

John D. Pruitt
Petroleum Geologist
216 M Paseo del Pueblo Norte
Box 285
Taos, New Mexico 87571
505-751-0115

Geologic Wellsite Report
Ensign Operating Company # 1-18 Schaffer Trust
SWNE Section 18 -T33.5 - R24W
Clark County, Kansas

Well Data

OPERATOR: Ensign Operating Company

WELL NAME: 1-18 Schaffer Trust

LOCATION: 1980' FNL, 1980' FEL (SENW) section 18-T33S-R24W

TOTAL DEPTH: 5675 Driller, 5672 Logger, 5672.96 Strap

SPUD DATE: May 29, 1996

COMPLETION DATE: June 8, 1996

ELEVATION: 2041 G.L. 2044 K.B.

SURFACE CASING: Set 20 joints 8 5/8" 24# at 829' K.B. with 230 sacks Class C, 2% CaCl, 1/4# Floseal + 150 sacks Class C. Cement did not circulate. Ran 1" to 100'. Cemented with 100 sacks Class H, 2% CaCl.

CONTRACTOR: Duke Drilling, Rig 7

WELLSITE GEOLOGIST: John D. Pruit

MUD: MUDCO/Service Mud, Pratt, Kansas
Jim Weisner, Engineer

GAS DETECTION: Unmanned unit from Holmes Gas Detectors, Inc.,
Liberal, Kansas

DRILLSTEM TEST: Trilobite Testers, LLC, Satanta, Kansas
Mike Colantonio, Tester

LOGS: BPB Inc., Liberal, Kansas

RESULT: Plugged and abandoned as a dry hole.

WELL HISTORY:

<u>DATE</u>	<u>DEPTH</u>	<u>FORMATION</u>	<u>OPERATION</u>
5-29-96	0	Surface	Spud 3:45 PM
5-30-96	834'	-----	Running casing. Made 834' in 17 1/4 hours. MW 9.6, CL 85,000
5-31-96	1480'	-----	Drilling. Made 646' in 24 hours. WOB 24-28, RPM 80-100, PP 800, SPM 60
6-1-96	2608'	-----	Drilling. Made 1128' in 24 hours. MW 9.6, CL 85,000 WOB 35, RPM 75, PP 875, SPM 60
6-2-96	3440'	-----	Drilling. Made 832' in 24 hours. VIS 34, MW 9.3+, CL 17,000, PV 6, YP 13, GS 8/14, PH 7.0, WL 56.0, LCM 0, CA 1600 WOB 36-38, RPM 75, PP 975, SPM 60
6-3-96	4020'	-----	Drilling. Made 580' in 24 hours. VIS 34, MW 9.4, CL 10,000, PV 6, YP 14, GS 6/10, PH 7.0, WL 48.0, LCM 0, CA 1600 WOB 38, RPM 75, PP 1000, SPM 60
6-4-96	4710'	Lansing	Drilling. Made 690' in 24 hours. VIS 42, MW 9.1, CL 6000, PV 9, YP 13, GS 10/15, PH 10.0, WL 14.4, LCM 0, CA 40 WOB 36-38, RPM 75, PP 900, SPM 54
6-5-96	5010'	Marmaton	Drilling. Made 300' in 24 hours. VIS 46, MW 9.2, CL 7000, PV 12, YP 12, GS 12/17, PH 10.5, WL 9.6, LCM 0, CA 40 WOB 38, RPM 75, PP 900, SPM 75
6-7-96	5370	Morrow?	Drilling. Made 360' in 24 hours. VIS 50, MW 9.2, CL 4000, PV 14, YP 16, GS 10/22, PH 10.5, WL 10.4, LCM 0, CA 40 WOB 38, RPM 75, PP 975, SPM 54
6-8-96	5465	Chester	Drilling. Made 95' in 24 hours. VIS 49, MW 9.2, CL 5000, PV 14, YP 16,

GS 9/27, PH 10.5, WL 12.8, LCM 0, CA 80
WOB 38-40, RPM 75, PP 975, SPM 54

6-8-96 5675 DTD Meramec Logging. Made 210' in 24 hours.
5672 LTD

FORMATION TOPS:

<u>FORMATION</u>	<u>SAMPLE</u>	<u>DATUM</u>	<u>E. LOG</u>	<u>DATUM</u>
Heebner	4202	-2418	4200	-2146
Lansing	4389	-2335	4387	-2333
Stark Shale	4874	-2820	4870	-2816
Swope	4877	-2823	4874	-2819
Hertha	4929	-2875	4925	-2871
Marmaton	4961	-2907	4972	-2918
Cherokee Shale	5138	-3084	5132	-3078
Base Inola	5286	-3232	5279	-3225
Chester	5355	-3301	5352	-3298
Chester A	5373	-3319	5370	-3316
Chester B	5416	-3362	5410	-3356
Meramec	5593	-3539	5593	-3539

DRILLSTEM TEST RECORD:

DST #1: 5284-5397 (Chester A)

Times: 10-30-60-120
Recovery: 1515' Gas in Pipe
70' Mud 100% mud

FP: 97-97, 97-97
SIP: 97-694
HP: 2747-2696

Sampler: 600 psig
2.3 cubic feet gas
3200 ML mud 100% mud

SHOW DESCRIPTION:

<u>FORMATION</u>	<u>INTERVAL</u>	<u>DESCRIPTION</u>
Cherokee	5169-5181	trace Limestone, brown, mudstone, microcrystalline, dolomitic no visible porosity, spotty gold fluorescence, instant streaming cut, weak ring. POOR SHOW

DEVIATION RECORD:

<u>DEPTH</u>	<u>DEVIATION</u>	<u>DEPTH</u>	<u>DEVIATION</u>	<u>DEPTH</u>	<u>DEVIATION</u>
834	1/2°	3136	1/8°	4860	1/4°
1619	1/8°	3636	1/4°	5397	1°
2116	1/8°	4160	1/2°	5675	3/4°
2639	1/8°	4658	1/2°		

BIT RECORD:

<u>NO.</u>	<u>SIZE</u>	<u>MAKE</u>	<u>TYPE</u>	<u>DEPTH OUT</u>	<u>FOOTAGE</u>	<u>HOURS</u>
1	12 1/4	HTC	X3A	834	834	6 3/4
2	7 7/8	WM	51F	4860	4026	101 1/2
3	7 7/8	WM	53CHF	5675	815	49 3/4

SAMPLE DESCRIPTION:

10 foot samples were caught from 4000' to total depth at 5675. 1 foot drill time was saved from 4000' to total depth. Sample examination commenced at 4000' and continued to total depth. One dry cut was prepared and shipped to Kansas Geological Survey, Wichita, Kansas for storage. Samples were caught by crews and lagged by geologist. Sample depths reported herein are lagged depths. With minor exceptions sample quality was poor from 4000' to total depth. Sample size was predominantly coarse sand size; rig crews made an effort to correct the problem, but were unable to do so. Cavings and consequent mixing of samples were also a problem throughout the well.

<u>INTERVAL</u>	<u>DESCRIPTION</u>
4000-4006	Limestone, tan, wackestone, micritic, microfossils, shell fragments, sandy in part, tight, no stain, fluorescence or cut
4006-4016	Shale, gray to dark gray to greenish gray, trace black, platy to blocky, waxy in part

- 4016-4059 Shale, gray to dark gray, greenish gray in part, trace black in part, platy to blocky, pyritic in part, waxy in part
trace Limestone, tan, packstone, medium grained, micritic matrix, oolites, shell fragments, tight, no stain, fluorescence or cut
- 4059-4093 Shale, greenish gray to gray to dark gray, platy to blocky to splintery, waxy in part, calcareous in part
trace Limestone, gray, mudstone, micritic, argillaceous, pyritic, tight, no stain, fluorescence or cut
- 4093-4100 Limestone, tan, mudstone to wackestone, micritic, shell fragments, tight, no stain, fluorescence or cut
- 4100-4119 Shale, gray to dark gray, trace green, platy to blocky, very calcareous in part, micaceous in part
- 4119-4143 Shale, greenish gray to greenish gray, to dark gray, trace black, splintery to platy, waxy in part, silty in part, pyritic in part
trace Limestone, tan, wackestone, micritic, very argillaceous, microfossils, soft, tight, no stain, fluorescence or cut
- 4143-4154 Shale, gray to greenish gray to dark gray, platy to blocky, shell fragments
- 4154-4168 Shale, gray to dark gray, trace black, splintery to blocky, calcareous in part
- 4168-4181 Limestone, tan to buff, mudstone to wackestone, micritic, shell fragments, trace poor to fair pinpoint vuggy porosity, no stain, fluorescence or cut
Shale, gray, trace dark gray, platy, very calcareous in part, silty in part
trace Limestone, buff to brown, mudstone, micritic, very argillaceous in part, very sandy in part, micaceous in part, tight, no stain, fluorescence or cut
- 4181-4202 Shale, light gray to gray, blocky, silty in part, micaceous in part, very sandy in part
Shale, dark gray to black, chippy to splintery
trace Limestone, buff to brown, mudstone, micritic, very sandy, argillaceous, tight, no stain, fluorescence or cut

Top Heebner 4202 (-2148)

- 4202-4210 Shale, dark gray to black, splintery to platy
- 4210-4216 Siltstone, gray, very argillaceous, very calcareous, micaceous, tight, no stain, fluorescence or cut
- 4216-4226 Limestone, brown to dark brown, trace gray, mudstone, micritic, very argillaceous in part, shell fragments, tight, no stain, fluorescence or cut
Limestone, buff to light brown, mudstone, micritic, dolomitic in part, trace microfossils, tight, no stain, fluorescence or cut
- 4226-4250 Limestone, brown to dark grayish brown, mudstone, micritic, argillaceous, tight, no stain, fluorescence or cut
Limestone, buff to light gray, brown in part, mudstone, micritic, dolomitic in part, shell fragments in part, tight, no stain, fluorescence or cut
- 4250-4258 Shale, gray, platy to blocky, sandy in part, micaceous in part
- 4258-4286 Dolomite, buff, microcrystalline, limy in part, microfossils in part, tight, no stain, fluorescence or cut
trace Limestone, brown, mudstone, micritic, tight, no stain, fluorescence or cut
- 4286-4296 Shale, gray to dark gray, splintery to platy, calcareous in part
- 4296-4310 Limestone, buff to brown to gray, mudstone, micritic, dolomitic in part, very argillaceous in part, shell fragments in part, tight, no stain, fluorescence or cut
- 4310-4330 Limestone, buff to brown to gray, mudstone, trace packstone, medium grained, micritic matrix, dolomitic in part, very argillaceous in part, shell fragments in part, tight, no stain, fluorescence or cut
Dolomite, buff, microcrystalline, limy in part, microfossils, no visible porosity, no stain, fluorescence or cut
- 4320-4390 Shale, gray to dark gray, platy to blocky, micaceous in part, calcareous
- 4390-4398 Limestone, brown to dark brown, mudstone to wackestone, micritic, shell fragments, tight, no stain, fluorescence or cut
- 4398-4420 Limestone, light brown to brown, mudstone to wackestone, micritic, shell fragments, trace oolites, tight, no stain, fluorescence or cut
Dolomite, buff, microcrystalline to microsugrosic, shell fragments,

- limy in part, no visible porosity, no stain, fluorescence or cut
- 4420-4430 Limestone, buff to brown to grayish brown, mudstone, micritic, shell fragments, argillaceous in part, tight, no stain, fluorescence or cut
- 4430-4450 dolomitic, buff microcrystalline, microfossils, sandy in part, tight, no stain, fluorescence or cut
Limestone light brown, mudstone, micritic, tight, no stain, fluorescence or cut
trace Chert, tan, opaque
Dolomite, buff, light brown, microcrystalline, limy in part, shell fragments in part, tight to poor pinpoint vuggy porosity, no stain, fluorescence or cut
- 4450-4478 Limestone, buff to light brown, trace grayish brown, mudstone to wackestone, micritic, slightly to very dolomitic, oolites, microfossils, shell fragments in part, tight to fair vuggy porosity, no stain, fluorescence or cut
- 4478-4487 Limestone, buff to light brown, mudstone, micritic, argillaceous in part, dolomitic in part, tight, no stain, fluorescence or cut
Shale, gray, blocky, micaceous, calcareous
- 4487-4505 Limestone, buff to light brown, mudstone to wackestone, micritic, slightly to very dolomitic, oolites, shell fragments, no visible porosity, no stain, fluorescence or cut
Chert, gray, milky
- 4505-4519 Limestone, buff to brown, mudstone, micritic, shell fragments in part, tight, no stain, fluorescence or cut
- 4519-4543 Limestone, buff to brown, mudstone to wackestone, micritic, very dolomitic in part, oolites, shell fragments, dolomitic in part, tight to poor vuggy porosity, no stain, fluorescence or cut
- 4543-4553 Shale, gray, blocky, micaceous, calcareous
- 4553-4570 Limestone, buff to brown, wackestone, micritic, shell fragments, tight, no stain, fluorescence or cut
- 4570-4607 Limestone, buff to light brown to brown, wackestone, trace packstone, fine to medium grained, micritic matrix, shell fragments, trace oolites, slightly to very dolomitic, tight to trace poor vuggy porosity, no stain, fluorescence or cut

- 4607-4639 Limestone, light brown to brown, trace gray, mudstone to wackestone, micritic, shell fragments, slightly to very dolomitic, tight to fair vuggy porosity, no stain, fluorescence or cut trace Chert, gray, milky
- 4639-4664 Limestone, light brown to brown, mudstone, micritic, shell fragments in part, dolomitic in part, tight, no stain, fluorescence or cut trace Chert, tan opaque
- 4664-4666 Shale, black, chippy to splintery, carbonaceous
- 4666-4674 Limestone, light brown to brown, mudstone, micritic, shell fragments in part, dolomitic in part, tight, no stain, fluorescence or cut
- 4684-4680 trace Siltstone, gray, very argillaceous, siliceous, tight, no stain, fluorescence or cut
Shale, gray, blocky, silty in part, calcareous
- 4680-4694 Limestone, buff to brown, mudstone, micritic, argillaceous in part, shell fragments in part, tight, no stain, fluorescence or cut
trace Siltstone, gray, very argillaceous, very calcareous, micaceous, tight, no stain, fluorescence or cut
- 4694-4710 Limestone, gray to dark brown, mudstone, micritic, argillaceous, tight, no stain, fluorescence or cut
Limestone, light brown, trace gray, mudstone to wackestone, trace packstone, fine to medium grained, micritic matrix, dolomitic in part, oolites, tight to fair oomouldic and vuggy porosity, no stain, fluorescence or cut
- 4710-4720 Limestone, buff to light brown, mudstone, trace wackestone, micritic, shell fragments, oolites, tight, no stain, fluorescence or cut
trace Chert, gray to white, swirls, opaque
- 4720-4730 Limestone, buff to grayish brown, mudstone, micritic, trace oolites, dolomitic in part, argillaceous in part, tight, no stain, fluorescence or cut
- 4730-4739 Limestone, light brown to brown to gray to dark gray, mudstone, micritic, very argillaceous in part, shell fragments in part, tight, no stain, fluorescence or cut
- 4739-4732 Limestone, buff, packstone, fine grained to medium grained, micritic

to dolomitic matrix, recrystallized in part, oolites, tight to poor pinpoint vuggy porosity, no stain, fluorescence or cut

- 4732-4778 Limestone, light brown to light grayish brown, mudstone, micritic, argillaceous in part, oolites, shell fragments in part, in part, tight, no stain, fluorescence or cut
- 4778-4788 Limestone, light grayish brown, wackestone, micritic, slightly argillaceous, shell fragments, oolites, tight to poor vuggy porosity, no stain, fluorescence or cut
Limestone, light brown, trace gray, mudstone, micritic, argillaceous in part, shell fragments in part, tight, no stain, fluorescence or cut
- 4788-4850 Limestone, light brown to grayish brown to trace gray, dark brown in part, mudstone, micritic, argillaceous in part, shell fragments in part, oolites in part, tight, no stain, fluorescence or cut
- 4850-4860 No sample 4850 to 4860 lag depth. No circulating samples before bit trip.
- 4860-4874 Limestone, buff to dark brown to dark gray, mudstone, micritic, very argillaceous in part, tight, no stain, fluorescence or cut

Top Stark Shale 4874 (-2820)

- 4874-4877 Shale, black, chippy to splintery to blocky

Top Swope 4877 (-2823)

- 4877-4906 Limestone, gray to dark gray to dark brown, mudstone, micritic, very argillaceous, pyritic in part, tight, no stain, fluorescence or cut
trace Limestone, buff to brown, mudstone, micritic, argillaceous in part, tight, no stain, fluorescence or cut
- 4906-4915 Limestone, grayish brown to dark gray, mudstone, micritic, very argillaceous, tight, no stain, fluorescence or cut
- 4915-4924 Limestone, brown, mudstone, micritic, shell fragments in part, argillaceous in part, tight, no stain, fluorescence or cut
- 4924-4929 Shale, dark gray to black, platy to blocky

Top Hertha 4929 (-2875)

- 4929-4944 Limestone, dark brown to dark gray, mudstone, micritic, very

- argillaceous, tight, no stain, fluorescence or cut
- 4944-4961 Shale, gray to greenish gray, blocky, calcareous, waxy in part, slightly micaceous in part
- 4961-4990 Limestone, brown to grayish brown, mudstone, micritic, very argillaceous in part shell fragments, tight, no stain, fluorescence or cut
trace Dolomite, buff, microcrystalline, very argillaceous, trace poor pinpoint vuggy porosity, no stain, fluorescence or cut
- 4991-4998 Limestone, brown to dark grayish brown, trace gray, mudstone, micritic, very argillaceous in part, trace shell fragments, tight, no stain, fluorescence or cut
- 4998-5014 Limestone, brown to grayish brown, mudstone to wackestone, trace gray, micritic, shell fragments, oolites, very argillaceous in part, tight, no stain, fluorescence or cut
Chert, light brown, translucent, 1%-5% of sample
- 5014-5026 Limestone, brown to grayish brown, wackestone, micritic, argillaceous in part, oolites, shell fragments, tight, no stain, fluorescence or cut
- 5026-5040 Limestone, buff to brown to grayish brown, mudstone to wackestone, micritic, dolomitic in part, shell fragments, tight, no stain, fluorescence or cut
Limestone gray to dark gray, mudstone, micritic, very argillaceous, tight, no stain, fluorescence or cut
Chert, gray to dark gray, translucent to opaque
- 5040-5081 Limestone, light brown to light grayish brown, mudstone, micritic, shell fragments in part, tight, no stain, fluorescence or cut
Chert, tan, translucent
- 5081-5084 Shale, black, chippy to splintery, carbonaceous
- 5084-5091 Limestone, light brown to grayish brown, mudstone, micritic, argillaceous in part, oolites in part, tight, no stain, fluorescence or cut
- 5091-5093 Shale, black, chippy to splintery, carbonaceous
- 5093-5108 Limestone, light grayish brown to brown, mudstone, micritic, tight, no stain, fluorescence or cut

- 5108-5120 Limestone, buff to light brown, mudstone, micritic, slightly dolomitic in part, tight, no stain, fluorescence or cut
- 5120 -5122 Shale, black, splintery to platy
- 5122-5138 Limestone, buff to brown, mudstone, trace wackestone, micritic, shell fragments, tight, no stain, fluorescence or cut
Chert white to light brown, translucent to opaque
- Top Cherokee Shale 5138 (-3084)**
- 5138-5142 Shale, dark gray to black, chippy to splintery
- 5142-5158 Limestone, brown to grayish brown, mudstone, micritic, tight, no stain, fluorescence or cut
- 5158-5160 Shale, dark gray to black, splintery
- 5160-5171 Limestone, buff to grayish brown, trace gray, mudstone, micritic, argillaceous in part, trace pyrite, tight, no stain, fluorescence or cut
trace Chert, tan, translucent
- 5171-5180 trace Limestone, brown, dolomitic, mudstone, crystalline, no visible porosity, spotty gold fluorescence, instant streaming cut, weak ring,
POOR SHOW
- 5180-5190 Limestone, grayish brown, mudstone, micritic tight, no stain, fluorescence or cut
- 5190-5232 Limestone, buff to grayish brown, mudstone to wackestone, micritic, argillaceous in part, oolites, tight, no stain, fluorescence or cut
trace Chert, tan to light gray, opaque
- 5232-5235 Shale, dark gray, splintery
- 5235-5240 Limestone, buff to grayish brown, mudstone to wackestone, micritic, argillaceous in part, oolites, tight, no stain, fluorescence or cut
- 5240-5266 Limestone, grayish brown to gray, mudstone to packstone, fine grained to medium grained, micritic matrix, very argillaceous in part, shell fragments, oolites, lithic fragments in part, tight, no stain, fluorescence or cut
Limestone, grayish brown to gray, mudstone to wackestone, micritic, very argillaceous in part, shell fragments, oolites, tight, no stain,

fluorescence or cut
trace Chert, brown, opaque

- 5266-5286 Shale, dark gray, splintery
Limestone, buff to brown to grayish brown, mudstone to
wackestone, micritic, microfossils, tight, no stain, fluorescence or
cut
Shale, dark gray to black, chippy to splintery

Base Inola 5286 (-3232)

- 5286-5299 Shale, gray to dark gray, trace black, splintery to blocky, very
calcareous in part
Limestone, buff to gray to dark gray, mudstone, micritic, very
argillaceous in part, tight, no stain, fluorescence or cut
- 5299-5316 Limestone, brown to gray to dark gray, mudstone, micritic, very
argillaceous in part, shell fragments, tight, no stain, fluorescence or
cut
- 5316-5338 Shale, dark gray to black, chippy to splintery
Limestone, brown to gray to dark gray, mudstone, micritic, very
argillaceous in part, shell fragments, tight, no stain, fluorescence or
cut

Top Chester 5355 (-3301)

- 5355-5373 Limestone, light brown to light gray, wackestone, micritic, oolites,
argillaceous in part, tight, no stain, fluorescence or cut
Limestone, buff to brown, mudstone to wackestone, micritic, oolites
and shell fragments in part, trace crinoids, tight, no stain,
fluorescence or cut

Top Chester A 5373 (-3319)

- 5373-5389 Limestone, buff to brown, wackestone, micritic, sparry matrix in
part, oolites, shell fragments, lithic fragments, no visible porosity,
no stain, fluorescence or cut
- 5389-5397 Limestone, grayish brown, mudstone, micritic, shell fragments,
argillaceous, tight, no stain, fluorescence or cut
- 5397-5416 Limestone, light brown to light gray, packstone, fine grained to
medium grained, micritic matrix, argillaceous, oolites, lithic
fragments, no visible porosity no stain, fluorescence or cut

Shale, gray to dark gray, blocky, sandy in part, oolites in part

Top Chester B 5416 (-3362)

- 5416-5440 Limestone, light brown to light gray, packstone, fine grained to medium grained, micritic matrix, argillaceous, oolites, lithic fragments, no visible porosity no stain, fluorescence or cut
- 5440-5450 Limestone, brown, mudstone, microcrystalline, tight, no stain, fluorescence or cut
Shale, gray to grayish green, platy to blocky, oolites in part
- 5450-5474 Limestone, buff to brown, mudstone, micritic, shell fragments in part, trace crinoids, tight, no stain, fluorescence or cut
Shale, gray, blocky, very pyritic
trace Limestone, gray to dark gray, packstone, fine grained to medium grained, lithic fragments, argillaceous, pyritic, tight, no stain, fluorescence or cut
- 5474-5486 Limestone, light brown to light gray to dark gray, mudstone, wackestone in part, micritic, argillaceous in part, oolites in part, tight, no stain, fluorescence or cut
- 5486-5495 Limestone, light brown to brown to gray, mudstone, micritic, crinoids in part, tight, no stain, fluorescence or cut
- 5495-5505 Shale, variegated, light gray to red to yellow to green, splintery, waxy in part
- 5505-5518 Limestone, buff to light brown, mudstone to wackestone, micritic, shell fragments, oolites, tight, no stain, fluorescence or cut
Shale, light gray to olive green, splintery
- 5518-5531 Limestone, light brown, mudstone to packstone, medium grained, micritic matrix, oolites, tight, no stain, fluorescence or cut
- 5531-5538 Shale, gray to dark gray, splintery to blocky, silty in part, calcareous in part
- 5538-5558 Limestone, light gray to cream to dark gray, silty texture; very argillaceous in part, very chalky in part, tight, no stain, fluorescence or cut
Shale, gray to dark gray, very silty, very calcareous in part
- 5558-5568 Limestone green, mudstone, micritic, tight, no stain, fluorescence or cut

- Shale, variegated, red to pale green to light gray to gray to maroon, splintery to blocky
- 5568-5580 Shale, variegated, light gray to gray to dark gray to lavender to yellow to pale green, splintery, waxy in part
- 5580-5593 Limestone, brown to gray, mudstone, micritic, tight, no stain, fluorescence or cut
- Top Meramec 5593 (-3539)**
- 5593-5606 Shale, variegated, pale green to light gray to gray to red to yellow to lavender to maroon, splintery, waxy to very waxy in part silty in part
- 5606-5620 Limestone, white to light brown, sandy texture, very fine grained, micritic, tight, no stain, fluorescence or cut
- 5620-5631 Shale, variegated, green to red to lavender to light gray to gray, splintery to platy, very waxy in part, sandy in part
- 5631-5645 Limestone, white to gray, sandy texture, argillaceous in part, tight, no stain, fluorescence or cut
- 5645-5665 Limestone, gray to brown, mudstone, micritic to microcrystalline, sandy in part, tight, no stain, fluorescence or cut
- 5665-5675 Limestone, white, sandy texture, very fine grained to fine grained, micritic, argillaceous in part, tight, no stain, fluorescence or cut

REMARKS AND RECOMMENDATIONS:

The prospect was drilled with the idea of catching the Chester A and Chester B "bars" near their truncation edge in the belief that proximity to the truncation would enhance porosity and permeability. Both zones were present and gas detector readings indicated both contained hydrocarbons. Unfortunately, the hoped-for enhancement of porosity and permeability did not occur, and both were tight.

A drillstem test of the Chester A recovered 1515 feet of gas in the drill pipe, and measured only 694 pounds of shut-in pressure after a two hour buildup with no hint of breakover on the pressure curve. Inasmuch as the minimum pressure deemed likely to result in commercial production was 1000 pounds, the zone was judged to be non-commercial.

Examination of samples from the Chester B interval found no indications of porosity and gas detector readings were substantially lower than from the Chester A interval (36 units

versus 130 units in the Chester A). The Chester B was therefore also judged to be non-commercial.

There being no other potentially commercial zones observed either in the samples or on electric logs, the well was plugged and abandoned as a dry hole.

Respectfully submitted,

John D. Fruit
Petroleum Geologist