

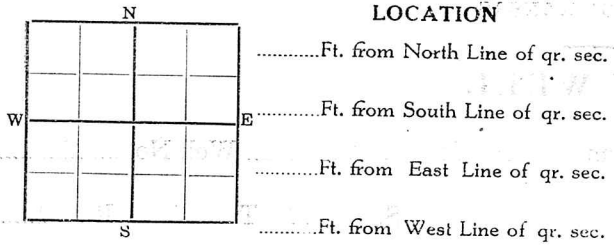
**GEOLOGICAL DEPARTMENT
SOUTHWESTERN GAS COMPANY**

INDEPENDENCE, KANSAS

LOG OF WELL

Company Empire Farm Frank Hedgas Well No. 1
 State Kansas County Cowley S. 36 T. 32 R. 4
 Commenced Drilling 2-21-17 Completed 3-30-17 Elev. _____
 Shot _____ Qts. from _____ to _____ I. P. _____ R. P. _____
 Casing: 472' 10" Casing: 680' 8" Casing: 1424' 6 1/2"
 Casing: _____ Casing: _____ Casing: _____
 Tubing _____ Caged at _____ Packer at _____
 Contractor Swallow & Sweeney

soil	1	slate	542
clay	8	lime	352
lime	9	slate	356
clay	13	lime	376
lime	15	shale red	396
clay	23	shale	400
lime	26	lime	406
clay	29	shale red	417
lime shells	35	shale	423
lime	75	lime	429
slate	100	shale	438
lime	109	sand	450 show gas
slate	115	lime	460
lime	122	slate	463
slate	123	lime	469
slate lime	131	shale	471
slate	136	lime	482
red rock	144	shale red	487
lime	156	lime	495
slate	164	slate	500
lime	170	lime	535
shale red	178	slate	550
lime	180	sand	560
shale	215-228	slate	565
lime	230	lime	575
slate	240	slate	582
red rock	253	lime	592
lime	259	slate	627
slate	269	shale pink	631
lime	272	shale	646
slate	290	lime	656
lime	310	shale	670
red rock	320	lime	676 gas
slate	333	slate	690
lime	340	lime	694 (over)



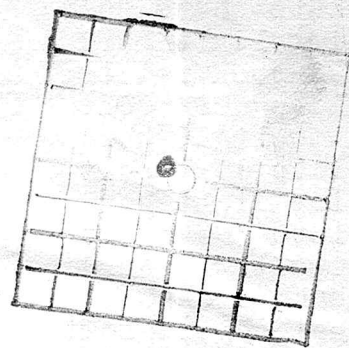
TEST

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

- slate 770
- shale 807
- lime 817
- slate 842
- sand 857 water
- slate 861
- sand 871
- slate 875
- lime 880
- slate 886
- lime 889
- slate 893
- lime 895
- slate 905
- lime 920
- slate 922
- lime 934
- slate 953
- lime 975
- slate 985
- lime 988
- slate 990
- lime 1005
- slate 1009
- slate lime 1016
- slate 1050
- sand 1060
- slate 1105
- lime 1115
- sand 1137 water
- slate 1150
- lime 1152
- slate 1160
- lime 1172
- slate 1205
- lime 1211
- slate 1219
- lime 1223
- slate 1228
- lime 1230
- slate 1248
- lime 1298
- slate 1314
- lime 1350
- slate 1355
- red rock 1360
- lime 1369
- slate 1374
- lime 1382
- slate 1384
- lime 1414
- shale 1424
- slate 1432
- lime 1434
- sand broken 1445
- slate 1449
- sand 1452¹/₂ oil & gas

Well # 1,
36-32-4,
Kansas.

7273



Hedges,
Walnut Twp.,
Cowley County.

Location: -220'S and
220'E-SE Cor.

Dr. comm. - Feb. 21, 1917;

Dr. comp. - March 30, 1917.

Nat. Prod. - 97 bbls. 1st 24 hrs.,

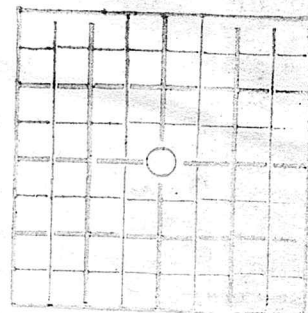
CASING RECORD.

12 1/2"	50#	21'6"
10"	32	472'
8 1/4"	24	894'
6 5/8"	17	1420'
2"	1800#	1437'11"
5/16"	Sucker rocs 1425'	

soil dark soft	1	1
clay brown soft	7	8
lime light hard	1	9
clay blue soft	4	13
lime light hard	2	15
clay blue soft	8	23
lime light hard	3	26
clay blue soft	3	29
lime shells grey soft	6	35
lime light hard	40	75
slate dark soft	15	90
slate white soft	10	100
lime light hard	9	109
slate white soft	6	115
lime light hard	7	122
slate dark soft	1-	123
lime light hard	8	131
slate light soft	5	136
red rock red soft	8	144
lime light hard	12	156
slate dark soft	8	164
lime light hard	6	170
shale red soft	8	178
lime light hard	2	180
shale brown soft	3	183
slate white soft	10	193
slate dark soft	22	215
lime light hard	15	230
slate dark soft	10	240
red rock red soft	13	253
lime light hard	6	259
slate dark soft	10	269
lime light hard	3	272

slate white soft	18	290	
lime light hard	20	310	
red rock red soft	10	320	
slate dark soft	13	333	
lime light hard	7	340	
slate dark soft	2	342	
lime light hard	10	352	
slate dark soft	4	356	
lime light hard	20	376	
shale red soft	20	396	
shale brown soft	4	400	
lime light hard	5	405	
shale red soft	12	417	
shale white soft	6	423	
lime light hard	6	429	
shale light soft	9	438	
sand grey soft	12	450	show of gas
lime light hard	10	460	
slate dark soft	3	463	
lime light hard	6	469	
shale dark soft	2	471	casing 10"
lime light hard	11	482	
shale red soft	5	487	
lime light hard	8	495	
slate dark soft	5	500	
lime light hard	35	535	
slate dark soft	15	550	
sand grey soft	10	560	
slate dark soft	5	565	
lime light hard	10	575	
slate dark soft	7	582	
lime light hard	10	592	
slate white soft	10	602	
slate dark soft	25	627	
shale pink soft	4	631	
shale dark soft	15	646	
lime light hard	10	656	
shale dark soft	14	670	
lime light hard	6	676	gas
slate dark soft	14	690	
lime light hard	4	694	
slate dark soft	66	760	
slate white soft	10	770	
shale dark soft	37	807	
lime light hard	10	817	
slate dark soft	5	822	
sand light soft	35	857	water
slate dark soft	4	861	
sand grey soft	10	871	
slate dark soft	4	875	
lime light hard	1	876	casing 8"
lime light hard	4	880	
slate dark soft	6	886	

lime light hard	3	889
slate dark soft	4	893
lime light hard	2	895
slate dark soft	10	905
lime light hard	15	920
slate dark soft	2	922
lime light hard	12	934
slate dark soft	19	953
lime light soft	21	974
lime light hard	1	975
slate white soft	1-	985
lime light hard	3	988
slate dark soft	2	990
lime light hard	15	1005
slate dark soft	4	1009
lime light hard	7	1016
slate dark soft	34	1050
sand grey soft	1-	1060
slate dark soft	45	1105
lime light hard	10	1115
sand grey soft	22	1137 water
slate dark soft	13	1150
lime light hard	2	1152
slate dark soft	8	1160
lime light hard	12	1172
slate dark soft	33	1205
lime light hard	6	1211
slate dark soft	8	1219
lime light hard	4	1223
slate dark soft	5	1228
lime light hard	2	1230
slate dark soft	18	1248
lime light hard	50	1298
slate dark soft	16	1314
lime light hard	36	1350
slate dark soft	5	1355
red rock red soft	5	1360
lime light hard	9	1369
slate dark soft	5	1374
lime light hard	8	1382
slate dark soft	2	1384
lime light hard	30	1414
shale black soft	4	1418
lime light hard	2	1420 casing 6 $\frac{1}{2}$ "
lime light hard	4	1424
slate dark soft	8	1432
lime light hard	2	1434
sand broken light soft	8	1441
sand light soft	5	1446
slate dark soft	4	1450
sand light soft	3	1453 Oil & GAS



From 1441 to 1446 broken sand showing no oil,
or gas 1446 to 1450 break of slate 1450 to 1453 showing
quite a lot of gas. Hole filled up 600' in 30 min.
and filled to 800' next hour. 1050' of oil 150'
water over night.