115	shale	1260
lime	133	lime	1290
shale	152	coal	1291
lime & flint	161	lime	1320
shale	275	sand	1384
shale & flint	280	shale	1425
sand	285	sand	1575-water
shale	300	shale	1488
red rock	328	sand	1500-water
shale	335	sand & lime	1520-water
lime	347	lime	1540
shale	354	granite	1545
shale lime	430	shale	1550
lime	444	lime	1555
shale	715	shale	1560
lime & flint	745	lime	1590
shale	755	shale	1605
flint	762	lime	1646-water
shale	770	shale	1647
lime	805	lime	1660
shale	855	shale	1673
lime	864-water	lime	1690
sandy shale	933	shale	1695
lime	950	lime	1708
shale	975	shale	1711
sand	988-water	lime	1720
shale	1003	shale	1724
lime	1034	lime	1758
shale	1040	shale	1767
sand	1050-water	lime	1815
shale	1070	shale-	1885
lime water	1095	lime	1903
shale	1112	shale	1918
lime	1135	lime	1935

(over)

9-13-8E

LOCATION



..... Ft. from North Line of qr. sec.

..... Ft. from South Line of qr. sec.

..... Ft. from East Line of qr. sec.

..... Ft. from West Line of qr. sec.

9. 13s . 8E

TEST

Through	Pitot Tube Test of 192		 192
	Used	Mercury	Water	Open Gauge Test Shows
In. Tubing	Reading			
In Casing	Vol. Cu. Ft.		 Lbs.

shale	1940
lime	1958
shale	2010
lime	2040
shale	2275
sand & water	2280
lime	2550
shale	2565
lime	2570
shale	2704
lime	2763

RETURN TO GYPSY OIL CO.

25' = 100'

100' = 100' (mirrored text)

Co. Empire Gas & Fuel
 Loc. SE NE SW

Dr. Comm. 8-26-16
 Dr. Comp. 4-27-17

I.P. Dry hole
 Elev. 1484

CASING RECORD:

15 1/2"	59' 11"	Pulled out
12 1/2"	660 7	"
10	1670 5	" except about 800'
8 1/4"	2272 10	"
6 5/8"	2595 4	"

MATERIAL:

surface	6	black mud	658
limestone	14	shale blue	715
flint rock	43	limestone	735
flint rock & limestone	50	flint	745
shale blue	57	shale blue	755
red rock	68	flint	762
shale blue	110	shale blue	770
red rock	115	limestone	805
limestone	133	shale blue	855
shale blue	152	bastard limestone water	864
limestone	161	sandy shale	933
shale grey	175	limestone	950
shale blue	195	shale black	955
shale grey	275	shale grey	973
shale lime chalk bands	280	sand water	988
sand	285	shale grey	1003
shale	300	limestone	1024
red rock	328	shale black	1040
shale grey	335	sand water	1050
limestone	347	shale black	1070
shale blue	354	limestone water	1095
lime shale grey	430	shale grey	1112
limestone	444	limestone	1135
shale blue	490	shale grey	1155
shale grey	524	limestone	1176
sandy shale	535	coal	1178
grey shale	631	limestone	1222

H. Stellwagen #1
 Sec. 9-13S-8E
 Geary County, Kansas

N.R.S.
Sample

RETURN TO GYPSY OIL CO.

PLOTTED

shale	1260	blue shale	2275
limestone	1290	water sand	2280
coal	1291	Miss. lime	2550
limestone	1320	shale	2565
salt sand HFW	1384	lime	2570
shale	1425	shale	2578
water sand	1475	lime	2700
shale	1488	shale blue	2704
water sand	1500	lime	2763
water sand & lime	1520		
limestone	1540		
granite ?	1545		
shale black	1550		
limestone	1555		
shale	1560		
limestone	1590		
shale grey	1605		
limestone water	1610		
water sand	1620		
limestone	1636		
shale	1647		
limestone	1660		
shale	1673		
limestone	1690		
shale	1695		
limestone	1701		
shale	1703		
limestone	1708		
shale	1711		
limestone	1720		
shale	1724		
limestone	1758		
slate black	1760		
shale grey	1767		
limestone	1815		
shale	1885		
limestone	1903		
shale	1918		
limestone hard	1955		
shale black	1940		
limestone hard	1958		
shale	1980		
red shale	1990		
blue shale	2010		
limestone variegated	2015		
flinty limestone			
very sharp	2040		
red shale	2045		
green shale	2050		
red shale	2100		
green shale	2180		

2.5 11-100'

Houston Tex. del 2275
" Sil " 2305
Mag ch 2517
Ocala del 2605
Gump sd. 2697
T. D. Ab et 2775E

1520
H 11
-36
L 11

Pt. Ab et 2910E

15'
17'
5'
- Miss chert 2010

KH. 2038

2550
2275
2305
2517
2605
2697

Empire Gas & Fuel Co.
 Henry Steliwagen Farm
 SE SW Sec 9-13S-8E,
 Geary County, Kansas.

Surface	6	Limestone	1222
Limestone	14	Shale	1250
Flint rock	43	Limestone	1290
Flint rock	50	Coal	1291
Blue shale	57	Limestone	1325
Red rock	110	Salt sand	1384
Blue shale	115	Shale	1425
Limestone	133	Water sand	1475
Blue shale	152	Shale	1488
Limestone	161	Water sand	1500
Gray shale	175	Water sand	1520
Blue shale	195	Limestone	1540
Gray shale	275	Granite	1545
Shale lime - chalk bands	290	Black shale	1550
Sand	285	Limestone	1555
Shale	300	Shale	1560
Red rock	328	Limestone	1590
Gray shale	335	Gray shale	1605
Limestone	347	Limestone - water	1620
Blue shale	354	Limestone	1636
Gray shale lime	430	Shale	1647
Limestone	444	Gray shale	1660
Blue shale	490	Shale	1673
Gray shale	527	Limestone	1690
Sandy shale	535	Shale	1895
Gray shale	631	Limestone	1901
Black mud	658	Shale & stone	1903
Blue shale	715	Hard limestone	1935
Limestone	735	Black shale	1940
Flint	745	Hard limestone	1958
Blue shale	755	Gray shale	1988
Flint	762	Red shale	1990
Blue shale	770	Blue shale	2010
Limestone	805	Limestone	2040
Blue shale	855	Red shale	2045
Limestone water	864	Green shale	2050
Sandy shale	933	Red shale	2100
Limestone	950	Green shale	2160
Black shale	955	Blue shale	2275
Gray shale	975	Water sand	2280
Sand - water	982	Miss. Lime	2550
Gray shale	1003	Shale	2565
Limestone	1024	Miss. Lime	2570
Black shale	1040	Shale	2578
Sand - water	1050	Miss. Lime	2700
Black shale	1070	Blue shale	2704
Limestone - water	1095	Blue shale	2763
Gray shale	1112		
Limestone	1135		
Gray shale	1155		
Limestone	1176		
Coal	1178		

Discontinued May, 1917

HENRY SCHLITZMAN BAIN

SE/4 of SW 1/4 of Sec. 9 Twp 15, South Range 8 Alta Vista, Kansas.
Geary County, Kansas.

Commenced Drilling August 7th., 1916
Completed Drilling May 1917 Discontinued.

Well #1. Casing record:

60'	15"	70'	Casing.
860'	12"	50'	Casing.
1070'	10"	35'	Casing.
2272'	8"	23'	Casing.
2595'	6 5/8"	20'	Casing.

Flow 1484 DF

FORMATION RECORD:

Surface	0	Limestone	6	1320	1325
Limestone	6	Salt sand	14	1325	1334
Flint Rock	14	Shale	43	1334	1425
Flint Rock	45	Water Sand	50	1425	1475
Blue Shale	50	Shale	57	1475	1488
Red Rock	57	Water Sand	110	1488	1500
Blue Shale	110	Water Sand	115	1500	1520
Line stone	115	Limestone	153	1520	1540
Blue Shale	153	Granite	152	1540	1545
Line Stone & P.	152	Black Shale	161	1545	1350
Gray Shale	161	Limestone	175	1550	1555
Blue Shale	175	Shale	195	1555	1560
Gray Shale	195	Limestone	275	1560	1590
Shale Line	275	Shale bands	280	1590	1605
Sand	280	Limestone	285	1605	1620
Shale	285	Limestone	300	1620	1636
Red Rock	300	Shale	323	1636	1647
Gray Shale	323	Gray Shale	335	1647	1650
Limestone	335	Shale	347	1650	1673
Blue Shale	347	Limestone	354	1673	1690
Gray Shale Line	354	Shale	4430	1690	1695
Limestone	430	Limestone	444	1695	1701
Blue-Shale	444	Shale & Stone	490	1901	1903
Gray Shale	490	Hard Limestone	527	1903	1925
Sandy Shale	527	Black Shale	535	1925	1940
Gray Shale	535	Hard Limestone	651	1940	1950
Black Mud	631	Gray Shale	658	1950	1986
Blue Shale	658	Red Shale	715	1983	1990
Limestone	715	Blue shale	735	1990	2010
Flint	735	Line stone	745	2010	2040
Blue Shale	745	Red Shale	755	2040	2045
Flint	755	Green Shale	762	2045	2050
Blue Shale	762	Red Shale	770	2050	2100
Limestone	770	Green Shale	805	2100	2100
Blue Shale	805	Blue Shale	855	2150	2275
Limestone	855	Water Sand	864	2275	2280
Sandy Shale	864	Miss. Lino	933	2280	2550
Limestone	933	Shale	950	2550	2565
Black Shale	950	Miss. Lino	955	2565	2570
Gray Shale	955	Shale	975	2570	2570
Sand	975	Miss Lino	982	2570	2700
Gray Shale	982	Blue Shale	1003	2700	2704
Limestone	1003		1024	2704	2763
Black Shale	1024		1040		
Sand	1040	Water.	1050		
Black Shale	1050		1070		
Limestone	1070	Water.	1095		
Gray Shale	1095		1112		
Limestone	1112		1135		
Gray Shale	1135		1155		
Limestone	1155		1176		
Coal	1176		1178		
Limestone	1178		1222		
Shale	1222		1260		
Limestone	1260	Over	1290		
Coal	1290	Heb. 1290	1291		

Paper

Layer 1510

BR 1815

*1510
1289
26*

HRS

*Miss chert 2010
KH 2038
Karton Dec del 2275
" Sil " 2305
Mag sh 2517
Vista del 2605
Sump sd 2627
Aub ent 2778E*

WELL LOG BUREAU, KANSAS GEOLOGICAL SOCIETY

7-13-8E

719-720 Union National Bank Bldg., Wichita, Kansas

CASING RECORD

LOCATION

NE SE SW

SEC 9

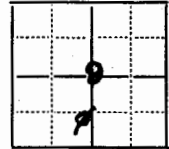
T 13

R 8E.

10" FARM Stillwater
 20" 8 1-4 COMPANY
 15 1-2 6 5-8 CONTRACTOR
 12 1-2 5 3-16 COMMENCED

NO. 1 COUNTY Geary

COMPLETED 4/27/17



TOTAL DEPTH SHOT QUARTS BETWEEN

CORRESPONDENCE REGARDING THIS WELL SHOULD BE REFERRED TO

ELEVATION 1484, L.S.

INITIAL PRODUCTION Dry Hole.

FIGURES INDICATE BOTTOM OF FORMATIONS
 REMARKS

Formation	Depth	Formation	Depth.
soil	6	lime	1212
Permian		sandstone	1277 wtr
(Chase and Council Grove)		shale	1317
lime	14	sandstone	1367 wtr
lime and flint	50	shale	1377
shale	115	sandstone	1397 - L
lime	133	(Kansas City Form)	
shale	152	lime	1477
lime flinty	161	shale	1492
Pennsylvanian		lime s dy	1522 wtr
(Waubaussee Form)		lime	1717 - BLC
shale	176	(Marmaton)	
lime sdy	181	shale	1787
sandstone	186	lime and shale	1862
shale	236	shale	1912
lime	246	lime	1942 - ch
lime and shale	346	(Cherokee sh)	
shale	516	shale	2177
(Shawnee)		sandstone	2182 wtr
lime	636	Mississippi	
flint	646	lime	2452 - K
shale	656	shale	2467 - H
flint	663	lime	2627 TD
lime	698		
shale	748		
lime	758		
shale	828 - H		
lime	843		
shale	865		
sandstone	880 wtr		
shale	900 - To		
(Douglas)			
lime	920		
shale	935		
sandstone	945		
shale	965		
lime	990		
shale	1005		
lime	1027		
shale	1047		
(Lansing)			
lime	1117		
shale	1152		

Elev 1484

Ballard Samples

- T.M 2010
- T.K 2110
- T.H - 22 75
- T.May 25 20
- T.U 25 75
- T.S.M 2 695
- T.D 2763

- good

Henry Stillwagon Well

9 - 13 - 8E

9-13-8E

surface	6	6	lime	17	1690
kime	8	14	shale	5	1695
flint and lime	36	50	lime	6	1701
shale blue	7	57	shale	2	1703
red rock	11	68	lime	5	1708
shale blue	42	110	shale	3	1711
red rock	5	115	lime	9	1720
lime	18	133	shale	2	1724
shale	19	152	lime	34	1758
lime flinty	9	161	shale	9	1767
shale	14	275	lime	48	1815
shale	5	280	shale	70	1885
sand	5	285	lime	18	1903
shale	15	300	shale	15	1918
red rock	28	328	lime	17	1935
shale	7	335	shale	5	1940
lime	12	347	lime	18	1958
shale	7	354	shale	42	2010
lime and shale	76	430	lime	30	2040
lime	14	444	shale	335	2275
shale	271	715	water sand	5	2280
lime	20	735	lime Miss.?	270	2550
flint	10	745	shale	15	2565
shale	10	755	lime	5	2570
flint	7	762	shale and lime	8	2578
shale	8	770			
lime	35	805	Still drilling.		
shale	50	855			
lime water	9	864			
shale sandy	69	933			
lime	17	950			
shale	23	973			
sand water	15	988			
shale	15	1003			
lime	21	1024			
shale	16	1040			
sand water	10	1050			
shale	20	1070			
lime water	25	1095			
shale	17	1112			
lime	23	1135			
shale	20	1155			
lime	21	1176			
coal	2	1178			
lime	44	1222			
shale	38	1260			
lime	30	1290			
coal	1	1291			
lime	29	1320			
salt sand HFW	64	1384			
shale	41	1425			
water sand	50	1475			
shale	13	1488			
water sand	12	1500			
water sand and lime	20	1520	water sand	10	1620
lime	25	1545	lime	16	1636
shale black	5	1550	shale	11	1647
lime	5	1555	lime	13	1660
shale	5	1560	shale	13	1673
lime	30	1590			
shale grey	15	1605			
lime water	5	1610			

W. L. Stryker Est.

004961

9-13-8E

Company Empire Gas & Fuel Co.

Sec. 9 T. 13 R. 8E

Farm Steilwagen

No. 1

SE SW

Alta Vista, Ks.

Total Depth

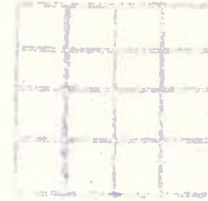
County Geary

Comm. 8/7/16

Comp. May, 1917

Shot or Treated

Contractor



CASING

20 in.		10 in.	1670
15 1/2	60	8 1/4	2272
17 1/2	660	6 xxx	2595
13 3/4		5 3/16	

Elevation 1450±? 1484

Production

Figures Indicate Bottom of Formations.

surface	6	lime	950	shale	1673
lime	14	blk shale	955	lime	1690
flint rock	43	gray shale	975	shale	1695
flint rock	50	<u>sand wtr</u>	988	lime	1701
blue shale	57	gray shale	1003	lime & shale	1703
red rock	110	lime	1024	lime	1708
blue shale	115	blk shale	1040	shale	1711
lime	133	<u>sand wtr</u>	1050	lime	1720
blue shale	152	blk shale	1070	shale	1724
lime & flint	161	lime wtr	1095	lime	1758
gray shale	175	gray shale	1112	blk slate	1760
blue shale	195	lime	1135	gray shale	1767
gray shale	275	gray shale	1155	lime	1815
shale lime chalk bands	280	lime	1176	shale	1885
<u>sand</u>	285	coal	1278	lime	1903
shale	300	lime	1222	shale	1918
red rock	328	shale	1260	hd lime	1935
gray shale	335	lime	1290	blk shale	1940
lime	347	coal	1291	hd lime	1958
blue shale	354	lime	1320	gray shale	1988
gray shale lime	430	<u>salt sand</u>	1384	red shale	1990
lime	444	shale	1425	blue shale	2010
blue shale	490	<u>wtr sand</u>	1475	lime var. colored	2015
gray shale	527	shale	1488	flinty hd lime	2040
<u>sdv shale</u>	535	<u>wtr sand</u>	1500	red shale	2045
gray shale	631	wtr sand & lime	1520	green shale	2050
blk mud	658	lime	1540	red shale	2100
blue shale	715	granite	1545	green shale	2180
lime	735	blk shale	1550	blue shale	2275
flint	745	lime	1555	<u>wtr sand</u>	2280
blue shale	755	shale	1560	Miss. lime	2550
flint	762	lime	1590	shale	2565
blue shale	770	gray shale	1605	Miss. lime	2570
lime	805	lime wtr	1620	shale	2578
blue shale	855	lime	1636	Miss. lime	2700
Baster lime wtr	864	shale	1647	blue shale	2704
<u>sdv shale</u>	933	lime	1660	Miss. lime	2763