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WELL HISTORY

ENSIGN OPERATING COMPANY

No. 1-6 McNINCH

McNINCH PROSPECT

RELEASED

SE SW SW Sec. 6, T16S, R24W

SEP 6 1994

NESS COUNTY, KANSAS

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BY
DUANE E. MOREDOCK
CONSULTING GEOLOGIST

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STRIP LOG (WITH DRILL TIME, LITHOLOGY AND HOT WIRE

MEASURMENTS)

ATTACHED

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SYNOPSIS

The Ensign Operating Co. No. 1-6 McNinch SE SW SW Sec. 6, T16S, R24W, Ness County, Kansas was 4486-foot wildcat well to test the McNinch Prospect for commercial oil production. The primary objective of this wildcat well was the Mississippian Osage. Secondary objectives were the Pennslyvania Cherokee A, B and C Sandstones.

The Mississippian Osage dolomites had some porosity development with oil shows. These oil shows were drill-stem tested. The drill-stem test recovered a show of oil, mud and water. At the Mississippian Osage level the well was structurally low when compared to nearby wells.

The Pennsylvanian Cherokee A and B Intervals had poor shows of oil in the lithologic samples. The oil shows were in limestones. These limestones did not have significant visual porosity or other oil reservoir attributes. There were no significant reservoir sandstones in the Cherokee A and B intervals. The Cherokee C Interval was not developed in the well.

After a review of the lithologic samples examinations, a drill-stem test of the most significant oil show in the lithologic samples, an evaluation of the wireline logs and considerations of other factors the decision was made to plug and abandon the well. The well was plugged and abandoned on June 16, 1993.

GENERAL WELL INFORMATION

Operator: Ensign Operating Co. RELEASER
Well Name: No. 1-6 McNinch API 15-135-23 745 SEP 6 1994
Prospect: McNinch FROM CONFIDENTIAL
Location: SE SW SW Sec. 6, T16S, R24W, 990' FWL, 330' FSL
County: Ness
State: Kansas
Elevation: G.L. 2480' K.B. 2489'
Spudded: June 9, 1993 @ 11:55 A.M.
Completed June 15, 1993 @ 3:45 P.M.
Drilling:
Total Depth: Driller 4486', Logger 4486'
Status: Plugged and Abandoned
Drill-Stem Tests: Drill-Stem Test No. 1 4436'-4486'
 Packer Failure; Mis-Run
 Drill-Stem Test No. 2 4468'-4486'
 30-60-30-60
 I.O. Weak Blow, 1/2" Building To 1 1/4" In 30 Min.
 F.O. No Blow
 Recovery: 1' Oil, 39° API @ 60° F
 62' Thin Watery Mud
 Sampler: 50 MI Oil, 2300 MI Mud, 1650 MI Water @ 50 psi
 Rw 0.35 @ 68° F
 Hydrostatic Pressures 2261-2245 psi
 Flow Pressures 7-30:37-44 psi
 Shut-in Pressures 1085-949 psi
 Bottom Hole Temperature 120° F
 Trilobite Testing Co., Paul Simpson, Testor

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<u>Logging Program:</u>	DI/SP/GR	0' - 4486'
	CND/GR/Cal	3500' - 4463'
	ML/GR/Cal	3500' - 4484'

ELI Wireline Services, Inc., Terry Spiller, Engineer

Sample Program: Thirty-foot samples from 3486' to 3632'. Ten foot samples from 3632' to 4486'. Samples were 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. The quality of the samples was good.

Mud Logging: None

Mud Program: MUD•CO Inc, John Ziegler, Engineer

Lost Circulation: None

Contractor: Duke Drilling Company, Rig No. 4, Rich Wheeler, Toolpusher

<u>Bit Record:</u>	No.	Size	Make	Type	Depth Out	Feet	Hours
	1	12.250	Sec	RT	238'	238'	1.75
	2	7.875	Walker	51 PF	1922'	1684'	11.75
	3	7.875	Walker	51 PF	4486'	2564'	90.00

Total Rotating Hours 103.50. Average 43.34 Ft/Hr

Deviation Record:

1/2° @ 238'
 1° @ 1922'
 1/4° @ 4174'
 1/4° @ 4486'

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DAILY DRILLING REPORT

SEP 6 1994

Ensign Operating Co.
No. 1-6 McNinch
SE SW SW Sec. 6, T16S, R24W
Ness County, Kansas

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7:00 A.M. Reports

1	June 9, 1993	0' (0') Rig up rotary tools. Spud @ 11:55 A.M..
2	Thru 10	888' (888') Set 8 5/8" @ 238', Plug down @ 4:00 P.M. Drill Plug @ 12:10 A.M.
3	Fri 11	2141' (1253')
4	Sat 12	2900' (759')
5	Sun 13	3594' (694')
6	Mon 14	4110' (516')
7	Tue 15	4430' (320')
8	Wed 16	4486' (56') DST Nos. 1 & 2, Logging
9	Thru 17	4486' (0') Plug and Abandon

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FORMATION TOPS

Ensign Operating Co.

No. 1-McNinch

SE SW SW Sec. 6, T16S, R24W ~~FROM CONFIDENTIAL~~

Ness County, Kansas

	Comparison Well SW SW 5-16S-24W	Drill Time And Samples K.B. 2448'	Wire Line Logs
G.L. 2480'			
K.B. 2489'			
Tertiary	Surface +2443'	Surface +2480'	Surface +2480'

Cretaceous

Cenomanian

Fort Hays	60' +2388'	104' +2385'	105' +2385'
Carlile	175' +2273'	218' +2271'	218' +2271'
Greenhorn	400' +2048'	446' +2043'	453' +2036'
Graneros	530' +1918'	572' +1917'	572' +1917'

Albian

Dakota	540' +1908'	586' +1903'	586' +1903'
Kiowa	830' +1618'	878' +1611'	878' +1611'
Cheyenne	940' +1508'	976' +1513'	980' +1513'

Permian

Glaudalupian

White Horse	1130' +1318	1192' +1297'	1192' +1297'
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Leonardian

Nipewalla Gr.			
Blaine	1200' +1248'	1246' +1243'	1246' +1243'
Cedar Hills	1300' +1148'	1346' +1143'	1346' +1143'
Sumner Gr.			
Stone Corral	1834' +614'	1876' +613'	1879' +613'
Ninnescah	1864' +584'	1913' +576'	1916' +576'
Wellington	2129' +319'	2160' +329'	2160' +329'
Hutchinson	2215' +233'	2254' +235'	2254' +235'

Wolfcampian

Chase Gr.

Herington	2504' -56'	2540' -51'	2543' -54'
Krider	2550' -102'	2588' -99'	2593' -104'
Winfield	2599' -151'	2638' -149'	2641' -152'
Gage Shale	2620' -172'	2660' -171'	2663' -174'
Towanda	2667' -219'	2708' -219'	2710' -221'
Fort Riley	2712' -264'	2756' -267'	2759' -270'
Wreford	2846' -398'	2882' -393'	2886' -377'
Council Grove Gr.	2870' -422'	2908' -419'	2911' -422'
Neva	3032' -584'	3076' -587'	3079' -580'
Red Eagle	3100' -652'	3140' -652'	3144' -655'

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Wire Line
Logs

	Comparison Well SW SW 5-16S-24W	Drill Time And Samples K.B. 2448'	
G.L. 2480'			
K.B. 2489'			
Foraker	3130' -682'	3170' -681'	3173' -681'
Admire Gr.	3215' -767'	3252' -763'	3254' -765'
Pennsylvanian			
Virgilian			
Wabaunsee Gr.	3263' -815'	3300' -811'	3309' -820'
Root Shale	3310' -862'	3366' -877'	3368' -879'
Shawanee Gr.			
Topeka	3522' -1074'	3551' -1062'	3553' -1064'
Douglas Gr.			
Heebner	3786' -1338'	3820' -1331'	3818' -1329'
Toronto	3806' -1358'	3841' -1352'	3834' -1345'
Missourian			
Lansing Gr.	3826' -1378'	3858' -1369'	3856' -1367'
Kansas City Gr.			
Bonner Spgs	3900' -1452'	3932' -1441'	3928' -1439'
Base KC	4148' -1700'	4182' -1693'	4180' -1691'
Demoinesian			
Marmaton Gr.			
Pawnee	4240' -1792'	4278' -1789'	4274' -1785'
Labette	4314' -1866'	4352' -1863'	4350' -1861'
Fort Scott	4320' -1872'	4358' -1869'	4357' -1868'
Cherokee Gr.			
A Interval	4346' -1898'	4384' -1895'	4380' -1891'
B Interval	4380' -1932'	4416' -1927'	4416' -1927'
C Interval	4392' -1944'	NP	NP
Mississippian			
Osagian	4430' -1982'	4474' -1985'	4467' -1978'
Total Depth	4494' -2046'	4486' -1997'	4486' -1997'

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No. 1-6 McNinch
SE SW SW Sec. 6, T16S, R24W
Ness County, Kansas **FROM CONFIDENTIAL**

Sample examination commenced at 3486 feet and continued to a total depth at 4486 feet. Samples were caught by crews on depth intervals and lagged by geologist. All depths reported herein are lagged depths. A 30 foot sample interval was used from 3486 feet to 3632 feet. A 10 foot sample interval was used from 3632 feet to 4486 feet.

3486 - 3504 Limestone (80%), buff, tan, grayish tan, wackestone, mudstone. Shale (20%), gray, black. Drilling with water, samples are very small in size.

3504 - 3524 Limestone (75%), buff, tan, grayish tan, wackestone, mudstone. Shale (25%), gray, black.

3524 - 3539 Limestone (85%), tan, grayish tan, wackestone, mudstone. Shale (15%), gray, black.

3539 - 3563 Limestone (70%), buff, tan, grayish tan, wackestone, mudstone, some packstone. Shale (30%), gray, black.

3563 - 3574 Limestone (80%), tan, grayish tan, wackestone, mudstone. Shale (20%), gray, black.

3574 - 3594 Limestone (85%), tan, grayish tan, buff, oolitic packstone with oomoldic porosity, wackestone. Shale (15%), gray, black.

3594 - 3624 Limestone (90%), tan, grayish tan, buff, oolitic packstone with oomoldic porosity, packstone, wackestone. Shale (10%), gray, black.

3624 - 3632 Limestone (85%), buff, tan, grayish tan, wackestone, packstone, oolitic packstone with oomoldic porosity. Shale (15%), gray, black. Start 10 foot samples.

3632 - 3643 Limestone (85%), buff, tan, grayish tan, wackestone, packstone, oolitic packstone with oomoldic porosity. Shale (15%), gray, black.

3643 - 3649 Limestone (95%), tan, buff, grayish tan, wackestone, some packstone and mudstone. Shale (5%), black, gray.

3649 - 3664 Limestone (90%), tan, buff, grayish tan, wackestone, packstone. Shale (10%), gray.

3664 - 3670 Limestone (85%), tan, grayish tan, wackestone, some packstone and mudstone. Shale (15%), gray.

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3670 - 3682 Limestone (90%), tan, grayish tan, wackestone, mudstone. Shale (10%), gray, black.

3682 - 3689 Limestone (90%), tan, grayish tan, wackestone, mudstone. Shale (10%), gray, black.

3689 - 3700 Limestone (95%), tan, grayish tan, wackestone, packstone, mudstone. Shale (5%), gray, black.

3700 - 3713 Limestone (95%), tan, buff, grayish tan, packstone, wackestone. Shale (5%), gray, black.

3713 - 3725 Limestone (90%), tan, buff, grayish tan, packstone, wackestone. Shale (10%), gray, black.

3725 - 3729 Limestone (95%), tan, buff, grayish tan, packstone, wackestone. Shale (5%), gray, black.

3739 - 3746 Limestone (90%), buff, tan, wackestone, packstone. Shale (10%), gray, black.

3746 - 3753 Limestone (95%), buff, tan, wackestone, packstone. Shale (5%), gray, black.

3753 - 3762 Limestone (100%), buff, tan, wackestone, packstone. Shale (trace), gray, black.

3762 - 3766 Limestone (100%), buff, tan, wackestone, packstone. Shale (trace), gray, black.

3766 - 3770 Limestone (100%), buff, tan, grayish tan, wackestone, packstone. Shale (trace), gray, black, greenish gray.

3770 - 3779 Limestone (100%), buff, tan, grayish tan, wackestone, packstone. Shale (trace), gray, black.

3779 - 3794 Limestone (100%), buff, tan, grayish tan, wackestone, packstone. Shale (trace), gray, black.

3794 - 3804 Limestone (90%), buff, tan, wackestone, packstone. Shale (10%), black, gray, green, greenish gray.

3804 - 3819 Limestone (90%), tan, buff, wackestone, packstone, trace packstone has black bitumen stain, dull yellow fluorescence, no cut. Shale (5%), gray, black.

Heebner 3820' -1331'

3819 - 3829 Limestone (80%), tan, buff, wackestone, packstone, trace packstone has black bitumen stain, dull yellow fluorescence, no cut. Shale (20%), gray, black.

Toronto 3841' -1352'**RELEASED**

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3829 - 3843 Limestone (70%), tan, buff, wackestone, some packstone, trace packstone has black bitumen stain, dull yellow fluorescence, no cut. Shale (30%), black, gray.

3843 - 3851 Limestone (95%), buff, tan, wackestone, packstone, fossiliferous. Shale (5%), gray, black.

Lansing 3858' -1369'

3851 - 3862 Limestone (100%), buff, tan, packstone, wackestone, trace packstone with bitumen stain, dull yellow fluorescence, no cut. Shale (trace), black, gray. Chert (trace), white, light gray.

3862 - 3874 Limestone (100%), buff, tan, packstone, wackestone, trace limestone with bitumen stain, dull yellow fluorescence, no cut. Shale (trace), black, gray. Chert (trace), white, light gray.

3874 - 3888 Limestone (100%), buff, tan, packstone, wackestone, trace packstone with bitumen stain, dull yellow fluorescence, no cut. Shale (trace), black, gray. Chert (trace), white, light gray.

3888 - 3896 Limestone (100%), buff, tan, packstone, wackestone. Shale (trace), black, gray, green. Chert (trace), white, light gray.

3896 - 3904 Limestone (100%), buff, tan, packstone, wackestone. Shale (trace), black, gray, green. Chert (trace), white, light gray.

3904 - 3920 Limestone (100%), buff, tan, packstone, wackestone. Shale (trace), gray, black. Chert (trace), white, light gray.

3920 - 3930 Limestone (95%), buff, tan, packstone, wackestone. Shale (5%), black, gray. Chert (trace), white, light gray.

Bonner Springs 3932' -1441'

3930 - 3939 Limestone (95%), buff, tan, packstone, wackestone. Shale (trace), black, gray. Chert (trace), white, tan.

3939 - 3946 Limestone (95%), buff, tan, packstone, wackestone, dolomitic. Shale (trace), black, gray. Chert (trace), gray, white.

3946 - 3952 Limestone (100%), buff, tan, packstone, wackestone, dolomitic. Shale (trace), black, gray. Chert (trace), gray, white.

3952 - 3955 Limestone (60%), buff, tan, packstone, wackestone, dolomitic. Dolomite (40%), buff, tan, fine crystalline, sucrosic. Shale (trace), gray, black. Chert (trace), white.

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3955 - 3974 Limestone (80%), buff, tan, packstone, wackestone, oolitic packstone with oomoldic porosity. Dolomite (20%), tan, buff, fine crystalline, sucrosic, good vuggy porosity, no show of oil. Shale (trace), black, gray. Chert (trace), white, gray.

3974 - 3983 Limestone (95%), buff, tan, packstone, wackestone, oolitic packstone with oomoldic porosity, mudstone. Shale (5%), gray, black. Chert (trace), tan, white.

3983 - 3994 Limestone (90%), buff, tan, packstone, oolitic packstone with oomoldic porosity, wackestone. Shale (10%), gray, black. Chert (trace), white, light gray.

3994 - 4004 Limestone (100%), buff, tan, packstone, oolitic packstone with oomoldic porosity, wackestone, dolomitic. Shale (trace), gray, black. Chert (trace), white, light gray.

4004 - 4018 Limestone (100%), buff, tan, packstone, wackestone. Shale (trace), gray, black. Chert (trace), white, light gray.

4018 - 4029 Limestone (100%), buff, tan, wackestone, mudstone. Shale (trace) gray, black. Chert (trace), white, light gray.

4029 - 4037 Limestone (95%), tan, buff, grayish tan, mudstone, wackestone. Shale (5%), black, gray. Chert (trace), white, tan, light gray.

4037 - 4050 Limestone (95%), tan, buff, light grayish tan, mudstone, wackestone. Shale (5%), black, gray. Chert (trace), white.

4050 - 4059 Limestone (100%), tan, light grayish tan, mudstone, wackestone. Shale (trace), gray, black. Chert (trace), white, light gray, tan.

4059 - 4064 Limestone (100%), tan, light grayish tan, mudstone, wackestone. Shale (trace), gray, black. Chert (trace), white, tan, light gray.

4064 - 4072 Limestone (95%), tan, light grayish tan, mudstone, wackestone. Shale (5%), black, gray. Chert (5%), white, tan, light gray.

4072 - 4088 Limestone (95%), tan, light grayish tan, buff, mudstone, wackestone, oolitic packstone with oomoldic porosity. Shale (5%), black, gray. Chert (trace), white.

4088 - 4098 Limestone (90%), tan, buff, light grayish tan, wackestone, mudstone. Shale (10%), black, gray.

4098 - 4104 Limestone (95%), tan, light grayish tan, wackestone, mudstone. Shale (5%), gray, black.

4104 - 4119 Limestone (95%), tan, buff, light grayish tan, wackestone, mudstone, oolitic packstone with oomoldic porosity. Shale (5%), gray, black.

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4119 - 4129 Limestone (100%), buff, tan, mudstone, wackestone, some oolitic packstone with oomoldic porosity. Shale (trace), gray, black. Chert (trace), tan, white.

4129 - 4139 Limestone (90%), buff, tan, light grayish tan, wackestone, mudstone, trace oolitic packstone with oomoldic porosity. Shale (10%), black, gray, green.

4139 - 4150 Limestone (90%), tan, light grayish tan, mudstone, wackestone. Shale (10%), black, gray.

4150 - 4160 Limestone (80%), tan, light grayish tan, mudstone, wackestone. Shale (20%), black, gray.

4160 - 4170 Limestone (80%), tan, light grayish tan, mudstone, wackestone. Shale (20%), black, gray.

4170 - 4177 Limestone (75%), tan, light grayish tan, mudstone, wackestone. Shale (25%), black, gray.

Base Kansas City 4182' -1693'

4177 - 4183 Limestone (70%), tan, light grayish tan, mudstone, wackestone. Shale (30%), black, gray, greenish gray.

4183 - 4201 Limestone (80%), light grayish tan, mudstone, wackestone. Shale (20%), black, gray, greenish gray.

4201 - 4208 Limestone (80%), light grayish tan, mudstone, wackestone. Shale (20%), black, gray, greenish gray.

4208 - 4216 Limestone (80%), light grayish tan, mudstone, wackestone. Shale (20%), black, gray, greenish gray, red, dark maroon. Chert (trace), white, orange.

4216 - 4229 Limestone (85%), tan, buff, light grayish tan, wackestone, packstone, trace tan oolitic packstone with oomoldic porosity. Shale (15%), gray, black, red, dark maroon.

4229 - 4238 Limestone (70%), tan, buff, light grayish tan, tan, wackestone, packstone, mudstone. Shale (30%), gray, black, maroon, maroon-gray mottled, green.

4238 - 4247 Limestone (100%), light gray, mudstone, dolomitic. Shale (trace), maroon, gray, black, green.

4247 - 4260 Limestone (100%), light gray, mudstone, dolomitic. Shale (trace), gray.

4260 - 4270 Limestone (100%), light gray, mudstone, dolomitic. Shale (trace), gray.

Pawnee 4278' -1879'

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4270 - 4280 Limestone (100%), light gray, mudstone, dolomitic. Shale (trace), gray.

4280 - 4290 Limestone (90%), light gray, tan, mudstone, trace limestone with black bitumen stain, yellow fluorescence, bleeding cut with good residual ring. Shale (10%), black, gray.

4290 - 4300 Limestone (95%), light gray, tan, grayish tan, mudstone. Shale (5%), gray.

4300 - 4308 Limestone (95%), light gray, tan, grayish tan, mudstone. Shale (5%), gray.

4308 - 4318 Limestone (95%), light gray, tan, grayish tan, mudstone. Shale (5%), gray.

4318 - 4331 Limestone (95%), light gray, tan, grayish tan, mudstone. Shale (5%), gray.

4331 - 4341 Limestone (70%), light gray, tan, grayish tan, mudstone. Shale (30%), gray, black.

4341 - 4349 Shale (65%), black, gray. Limestone (35%), light grayish tan, mudstone. Sample caught late.

Labette Shale 4352' -1863' Fort Scott 4358' -1869'

4349 - 4361 Limestone (60%), tan, grayish tan, mudstone, wackestone. Shale (40%), black, gray.

4361 - 4369 Limestone (80%), light gray, mudstone, wackestone, trace limestone has light brown oil stain, no visible porosity, yellow fluorescence, slow bleeding cut, delayed residual ring. Shale (20%), gray, black.

4369 - 4380 Limestone (90%), light gray, tan, mudstone, wackestone. Shale (10%), gray, black.

Cherokee A Interval 4384' -1895'

4380 - 4387 Limestone (85%), light gray, tan, mudstone, some wackestone and packstone. Shale (15%), gray, black.

4387 - 4398 Limestone (90%), tan, light gray, mudstone, wackestone. Shale (10%), black, gray.

4398 - 4411 Limestone (80%), tan, buff, wackestone, mudstone, no visual porosity, few pieces of limestone have light brown oil stain, yellow fluorescence, fair cut, fair residual ring. Shale (20%), black, gray, dark maroon, greenish gray, green.

Cherokee B Interval 4416' -1927'

4411 - 4420 Limestone (85%), tan, buff, wackestone, mudstone. No Oil Show. Shale (15%), gray, black, maroon, maroon-gray mottled.

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4420 - 4430 Limestone (70%), light gray, tan, mudstone, some wackestone. Shale (30%), green, dark maroon, greenish gray, black, gray. (11A)

4430 - 4436 Limestone (75%), light gray, tan, grayish tan, mudstone, some wackestone, dolomitic. Shale (25%), dark maroon, greenish gray, black, gray, red, light gray. Circulated Sample.

4436 - 4441 Limestone (75%), light gray tan, grayish tan, mudstone, some wackestone, dolomitic. Shale (25%), dark maroon, greenish gray, black, gray, red, light gray. Circulated Sample.

4441 - 4446 Limestone (40%), light gray, grayish tan, mudstone, some wackestone. Dolomite (25%), tan, fine crystalline, sucrosic, trace dolomite with light brown oil stain, yellow fluorescence, poor cut, delayed residual ring. Shale (35%), gray, maroon, green, greenish gray, ochre. Chert (trace), white, orange. Circulated Sample.

4446 - 4451 Shale (60%), gray, green, maroon, red, ochre, light gray, light green. Dolomite (40%), buff, tan, fine crystalline, some fragment and pellet ghosts, trace dolomite has light brown oil stain, yellow fluorescence, bleeding cut, delayed residual ring. Chert (trace), ochre, white, tan. Circulated Sample.

4451 - 4453 Shale (55%), gray, green, light green, maroon, gray, ochre. Dolomite (45%), tan, buff, fine crystalline, trace dolomite has brown oil stain, yellow fluorescence, good cut good residual ring. Chert (trace), gray, white, ocher.

4453 - 4455 Shale (75%), gray, maroon, ochre, light green, red. Dolomite (25%), tan, buff, fine crystalline.

4455 - 4457 Dolomite (50%), buff, tan, fine crystalline, trace dolomite has light brown oil stain yellow fluorescence, bleeding cuts, delayed residual ring. Shale (50%), gray, maroon, ochre, light green, red, red-gray mottled. Chert (trace), white, ochre, red, light gray.

4457 - 4459 Dolomite (50%), buff, tan, fine crystalline, trace dolomite has light brown oil stain yellow fluorescence, bleeding cut, delayed residual ring. Shale (50%), gray, maroon, ochre, light green, red, red-gray mottled. Chert (trace), white, ochre, red, light gray.

4459 - 4465 Dolomite (40%), buff, tan, fine crystalline, trace dolomite has light brown oil stain yellow fluorescence, bleeding cuts, delayed residual ring. Shale (60%), gray, maroon, ochre, light green, red, red-gray mottled. Chert (trace), white, light gray.

Mississippian 4474' -1985'

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4465 - 4478 Dolomite (80%), tan, some buff, sucrosic, fine crystalline, some dolomite has light brown oil stain, vuggy porosity, yellow fluorescence, good cut, good residual ring.
Shale (20%), maroon, gray, green, maroon-gray mottled. Chert (trace), white, light gray.

4478 - 4486 Dolomite (70%), tan, some buff, sucrosic, fine crystalline, some dolomite has light brown oil stain, vuggy porosity, yellow fluorescence, good cut, good residual ring.
Shale (30%), maroon, gray, green, maroon-gray mottled. Chert (trace), white, light gray.

Total Depth Driller 4486 Feet.

Total Depth Logger 4486 Feet.

Drill-Stem Test No. 1 4436'-4486'

Packer Failure; Mis-Run

Drill-Stem Test No. 2 4468'-4486'

30-60-30-60

I.O. Weak Blow, 1/2" Building To 1 1/4" In 30 Min.

F.O. No Blow

Recovery: 1' Oil, 39° API @ 60° F

62' Thin Watery Mud

Sampler: 50 Ml Oil, 2300 Ml Mud, 1650 Ml Water @ 50 psi

Rw 0.35 @ 68° F

Hydrostatic Pressures 2261-2245 psi

Flow Pressures 7-30:37-44 psi

Shut-in Pressures 1085-949 psi

Bottom Hole Temperature 120° F

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SUMMARY

The Ensign Operating Co. No. 1-6 McNinch SE SW SW Sec. 6, T16S, R24W, Ness County, Kansas was 4486-foot wildcat well to test the McNinch Prospect for commercial oil production. The primary objective of this wildcat well was the Mississippian Osage. Secondary objectives were the Pennsylvanian Cherokee A, B and C Sandstones.

The Mississippian Osage dolomites had some porosity development with oil shows. These oil shows were drill-stem tested. The drill-stem test recovered a show of oil, mud and water. At the Mississippian Osage level the well was structurally low when compared to nearby wells.

The Pennsylvanian Cherokee A and B Intervals had poor shows of oil in the lithologic samples. The oil shows were in limestones. These limestones did not have significant visual porosity or other oil reservoir attributes. There were no significant reservoir sandstones in the Cherokee A and B intervals. The Cherokee C Interval was not developed in the well.

After a review of the lithologic samples examinations, a drill-stem test of the most significant oil show in the lithologic samples, an evaluation of the wireline logs and considerations of other factors the decision was made to plug and abandon the well. The well was plugged and abandoned on June 16, 1993.

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