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ORIGINAL

SHIELDS OIL PRODUCERS, INC.
RUSSELL, KANSAS

GEOLOGICAL REPORT
BOWMAN TRUST A-3
C W/2 NW NE Section 3
Twp. 10 South, Rge. 12 West
Osborne County, Kansas

15-141-20323

August 15, 1996

SHIELDS OIL PRODUCERS, INC.

Russell, Kansas

Geological Report:	Bowman Trust A-3 C W/2 NW NE Sec. 3, T 10 S, R 12 W Osborne County, Kansas
Contractor:	Shields Drilling Co., Inc.
Drilling Commenced:	Aug. 8, 1996
Drilling Completed:	Aug. 14, 1996
Casing Record:	8 5/8" surface casing set at 206' with 150 sx. 4 1/2" production casing set at 3232' with 125 sx. Port Collar set in Anhydrite. (902')
Samples:	Saved and examined from 2700' to 3240', RTD. Zones of interest are described in this report.
Drilling Time:	Recorded and plotted from 2700' to 3240', RTD. A copy of the drilling time/lithology log is included with this report.
Drillstem Tests:	3 by Swift Formation Testers 1 by Trilobite Testing, LLC.
Electric Logs:	Radiation-Guard-Caliper by Mercury Wireline.
Elevations:	Kelly Bushing: 1835' Ground Level: 1830 Measurements From: K B

FORMATIONS:	ROTARY DEPTHS:	E. LOG DEPTHS:	E. LOG DATUMS:
Anhydrite	897-929	896-928	+ 939
Howard Lime	2732	2726	- 891
Topeka Lime	2768	2764	- 929
Heebner Shale	3005	3000	-1165
Toronto Lime	3025	3022	-1187
Lansing-Kansas City	3062	3058	-1223
"C" Zone Porosity	3111	3107	-1272
Total Depth	3240	3238	-1403

Lithology; Zones of Interest & Test Data (corrected to E. Log depths):

Lansing-Kansas City:

3058-3068: A zone — LS-white, buff, crystalline, dense to some crystalline and fossil porosity with scattered light oil stain and poor saturation. Faint odor, but no free oil. Tested by DST #1.

DRILLSTEM TEST No. 1: 3034-3068 (w/ 4' up hole correction)

Times: 15-60-45-60 with good blow 1st. flow and good to fair blow 2nd. flow period. (blew off bottom of bucket instantainiously and then gradually weakened thru-out test)

Recovery:
180' of gas
120' very slight oil & gas cut mud
180' slight oil & gas cut mud

Grindout 2nd. stand from bottom:

17% gas, 10% oil, 25% water & 48% mud

IFP: 133-150
IBHP: 983
FFP: 192-217
FBHP: 726

3086-3096: B zone — LS-white, buff, crystalline dense with white, crystalline, porous dolomite. Some white blocky chert. Trace of light oil stain but no free oil or odor. Tested by DST #2.

DRILLSTEM TEST No. 2: 3079-3096 (w/ 4' up hole correction)

Times: 15-60-45-60 with good blow 1st. flow. Off bottom in 2 min. dead in 15 min. 2nd. flow.

Recovery: 225' of heavy, jellied mud with salty taste.

Plugged tool after 1st. flow. Bottom hole pressures unable to read. Mud recovery was from mud invasion of zone during drilling and circulating. When packer was set the hydrostatic head pressure was cut off allowing the invaded mud to flow out of the zone and into the test tool. I believe that the heavy mud plugged the test tool. Considered no test.

Lithology, cont...

3107-3113: C zone — LS-white, buff, fine to medium oolicastic with good porosity and abundant barren porosity. Scattered light and dark oil stain with good show of free oil and good odor. Tested by DST #3 and DST #4.

DRILLSTEM TEST No. 3: 3103-3113: Packer failure. No test.

DRILLSTEM TEST No. 4: 3096-3113 (w/ 4' uphole correction)

Times: 5-60-30-60 with blow off bottom of bucket in 1 min. During 2nd. blow period, weak 1" blow increasing to strong. Off bottom in 11 min. Mud in annulus leaking during both open flow periods and shut in periods. Indicating that both the B zone and C zone was taking drilling mud during the test.

Recovery: 240' of heavy mud
120' of very slight oil and water cut mud.

Grindouts:

1. 3% oil, 5% water & 92% mud
2. 5% oil, 5% water & 90% mud

IFP:	97-104
IBHP:	1318
FFP:	164-194
FBHP:	1220

I believe that both the recovery of so much mud and high bottom hole pressures are the result of the supercharged C zone porosity. These test results are probably not valid.

3168-3172: F zone — LS-white, dense to chalky with oolicastic porosity. Some chert. Barren porosity with no show of oil.

3177-3198: G zone — LS-white, dense to chalky with abundant medium to coarse oolicastic porosity and barren. Some white, sucrosic lime. No show of oil.

Remarks & Recommendations:

The following table compares the Bowman Trust A-3 with the Nelson #1 and the Chattam A-1 (two nearby producing wells):

	Bowman Trust A-3	Nelson #1	Chattam A-1
Anhydrite	+ 939	+ 941	+ 946
Lansing-KC	-1223	-1223	-1226
C zone Porosity	-1272	-1274	-1274

You will note from the foregoing table that the Bowman Trust A-3 ran flat with the Nelson and 3 feet higher than the Chattam A-1. Both wells are producing from the A zone.

During the drilling of the well, drillstem tests were taken covering zones of commercial importance. These tests were not necessarily valid due to the mud invasion of the porosity zones. I believe that both the fluid recoveries and bottom hole pressures are suspect (even DST #1 covering the A zone).

After completion of the drilling an open hole log was run and you will note that a 4 foot uphole correction was made based on the E. log depths. Also, you will note the very high porosities in all three potential pay zones. This may account for the mud invasion of the zones.

Based on structural position of the well and the small amounts of oil noted on drillstem tests, it was decided that production casing should be set to further test the zones through perforations. I recommend that the C zone be perforated from 3108-12 and the A zone from 3060-66. I believe that the B zone can be disregared as a potential pay zone.

Respectfully submitted;

Francis C. Whisler

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