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January 10, 1985

Mid States General
2100 Goshen Road, Suite 208
Fort Wayne, Indiana 46808

Re: Your #11 George Well
4125' FSL, 1753' FEL (NE¼)
Section 23-T34S-R10E
Chautauqua County, Kansas
Elgin Oil & Gas Field
API #15-019-24,885

Gentlemen:

This brief geological report concludes wellsite supervision and sample examination from the above-referenced well. The well was drilled to test the Mississippian Chat/Lime formations at approximately 2028'. The rotary mud drilling samples revealed a good hydrocarbon show from 2028 - 2045'. Other significant shows include the True Prue Sandstone, which had a good showing from 1613 - 1636', the Pawnee Limestone, which had a fair showing from 1583 - 1588', and the Redd Sandstone, which had a fair showing from 1216 - 1232'. Other less significant shows were observed in the Layton and Wayside Sandstones. All formations are fully described in the following lithology report. Based on the above mentioned shows, it is recommended that 4½" production casing be set for further testing.

The surveyed elevation of this well is 1020.93', from which all measurements were made. The depths mentioned below have been correlated with the cased hole gamma-ray/neutron log provided by Fisher Perforating Company of Sedan, Kansas.

DEPTH	LITHOLOGY
0 - 1034'	No samples observed.
1034 - 1080'	Sandstone - clear, fine grained, calcareous, fair porosity, tite, clean to shaley, no shows.
1080 - 1082'	Coal
1082 - 1141'	Laytone Sandstone - clear to light gray, fine-grained, friable, fair to good porosity, no shows from 1082 - 1124'; Sandstone as above, medium to very fine-grained, good bright fluorescence, live staining, slight odor, trace when cut with acid, non-productive water sand zone balance of zone.

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DEPTH	LITHOLOGY
1141 - 1146'	Dark gray shale.
1146 - 1149'	Limestone - tan to brown, fine crystalline, sandy, slight porosity, no shows.
1149 - 1206'	Gray to dark gray shale.
1206 - 1216'	Drum Limestone - cream, buff to tan, fine to medium crystalline, tite, no shows.
1216 - 1266'	Redd Sandstone - clear to light gray, fine-grained, tite, fair to good porosity, good bright fluorescence, trace oil when cut with acid, slight odor, possible gas zone from 1216 - 1232'. Gray shale, sandy from 1232 - 1236'. Sandstone as before, clean, good porosity, no shows balance of zone.
1266 - 1367'	Gray to dark gray shale.
1367 - 1371'	Black shale.
1371 - 1380'	Gray to dark gray shale.
1380 - 1383'	Coal
1383 - 1390'	Dark gray shale.
1390 - 1394'	False Cap Limestone - tan to brown, fine to medium crystalline, tite, no shows.
1394 - 1397'	Dark gray shale.
1397 - 1405'	Lenapah Limestone - buff, grayish to tan, fine to medium crystalline, tite, no shows.
1405 - 1414'	Gray to light gray shale to siltstone.
1414 - 1424'	Wayside Sandstone - clear, light gray to greenish, fine-grained, friable, good porosity, scattered bright fluorescence only at top, no shows towards middle and base.

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DEPTH	LITHOLOGY
1424 - 1460'	Light gray to light greenish gray shale, fine to medium.
1460 - 1502'	Altamont Limestone - cream, buff to grayish, fine to medium crystalline, tite, slight to fair porosity, no significant shows, slightly shaley in middle.
1502 - 1539'	Weiser Sandstone Zone - gray to light gray shale to siltstone, slightly sandy, no shows.
1539 - 1580'	Gray to light gray shale.
1580 - 1603'	Pawnee Limestone - buff to grayish, fine to medium crystalline, tite, poor porosity, fossiliferous, no shows from 1580 - 1583'; Limestone as above, fair bright fluorescence, good odor, good oil when crushed and cut with acid, possible limited commercial oil and gas zone from 1583 - 1588'; Limestone as above, no shows balance of zone.
1603 - 1608'	Black shale.
1608 - 1611'	Light gray shale, slightly sandy.
1611 - 1653'	True Prue Sandstone - clear, fine to medium grained, extremely limy, fair porosity, no shows from 1611 - 1613'; Sandstone as above, clear to light greenish gray, fine to very fine-grained, calcareous, friable, fair porosity, fair to good dull fluorescence, gas bubbles, slight odor from 1613 - 1625'; Sandstone as above, clean to slightly silty, fair to good odor, good dull fluorescence, live oil and gas staining, some oil when crushed, gas bubbles, trace free oil when washed, possible commercial oil and gas zone from 1625 - 1636'; Sandstone as above, no significant shows balance of zone.
1653 - 1658'	Gray shale

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DEPTH	LITHOLOGY
1658 - 1731'	Oswego Limestone - cream, buff to grayish, soft, fine crystalline, no significant shows from 1658 - 1689'. Black shale zone from 1689 - 1695'. Limestone as before, no shows from 1695 - 1713'. Black shale zone from 1713 - 1719'. Limestone as before, no shows balance of zone.
1731 - 1757'	Variegated shales and slightly sandy shales, no shows.
1757 - 1759'	Verdigris Limestone - brown to dark brown, fine to medium crystalline, tite, no shows.
1759 - 1761'	Black shale.
1761 - 1771'	Cattlemans Sandstone - clear to light gray, very fine-grained to silty, poor porosity, no shows.
1771 - 2005'	Variegated shales and slightly sandy shales, no shows.
2005 - 2011'	Coal
2011 - 2018'	Burgess Sandstone - clear to light gray, very fine-grained, tite, limy, poor porosity, no shows.
2018 - 2028'	Gray shale.
2028 - 2051'	Mississippian Chat - white, tan to grayish, mainly fresh to slightly weathered cherts, tripolitic to chalcodonic, good porosity, good bright fluorescence, good sweet gas odor, live staining, trace free oil, slight increase in dead oil towards base, possible commercial oil and gas zone from 2028 - 2035'; lithology as above, good to strong sweet odor, good free oil when washed, good fluorescence, good live staining, some dead oil, possible commercial zone from 2035 - 2045'; Lithology as above, decreasing show balance of zone.

Geological Survey
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DEPTH	LITHOLOGY
2051 - 2080'	Mississippian Limestone - white, fine crystalline, very cherty, fair to good porosity, fair fluorescence, slight odor, trace free oil when cut, some live and dead staining, probable oil, gas and water zone.
2080'	Driller's total depth.

Please feel free to contact me if you have any questions concerning this report.

Sincerely,

Thomas H. Oast

Thomas H. Oast
Geological Consultant

THO:pm

FORMATION DATA

FORMATION	DEPTHS (SUB-SEA)	ISOPACH
Layton Sandstone	1082' (-61)	59'
Drum Limestone	1206' (-185)	10'
Redd Sandstone	1216' (-195)	50'
Lenapah Limestone	1397' (-376)	8'
Wayside Sandstone	1414' (-393)	10'
Altamont Limestone	1460' (-439)	42'
Weiser Sandstone	1502' (-481)	37'
Pawnee Limestone	1580' (-559)	23'
True Prue Sandstone	1611' (-590)	47'
Oswego Limestone	1658' (-637)	73'
Verdigris Limestone	1757' (-736)	2'
Cattlemans Sandstone	1761' (-740)	10'
Mississippian Chat	2028' (-1007)	23'
Mississippian Lime	2051' (-1030)	29'

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