UNDERSTANDING THE WORLD...
A PIECE AT A TIME

Geological Report on

GOBIN 'B' #1
N/2 NW NE 23-T29S-R18W
Kiowa County, Kansas

of

K & E PETROLEUM, INC.
Wichita, Kansas

CURTIS E. COVEY
3047 South Mount Carmel
Wichita, Kansas 67217
(316) 942-2685

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Curtis E. Covey

PETROLEUM GEOLOGIST

3047 SOUTH MOUNT CARMEL
WICHITA, KANSAS 67217

(316) 942-2685

GSA
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29 October 1985

K & E Petroleum, Inc.
Hardage Center, Suite 300
100 South Main
Wichita, Kansas

Re: Gobin "B" #1
N/2 NW NE 23-T29S-R18W
Kiowa County, Kansas

Gentlemen,

The following manuscript letter and enclosed geologist's log are a summary of the referenced well.

RECOMMENDATION

A recommendation was made to the operator to run production casing and attempt to complete the well from the Emporia Limestone.

A recommendation is made to appropriately perforate, adequately treat and test the Emporia Limestone (3,498'-3,507'). Secondary zones of interest encountered during the drilling of the Gobin "B" #1 were the Lansing "A" zone (4,263'-74') and the Mississippian-aged chert (4,868'-94').

GEOLOGICAL DATA

Formation Tops*:

Herington Limestone	2,457'	(-269')	((8'))**
Cottonwood Limestone	2,977'	(-789')	((6'))**
Stotler Limestone	3,413'	(-1,225')	((4'))**
Emporia Limestone	3,494'	(-1,306')	((4'))**
Heebner Shale	4,072'	(-1,884')	((4'))**
Iatan Limestone	4,246'	(-2,058')	((2'))**
Lansing Group	4,256'	(-2,068')	((2'))**
Stark Shale	4,582'	(-2,394')	((2'))**
Marmaton Group	4,724'	(-2,536')	((2'))**
Mississippi Chert	4,868'	(-2,680')	((1'))**

* Log measured from Kelly Bushing; 13 feet above Permanent Datum.

** Depth adjust Driller's depth up to Logger's depth.

Sample examination used in conjunction with the electric logs' calculations suggests the information as noted below.

MAJOR SHOW(S)

1. Emporia Limestone . . . . . (3,498'-3,507')

   $\emptyset_{xp}$= 13% - 17%, R_t= 2.5 - 4, R_w= .035 ohms, m = 2 & S_w= 65% - 85%. (Archies)

   Good/Excellent permeability as suggested by DST #1 and mudcake.

   Hotwire: 5u/1u (Bk) @ 5X.
   Chromatograph: 15u Total/3u (Bk) @ 2X.

   Limestone — Tan. Singular. (GSA: Grayish Orange). Micro-XLN. XLN porosity. Sub-chalky. Partly friable. No/Trace visible porosity.
   Faint odor. Spotted/Uniform high yellow flouresence. After crushing, no free oil. Rare minute gas bubbles free or clinging to rx chip. Weak positive cut/residual. Very weak acid/residual.

MINOR SHOW(S)

1. Lansing . . . . . (4,263'-74')

   $\emptyset_{xp}$= 16% - 26%, R_t = 6 - 12, R_w = .038 ohms, m = 2 & S_w = 23% - 51%. (Archies)

   Good permeability as suggested by mudcake and DST #2.

   Hotwire: 2u/1u (Bk) @ 5X.
   Chromatograph: 7u Total/ 3u (Bk) @ 2X.

   Limestone — Tan. Singular. Oolicastic. Tan matrix. Opaque. Lots void infill & Re-XLN. Excellent oolicastic porosity. No matrix visible porosity.
   No/Faint? odor. Uniform medium high yellow flouresence. After crushing, rare free gas bubbles. Most bubbles clinging to rx chip. Some free dead amber oil resting on tray bottom. Fair cut/residual Fair/Good acid/residual.

2. Mississippian-aged Chert . . . . (4,868'-94')

   $\emptyset_{xp}$ = 16% - 26%, R_t = 2 - 6, R_w = .04 ohms, m = 2 & S_w = 43% - 55%.

   Fair/Good permeability as suggested by mudcake and DST #3 & #4.

   Hotwire: 20u/6u (Bk) @ 5X.
   Chromatograph: 57u Total/ 17u (Bk) @ 2X.

   Chert — White/Tan/trace orange & amber near top. White/Tan mottled with depth. Mostly fresh. Some tripolitic. Opaque to Transparent. Inclusions. No/Trace visible porosity.
   Faint odor. Trace Spotted/Uniform (trace) high yellow flouresence. After crushing, trace free gas. No oil. Trace spotted light brown stain. Negative cut/residual. Negative acid/residual. Show decreasing with depth.

DRILL STEM TEST(S)

1. Emporia Limestone . . . . . Driller's Depth: 3,500'-15'
Logger's Depth: 3,496'-3,511'

Recovery: Gas to Surface - 2"
120' Watery Mud.

IFP: 240# - 261# / 45"
ISIP: 1,085# / 60"
FFP: 323# - 292# / 90"
FSIP: 1,085# / 120"

MH: 1,841# - 1,810#. Temp: 110°F.

R_w(Rec) = .08 ohms @ 78°F. Cl^-(88M).

IFP Gauge: 10" - 937M CFGD
20" - 1,105M CFGD
30" - 1,145M CFGD
40" - 1,187M CFGD
45" - 1,233M CFGD

FFP Gauge: All - 1,316M CFGD

2. Lansing "A" zone . . . . . Driller's Depth: 4,254'-72'
Logger's Depth: 4,242'-70'

Recovery: Gas to Surface - TSTM (FFP)
240' Oil Spotted Gassy Mud
180' Gassy Muddy Water
90' Gassy Water

IFP: 62# - 94# / 45"
ISIP: 1,399# / 60"
FFP: 156# - 188# / 45"
FSIP: 1,384# / 60"

MH: 2,210# - 2,195#. Temp: 117°F.

R_w(Rec) = .07 ohms @ 70°F. Cl^-(67M).
R_w(Pit) = .2 ohms @ 80°F. Cl^-(30M).

3. Mississippian-aged Chert . . . . Driller's Depth: 4,860'-78'
Logger's Depth: 4,859'-77'

Recovery: Gas to Surface - 10"
30' Mud.

IFP: 15# - 31# / 45"
ISIP: 1,414# / 60"
FFP: 15# - 15# / 90"
FSIP: 1,384# / 120"

MH: 2,628# - 2,597#. Temp: 123°F

R_w(Rec) = .34 ohms @ 75°F. Cl^-(19M).
R_w(Pit) = .32 ohms @ 80°F. Cl^-(18M).

DRILL STEM TEST(S) Cont'd.

3. Mississippian-aged Chert . . . . IFP Gauge: 20" - 8.2M CFGD
30" - 13.5M CFGD
40" - 17.3M CFGD
45" - 54.7M CFGD

FFP Gauge: 10" - 29M CFGD
20" - 37.6M CFGD
30" - 40.9M CFGD
40" - 37.6M CFGD
50"/90" - 39.2M CFGD

4. Mississippian-aged Chert . . . . Driller's Depth: 4,863'-88'
Logger's Depth: 4,862'-87'

Recovery: Gas to Surface - 20"
350' Mud

IFP: 78# - 62# / 45"
ISIP: 1,460# / 60"
FFP: 47# - 47# / 90"
FSIP: 1,445# / 120"

MH: 2,659# - 2,582#. Temp: 124°F.

R_w(Rec) = .34 ohms @ 78°F. Cl^-(19M).
R_w(Pit) = .38 ohms @ 65°F. Cl^-(19M).

Note: Partial packer seat leakage on beginning of FSIP.

IFP Gauge: 30" - 19.5M CFGD
40" - 25M CFGD
45" - 27M CFGD

FFP Gauge: 10" - 18.5M CFGD
20" - 20.7M CFGD
30" - 30.8M CFGD
40"/80" - 35.9M CFGD
90" - 34M CFGD

GENERAL

Spudded: 15 October 1985. Completed: 27 October 1985.

Contractor: Abercrombie Drilling Company -- Righ #6.

Depth: Rotary - 4,940'. & Logger's - 4,939'.

Elevation: 2,188'KB, 2,186'DF & 2,175'GL.

Hole Deviation: ½° @ 1,000', 3/4° @ 2,433', 3/4° @ 2,634', 3/4° @ 3,000', 3/4° @ 3,515', 1° @ 4,878' and 3/4° @ 4,940'.

CASING

Surface: 8-5/8", New, Set @ 432' Driller's with 300 sx Common (2%Gel/3%CC).
Production: 4-1/2", New, 10.5 lb.

SURVEYS

Electric Log: Great Guns. Mud Program: Davis Mud & Chemical.
Gas Detector: Davis Mud. Tester: Western Testers.

DISCLAIMER

The service rendered on the Gobin 'B' #1 was done without any biasing influence, intentional or unintentional, from any employee or representative of K & E Petroleum, Inc. In this review, I am an independent petroleum geologist and subsequently, not an employee of the referenced company. I will not receive any financial benefit from the positive completion of the subject well.

The enclosed geologist's log is considered an intergral part of this report and is not intended to separated from the same.

The recommendations made hereon shall not be construded as absolute and are made without assuption of liability and are statements of observation/ research/training/opinion only.

Should you require the services of a petroleum geologist at any time in the future, every effort will be made to serve you in the most efficient manner available.

Respectfully sumbitted,

Curtis E. Covey

CEC:fyd
cc:file
ENCL: GEOLOGIST LOG
SAMPLE CHIP TRAY
DST & E-log Service Tickets
Drilling Fluid Reports
Drilling Time Sheets
Strap Sheets
Straight Hole Targets
Hotwire & Chromatograph Charts