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FROM CONFIDENTIAL

WELL HISTORY
ENSIGN OPERATING CO.
NO. 1-9 DOLL FAMILY TRUST
DOLL PROSPECT
NE SW NW SEC. 9, T16S, R30W
LANE COUNTY, KANSAS

BY

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STRIP LOG (WITH DRILL TIME, LITHOLOGY AND HOT WIRE MEASUREMENTS)	ATTACHED

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SYNOPSIS

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The Ensign Operating Co. No. 1-9 Doll Family Trust, NE SW NW Sec. 9, T16S, R30W, Lane County, Kansas, was a 4450-foot wildcat well to test the Pennsylvanian Lansing, Marmaton, Pawnee, Fort Scott and Cherokee in the Doll Prospect. The basis for the prospect was an interpretation of geophysical and subsurface data. The prospect is located in an area where oil production from several intervals in the well is common. The main exploratory objectives of the well are the Lansing H and I, Marmaton, Pawnee Fort Scott and Cherokee intervals.

The well was structurally low to the offset wells. Poor oil shows were observed in the Lansing D and H, Marmaton and Cherokee intervals. The oil show in the Cherokee was drill-stem tested. This test recovered twenty feet of drilling mud.

The lithologic samples were smaller than normal in size. The small size resulted from the drill string being under compression while drilling. This causes the drill pipe to "wall whip" the sides of the hole creating small samples and abundant cavings.

An evaluation of the lithologic samples, borehole geophysical logs and and a drill-stem test indicates that the well contains no commercially producible oil or gas. Based on these factors and other considerations, the well was plugged and abandoned on September 19, 1992.

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GENERAL WELL INFORMATION

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Operator: Ensign Operating Co.
Well Name: No. 1-9 Doll Family Trust API No. 15-101-21 630
Location: NE SW NW Sec. 9, T16S, R30W, 3630' FSL, 4290' FEL
County: Lane
State: Kansas
Prospect: Doll
Elevation: G.L. 2684' K.B. 2689'
Date Spudded: September 12, 1992 @ 5:30 P.M.
Date Drilling Completed: September 17, 1992 @ 3:40 A.M.
Total Depth: Driller 4450' Logger 4448'
Status: Plugged and Abandoned
Drill-Stem Tests: DST No. 1 4321'-4392' Straddle Test Cherokee

30-30-15-30

I.O. Weak blow dead in 2 minutes.

F.O. Weak surge, then dead.

Rec: 20' Drilling mud.

HP 2138-2112 psi

FP 88-90:93-93 psi

SIP 1056-1038 psi

BHT 130° F

Trilobite Testing, John Ried, Testor

Cores: None

Logging Program: DIG/GR/SP 0' - 4444'
CNL/CDL/GR/Cal 38' - 4423'
BHC/GR 298' - 4446'
MEL/GR/Cal 3250' - 4416'

ELI Wireline Services Inc. Don A. Erickson, Engineer

Sample Program: 10' Samples 3184'-4450'
Samples examined and described at well site. Samples were caught on depth intervals by rig crews. Samples were lagged by geologist. All depths reported herein are lagged depths.

Mud Logging: None

Mud Program: MUD-CO Inc. John Ziegler, Engineer.

Lost Circulation: None

Drilling Engineer: Herb Brady

Contractor: Murfin Drilling Co.
Rig No. 3, Keith Van Pelt, Tool Pusher

<u>Bit Record:</u>	No.	Size	Make	Type	Depth Out	Feet	Hours
	1	12.250"	SEC	S33S	324'	319'	2.75
	2	7.875"	SEC	S33S	2045'	1721'	15.75
	3	7.875"	SEC	S84F	4450'	2405'	76.75

Total Rotating Hours 95.25

Average Feet/Hour 46.72

Deviation Record: 1/4° @ 324'
1/2° @ 2045'
3/4° @ 4450'

DAILY DRILLING REPORT

NO. 1-9 Doll Family Trust

7:00 A.M. Reports

1	September 12, 1992	0' (0')	MIRT, Spud @ 5:30 P.M.
2	Sun 13	340' (340')	Set 8 5/8" @ 324'. Plug Down @ 10:45 P.M. Drill Plug @ 6:45 A.M.
3	Mon 14	2200' (1860')	
4	Tue 15	3135' (935')	
5	Wed 16	3640' (505')	
6	Thru 17	4130' (490')	
7	Fri 18	4450' (320')	Logging, DST No.1 4321'-4392', Straddle.
8	Sat 19	4450' (0')	Plug and Abandon.

FORMATION TOPS No. 1-9 DOLL FAMILY TRUST

G.L. 2684' K.B. 2689'	Landmark No. 1-8 Doll SW NE NE 8-16S-30W K.B. 2735'	Drill Time and Samples	Wire Line Geophysical Logs
Tertiary	Surface +2731'	Surface +2684'	Surface +2684'
Cretaceous			
Turonian			
Niobrara			
Fort Hays**	330' +2391'	NDT	294' +2395'
Cenomanian			
Greenhorn	621' +2100'	NDT	578' +2111'
Graneros	732' +1989'	NDT	695' +1994'
Albian			
Dakota	770' +1951'	NDT	728' +1961'
Kiowa	1011' +1710'	NDT	936' +1753'
Cheyenne	1156' +1565'	NDT	1104' +1585'
Permian			
Leonardian			
Nippewalla Gr.			
Blaine	NP	NP	NP
Cedar Hills	1621' +1100'	1691' +998'	1684' +1005'
Sumner Gr.			
Stone Corral	2128' +593'	2092' +597'	2090' +599'
Ninnescah	2157' +564'	2121' +568'	2118' +571'
Wellington	2411' +310'	2400' +289'	2394' +295'
Wolfcampian			
Chase Gr.			
Herington	2578' +143'	2547' +142'	2545' +144'
Krider	2602' +119'	2572' +117'	2570' +119'
Winfield	2644' +77'	2619' +70'	2616' +73'
Towanda	2710' +11'	2674' +15'	2676' +13'
Wreford	2818' -97'	2784' -95'	2788' -99'
Council Grove Gr.	2840' -119'	2810' -121'	2812' -123'
Pennsylvanian			
Virgilian			
Wabaunsee**	3382' -647'	3354' -665'	3348' -659'
Douglas Gr.			
Heebner	3764' -1029'	3737' -1048'	3732' -1043'
Missourian			
Lansing-Kansas City	3800' -1065'	3774' -1085'	3768' -1079'
B	3826' -1091'	3800' -1111'	3794' -1105'
C	3846' -1111'	3820' -1131'	3814' -1125'
D	3880' -1145'	3848' -1159'	3844' -1155'
E	3911' -1176'	3882' -1193'	3878' -1189'
F	3969' -1234'	3944' -1255'	3940' -1251'
G	3977' -1242'	3956' -1267'	3950' -1261'
H	4005' -1270'	3976' -1287'	3972' -1283'
I	4039' -1304'	4009' -1320'	4004' -1315'
Stark Shale	4066' -1331'	4035' -1346'	4031' -1342'

** Formation tops above Wabaunsee are from Landmark Oil Exploration, No. 2-8 Doll, NW SE NE Sec. 8, T16S, R30W. KB 2721'.

FORMATION TOPS No. 1-9 DOLL FAMILY TRUST

G.L. 2684' K.B. 2689'	Comparison Well SW NE NE 8-16S-30W K.B. 2735'	Drill Time and Samples	Wire Line Geophysical Logs
Pennsylvanian			
Kansas City Gr.			
Hushpuckney Shale	4100' -1365'	4069' -1380'	4065' -1376'
Base Kansas City Gr	4140' -1405'	4108' -1419'	4104' -1415'
Desmoinesian			
Marmaton Gr.	4170' -1435'	4137' -1448'	4134' -1445'
Shale Marker	4260' -4260'	4224' -1535'	4224' -1535'
Pawnee	4296' -4296'	4262' -1573'	4256' -1567'
Fort Scott	4315' -1580'	4284' -1595'	4278' -1589'
Cherokee Gr.	4342' -1607'	4308' -1619'	4304' -1615'
Mississippian			
Meramecian			
St. Louis	4410' -1689'	4392' -1703'	4389' -1700'
Total Depth	4455' -1720'	4450' -1793'	4448' -1791'

Ensign Operating Co.
No. 1-9 Doll Family Trust
NE SW NW Sec. 9, T16S, R30W
Lane County, Kansas

Sample examination commenced at 3184 feet and continued to total depth at 4450 feet. Samples were caught by crews on depth intervals and lagged by geologist. All depths reported herein are lagged depths. A 10 foot sample interval was used from 3184 feet to 4450 feet.

- 3184 - 3195 Shale (50%), gray, dark gray. Shale (35%), red. Limestone (15%), light gray, wackestone, mudstone. Cuttings are very small in size. Drilling with water.
- 3195 - 3202 Shale (60%), gray, light gray. Shale (20%), red. Limestone (20%), gray, mudstone, wackestone.
- 3202 - 3212 Shale (50%), gray, light gray, red. Limestone (50%), gray, mudstone, wackestone.
- 3212 - 3222 Shale (60%), gray, light gray, red. Limestone (40%), gray, mudstone, wackestone.
- 3222 - 3232 Limestone (65%), light gray, mudstone, wackestone. Shale (35%), red, light gray.
- 3232 - 3238 Limestone (70%), light gray, white, wackestone, mudstone, trace oolitic packstone. Shale (30%), light gray, gray, red.
- 3238 - 3248 Shale (65%), light gray, gray, red. Limestone (35%), light gray, grayish tan, mudstone, wackestone.
- 3248 - 3262 Limestone (55%), tan, grayish tan, mudstone, wackestone. Shale (45%), gray, light gray, red.
- 3262 - 3274 Limestone (50%), tan, grayish tan, mudstone, wackestone. Shale (50%), gray, light gray, red.
- 3274 - 3284 Shale (60%), gray, light gray, red. Limestone (40%), tan, light gray, grayish tan, mudstone, wackestone.
- 3284 - 3291 Shale (55%), gray, light gray, red. Limestone (45%), tan, light gray, grayish tan, wackestone, some packstone, mudstone.
- 3291 - 3298 Shale (65%), gray, light gray, red. Limestone (35%), tan, light gray, grayish tan, wackestone, mudstone.
- 3298 - 3306 Shale (50%), gray, light gray, red. Limestone (50%), tan, light gray, grayish tan, wackestone, mudstone.

- 3306 - 3312 Shale (65%), gray, light gray, red. Limestone (35%), tan, light gray, grayish tan. Drilling with water, cuttings are very small in size.
- 3312 - 3326 Limestone (55%), tan, grayish tan, light gray, wackestone, mudstone. Shale (45%), gray, light gray, red.
- 3326 - 3336 Shale (65%), gray, light gray, red. Limestone (35%), tan, grayish tan, light gray, wackestone, mudstone.
- 3336 - 3356 Shale (80%), gray, light gray, red. Limestone (35%), tan, grayish tan, light gray, wackestone, mudstone.
- 3356 - 3361 Shale (85%), gray, light gray, red. Limestone (15%), tan, grayish tan, mudstone, trace wackestone.
- 3361 - 3369 Shale (85%), gray, light gray, red. Limestone (15%), tan, light gray, mudstone, trace wackestone.
- 3369 - 3380 Limestone (75%), tan, light grayish tan, mudstone, wackestone. Shale (25%), gray, light gray, red.
- 3380 - 3392 Limestone (80%), tan, light grayish tan, mudstone, wackestone. Shale (20%), gray, light gray, red.
- 3392 - 3404 Limestone (75%), tan, light grayish tan, mudstone, wackestone. Shale (25%), gray, light gray, red.
- 3404 - 3412 Limestone (95%), buff, tan, mudstone, wackestone. Shale (5%), gray, light gray, red.
- 3412 - 3420 Limestone (90%), tan, light grayish tan, wackestone, mudstone. Shale (10%), gray, light gray, red.
- 3420 - 3434 Limestone (75%), tan, light grayish tan, wackestone, mudstone. Shale (25%), gray, light gray, red.
- 3434 - 3448 Limestone (70%), tan, light grayish tan, wackestone, mudstone. Shale (30%), gray, light gray, red.
- 3448 - 3455 Limestone (75%), tan, light grayish tan, mudstone, wackestone. Shale (25%), gray, light gray, red.
- 3455 - 3464 Shale (60%), gray, light gray, red. Limestone (40%), tan, light grayish tan, mudstone.
- 3464 - 3474 Shale (70%), gray, light gray, red. Limestone (30%), tan, light grayish tan, mudstone. Poor sample quality. Drilling with water.
- 3474 - 3482 Shale (80%), gray, light gray, red. Limestone (20%), tan, light grayish tan, mudstone.

- 3482 - 3492 Shale (65%), gray, light gray, red. Limestone (35%), tan, gray, mudstone
- 3492 - 3503 Shale (60%), gray, light gray, red. Limestone (40%), light grayish tan, tan, mudstone.
- 3503 - 3513 Shale (70%), gray, light gray, red. Limestone (30%), tan, light grayish tan, mudstone. Poor sample quality. Drilling with water, cuttings are very small in size.
- 3513 - 3518 Shale (60%), gray, light gray, red. Limestone (40%), tan, light grayish tan, mudstone, wackestone, trace tan oolitic packstone.
- 3518 - 3523 Shale (80%), gray, light gray, red. Limestone (20%), tan, light grayish tan, mudstone, wackestone.
- 3523 - 3533 Shale (70%), gray, light gray, green. Limestone (30%), tan, light grayish tan, mudstone, wackestone.
- 3533 - 3546 Limestone (65%), tan, light grayish tan, mudstone, wackestone. Shale (35%), gray, light gray, red.
- 3546 - 3556 Limestone (70%), grayish tan, tan, mudstone, wackestone. Shale (30%), gray, light gray, red.
- 3556 - 3560 Shale (50%), gray, light gray, red. Limestone (50%), grayish tan, tan, mudstone, wackestone.
- 3560 - 3574 Limestone (55%), tan, light grayish tan, mudstone. Shale (45%), gray, light gray, red.
- 3574 - 3590 Limestone (60%), tan, light grayish tan, wackestone, mudstone. Shale (40%), gray, light gray, red.
- 3590 - 3601 Limestone (75%), tan, light grayish tan, wackestone, mudstone. Shale (25%), gray, light gray, red.
- 3601 - 3614 Limestone (50%), tan, light grayish tan, wackestone, mudstone. Shale (50%), gray, light gray, red.
- 3614 - 3622 Shale (80%), gray, light gray, red. Limestone (20%), tan, grayish tan, wackestone, mudstone. Displacing water with drilling mud.
- 3622 - 3628 Shale (85%), gray, light gray, red. Limestone (15%), tan, grayish tan, wackestone, mudstone.
- 3628 - 3640 Shale (65%), gray, light gray, red. Limestone (35%), tan, grayish tan, wackestone, mudstone. Displacing water with drilling mud.
- 3640 - 3656 Limestone (90%), tan, buff, wackestone, packstone. Shale (10%), gray. First good sample.
- 3656 - 3662 Limestone (95%), tan, buff, wackestone, packstone. Shale (5%), gray.

- 3662 - 3666 Limestone (95%), tan, buff, wackestone, packstone, trace vuggy porosity. Shale (5%), gray.
- 3666 - 3675 Limestone (95%), tan, buff, wackestone, packstone, trace vuggy porosity. Shale (5%), gray.
- 3675 - 3682 Limestone (90%), buff, tan, wackestone, mudstone. Shale (10%), gray.
- 3682 - 3694 Limestone (95%), buff, tan, wackestone, mudstone. Shale (5%), gray. Chert (trace), white.
- 3694 - 3704 Limestone (100%), buff, tan, wackestone, mudstone, some packstone, trace vuggy porosity. Trace limestone with brown oil stain, yellow fluorescence, good bleeding cut, good residual ring. Shale (trace), gray.
- 3704 - 3718 Limestone (100%), light grayish tan, buff, wackestone, mudstone, some packstone. Shale (trace), gray, black.
- 3718 - 3737 Limestone (90%), light grayish tan, buff, wackestone, mudstone, some packstone. Shale (trace), gray, black.

HEEBNER 3737' -1048'

- 3737 - 3742 Limestone (85%), light grayish tan, wackestone, some packstone, mudstone. Trace limestone with black asphaltic stain, very dull yellow fluorescence, poor cut. Shale (15%), gray, black.
- 3742 - 3751 Limestone (95%), light grayish tan, wackestone, mudstone, some packstone. Trace limestone with black asphaltic stain, very dull yellow fluorescence, poor cut. Shale (5%), gray, black.
- 3751 - 3764 Limestone (95%), light grayish tan, wackestone, mudstone, vuggy porosity. Trace limestone with dark brown-black asphaltic stain, dull yellow fluorescence, poor cut. Shale (5%), gray, black, green. Chert (trace), white.
- 3764 - 3774 Limestone (95%), light tan, buff, wackestone, mudstone, trace vuggy and pin point porosity. Trace limestone has dark brown-black asphaltic stain, very dull yellow fluorescence, poor cut. Shale (5%), gray, black. Chert (trace-5%), white.

LANSING 3774' -1085'

- 3774 - 3780 Limestone (95%), light tan, buff, wackestone, mudstone, trace vuggy and pin point porosity. Trace limestone has dark brown-black asphaltic stain, very dull yellow fluorescence, very poor cut. Shale (5%), gray, greenish gray. Chert (trace), white.
- 3780 - 3783 Limestone (95%), buff, light tan, wackestone, mudstone. Shale (5%), gray, green, greenish gray, black. Chert (trace), white, gray.

- 3783 - 3792 Limestone (100%), white, mudstone, wackestone. Shale (trace), gray.
- LANSING B 3800' -1111'
- 3792 - 3801 Limestone (100%), white, mudstone, wackestone. Shale (trace), gray.
Chert (trace), white.
- 3801 - 3811 Limestone (90%), white, mudstone, wackestone. Shale (10%), gray, black,
greenish gray.
- LANSING C 3820' -1131'
- 3811 - 3822 Limestone (95%), white, mudstone, wackestone. Shale (5%), gray, black,
greenish gray.
- 3822 - 3831 Limestone (95%), white, mudstone, wackestone. Shale (5%), gray, black,
greenish gray, green.
- 3831 - 3844 Limestone (95%), white, mudstone, wackestone. Shale (5%), gray, black.
- LANSING D 3848' -1159'
- 3844 - 3849 Limestone (95%), white, mudstone, wackestone. Shale (5%), gray, black.
- 3849 - 3863 Limestone (95%), tan, buff, white, wackestone, mudstone, trace limestone
with brown oil stain, dull yellow fluorescence, good cut, good residual
ring. Shale (5%), gray, black.
- 3863 - 3869 Limestone (95%), tan, buff, white, wackestone, mudstone. Shale (5%),
gray, black.
- 3869 - 3874 Limestone (90%), buff, white, mudstone, wackestone. Shale (10%), gray,
greenish gray, black.
- LANSING E 3882' -1193'
- 3874 - 3884 Limestone (100%), buff, light grayish tan, wackestone, mudstone, trace
vuggy porosity, no show of oil. Shale (trace), gray, black.
- 3884 - 3900 Limestone (100%), light grayish tan, oolitic packstone with oomoldic
porosity, wackestone, trace vuggy porosity, no oil show. Shale (trace),
gray, black.
- 3900 - 3908 Limestone (100%), white, buff, wackestone, mudstone. Shale (trace),
gray, black.
- 3908 - 3926 Limestone (100%), white, buff, wackestone, trace oolitic packstone.
Shale (trace), gray, black.
- 3926 - 3936 Limestone (100%), buff, tan, wackestone, mudstone. Shale (trace), gray,
black.

LANSING F 3944' -1255'

3936 - 3948 Limestone (100%), buff, tan, white, wackestone, mudstone. Shale (trace), gray, black.

LANSING G 3956' -1267'

3948 - 3960 Limestone (100%), tan, light grayish tan, mudstone, wackestone. Shale (trace), gray, black.

3960 - 3968 Limestone (100%), tan, light grayish tan, mudstone, wackestone. Shale (trace), gray, black.

3968 - 3976 Limestone (100%), tan, light grayish tan, mudstone, wackestone. Shale (trace), black, gray.

LANSING H 3976' -1287'

3976 - 3988 Limestone (100%), tan, light grayish tan, mudstone, wackestone, trace limestone with brown oil stain, dull yellow fluorescence, good cut, good residual ring, no visible porosity. Shale (trace), black, gray.

3988 - 3898 Limestone (95%), buff, tan, mudstone, wackestone. Shale (5%), gray, black.

3998 - 4001 Limestone (100%), buff, tan, wackestone, mudstone. Shale (trace), gray, black.

LANSING I 4009' -1320'

4001 - 4019 Limestone (100%), buff, tan, wackestone, mudstone, some packstone, no oil show. Shale (trace), gray, black.

4019 - 4026 Limestone (100%), buff, tan, wackestone, mudstone, some packstone, no oil show. Shale (trace), gray, black.

4026 - 4027 Limestone (100%), buff, tan, white, wackestone, mudstone. Shale (trace), gray, black.

4027 - 4032 Limestone (100%), tan, very light grayish tan, wackestone, mudstone. Shale (trace), gray, black. Chert (trace), light gray.

STARK SHALE 4035' -1346'

4032 - 4044 Limestone (90%), tan, grayish tan, buff, wackestone, mudstone. Shale (5%), black, gray.

4044 - 4054 Limestone (95%), tan, grayish tan, buff, wackestone, mudstone. Shale (5%), black, gray.

4054 - 4064 Limestone (95%), buff, white, tan, wackestone, mudstone. Shale (5%), black, gray. Chert (trace), gray, white.

HUSHPUCKNEY 4069' -1380'

- 4064 - 4071 Limestone (85%), tan, light grayish tan, mudstone, wackestone. Shale (15%), black, gray. Chert (trace), light gray, tan.
- 4071 - 4086 Limestone (95%), tan, light grayish tan, wackestone, mudstone. Shale (5%), black, gray.
- 4086 - 4090 Limestone (95%), tan, light grayish tan, wackestone, mudstone. Shale (5%), black, gray.
- 4090 - 4100 Limestone (100%), buff, very light grayish tan, mudstone, wackestone. Shale (trace), gray, black.

BASE KANSAS CITY 4108' -1419'

- 4100 - 4110 Limestone (95%), tan, very light grayish tan, wackestone, some oolitic packstone, mudstone. Shale (5%), black, gray.
- 4110 - 4114 Limestone (95%), tan, very light grayish tan, wackestone, mudstone. Shale (5%), gray, black.
- 4114 - 4126 Limestone (85%), tan, very light grayish tan, wackestone, mudstone, trace tan oolitic packstone, trace vuggy porosity, no oil show. Shale (15%), black, gray.

MARMATON 4137' -1448'

- 4126 - 4140 Limestone (95%), tan, light grayish tan, wackestone, mudstone. Shale (5%), black, gray.
- 4140 - 4147 Limestone (90%), tan, light grayish tan, wackestone, mudstone. Shale (10%), gray.
- 4147 - 4157 Limestone (90%), tan, light grayish tan, wackestone, mudstone, trace limestone with vuggy porosity, brown oil stain, dull yellow fluorescence, good cut, good residual ring. Shale (10%), gray, black, greenish gray.
- 4157 - 4167 Limestone (90%), tan, grayish tan, mudstone, wackestone. Shale (10%), gray, black, greenish gray.
- 4167 - 4176 Limestone (95%), tan, grayish tan, mudstone, wackestone, trace tan oolitic packstone with oomoldic porosity. Shale (5%), gray, greenish gray, black.
- 4176 - 4188 Limestone (85%), tan, grayish tan, mudstone, wackestone. Shale (15%), black, gray, greenish gray.
- 4188 - 4200 Limestone (95%), tan, grayish tan, mudstone, wackestone. Shale (5%), black, gray, greenish gray. Chert (trace), gray, white.

4200 - 4209 Limestone (95%), buff, tan, wackestone, mudstone. Shale (5%), gray, green, black.

4209 - 4216 Limestone (95%), tan, light grayish tan, wackestone, mudstone. Shale (5%), gray, green, black.

SHALE MARKER 4224' -1535'

4216 - 4227 Limestone (95%), tan, light grayish tan, wackestone, mudstone. Shale (5%), gray, black, green.

4227 - 4238 Limestone (95%), tan, grayish tan, wackestone, mudstone. Shale (5%), gray, green, black. Chert (trace-5%), white, tan, light gray.

4238 - 4247 Limestone (95%), tan, grayish tan, mudstone, wackestone. Shale (5%), gray, black. Chert (trace), white, gray.

4247 - 4257 Limestone (95%), tan, grayish tan, mudstone, wackestone. Shale (5%), gray, black. Chert (trace), gray, brown.

PAWANEE 4262' -1573'

4257 - 4267 Limestone (80%), tan, buff, grayish tan, mudstone, wackestone. Shale (20%), black, gray. Chert (trace), gray, white.

4267 - 4278 Limestone (90%), tan, buff, mudstone, wackestone. Shale (10%), gray, black. Chert (trace), gray, white.

FORT SCOTT 4284' -1595'

4278 - 4291 Limestone (85%), grayish tan, mudstone, some wackestone. Shale (15%), gray, black. Chert (trace), gray, white.

4291 - 4299 Limestone (85%), gray, grayish tan, brown, mudstone, some wackestone. Shale (5%), black, gray. Chert (trace), gray, white.

4299 - 4309 Limestone (90%), gray, grayish tan, brown, mudstone, some wackestone. Shale (10%), black, gray. Chert (trace), gray.

CHEROKEE 4308' -1619'

4309 - 4317 Limestone (95%), gray, grayish tan, mudstone, some wackestone. Shale (5%), black, gray, green. Chert (trace), gray, white.

4317 - 4330 Limestone (80%), gray, grayish tan, mudstone, some wackestone. Shale (20%), gray, black, greenish gray. Chert (trace), gray, white.

4330 - 4338 Limestone (90%), gray, grayish tan, mudstone, some wackestone. Shale (10%), gray, black. Chert (trace), gray, white.

4338 - 4346 Limestone (90%), tan, grayish tan, gray, wackestone, mudstone. Shale (10%), gray, black, reddish brown, light green.

- 4346 - 4357 Limestone (90%), tan, grayish tan, wackestone, some limestone has vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (10%), gray, black, red, gray, green. Chert (trace), white, gray.
- 4357 - 4366 Limestone (90%), buff, tan, wackestone, mudstone, trace limestone has vuggy porosity, brown oil stain, yellow fluorescence, good cut, good residual ring. Shale (10%), gray, black, green. Chert (trace), white, gray.
- 4366 - 4379 Limestone (55%), buff, tan, wackestone, mudstone. Shale (40%), gray, black, red, green. Sandstone (5%), white, fine grained, trace sandstone has brown oil stain, dull yellow fluorescence, good cut, good residual ring.
- 4379 - 4388 Limestone (50%), buff, tan, wackestone, mudstone. Shale (45%), gray, black, green, red. Sandstone (5%), white, fine grained, trace sandstone has brown oil stain, dull yellow fluorescence, good cut, good residual ring. Chert (trace), gray, white.

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- 4388 - 4398 Limestone (90%), buff, light tan, wackestone, some mudstone. Shale (10%), gray, black, red. Chert (trace), white, gray, orange.
- 4398 - 4404 Limestone (95%), buff very light grayish tan, wackestone, mudstone. Shale (5%), gray, black, reddish brown.
- 4404 - 4414 Limestone (100%), buff, light tan, packstone, wackestone, oolitic packstone, stylitic. Shale (trace), gray, green. Chert (trace), gray, white.
- 4414 - 4424 Limestone (100%), buff, light tan, packstone, wackestone. Shale (trace), gray. Chert (trace), white.
- 4424 - 4436 Limestone (100%), buff, light tan, packstone, wackestone. Shale (trace), gray. Chert (trace), gray, white.
- 4436 - 4443 Limestone (100%), buff, tan, wackestone, packstone. Shale (trace), gray, green. Chert (trace), white, gray, orange.
- 4443 - 4448 Limestone (90%), buff, tan, wackestone, packstone, oolitic packstone. Shale (10%), gray, green, black. Chert (trace), gray, white.
- 4448 - 4450 Limestone (95%), buff, tan, wackestone, packstone, oolitic packstone. Shale (5%), gray, green. Chert (trace), gray, tan.

TOTAL DEPTH DRILLER 4450 FEET.
TOTAL DEPTH LOGGER 4448 FEET.

SUMMARY

The Ensign Operating Co., No. 1-9 Doll Family Trust, NE SW NW Sec. 9, T16S, R30W, Lane County, Kansas, was a 4450-foot wildcat well to test the Doll Prospect. The basis for the prospect was an interpretation of geophysical and subsurface data. The main exploratory objectives of the well are the Lansing H and I, Marmaton, Pawnee Fort Scott and Cherokee intervals.

The well was structurally low to the offset wells. Poor oil shows were observed in the Lansing D and H, Marmaton and Cherokee intervals. The oil show in the Cherokee was drill-stem tested. This test recovered twenty feet of drilling mud.

An evaluation of the lithologic samples, borehole geophysical logs and a drill-stem test indicates that the well contains no commercially producible oil or gas. Based on these factors and other considerations the well was plugged and abandoned on September 19, 1992.