

LOG OF WELL 1019  
Southwestern Gas Co.  
Independence, Kansas

5-18-6E

Dmp

Company.....National Refg. Co. Farm.....Southworth  
State.....Kansas County.....Chase S. corner of T. 5 R. 8  
Commenced Drilling.....6-28-33 Completed.....12-10-30 Elev. 18  
Shot..... Qts. from..... to..... I. P. R. P.  
Casing: 410' 151" Casing: 215' 121" Casing:  
Casing: Casing: Casing:  
Tubing Caged at Packer at

Drilling Contractor--Smith & Crumley, Wichita

soil	5		slate	890
lime	90		lime	895
slate	95		slate	985
red rock	100	1 B W 120	lime	990
lime	110		slate	1005
slate	115		lime	1015
lime	125		slate	1045
slate	145		lime	1065
red rock	155		slate	1195
lime	180		lime	1225
slate	185		slate	1255
lime	195		lime	1330
slate	255		slate	1335
lime	290		water sand	1345
slate	315		slate	1410 N.P.S. 1390
sand	320		water sand	1420
slate	325		slate	1475
red rock	355		lime	1480
slate	400		slate	1545 N.P.S. 1445
lime	420	7 B W 420	lime	1755
lime	450		slate	1775 N.P.S. 1735
lime	455		lime	1825 N.P.S. 1785
slate	460		lime	1850
lime	470		slate	1860 1 B W 1825
slate	525		lime	1900
lime	530		slate	1915
slate	545		slate	2025
slate	570		lime	2035
lime	580		slate	2040
slate	590		lime	2045
slate	625	gas 665	sand	2055
lime	630		red rock	2060 N.P.S. 2060
slate	655		water sand	2080
sand	660		red rock	2105
sand slate	680		lime	2115
slate	720	3 B W 730	red rock	2130
lime	725		sand	2130
sand gas	755		slate	2180
slate	775		sand	2205
slate	790	gas 745	lime	2515
lime	795		granite	2525

5-18-6 E

1235 V

## FEDERAL SOUTHWORTH WELL NO.1.

Elev. 1490.

Plotted

Plotted June 16, 1921

5-18-6 E.W.

Sec. 5, twp. 18, range 6, Chase County, Kansas.

300 Feet from South Line----300 Feet from East Line

NATURE OF STRATA	COLOR	HARD OR SOFT	THICKNESS	TOTAL DEPTH	REMARKS
Soil	Dark	soft	5	5	
Lime	light	hard	5	10	
Lime	light	hard	80	90	
Slate	light	soft	5	95	
Redrock	red	soft	5	100	One bailer water @ 120'
Lime	white	soft	10	110	
Slate	white	soft	5	115	
Lime	white	hard	10	125	
Slate	white	soft	20	145	
Redrock	red	soft	10	155	
Lime	dark	med.	5	160	
Slate	dark	soft	5	165	
Lime	light	hard	20	185	
Lime	light	hard	10	195	
Slate	light	soft	60	255	
Lime	light	hard	5	260	
Slate	light	soft	55	315	
Sand	white	med.	5	320	
Slate	light	soft	5	325	
Redrock	red	soft	10	335	15 1/2 Csg. Set @ 410'
Slate	dark	soft	65	400	
Lime	light	Med	20d.	420	7 Boilers water @ 420'
Slate	dark	soft	15	435	
Lime	gray	hard	15	450	
Slate	dark	soft	5	460	
Lime	gray	hard	5	465	
Lime	dark	med.	10	470	
Slate	dark	soft	55	525	
Lime	white	hard	5	530	
Slate	light	med.	15	545	
Slate	light	soft	25	570	
Lime	light	hard	10	580	
Slate	light	soft	5	585	
Lime	gray	hard	5	590	
Slate	dark	med.	10	600	Gas @ 665
Slate	light	soft	25	625	
Lime	light	med.	5	630	
Slate	dark	soft	25	655	
Sand	gray	soft	5	660	
Sandshale	gray	soft	20	680	
Slate	dark	soft	40	720	3 bailers water @ 730'
Lime	light	hard	5	725	
Sand Gas	Gray	med.	10	735	
Slate	gray	soft	35	770	
Lime	white	med.	5	775	
Slate	dark	soft	15	790	Gas @ 745'
Lime	light	hard	5	795	
Slate	light	soft	95	890	12 1/2 Csg. set @ 815'

12-

NATURE OF STRATA	COLOR	HARD OR SOFT	THICKNESS	TOTAL DEPTH	REMARKS
Lime	light	hard	5	895	
Slate	dark	soft	90	985	
Lime	light	hard	5	990	
Slate	light	soft	15	1005	
Lime	white	med.	10	1015	
Slate	dark	soft	30	1045	
Lime	light	hard	20	1065	
Slate	dark	soft	130	1195	
Lime	gray	hard	30	1225	
Slate	dark	soft	30	1255	
Lime	light	hard	75	1330	
Slate	dark	soft	5	1335	
Water sand	gray	soft	10	1345	
Slate	light	soft	65	1410	Hole full water
Water sand	gray	soft	10	1420	@ 1390'
Slate	dark	soft	55	1475	
Lime	light	hard	5	1480	
Slate	dark	soft	65	1545	Hole full water
Lime	white	med.	180	1725	@ 1445'
Lime	white	hard	30	1755	<del>1445'</del>
Slate	gray	soft	20	1775	Hole full water
Lime	gray	hard	40	1815	@ 1735
Lime	gray	hard	10	1825	Hole full water
Lime	gray	hard	25	1850	@ 1782'
Slate	light	soft	10	1860	One bailer
Lime	gray	hard	20	1880	water @ 1825'
Lime	gray	hard	20	1900	
Slate	white	soft	15	1915	
Slate	black	soft	40	1955	
Slate	black	soft	50	2005	
Slate	light	soft	20	2025	
Lime	gray	hard	10	2035	
Slate	black	soft	5	2040	
Lime	gray	hard	5	2045	
Sand	gray	hard	10	2055	
Redrock	red	soft	5	2060	Hole full water
Water sand	gray	soft	20	2080	@ 2060
Redrock	red	soft	25	2105	
Lime	gray	hard	10	2115	
Redrock	red	soft	5	2120	
Sand	gray	hard	10	2130	
Slate	light	soft	20	2150	alg. commenced
Slate	blue	soft	10	2160	June 28-20.
Slate	gray	soft	20	2180	
Sand	white	hard	20	2190	alg. comp.
Sand	white	med	15	2205	Dec. 16-20.
Lime	white	hard	60	2265	
Lime	black	hard	20	2285	
Lime	white	med	65	2350	
Lime	white	hard	30	2380	
Lime	white	hard	135	2515	
Granite	red	hard	8	2523	

CASING RECORD.

SIZE.	WT. PER FT.	LEFT IN WELL	WHEN COMPLETED.
15 1/2	70#	170'	Pulled
12 1/2	50#	815'	Do
10"	3.5 + 40#	1450'	do
8 1/4	3.2 + 28#	2025'	do
8 5/8	2.0 + 24#	2140'	do

LOG OF WELL

Company National Farm H. Southworth Well No. \_\_\_\_\_  
 State Kansas County Chase S. 6 T. 18 R. 04  
 Commenced Drilling \_\_\_\_\_ Completed \_\_\_\_\_ Elev. \_\_\_\_\_  
 Shot \_\_\_\_\_ Qts. from \_\_\_\_\_ to \_\_\_\_\_ I. P. \_\_\_\_\_ R. P. \_\_\_\_\_  
 Casing: 40' 15 1/2" Casing: 80' 18" Casing: 1392' 10"  
 Casing: 1020' 8" Casing: 2120' 8" Casing: 2145' 6"  
 Tubing \_\_\_\_\_ Caged at \_\_\_\_\_ Packer at \_\_\_\_\_

soil	5		
lime	100	lime	1000
slate light	105	slate	1050
red rock	110	lime	1060
lime	120	1 B water slate	1090
slate	125	lime	1110
lime	133	slate	1240
slate	155	lime	1270
red rock	165	slate	130
lime	170	lime	1375
slate	175	slate	1500
lime	205	slate	1436
slate	255	sand	1445
lime	270	slate	1500
slate	325	lime	1505
sand	330	slate	1517
slate	335	lime	1750
red rock	345	lime	1780
slate	410	shale	1800
lime	465	7 B water lime	1875
slate	470	(420' shale	1885
lime	480	lime	1925
slate	535	shale	2060
lime	540	lime	2070
slate	580	shale	2075
lime	590	lime	2080
slate	595	sand	2085
lime	600	red rock	2100
slate	635	sand	2120
lime	640	red rock	2145
slate	665	lime	2155
sand	670	red rock	2160
sand & shale	695	3 B water sand	2170
slate	730	shale	2180
lime	735	shale	2200
sand	745	(745) sand	2210
slate	780	sandy lime	2518
lime	785	granite sand	2525
slate	800		
lime	808		
slate	900		
lime	905		
slate	908		

003995

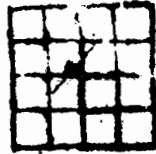
NATIONAL RESO.  
Federal Southworth No. 1.

SEC. 5 T. 18 R. 02  
SE 1/4 NW 5 185 6E

Total Depth. 2523'  
Comm. 6-28-20 Comp. 12-16-20  
Shot or Proated.  
Contractor.  
-Isaud.

County. Chase

*Handwritten:* 112440



Elevation. 1490 65

Production. Dry

CASING:

15 1/2"	410'
12 1/2"	815'
10"	1450'
8 1/4"	2115'
6 5/8"	2140'

Figures Indicate Bottom of Formations.

soil drk	5	lime grey	1225
limo lgt	90	slate drk	1255
slate lgt	95	lime lgt	1330
red rock 1BW 120	100	slate drk	1335
lime white	110	wtr sand grey	1345
slate white	115	slate lgt HFW 1390	1410
lime white	125	wtr sand grey	1420
slate white	145	slate drk	1475
red rock aft	155	limo lgt	1480
lime drk	160	slate drk HFW 1445	1545
slate drk	165	lime white	1755
lime lgt	195	slate grey	1775
slate lgt	255	lime grey HFW	1850
lime lgt	260	slate lgt	1860
slate lgt	315	lime grey	1900
sand wht	320	slate lgt	2025
slate lgt	325	lime grey	2035
red rock	335	slate blk	2040
slate drk	400	lime grey	2045
lime lgt 7 BW	420	sand grey	2055
slate drk	435	red rock HFW	2060
lime grey	455	wtr sand	2080
slate drk	460	red rock	2105
lime drk	470	lime grey	2115
slate drk	525	red rock	2120
lime white	530	sand grey	2130
slate lgt	570	slate grey	2160
lime lgt	580	sand white	2205
slate lgt	655	lime white	2515
lime grey	590	granite red	2523
slate lgt gas 665	625	Total Depth.	
lime lgt	630		
slate drk	655		
sand grey	660		
sand shale grey	680		
slate drk	720		
lime lgt 3BW 730	725		
sand gas	735		
slate grey	770		
lime white	775		
slate drk gas	790		
lime lgt	795		
slate lgt	830		
lime lgt	895		
slate drk	985		
lime lgt	990		
slate lgt	1005		
lime white	1015		
slate drk	1045		
lime lgt	1065		
slate drk	1105		

*Handwritten:* 1545?