

ORIGINAL

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# *Geological Report*

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*for*



*SHIELDS OIL PRODUCERS*

**Sharp "A" No. 3  
NE-NW-SW, Section 20-14S-30W  
Gove County, Kansas**

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ORIGINAL

SEP 10 2002  
ACC W. 100%

OPERATOR: Shields Oil Producers

WELL: Sharp "A" No. 3  
API # 15-063-21563

LOCATION: NE-NW-SW  
2310' from the South Line  
990' from the East Line  
Section 20-14S-30W  
Gove County, Kansas

FIELD: Butterfield-Overland NE

CONTRACTOR: Shields Drilling Co., Rig 1

DRILLING COMMENCED: 01-14-2002

DRILLING COMPLETED: 01-24-2002

DRILLING TIME: One (1) foot drilling time was recorded  
from 3600' to 4670' RTD.

SAMPLES: Samples were saved and examined from 3850'  
to 4670' RTD.

ELEVATIONS: 2887' Ground Level    2892' Kelly Bushing

MEASUREMENTS: All depths are measured from 2892' K.B.

CASING RECORD: 8 5/8" Surface Casing set @ 218' with 150 sxs. 60/40 poz  
4 1/2" Production Casing set @ 4669' with 100 sxs. ASC

FORMATION TESTING: Two (2) tests were run by Trilobite Testing, Tested by Rod Steinbrink

MUD: Mud-Co. Inc. (Chemical Mud)

OPEN HOLE LOGS: ELI Wireline Service (CNL-CDL, DIL )

PRODUCTION: Oil (Myrick Station)

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FORMATION TOPS:

FORMATION	SAMPLE	LOG	DATUM
ANHYDRITE	2329'	2326'	+ 566'
BASE ANHYDRITE	2389'	2386'	+ 506'
HEEBNER SHALE	3951'	3950'	-1058'
LANSING	3992'	3993'	-1101'
KANSAS CITY	4070'	4070'	-1178'
STARK SHALE	4238'	4237'	-1345'
BASE KANSAS CITY	4314'	4313'	-1421'
PLEASANTON	4321'	4322'	-1420'
MARMATON	4341'	4342'	-1450'
PAWNEE	4441'	4441'	-1549'
MYRICK STATION	4477'	4479'	-1587'
LABETTE SHALE	4497'	4495'	-1603'
FORT SCOTT	4504'	4502'	-1610'
CHEROKEE	4532'	4531'	-1639'
JOHNSON	4572'	4572'	-1680'
MISSISSIPPI	N/R	N/R	N/A
ROTARY TOTAL DEPTH	4670'	4670'	-1778'
LOG TOTAL DEPTH	4670'	4670'	-1778'

SAMPLE DESCRIPTIONS AND TEST DATA: All depths have been corrected to log measurements.

LANSING:

- 3992-3996 Limestone, tan, gray and white, very finely crystalline, dense, slightly chalky, with fair visible interfossiliferous porosity, no shows of oil were noted.
- 4028-4037 Limestone, white and tan, finely crystalline, dense, oolitic in part, chalky, no shows of oil were noted.
- 4044-4052 Limestone, tan and gray, finely crystalline, dense, granular in part, slightly oolitic and chalky, with poor visible porosity, no shows of oil were noted.

400

4075-4080 Limestone, tan and gray, very finely crystalline, dense, slightly oolitic and chalky, with poor visible intercrystalline porosity, two to three pieces showing traces of staining, very slight show of oil on break, no odor.

4087-4100 Limestone, tan and gray, very finely crystalline, dense, chalky in part, with rare white chert, no shows of oil were noted.

4151-4156 Limestone, brown and tan, dense to finely crystalline, fossiliferous in part, with poor visible intercrystalline porosity, trace of scattered staining, no show of free oil, no odor.

4167-4180 Limestone, tan, gray and brown, finely crystalline, dense, slightly fossiliferous, with trace of dead appearing staining, no show of free oil, poor visible porosity, no odor.

4199-4208 Limestone, gray and white, dense to very finely crystalline, slightly chalky, no shows of oil were noted.

4219-4230 Limestone, white and tan, finely crystalline, with poor visible intercrystalline porosity, trace of scattered staining, minor show of heavy dead appearing oil, chalky, no odor.

4252-4263 Limestone, tan and light brown, fine to medium crystalline, slightly oolitic and fossiliferous, with poor visible intercrystalline porosity, chalky, rare scattered staining, no show of free oil, no odor.

4280-4286 Limestone, gray and tan, fine to medium crystalline, chalky, with trace of dead staining, no show of free oil, no odor.

4292-4300 Limestone, tan and gray, fine to medium crystalline, dense, slightly fossiliferous and chalky, no shows of oil were noted.

**MARMATON:**

4342-4352 Limestone, tan and cream, finely crystalline, dense, slightly granular, with poor visible porosity, chalky in part, no shows of oil were noted.

4364-4376 Limestone, tan and gray, dense, finely crystalline, slightly chalky, no shows of oil were noted.

4408-4420 Limestone, tan and white, finely crystalline, with white chert, some minor fine grained sandstone, no shows of oil were noted.

**PAWNEE:**

4441-4452 Limestone, tan, very finely crystalline, dense, with poor visible porosity, slightly chalky, with a few pieces showing a trace of dark staining, no show of free oil, no odor.

**MYRICK STATION:**

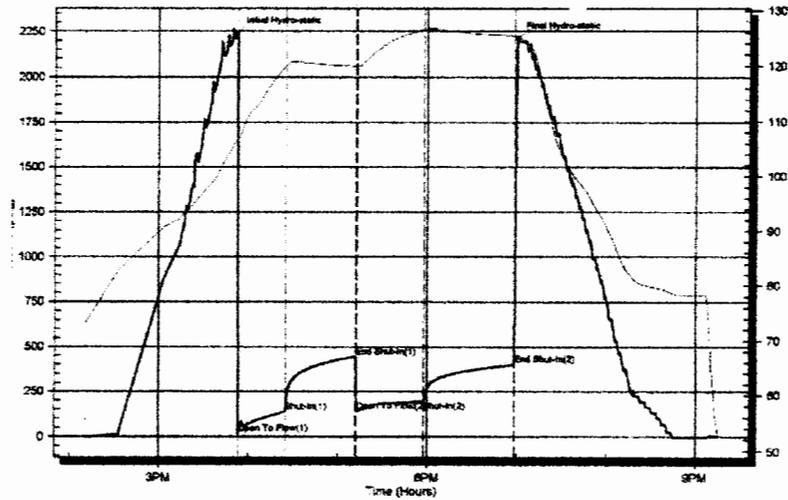
4479-4489 Limestone, tan and gray, fine to medium crystalline, with fair visible intercrystalline and slightly pinpoint vugular porosity, fair spotted staining and saturation, possible fractured staining, very slight show of free gassy oil, light odor. (Covered by D.S.T. No. 1)

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**FORMATION TEST NO. 1**

Myrick Station  
 Tested from 4461'-4489'

<i>Fair to B.O.B. in 13 min.</i>	30 min.	I.H.P.	2240#
<i>Weak surface blow-back</i>	45 min.	I.F.P.	19# -138#
<i>Weak to 10 inch blow</i>	45 min.	I.S.I.P.	447#
<i>Weak surface blow-back</i>	60 min.	F.F.P.	142# -196#
		F.S.I.P.	403#
		F.H.P.	2209#



RECOVERY:            240' Gas In Pipe  
                           20' Clean Oil (34\* gravity)  
                           240' Slightly Gassy Watery Mud Cut Oil  
                           180' Water  
                           440' Total Liquid Recovery

TEMPERATURE:        125\*

CHLORIDES:            40,000 ppm (Recovery)  
                               2,200 ppm (System)

**FORT SCOTT:**

4502-4508        Limestone, light brown and tan, very finely crystalline, dense, slightly chalky, with minor chert, no shows of oil were noted. (Covered by D.S.T. No. 2)

4516-4526        Limestone, brown, dense to finely crystalline, with poor visible intercrystalline porosity, trace of scattered staining, no show of free oil, no odor. (Covered by D.S.T. No. 2)

**CHEROKEE:**

4532-4538        Limestone, tan, gray and cream, fine to medium crystalline, with fair visible intercrystalline and slightly pinpoint porosity, slight show of free oil, light odor. (Covered by D.S.T. No. 2)

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**JOHNSON:**  
4574-4579

Limestone, gray and tan, fine to medium crystalline, with fair visible intercrystalline porosity, slightly chalky, with slight show of free oil, light spotted staining and saturation, light odor. (Covered by D.S.T. No. 2)

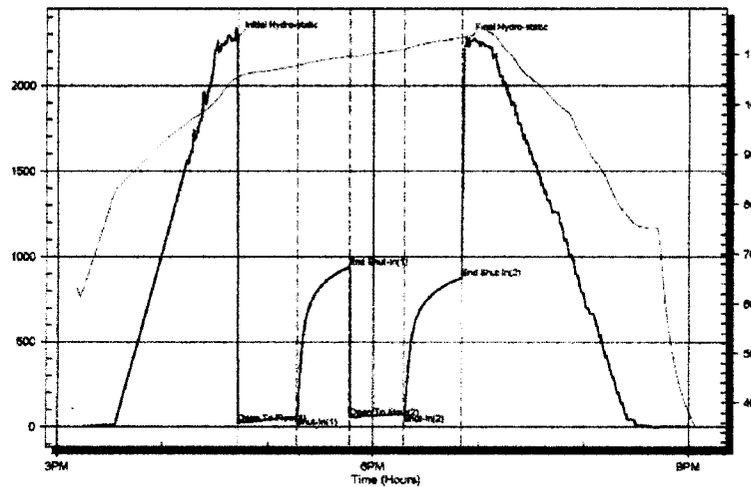
4585-4589

Limestone, gray and brown, fine to medium crystalline, as above, with scattered pinpoint vugular porosity, fair show of free oil, fair spotted staining and saturation, fair odor. (Covered by D.S.T. No. 2)

**FORMATION TEST NO. 2**

Fort Scott, Cherokee & Johnson  
Tested from 4511'-4593'

		I.H.P.	2280#
<i>Weak 1/4" blow</i>	30 min.	I.F.P.	23# -55#
<i>No blow-back</i>	30 min.	I.S.I.P.	942#
<i>No blow</i>	30 min.	F.F.P.	57# -77#
<i>No blow back</i>	30 min.	F.S.I.P.	878#
		F.H.P.	2266#



RECOVERY: 75' Mud  
 TEMPERATURE: 113\*  
 CHLORIDES: N/A ppm (Recovery)  
 3,000 ppm (System)

Structural Comparisons, Formation Tops & Intervals

	Shields Oil		Shields Oil		Shields Oil		Shields Oil		Shields Oil		L.D. Drilling, Inc	
	Intervals		Intervals		Intervals		Intervals		Intervals		Intervals	
Anhydrite	2326	566	2332	550	2236	561	2218	569	2247	540	#1 B-29 North Glenn	
Base Anh.	2386	506 60	2377	505 45	2289	508 53	2275	512 57	2271	516 24	NW NW NW	
Heebner	3950	-1058 1564	3934	-1052 1557	3851	-1054 1562	3841	-1054 1566	3846	-1059 1575	29-14S-30W	
Lansing	3993	-1101 43	3974	-1092 40	3889	-1092 38	3878	-1091 37	3884	-1097 38	2787 KB	
Kansas City	4070	-1178 77	4050	-1168 76	3967	-1170 78	3957	-1170 79	3958	-1171 74		
Muncie Crk	4148	-1256 78	4134	-1252 84	4048	-1251 81	4039	-1252 82	4046	-1259 88		
Stark Sh	4237	-1345 89	4216	-1334 82	4131	-1334 83	4124	-1337 85	4131	-1344 85		
Hushpuckney Sh	4275	-1383 38	4251	-1369 35	4168	-1371 37	4160	-1373 36	4170	-1383 39		
Base K.C.	4313	-1421 38	4290	-1408 39	4207	-1410 39	4200	-1413 40	4210	-1423 40		
Marmaton	4342	-1450 29	4316	-1434 26	4236	-1439 29	4232	-1445 32	4236	-1449 26		
Pawnee	4441	-1549 99	4416	-1534 100	4325	-1528 89	4318	-1531 86	4331	-1544 95		
Myrick Station	4479	-1587 38	4451	-1569 35	4362	-1565 37	4356	-1569 38	4364	-1577 33		
Labette Sh	4495	-1603 16	4467	-1585 16	4377	-1580 15	4371	-1584 15	4385	-1598 21		
Fort Scott	4502	-1610 7	4474	-1592 7	4383	-1586 6	4377	-1590 6	4391	-1604 6		
Cherokee	4528	-1636 26	4501	-1619 27	4411	-1614 28	4406	-1619 29	4421	-1634 30		
Johnson	4572	-1680 44	4541	-1659 40	4452	-1655 41	4448	-1661 42	4459	-1672 38		
Mississippian	N/R		4585	-1703 44	4496	-1699 44	4492	-1705 44	4500	-1713 41		
TD	4670	-1778	4650	-1768 65	4550	-1753 54	4550	-1763 58	4480			

100-100-100

DRILLING RECORD:

<u>Date</u>		<u>Daily Drilling Record</u>
1/14/02		Moved in on location and rigged up.
1/15/02		Set 8 5/8" surface casing @ 218' with 150 sxs.
1/16/02	7:00 A.M.	Drilling Depth 1100'
1/17/02	7:00 A.M.	Drilling Depth 2412'
1/18/02	7:00 A.M.	Drilling Depth 3190'
1/19/02	7:00 A.M.	Drilling Depth 3475'
1/20/02	7:00 A.M.	Drilling Depth 3965' Geologist on Location
1/21/02	7:00 A.M.	Drilling Depth 4243'
1/22/02	7:00 A.M.	Drilling Depth 4475' DST No. 1
1/23/02	7:00 A.M.	Drilling Depth 4540' DST No. 2
1/24/02	7:00 A.M.	Drilling Depth 4670' Ran Open Hole Logs and Set 4 1/2" Production Casing

SUMMARY:

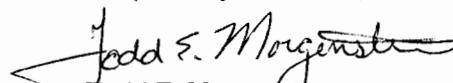
The No. 3 Sharp "A" was under geological supervision from 3850' to 4670' RTD. With the positive results of D.S.T. No. 1 and after reviewing the open hole logs, it was decided to run 4 1/2" production casing and complete this well through perforations.

**Recommended Perforations:**

Johnson        4587-4589  
                    4576-4578

Myrick Station 4481-4486

Respectfully submitted,

  
Todd E. Morgenstern