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GEOLOGIST'S WELL REPORT

COMPANY ESP DEVELOPMENT, INC. (6194)

WELL Hagaman #1

FIELD Hagaman North (Wildcat per seismic)

LOCATION (legal) Ap. N½ SW SW (1075' FSL & 4515' FEL)

Section 27 TWP 11 S RGE 15 W

(Map) 4 mi E & 1 mi N of Fairport, Ks.

COUNTY Russell STATE Kansas

ELEVATION: 1828' K.B., 1823' G.L.

Depths measured from Kelly Bushing

A. P. I. NUMBER 15-167-23229

GEOLOGY BY Randall Kilian
Matt Dreiling

PERTINENT WELL DATA

CONTRACTOR Vonfeldt Drilling, Inc. (9431) (Doug Budig T.P.)

RIG #1 HYDRAULICS Upetron 6x14x60

DRILL PIPE 4 ½" X-H COLLARS X-H 14 (472')

CASING: SURFACE 8 5/8" @ 212' w/ 150 sx 60/40 Poz

PRODUCTION 5 ½" @ 3374' w/ 150 sx ASC DV @ 905' w/ 300 sx 60/40 Poz 6% gel

DRILLING FLUID: COMPANY Andy's Mud & Chemical Co. (Andy Werth)

TYPE: Chemical & Drispac

REMARKS: Full-Service

DRILL STEM TESTS: COMPANY Trilobite Testing Inc. (John J. Schmidt)

NUMBER OF TESTS Four (4)

ELECTIC LOGS: COMPANY ELI Wireline Service, Inc.

DETAIL (5") 2600' - RTD

TYPE Comp N-D, Dual, Micro

DRILLING TIME FROM 2600' TO RTD

SAMPLE TIME FROM 2600' TO RTD

SUPERVISION FROM 2600' TO RTD

VERTICAL DEVIATION ½° @ 212', 3/4° @ 3006',

PLUGGING REPORT 15 sx Rat, 10 sx Mouse

RESERVE PIT 400 bbls., Chl. 56,000, Ca. 1800

DAILY REPORT

DATE:	7 a.m. Depth	RIG ACTIVITY
5-07-03		MIRU, Spud
5-08-03	212'	WOC
5-09-03	1692'	Drilling shale
5-10-03	2369'	Drilling lime & shale
5-11-03	2920'	Drilling lime & shale
5-12-03	3035'	DST #2 LKc "D"
5-13-03	3200'	DST #3 LKc "J-K"
5-14-03	3303'	DST #4 Arbuckle
5-15-03	3377'	T.D. Running 5½" casing

DRILL STEM TESTS

NO	INTERVAL	IFP/TIME	ISIP/TIME	FFP/TIME	FSIP/TIME	IHP/FHP	RECOVERY
2	LKc D 3012- 3035'	14# 20# 30"	468# 30"	20# 34# 60"	475# 60"	1446# 1407#	380' GIP 50' H,O,G,W,C,Mud
1	LKc A-D 2954- 3006'	18# 51# 30"	475# 30"	54# 83# 30"	465# 60"	1421# 1394#	75' GIP 90' Mud w/ S.O. 60' M,Wtr.
3	LKc J-K 3145- 3200'	16# 29# 30"	570# 30"	29# 53# 60"	609# 60"	1532# 1492#	350' GIP 90' O,G,Mud 30% Oil
4	Arb. 3282- 3303'	20# 71# 30"	902# 45"	76# 145# 60"	879# 90"	1613# 1568#	325' G,Oil grav 28°
5							
6							
7							
8							

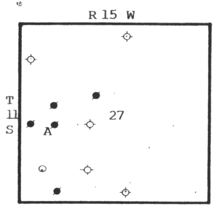
MUD RECORD

CHK	DEPTH	WT	VIS	FIL	CHL	YP	
1	2524'						Displaced
2	2600'	8.7	52				
3	2700'	8.8	49				
4	2800'	8.9	51				
5	2947'	9.0	52	7.2	6k	15	LCM tr.
6	3035'	9.1	42	7.2	11k	14	LCM tr.
7	3085'	9.0	40				
8	3200'	9.2	49	8.0	11k	15	LCM tr.
9	3303'	9.3	42	8.8	12k	14	LCM tr. $3480
10							
11							

BIT RECORD

NO.	SIZE	MAKE	TYPE	DEPTHOUT	FEET	HOURS
1	12 ¼"	Sec.	Mt	212'	212'	3 ½
2	7 7/8"	JZ	517 Y	3200'	2988'	82 ¼
3	7 7/8"	JZ	517 Y	3377'	177'	9 ½
4						
5						
6						
7						

FORMATION TOPS & STRUCTURAL GEOLOGY



REFERRED TO:
A: FRONTIER OIL CO.
Abbott #1 NE NW SW 27
B:
C:
D:
E:

STRATIGRAPHIC MARKERS	SUBJECT WELL SAMPLE	SUBJECT WELL E. LOG	DATUM	STRUCTURAL POSITION A	B	C	D	E
Anhydrite	901'	900'	+ 928	+ 922				
Base	935'	937'	+ 891	+ 888				
Topeka	2670'	2670'	- 842	- 845				
Heeb. Sh.	2923'	2921'	-1093	-1095				
Toronto	2943'	2940'	-1112	-1116				
Lansing	2973'	2973'	-1145	-1147				
Base Kc.	3225'	3227'	-1399	-1400				
Arbuckle	3286'	3284'	-1456	-1462				
T.D.	3377'	3377'	-1549	-1493				

Pipe strap 1.49' short

*Structural position of subject well as compared to referred well.

SUMMARY

The Hagaman #1 well was drilled with Vonfeldt Drilling Inc. tools rig #1 beginning May 7, and drilling was completed on May 15, 2003.

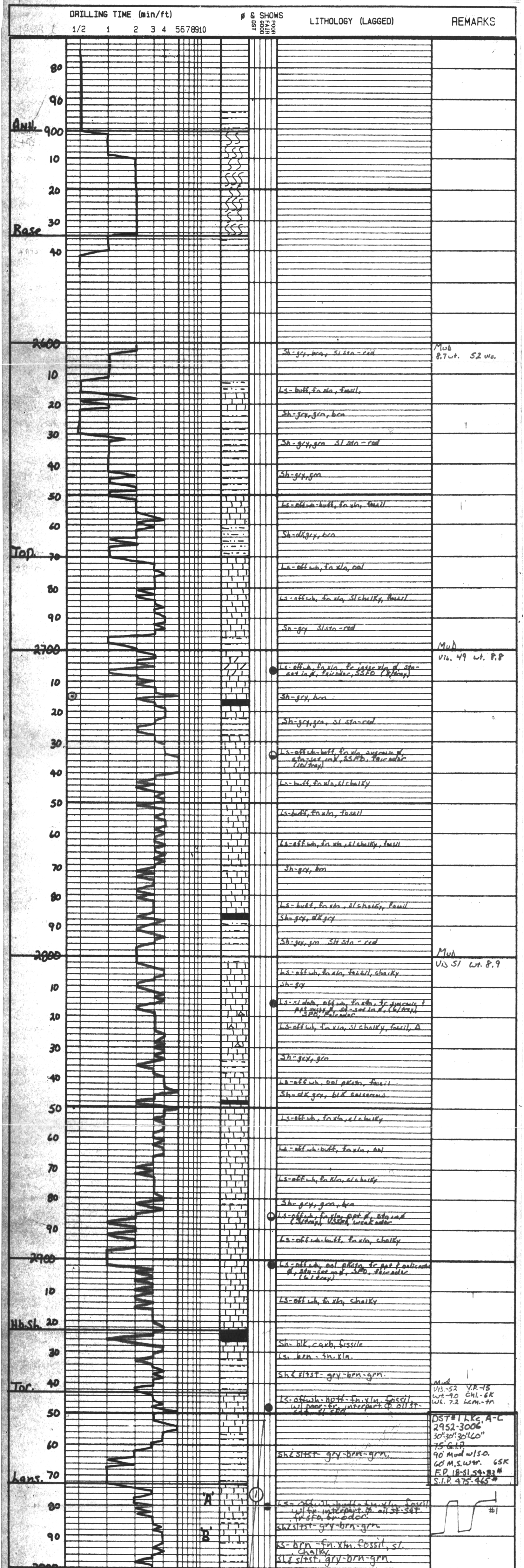
The well was located via 3-D seismic data. The well ran high structurally to the key well by 3-6'. Small tests were taken over several LKc zones that will contribute to overall production. DST #4 over the upper Arbuckle is a good test for the area.

Based upon all data, casing was set and cemented to further test and produce the well. Recommended perfs: Arb. 3287-3306', LKc K 3189-92', J 3161-66', D 3015-19', A 2973-76', Top. 30' 2701-06'.

Respectfully,

Randy

Randall Killian



Sh-gry, brn, Sl sta-red

Mud
8.7 wt. 52 vis.

Ls-buff, fn xln, fossil.

Sh-gry, grn, brn

Sh-gry, grn Sl sta-red

Sh-gry, grn

Ls-off wh-buff, fn xln, fossil

Sh-dk gry, brn

Ls-off wh, fn xln, ool

Ls-off wh, fn xln, Sl chalky, fossil

Sh-gry Sl sta-red

Mud
Vis. 49 wt. 8.8

Ls-off wh, fn xln, fr inter xln ø, sta-sat in ø, fair odor, SSFO (8/tray)

Sh-gry, brn

Sh-gry, grn, sl sta-red

Ls-off wh-buff, fn xln, sucrosic ø, sta-sat in ø, SSFO, fair odor (10/tray)

Ls-buff, fn xln, sl chalky

Ls-buff, fn xln, fossil

Ls-off wh, fn xln, sl chalky, fossil

Sh-gry, brn

Ls-buff, fn xln, sl chalky, fossil

Sh-gry, dk gry

Sh-gry, grn Sl sta-red

Mud
Vis 51 wt. 8.9

Ls-off wh, fn xln, fossil, chalky

Sh-gry

Ls-sl dolo, off wh, fn xln, fr sucrosic & ppt vugy ø, st-sat in ø, (6/tray), SFO, fair odor

Ls-off wh, fn xln, sl chalky, fossil, Δ

Sh-gry, grn

Ls-off wh, ool pkstn, fossil

Sh-dk gry, blk calcareous

Ls-off wh, fn xln, sl chalky

Ls-off wh-buff, fn xln, ool

Ls-off wh, fn xln, sl chalky

Sh-gry, grn, brn

Ls-off wh, fn xln, ppt ø, sta in ø (3/tray), VSSFO, weak odor

Ls-off wh-buff, fn xln, chalky

Ls-off wh, ool pkstn, fr ppt & oolicastic ø, sta-sat in ø, SFO, fair odor (6/tray)

Ls-off wh, fn xln, chalky

Sh-blk, carb, fissile

Ls. brn - fn. xln.

Sh & sltst - gry-brn-grn.

Mud
Vis.-52 Y.P.-15
wt.-9.0 Chl.-6K
Wh. 7.2 LCM.-tr.

Ls-offwh-buff-fn. xln. fossil, w/ poor-fr. interpart. ø. oil st-sat. sl SFO

DST#1 LKc, A-C
2952-3006'
30"-30"-30"-60"
75' G.I.P.
90' Mud w/S.O.
60' M.S.Wtr. 65K
F.P. 18-51, 54-83#
S.I.P. 475-465#

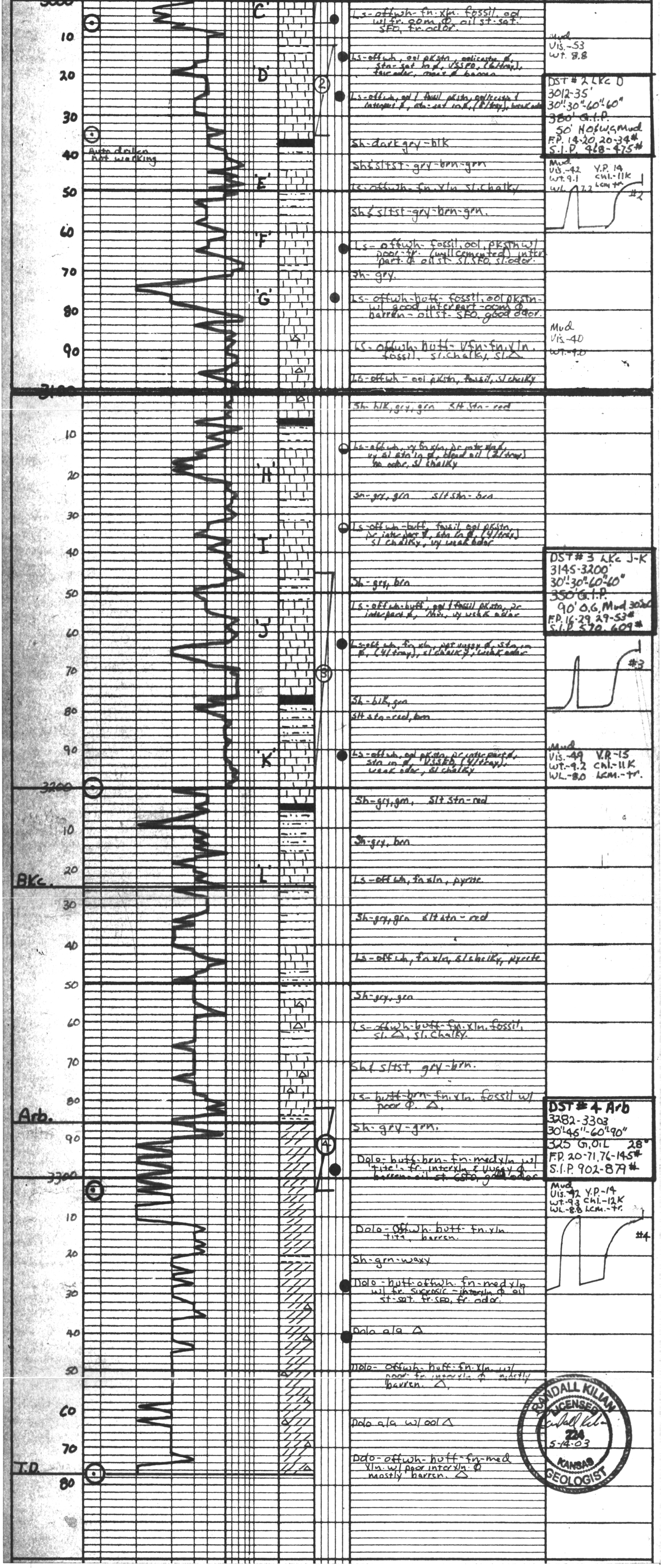
Sh & sltst- gry-brn-grn.

Ls-offwh-buff-fn. xln. fossil w/ fr. interpart. ø. oil st-sat. fr SFO, fr odor.

Sh & sltst-gry-brn-grn.

Ls-brn-fn. xln. fossil, sl. chalky.

Sl & sltst. gry-brn-grn.



Auto driller not working

Ls-offwh-fn.xln. fossil, ool w/ fr. oom. Φ, oil st-sat. SFO, fr. odor.

Mud
Vis.-53
wt. 8.8

Ls-offwh, ool pkstn, oolicastic Φ, stn-sat in Φ, VSSFO, (6/tray), fair odor, most Φ barren

Ls-offwh, ool & fossil pkstn, oolicastic & interpart Φ, stn-sat in Φ, (8/tray), weak odor

DST # 2 LKc D
3012-35'
30"-30"-60"-60"
380' G.I.P.
50' HO&WCMud
F.P. 14-20, 20-34#
S.I.P. 468-475#

Sh-dark grey-blk

Mud
Vis.-42 Y.P. 14
wt. 9.1 chl.-11k
WL 7.2 LCM tr.

Sh & sltst-gry-brn-grn

Ls-offwh-fn.xln sl. chalky

Sh & sltst-gry-brn-grn.

Ls-offwh-fossil, ool, pkstn w/ poor-fr. (wellcemented) interpart. Φ oil st- sl. SFO, sl. odor.

Sh-gry.

Ls-offwh-buff-fossil, ool pkstn-w/ good interpart-oom Φ, barren-oil st-SFO, good odor.

Mud
Vis.-40
wt.-9.0

Ls-offwh, buff-vfn-fn.xln. fossil, sl. chalky, sl. △

Ls-offwh-ool pkstn, fossil, sl chalky

Sh-blk, gry, grn Slt stn-red

Ls-offwh, vy fn xln, pr interpart Φ, vy sl stn in Φ, bleed oil (2/tray) no odor, sl chalky

Sh-gry, grn slt stn-brn

Ls-offwh-buff, fossil, ool pkstn, pr interpart Φ, stn in Φ, (4/tray) sl chalky, vy weak odor

DST # 3 LKc J-K
3145-3200'
30"-30"-60"-60"
350' G.I.P.
90' O.G. Mud 30%O
F.P. 16-29, 29-53#
S.I.P. 570-609#

Sh-gry, brn

Ls-offwh-buff, ool & fossil pkstn, pr interpart Φ, NSO, vy weak odor

Ls-offwh, fn xln, pr vuggy Φ, stn in Φ, (4/tray), sl chalky, weak odor

Sh-blk, grn

Slt stn-red, brn

Ls-offwh, ool pkstn, pr interpart Φ, stn in Φ, VSSFO, (4/tray), weak odor, sl chalky

Mud
Vis.-49 Y.P.-15
wt.-9.2 Chl.-11K
WL.-8.0 LCM.-tr.

Sh-gry, grn, Slt stn-red

Sh-gry, brn

Ls-offwh, fn xln, pyrite.

Sh-gry, grn Slt stn-red

Ls-offwh, fn xln, sl chalky, pyrite

Sh-gry, grn

Ls-offwh-buff-fn.xln. fossil, sl. △, sl. chalky.

Sh & sltst, gry-brn.

Ls-buff-brn-fn.xln. fossil w/ poor Φ. △.

DST # 4 Arb
3282-3303
30"-45"-60"-90"
325 G, OIL 28°
F.P. 20-71, 76-145#
S.I.P. 902-879#

Sh-gry-grn.

Dolo-buff-brn-fn-med xln w/ 'tite', fr. interxln & vuggy Φ barren-oil st. GSFO, good odor

Mud
Vis.-42 Y.P.-14
wt.-9.3 Chl.-12K
WL.-8.8 LCM.-tr.

Dolo-offwh-buff-fn.xln. tite, barren.

Sh-grn-waxy

Dolo-buff-offwh-fn-med xln w/ fr. sucrosic-interxln Φ oil st-sat. fr. SFO, fr. odor.

Dolo a/a △

Dolo-offwh-buff-fn.xln. w/ poor-fr. interxln Φ, mostly barren. △,

Dolo a/a w/ ool △

Dolo-offwh-buff-fn-med xln. w/ poor interxln. Φ mostly barren. △

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5-14-03