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Petroleum Management, Inc. CONFIDENTIAL Wichita, KS 67208

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GEOLOGICAL REPORT

STOLP #17
50'N SE NE NE SECTION 29-30S-7E
COWLEY COUNTY,KS

CONTRACTOR:	Gaines Drilling
COMMENCED:	July 16, 1990
COMPLETED:	July 26, 1990
ELEVATION:	1461 G.L. 1467 K.B.
SURFACE CASING:	Set 302' of 8 5/8", 24-lb. casing at 313'. Cemented with 210 sacks of standard cement, with 3% CaCl 2.
PRODUCTION CASING:	Set new and used; 14.5-lb and 15.5-lb. 5 1/2" casing at 3242' with 220 sacks 40/60 Pozmix, 2% gel, 1% CaCL 2 and 1/4-lb. sack Flocele.
DRILLING TIME:	One-Foot drilling time from 1625' to 3243' (RTD).
SAMPLE DEPTH:	Twenty-Foot samples observed from 1640' to 2200', Ten-Foot samples observed from 2200' to 2800', Five-foot samples observed from 2300' to 2330', Ten-foot samples observed from 2300' to 3180' and Five-foot samples from 3180' to 3243' RTD.
ELECTRIC LOGS:	None

29-30-7E

CONFIDE

Stolp #17

FORMATION TOPS
Kelly Bushing Elevation

	Sample Depth
Kansas City	2119'
Hertha Limestone	2310'
Base Kansas City	2348'
Lenapah Limestone	2384'
Cherokee Shale	2603'
Mississippi Chert	2865'
Mississippi Lime	2871'
Mississippi Dolomite	2874'
Kinderhook	3175'
Chattanooga Shale	3201'
Arbuckle Dolomite	3242'

SAMPLE DESCRIPTIONS

Layton Sand 2101-2109' — Sandstone, clear to white, fine grained, subangular, poor intercrystalline porosity, spotted light stain, calcite cement matrix.

Kansas City 2109'

2171-2175' — Limestone; cream, fine crystalline slightly fossiliferous, poor intercrystalline porosity, very slight stain, no odor.

2201-2207' — Limestone, cream, fine crystalline, poor intercrystalline porosity, spotted stain, slight golden fluorescence, faint odor.

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2242-2248' **Limestone, cream, fine crystalline, slightly fossiliferous, fair to poor intercrystalline porosity, scattered dark stain, faint odor, good golden fluorescence.**

2309-2316' **Limestone, cream, fine crystalline, fossiliferous, poor intercrystalline porosity with spotted stain, fair to poor vugular porosity with scattered stain, fair odor.**

2322-2329' **Limestone, cream, fine crystalline, slightly fossiliferous, fair to poor intercrystalline porosity with spotted stain, scattered poor vagular porosity with spotted stain, fair odor, slight show of free oil, good golden fluorescence.**

Drill Stem Test #1 2290-2334'

Open 45 minutes with a weak blow. Shut-in 45 minutes. Open 45 minutes with a weak blow. Shut-in 45 minutes.

IFP	**104-127***	**FFP**	**127-139***
ISIP	**696***	**FSIP**	**649***

***Note these readings are field measurements. Recovered 75' of drilling mud with show of oil and gas throughout test.**

Mississippi Dolomite

2874-2884 Dolomitic Limestone, brown to tan, fine crystalline, poor to fair intercrystalline porosity, good oil saturation, good golden fluorescence, slight show of free oil, fair odor.

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	2884-2897	Dolomite, brown, fine crystalline, poor to fair intercrystalline, moderate oil saturation, slight show of free oil, faint odor.
	2897-2908'	Limy Dolomite, brown, fine crystalline, poor intercrystalline porosity, zone appears tighter than above zones, light saturation, no free oil, faint odor, zone contains small amount of fresh chert.
	2908-2918'	Dolomite, brown, fine crystalline, poor intercrystalline, less porosity than above zone, very slight show of oil on broken sample, no odor.
	2940-2948'	Dolomite, brown, fine crystalline, poor scattered vugular porosity with spotted saturation, slight show of free oil on broken sample, no odor.
Arbuckle	3242'	Dolomite, cream, fine to medium crystalline, poor to fair intercrystalline porosity, good stain, moderate saturation, some residual black stain, few pieces with scattered poor vugular porosity, good stain, zone contains small amount of chert, white, sharp.
Rotary Total Depth	3243'	

REMARKS

Although the #17 Stolp ran 7' lower than the #1 Smith (East offset) on the top of the Arbuckle, it was decided to run production casing to further test this well.

R. Gregory Williams
Geologist

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COMPANY P-m-I FARM Stolp WELL NO. 17

SEC 29 TWP. 30 RGE. 7E LOC. 50'N SENENE COUNTY Cowley STATE KS

CONTRACTOR Gaines Drlg SIZE HOLE 7 7/8" DRILL PIPE 4 1/2

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-21-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
1635 36		1	
		1	
		1	
		1	
1630		1	
		1	
		1	
		1	
		1	
35		1	CONN
		1	
		1	
		1	
		1	
40		1	
		1	
		1	
		1	
		1	
45		1	
		1	
		1	
		1	
		1	
1650		1	
		1	
		1	
		1	
		2	
55		1	
		2	
		1 1/2	
		1 1/2	
		2	
60		2	
		2	
		2	
		1 1/2	
		1 1/2	
65		1 1/2	CONN
		1 1/2	
		1 1/2	
		1 1/2	
		1 1/2	
70		1 1/2	
		1	
		1	
		1	
		1	
1675		1	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
1675 76		1	
		1	
		1	
		1	
80		1	
		1	
		1	
		1	
		1	
85		5 1/2	
		5	
		1 1/2	
		1 1/2	
		1 1/2	
90		1 1/2	
		2	
		3	
		4	
		3 1/2	
1695		3 1/2	CONN
		3	
		3	
		2 1/2	
		3	
1700		3	
		3	
		3 1/2	
		3 1/2	
		3 1/2	
05		4	
		3	
		3 1/2	
		3 1/2	
		3 1/2	
10		3 1/2	
		3 1/2	
		3	
		2	
		2	
15		2	
		4	
		4	
		4	
		3	
20		3	
		3 1/2	
		3	
		2	
		2 1/2	
1725		3	CONN

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COMPANY P-m-I FARM Stolp WELL NO. 1-7

SEC. 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE KS

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8" DRILL PIPE 4 1/2

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-21-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
1725/26		3 1/2	
		3	
		1 1/2	
		1	
30		3	
		3	
		3	
		3	
		3 1/2	
35		3 1/2	
		3 1/2	
		3 1/2	
		3	
		3	
40		3	
		3	
		3	
		3	
		3	
45		3	
		3	
		3	
		3	
		3	
50		3	
		3	
		3	
		3	
		3	
55		2	CONN
		3	
		3	
		3	
		3	
60		3	
		3	
		3	
		3	
		3	
65		3	
		3	
		3	
		3	
		3	
70		3	
		3	
		3	
		3	
		3	
1775		3	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
1775/76		2	
		2	
		2 1/2	
		3	
1788		4	FROM
		5	
		3	
		3	
		2 1/2	
85		2 1/2	CONN
		1	
		1	
		1	
		1	
90		1 1/2	
		3 1/2	W.O.P
		1	
		1 1/2	
		3	
95		3	
		3	
		3	
		3	
		3	
1800		3	
		2 1/2	
		2 1/2	
		2	
		2	
05		2	
		3	
		2	
		3	
		3	
10		2 1/2	
		2 1/2	
		2 1/2	
		2 1/2	
		1 1/2	
15		2	
		3	
		3	
		2	
		3	
20		3	
		3	
		3	
		3	
		3	
1825		3	

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COMPANY P-m-I FARM STOLP WELL NO. 7

SEC 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE KS

CONTRACTOR GAINES Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2 XH

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-21-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
~~1825~~ 26	~~7:03 1/2~~ 7:09	3 1/2	
	12	3	
	15	3	
	18	3	
30	21	3	
	24	3	
	27	3	
	30	3	
	33	3	
35	36	3	
	39 1/2	3 1/2	
	43 1/2	3	
	46	3 1/2	
	49 1/2	3 1/2	
40	53	3 1/2	
	56	3	
	8:00	4	
	04	4	
	07	2 1/2	CONN
45	9	2	
	11	2	
	14	3	
	16 1/2	2 1/2	
	19	2 1/2	
50	21	2	
	23	2	
	25	2	
	27 1/2	2 1/2	
	30	2 1/2	
55	33	3	
	36	3	
	38 1/2	2 1/2	
	42 1/2	4	
	45 1/2	3	
60	49	3 1/2	
	52 1/2	3 1/2	
	56 1/2	4	
	9:00	3 1/2	
	03	3	
65	5	2	
	7	2	
	9 1/2	2 1/2	
	12	2 1/2	
	14 1/2	2 1/2	
70	17	2 1/2	
	19 1/2	2 1/2	
	21 1/2	2	
	24	2 1/2	
	26	2	CONN.
1875	27	1	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
~~1875~~ 76	~~9:27~~ 9:29	2	
	30	1	
	31	1	
	33	2	
80	35	2	
	38	3	
	41	3	
	44 1/2	3 1/2	
	48	3 1/2	
85	52	4	
	55	3	
	58	3	
	10:02	4	
	05 1/2	3 1/2	
90	9	3 1/2	
	12 1/2	3 1/2	
	16 1/2	4	
	20 1/2	4	
	24 1/2	4	
95	28	3 1/2	
		4	
		4	
		3 1/2	
		3 1/2	
1900		4	
		4 1/2	
		4 1/2	
		4 1/2	
		4 1/2	CONN.
05		2 1/2	
		3	
		3 1/2	
		2 1/2	
		2 1/2	
10		1 1/2	
		1 1/2	
		1	
		1	
		1 1/2	
15		1 1/2	
		1 1/2	
		1 1/2	
		1 1/2	
		1	
20		1 1/2	
		1 1/2	
		1 1/2	
		1 1/2	
		2	
1925		1 1/2	

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COMPANY P-M-I FARM STOLP WELL NO. #17

SEC 29 TWP 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE Kansas

CONTRACTOR GAINES Drilling SIZE HOLE 7 7/8" DRILL PIPE 4 1/2 X H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-22-70

DEPTH	TIME O'CLOCK	MIN.	REMARKS
1925/26		2	
		2	
		1.5	
		1.5	
1930		1.5	
		1.5	
		1.5	
		1.5	
		1.5	CONN.
1935		1.5	
		1.5	
		1	
		1.5	
		1.5	
1940		2	
		2	
		2	
		2	
		1.5	
1945		2	
		2	
		2	
		2	
		2	
1950		2	
		2	
		2	
		2	
		2	
1955		2	
		2	
		2	
		2	
		2	
1960		3	
		2	
		2.5	
		3	
		2.5	CONN.
1965		2	
		1.5	
		2	
		1.5	
		1.5	
1970		1.5	
		1.5	
		2	
		2.5	
		3	
1975		3.5	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
1975/76		3	
		3.5	
		4	
		3.5	
1980		3.5	
		4	
		3.5	
		3.5	
		3.5	
1985		3.5	
		3.5	
		3.5	
		4	
		5	
1990		4	
		5	
		3	
		3	
		2.5	CONN.
1995		2	
		2	
		2	
		2	
		2	
2000		2	
		2	
		2	
		2	
		2	
2005		2	
		2.5	
		2	
		2	
		2	
2010		2.5	
		2.5	
		2	
		2	
		2	
2015		2	
		2	
		2	
		2	
		2	
2020		2	
		2	
		2.5	
		2	
		2.5	CONN.
2025		2	

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COMPANY P-M-I FARM Stolp WELL NO. #1

SEC 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE Kansas

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-22-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2025/26		2	
		2	
		2	
		2	
2030		2	
		2	
		2	
		2	
		2	
2035		2	
		2	
		2	
		2 1/2	
		2	
2040		2 1/2	
		2 1/2	
		2	
		2	
		2 1/2	
2045		2 1/2	
		2	
		3	
		2 1/2	
		2 1/2	
2050		3	
		2 1/2	
		2	
		3	
		3	CONN.
2055		2	
		2	
		2	
		2	
		2	
2060		2	
		2	
		2	
		2	
		2	
2065		2	
		2	
		2	
		2	
		2	
2070		2	
		2	
		2	
		3	
		2	
2075		2	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2075/76		2	
		2 1/2	
		2	
		2 1/2	
2080		2	
		2	
		2	
		2	
		2 1/2	CONN.
2085		3	
		2	
		2	
		2	
		2	
2090		2	
		2	
		2	
		2	
		2	
2095		2 1/2	
		2 1/2	
		2	
		2 1/2	
		2	
2100		2	Mix mud @ 2100'
		2 1/2	
		1 1/2	
		1	
		1	
2105		1	
		1	
		1	
		1	
		1	
2110		1 1/2	
		1 1/2	
		1 1/2	
		1 1/2	
		2	
2115		2	
		1 1/2	
		3	
		3	
		3	TO KANSAS CITY
2120		3 1/2	
		3	
		3 1/2	
		3 1/2	
		3 1/2	
2125		3	

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COMPANY PMI FARM Stolp WELL NO. 17

SEC 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE KS

CONTRACTOR Barnes Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-22-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2125/26		3	
		3	
		2	
		2 1/2	
30		2 1/2	
		3	
		3 1/2	
		3 1/2	
		3 1/2	
35		3 1/2	
		4	
		3	
		3	
		3	
40		3	
		3	
		3	
		2 1/2	
		2 1/2	CONN
45		2 1/2	
		2 1/2	
		2	
		2 1/2	
		2	
50		4	
		4	
		4	
		3 1/2	
		4	
55		2 1/2	
		3	
		3	
		2 1/2	
		2 1/2	
60		3	
		4	
		3	
		4	
		4	
65		4	
		4	
		3 1/2	
		2	
		2	
70		3	
		2 1/2	
		2	
		2	
		2 1/2	CONN
75		2 1/2	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2175/76		2 1/2	
		2 1/2	
		2	
		2	
80		2	
		2	
		2 1/2	
		2	
		3	
85		4	
		4	
		3 1/2	
		3 1/2	
		4	
90		4 1/2	
		4 1/2	
		5	
		4	
		4	
95		3 1/2	
		3	
		2 1/2	
		3	
		3 1/2	
2200		3 1/2	
		3 1/2	
		3	
		1 1/2	
		4	CONN
05		3	
		3	
		2 1/2	
		3	
		2 1/2	
10		3	MUD CHECK
		3	34 VIS 9.2 WT
		3	
		3	
		3	
15		3	
		2 1/2	
		3	
		3	
		2	
20		2	
		2	
		2 1/2	
		3	
		3 1/2	
2225		3 1/2	

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COMPANY P-M-I FARM Stolp WELL NO. 17

SEC. 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE KS

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8" DRILL PIPE 4 1/2 x H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-22-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2275/26		3 1/2	
		3	
		2 1/2	
		2 1/2	
30		2 1/2	
		2 1/2	
		2 1/2	
		1 1/2	
		3	CONN
35		3	
		3	
		2 1/2	
		3	
		3	
40		3	
		3 1/2	
		3 1/2	
		1 1/2	
		2	
45		5	
		3	
		2	
		3	
		4	
50		4	
		4	
		4	
		4	
		4	
55		3 1/2	
		3 1/2	
		3 1/2	
		4 1/2	
		3	
60		3	
		4 1/2	
		3	
		3	
		3	CONN
65		2 1/2	
		2 1/2	
		2 1/2	
		3 1/2	
		3 1/2	
70		3	
		3	
		3 1/2	
		6 1/2	
		4 1/2	
2275		3	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2275/76		3 1/2	
		5	
		5 1/2	
		5 1/2	RCH
80		5	Check mud
		5	"34" vis.
		5	
		5 1/2	
		4	
85		4	
		2 1/2	
		3	
		6	
		5	
90		5	
		3 1/2	
		3 1/2	
		3	
		2	CONN. mix mud
95		2	36 vis
		2	9.3 wt.
		2	
		2	
		1 1/2	
2300		1 1/2	
		4	
		5	
		5	
		5	
05		5	
		5	
		5 1/2	
		5 1/2	
		5	
10		4	HERTHA LIMESTONE
		4	
		3 1/2	
		3 1/2	
		3 1/2	
15		3 1/2	
		3	
		4 1/2	
		4 1/2	
		7	
20		4	
		4	
		4	
		2 1/2	
		2 1/2	CONN.
2325		2 1/2	CALL JAY

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COMPANY P-M-I FARM STOLP WELL NO. #17

SEC. 29 TWP. 30. RGE. 7E LOC. SE NE NE COUNTY Cowley STATE Kansas

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2 x H

REMARKS: 5 foot samples 2800, 32 dmt 9.4 9.5 60-65 strokes 500 pounds of pump

SIZE PUMP LINERS LENGTH STROKE

DATE 7-23-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
~~2325~~ 26		2 1/2	
		2	
		2	
		3	
2330		4	
		3	
		3	
		5	
		6	Circ. for Sample
2335		6	15-30-45
			Mud Check 36 vis
			9.3 weight
			DST #1 2290-2334'
2340			
2345			
		3 1/2	
		4	
		3	
		4 1/2	
2350		5	
		5	
		5	
		5	
		3 1/2	
2355		3	
		2 1/2	
		2 1/2	
		2 1/2	
		2 1/2	
2360		2 1/2	
		2 1/2	
		2 1/2	
		2 1/2	
		2 1/2	
2365		2 1/2	CONN
		2 1/2	
		2	
		2	
		2 1/2	
2370		4	
		3	
		3	
		2 1/2	
		2	
2375		2	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
~~2315~~ 16		2	
		2 1/2	
		3	
		2 1/2	
2380		2 1/2	
		3	
		3	
		2 1/2	
		2	
2385		7	work on Throttle
		2 1/2	
		2	
		2 1/2	
		1 1/2	
2390		1 1/2	
		1	
		2	
		2	
		4	
2395		3 1/2	CONN
		4	
		3 1/2	
		3 1/2	
		4 1/2	
2400		2	
		2 1/2	
		2 1/2	
		2 1/2	
		2 1/2	
2405		2 1/2	
		2	
		2 1/2	
		2	
		3	
2410		2 1/2	
		3	
		2 1/2	
		2 1/2	
		2	
2415		2 1/2	
		2 1/2	
		2 1/2	
		2	
		3	
2420		3	
		3	
		3	
		2 1/2	
		2 1/2	
2425		3	CONN

FROM CONFIDENTIAL

ROTARY DRILLING TIME SHEET # 503 ©
KANSAS BLUE PRINT CO. WICHITA, KAN.

CONFIDENTIAL

COMPANY PmI FARM Stolp WELL NO. 17

SEC. 29 TWP 30. RGE. 7E LOC. SE NE NE COUNTY Cowley STATE KS

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8" DRILL PIPE 4 1/2 x H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

RELEASED OCT 9 8 FROM CONFIDENTIAL

DATE 7-23-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2425/26		3	
		3	
		3	
		3	
30		3	
		3	
		3	
		3	
		3	
35		3½	
		3	
		3	
		3	
		4	
40		4	
		4	
		3	
		3½	
		3	
45		3	
		3	
		4	
		4	
		3½	
50		3	
		3½	
		4	
		4	
		4	
55		3	CONN.
		3½	
		3½	
		3	
		3½	
60		2	
		3	MUD CHECK
		4	(30 vis.
		4½	(8.9 weight)
		4	
65		4	
		4	
		3	
		3	
		2½	
70		3	
		3	
		3	
		3	
		3	
2475		3	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2475/76		3½	
		3	
		3	
		2½	
80		3	
		3	
		3	
		3	
		4	
85		3	CONN.
		3	
		2½	
		2½	
		2½	
90		3	
		2	
		3½	
		3	
		3	
95		2½	
		3	
		3	
		3	
		3	
2500		3	
		3½	
		3½	
		3	
		3½	
05		3	
		3½	
		3½	
		3	
		3½	
10		3	
		3	
		4	
		3	
		3	15
15		3	CONN.
		3½	
		3	
		3	20
		2	
20 25		2	
		3	
		3½	
		3½	
25		3	
30		4	

ROTARY DRILLING TIME SHEET # 503
KANSAS BLUE PRINT CO., WICHITA, KAN.

CONFIDENTIAL

COMPANY PMI FARM Stolp WELL NO. 17

SEC. 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE KS

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8" DRILL PIPE 4 1/2 x H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-24-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2630/31		2 1/2	25
		2 1/2	
		2 1/2	
		2 1/2	
35		1	30 CONN
		1 1/2	
		1 1/2	
		1 1/2	
		1 1/2	
40		1 1/2	35
		1 1/2	
		2	
		2	
		2	
45		2	40
		2	
		1 1/2	
		1 1/2	
		1 1/2	
50		1	45
		1 1/2	
		1 1/2	
		1 1/2	
		2	
55		2	50
		3	
		2 1/2	
		3	MUD CHECK
		1 1/2	32 V.S 9.0+
60		1 1/2	55
		1 1/2	
		1	
		1 1/2	
		1	
65		1	CONN
		2 1/2	
		2 1/2	
		2 1/2	
		1 1/2	
70		2	
		2	
		2	
		2 1/2	
		2 1/2	
75		2 1/2	
		2 1/2	
		2 1/2	
		2 1/2	
		3	
2680		1 1/2	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2680/81		2	
		1	FROM
		1	
		1 1/2	
85		2 1/2	
		2 1/2	
		2 1/2	
		2 1/2	
		2	
90		2	
		2	
		2 1/2	
		2	
		2	
95		1 1/2	CONN
		1 1/2	
		1 1/2	
		2	
		2 1/2	
2700		2	
		2 1/2	
		2 1/2	
		2 1/2	
		1 1/2	
05		1 1/2	
		1 1/2	
		1 1/2	
		2	
		3	
10		3	
		2	
		4	
		1 1/2	
		1 1/2	
15		2	
		2 1/2	
		2 1/2	
		2 1/2	
		3	
20		3	
		4	
		2 1/2	
		1 1/2	
		1 1/2	
25		1	CONN
		2	
		1 1/2	
		2	
		2	
2730		1 1/2	

ROTARY DRILLING TIME SHEET # 503
KANSAS BLUE PRINT CO., WICHITA, KAN.

CONFIDENTIAL

COMPANY PmI FARM Stolp WELL NO. 17

SEC. 29 TWP. 30 RGE. 7E LOC. COUNTY Cowley STATE KS

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2 x H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

RELEASED

DATE 7-24-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2730/31		2 1/2	
		2	
		2	
		2	
35		2	
		1 1/2	
		2	
		2	
		2 1/2	
40		2 1/2	
		2	
		2	
		2	
		2	
45		2	
		2	
		2	
		2 1/2	
		2 1/2	
50		2	
		2	
		2	
		1 1/2	
		1 1/2	
55		1 1/2	CONN
		2	
		1 1/2	
		1 1/2	
		1 1/2	
60		1 1/2	
		1 1/2	
		1 1/2	
		2	
		3	
65		3 1/2	
		2 1/2	
		2 1/2	
		2	
		2	
70		2	
		2	
		2	
		2	
		2	
75		2	
		2	
		2	
		2	
		1 1/2	
80		1 1/2	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2780/81		1 1/2	
		1	
		1	
		1	
85		1 1/2	CONN
		2 1/2	
		2	
		2 1/2	
		2	
90		1	
		1 1/2	
		1 1/2	
		1 1/2	
		1	
95		2	
		2 1/2	
		1	
		1 1/2	
		3	
2800		3	
		2 1/2	
		1	
		1 1/2	
		1	
05		1 1/2	
		2	
		2 1/2	
		2	
		2	
2810		2	
		2	
		2	
		2	
		1 1/2	
15		1 1/2	CONN
		1 1/2	
		1 1/2	
		2	
		1 1/2	
20		1 1/2	
		2	
		1 1/2	
		1 1/2	
		1 1/2	
25		1 1/2	
		1	
		2	
		1	
		1 1/2	
2830		1 1/2	

ROTARY DRILLING TIME SHEET # 503
KANSAS BLUE PRINT CO., WICHITA, KAN.

CONFIDENTIAL

COMPANY PmI FARM Stolp WELL NO. 17

SEC 29 TWP. 30 RGE. 7E LOC. SE-NE-NE COUNTY Cowley STATE KS

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4½ x H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

RELEASED

OCT 1 3

FROM CONFIDENTIAL

DATE 7-24-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
~~2830~~ 31		2	~~Rig up 1 hr 6 8~~
		2	
		1½	
		1½	
35		2	
		2	
		1	
		2½	
		2½	
40		2½	
		2	
		2	
		2	
		1½	
45		1	CONN
		1½	
		1	
		1½	smooth
		1½	
50		1½	
		3	
		3	
		3	
		3	
55		3	
		1½	
		2½	
		2½	
		2	
60		2½	
		2½	
		2	
		2	
		2	
65		2	MISSISSIPPI CHERT
		2½	
		2½	
		2½	
		2½	
70		2½	
		2½	MISSISSIPPI LIME
		3½	
		3½	
		3	
75		2	CONN MISS. Dolomite
		1	
		1½	
		1	
		1	
2880		1½	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
~~2880~~ 81		1½	Rough
		1½	
		1½	
		1	
85		1½	
		1	
		1	
		1	
		1	
90		1	Smooth Break
		1	
		1	
		1	
		1	
95		1½	
		1½	
		1½	
		2	
		2	
2900		2	
		2	
		2½	
		2	
		2½	
05		2½	CONN
		2	Mud Check
		2	36 vis
		2	9.8 weight
		2½	
10		2½	
		2½	
		3	
		2½	
		2½	
15		3	
		2	
		1½	
		2	
		3	
20		3	10 foot samples
		2½	
		2½	
		2½	
		2	
25		2½	
		2	
		2½	
		2½	
		3	
2930		3	

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CONFIDENTIAL

COMPANY P.M.I. FARM Stolp WELL NO. #17

SEC 29 TWP 30. RGE. 7E LOC. SE NE NE COUNTY Cowley STATE Kansas

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2 x H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

RELEASED

OCT 0 3 [illegible]

FROM [illegible]NTIA

DATE 7-24-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2930 31		2½	
		2½	
		2½	
		2	
35		2½	CONN.
		2	
		2½	
		2½	
		2	It should get
40		2½	Hard about
		2½	2940
		3	
		3	
		3	
45		2½	
		2½	
		2½	
		2	
		3	
2950		3	
		3	
		2½	
		2½	
		3	
55		2½	
		3	
		5	
		5½	
		6	
60		6	
		6½	
		6	
		5½	
		5½	
65		4	CONN.
		4	
		4	
		4½	
		4	
70		4½	
		4	
		4	
		3½	
		4	
75		3	
		3	
		3	
		4	
		4	
2980		5½	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
2980 81		4½	
		5½	
		5½	
		5½	
85		6	} Loss
		6	} circulation
		4½	
		5	
		5	
90		5	10 hulls
		5½	33
		5	Get 34 vis
		5½	9.3 or less
		5	
95		3	CONN. D. Add [illegible]
		4	
		4	
		3½	
		4½	
3000		4	
		4½	
		4	
		4½	
		4	
05		4½	
		4	
		4	
		4½	
		4½	
10		4	WATCH for
		5	Loss circulation
		5	if so [illegible]
		5	
		4	
15		4½	
		4	
		4½	
		4½	
		4½	
20		4½	
		4½	
		4½	
		4½	
		4	
25		4	CONN.
		5½	
		3	
		3½	
		3	MUD CHECK
3030		3	32 vis 92+ wt

trace Lcm

ROTARY DRILLING TIME SHEET # 503 ©
KANSAS BLUE PRINT CO., WICHITA, KAN.

CONFIDENTIAL

COMPANY P-M-I FARM Stolp WELL NO. #17

SEC. 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE Kansas

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2 XH

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-25-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
3030/31		3	
		3	
		2½	
		2½	
35		3	
		2½	
		2½	
		3	
		2½	
40		2	
		2½	
		2	
		2½	
		2	
45		3	
		2½	
		2	
		3	
		3	
50		3	
		3	
		3	
		3	
		3	
55		3	CONN.
		2½	
		2½	
		2½	
		2½	
60		2½	
		2	
		2	
		2	
		2	
65		2	
		2	
		2	
		2	
		2	
70		2	
		2½	
		2½	
		2	
		2	
75		2	
		2½	
		2½	
		1½	
		2	
3080		2	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
3080/81		2	FROM CONFIDENTIAL
		2	
		2	
		1	
85		1½	CONN.
		2½	
		2½	
		2	
		2	
90		1½	CALL GEO.
		2	
		1½	
		1½	
		1½	
95		1½	
		1½	
		1½	
		2	
		3	
3100		2½	
		3	
		3	
		3½	
		4	
05		4	
		4	
		4	
		4	
		4	
10		4	
		3½	
		3½	
		3½	
		3	
15		2½	CONN
		2½	
		2½	
		2½	
		3	
20		3	
		3	
		3	
		3	
		3	
25		3	
		4½	
		3	
		5	
		4½	
30		5	

ROTARY DRILLING TIME SHEET # 503
KANSAS BLUE PRINT CO., WICHITA, KAN.

CONFIDENTIAL

COMPANY PMI FARM Stolp WELL NO. 17

SEC. 29 TWP. 30 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE KS

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4½ x H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-25-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
3130 / 31		5½	
32		4	
33		6½	
		3½	
35		3	
		3	
		2½	
		3	
		2½	
40		2½	
		2½	
		2½	
		2½	
		2	
45		2½	CONN
		2½	
		2½	
		2½	
		2½	
50		3	
		2	
		2½	
		2½	
		2½	
55		3½	
		3	
		3	
		3	
		3	
60		3	
		3	
		3	
		3½	
		3½	
65		3½	
		3½	
		3½	
		3½	
		3½	
70		3½	
		3½	
		3½	
		3	
		3½	
75		2½	CONN
		3	KINDERHOOK @3175'
		2½	
		2½	
		2½	
3180		2½	

DEPTH	TIME O'CLOCK	MIN.	REMARKS
3180 / 81		3	
		2½	FROM
		2½	
		3	
85		3	
		3	
		3	
		3	
		3	
90		3	
		2½	
		3	
		3½	
		3	
95		2½	
		2½	
		2	
		2½	
		2½	
3200		3	
		3	CONN/HASH SHALE
		3	
		2½	
		2½	
05		2	
		3	
		2½	
		10	WORK ON AIR
		2	
10		2	
		2½	
		2	
		2	
		2½	
15		2½	
		2½	
		2	
		2	
		2	
20		2½	PLUG CHECK
		2½	38 VIS 9.2+
		2	11.8 WM
		2½	
		3	
25		2½	
		2½	
		2½	
		2½	
		2½	
3230		2½	

ROTARY DRILLING TIME SHEET # 503 ©
KANSAS BLUE PRINT CO., WICHITA, KAN.

CONFIDENTIAL

COMPANY P-M-I FARM Stolp WELL NO. #17

SEC 29 TWP. 36 RGE. 7E LOC. SE NE NE COUNTY Cowley STATE Kansas

CONTRACTOR Gaines Drilling SIZE HOLE 7 7/8 DRILL PIPE 4 1/2 X H

REMARKS: SIZE PUMP LINERS LENGTH STROKE

DATE 7-25-90

DEPTH	TIME O'CLOCK	MIN.	REMARKS
~~32~~ 30 31		2	
		2	
		2 1/2	
		2 1/2	
35		2	CONN
		2	geo NOTIN
		2	
		2	
		2	Circulate for
40		2	samples @ 3239
		2	15-30-45
		2	Rough ARBUCKLE got ROFF
		2 1/2	15-30-45 circ.
45			
50			

DEPTH	TIME O'CLOCK	MIN.	REMARKS

ROTARY DRILLING TIME SHEET # 503
KANSAS BLUE PRINT CO., WICHITA, KAN.