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Copy for Jim Ferrell

GEOLOGIC REPORT

Aspen Drilling Co.
No. 1 Baumann
C NW SE Section 32-Township 23S-Range 15W
Pawnee County, Kansas

Contractor: H-30 Drilling Co.

Spud: May 30, 1973

Completed: June 5, 1973

Surface Casing: 8 5/8" @ 269 ft.

Production Casing: 5 1/2" @ 2124 ft.

Measurement: Kelly Bushing

ELEVATION: 2032 ft. - KB

Geologic Formation Tops

Anhydrite	948	+1084
Base Anhydrite	968	+1064
Hollenberg	1942	+90
Herrington	1979	+53
Krider	1991	+41
Winfield	2030	+2
Towanda	2096	-64
Log TD	2128	-96
Rotary TD	2125	-93

The above formation tops are based on electric log measurements and are approximately 4 feet deeper than rotary measurements. A Baroid portable gas detector was operating from 1900 ft. to Rotary TD.

The following electric logs were run by Welex: Radiation-Guard-Caliper, Compensated Density, Compensated Acoustic Velocity.

Two cores were taken and analyzed by Core Lab, Inc.

The cores and samples will be preserved and deposited at some later date in the Wichita Well Sample Library and/or the State Geological Survey.

I STRATIGRAPHY AND LITHOLOGY

The stratigraphy, lithology and drilling time are presented on the geologic log included in this report. A summary of the shows of gas, cores, and drill stem tests are also presented on the geologic log.

The Herrington-Krider and Winfield were cored. Core descriptions and analysis are included with this report. Core depths are about 4 ft. shallower than electric log depths.

II STRUCTURAL GEOLOGY

The #1 Baumann encountered all potentially productive formations structurally higher than other wells in the area, except those wells in the Benson Pool immediately northwestward.

Structural comparisons can be made from the map included with this report.

Detailed structural comparisons of key wells are tabulated below.

	Aspen #1 Baumann C NW SE Sec. 32	D-G #1 Baumann SE NW SE Sec. 32	Aspen #1 Becker NW SE SW Sec. 33
Elevation - KB	2032 ft.	2031 ft.	2021 ft.
Anhydrite	+ 1084	+ 1077	+ 1072
Base Anhydrite	+ 1064	+ 1059	+ 1052
Herrington	+ 53	+ 45	+ 9
Base Krider	+ 14	+ 6	- 30
Winfield	+ 2	- 7	- 42
Towanda	- 64	- 69	- 102

III REMARKS

HERRINGTON 1979 (+53) Top Chase Group

The Herrington-Krider section was tested further by DST #1 and is considered to be potentially gas productive.

DST #1 1977 ft - 2027 ft. (E. Log 1981 ft. - 2031 ft.)

Tool Open: Initial 60 min + final 60 min = 2 hours.
Good blow throughout.

Recovered: 185 feet of mud.

IBHP	123#/60 min	IFP	26-35#
FBHP	345#/60 min	FFP	35-53#
HP	1065#	BHT	98° F (est)

Mud: Wt. - 9.9, Vis. 34, WL 40, Cl. 85,000

No gas in the mud was detected while coring. A maximum of 23 units CH_4 was recorded while reaming the core hole. After DST #1 maximum gas exceeded 200 units CH_4.

WINFIELD 2030 (+2)

The Winfield was tested further by DST #2 and is considered to be potentially gas productive.

DST #2 2028 ft. - 2088 ft. (E Log 2032 - 2092)

Tool Open:	Initial 60 min. + final 60 min. = 2 hours. Good blow throughout.		
Recovered:	125 feet of mud.		
	IBHP 289#/60 min	IFP	61-70#
	FBHP 411#/60#	FFP	70-87#
	HP 1065#	BHP	90° F (est.)
Mud:	Wt. 9.7 Vis. 32 WL 4.8	Cl.	70,000

No new gas anomalies were detected while coring. A maximum of 15 units CH_4 was recorded while reaming core hole. After DST #2 maximum gas exceeded 200 units CH_4.

TOWANDA 2096 (-64)

The Towanda was tested further by DST #3 and is considered potentially productive.

DST #3 2065 ft. - 2125 ft. (E. Log 2068 - 2128)

Tool Open:	Initial 60 min. + final 120 min. = 3 hours. Fair blow decreased and died in 20 min. on initial open. Weak blow increased to fair blow throughout final open.		
Recovered:	120 feet of mud.		
	IBHP 113#/60 min	IFP	43-52#
	FBHP 621#/120 min	FFP	52-70#
	HP 1085#	BHT	91° F (est)
Mud:	Wt. 9.7 Vis. 32 WL 4.8	Cl.	70,000

While drilling the Towanda, the mud system was carrying 15 units CH_4 from DST #2. Two gas anomalies over the 15 unit "base line" were recorded: 1) 24 units CH_4 while circulating at 2100 ft. 2) 27 units CH_4 from below 2115 feet. After DST #3 and electric log was run without circulating the mud and there was no opportunity to detect gas in the mud after DST #3.

IV RECOMMENDATIONS

After evaluation of the samples and cores, core analysis, electric logs and drill stem tests, production casing was set to further test the potentially productive zones.

It is considered that the Herrington-Krider section is of primary interest, the Winfield is of secondary interest and the Towanda is of tertiary interest. It is recommended that the Herrington-Krider and Winfield be tested through perforations and treated on the primary completion. It is recommended that the Towanda be perforated and treated before the well is abandoned.

Based on core and log analysis it is recommended that the following intervals be perforated: (Electric Log Measurements)

	Formation	Depth	Remarks
A.	Herrington-Krider	1982 - 1990	Tight ?
		2003 - 2016	Best Reservoir
B.	Winfield	2040 - 2048	Dolomite, Tight ?
		2056 - 2064	L. S. Best Reservoir ?
C.	Towanda	2112 - 2124	Best Reservoir in Towanda

Respectfully submitted

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