

State Geological Survey
KANSAS
WICHITA BRANCH
WELL COMPLETION REPORT AND
DRILLER'S LOG

IMPORTANT
 Kans. Geo. Survey request
 samples on this well.

9 T. T32S R. R21W E
 W
 Loc. 2290' FWL 1960' FSL of Sec.
 County CLARK

API No. 15 — 025 — 20460
 County Number

Operator
 CALVIN EXPLORATION, INC.

Address
 1125 17th St., Suite 2000, Denver, Colorado 80202

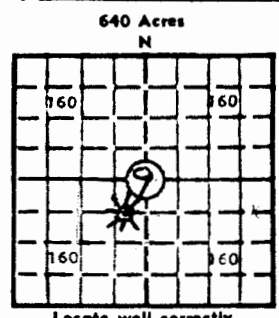
Well No. 3-9 Lease Name HARDEN

Footage Location
 2290' FWL Iron (N) (S) line 1960' FSL feet from (E) (W) line

Principal Contractor Search Drilling Co. Geologist Paul M. Gerlach

Start Date 05-13-81 Date Completed 06-13-81 Total Depth 5400' P.B.T.D. 5358'

Directional Deviation 1° @ 5024', 1° @ 5270' Oil and/or Gas Purchaser SIGW



Elev.: Gr. 2013'
 DF 2021' KB 2023'

CASING RECORD

Report of all strings set — surface, intermediate, production, etc.

Purpose of string	Size hole drilled	Size casing set (in O.D.)	Weight lbs/ft.	Setting depth	Type cement	Sacks	Type and percent additives
Conductor	30"	20"		46'	Redimix	4-1/2 yds	
Sfc csg	12-1/4"	8-5/8"	24#	767'	HLC	1100 sx	1/4# floccul/sk, 2% CaCl
Production	7-7/8"	4-1/2"	10-1/2#	5400'	50/50 Poz	175 sx	18% NaCl & 3/4 of 1% CFR2

LINER RECORD

PERFORATION RECORD

Top, ft.	Bottom, ft.	Sacks cement	Shots per ft.	Size & type	Depth interval
			2SPF	3-1/8" jet gun	5353' - 5360'
			2SPF	3-1/8" jet gun	5238' - 5242'

ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Amount and kind of material used	Depth interval treated
750 gal 7-1/2% MCA w 10 BS	5353' - 5360'
750 gal 7-1/2% Fe Acid followed by 300 gal methanol w 1500 SCF/ bbl N ₂	5238' - 5242'

INITIAL PRODUCTION

Date of first production SIGW Producing method (flowing, pumping, gas lift, etc.) Flowing

RATE OF PRODUCTION PER 24 HOURS	Oil	Gas	Water	Gas-oil ratio
	bbls.	MCF	bbls.	CFPB
Disposition of gas (vented, used on lease or sold) sold	Producing interval(s) 5238' - 5360'			

INSTRUCTIONS: As provided in KCC Rule 82-2-125, within 90 days after completion of a well, one completed copy of this Drillers Log shall be transmitted to the State Geological Survey of Kansas, 4150 Monroe Street, Wichita, Kansas 67209. Copies of this form are available from the Conservation Division, State Corporation Commission, 245 No. Water, Wichita, Kansas 67202. Phone AC 316-522-2206. If confidential custody is desired, please note Rule 82-2-125. Drillers Logs will be on an open file in the Oil and Gas Division, State Geological Survey of Kansas, Lawrence, Kansas 66044.

Operator
CALVIN EXPLORATION, INC.

DESIGNATE TYPE OF COMP.: OIL, GAS,
 DRY HOLE, SWDW, ETC.:

Well No. **3-9** Lease Name **Harden** **GAS**

S 9 T 32S R 21 ^E_W

WELL LOG


Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

SHOW GEOLOGICAL MARKERS, LOGS RUN, OR OTHER DESCRIPTIVE INFORMATION.

FORMATION DESCRIPTION, CONTENTS, ETC.	TOP	BOTTOM	NAME	DEPTH
<u>Formation</u>			<u>SAMPLE TOPS:</u>	
Red Bed	50	668	Heebner	4280'
Red Bed and Lime	668	2306	Lansing	4475'
Lime and Shale	2306	5400	Marmaton	4975'
RTD	5400		Cherokee	5094'
			Marker	5117'
			B/Inola	5222'
DST #1 5220' - 5270'. OP 10" w SB(GTS 12"), SI 30", OP 60", SI 120". Ga 98MCFPD. Rec 183' HGC & SOCM, 183' HGC & HOCM, 183' HGC & HOC sltlyM 61' SG & SOCSW. IHP 2503#, IFP's 83 & 133#, ISIP 1754#, FFP's 133 & 232#, FSIP 1608#, FHP 2503#. Sampler pressure 180#. Contents 50cc oil, 1550cc SW T.5CFG.				

USE ADDITIONAL SHEETS, IF NECESSARY, TO COMPLETE WELL RECORD.

Date Received


 Gary C. Wilkins, ^{Signature} Vice President
 Exploration-Production
 Title
 June 15, 1981
 Date

PT

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State Geological Survey
 DRILLERS LOG
 WICHITA BRANCH
 Harden #3-9

<u>CASING RECORD:</u> 8 5/8" set at 767' w/ 700 sack cement	<u>OPERATOR:</u> Calvin Exploration, Inc.	<u>DESCRIPTION</u>
<u>TOTAL DEPTH:</u> 5400'	<u>CONTRACTOR:</u> Search Drilling Co.	NE SW Section 9-32S-21W Clark County, Kansas
	<u>COMMENCED:</u> May 12, 1981	
	<u>COMPLETED:</u> May 25, 1981	

<u>FORMATION</u>	<u>TO</u>	<u>FROM</u>	<u>REMARKS</u>
Red Bed	50	668	
Red Bed and Lime	668	2306	
Lime and Shale	2306	5400	
Rotary Total Depth	5400		

Ran 130 joints
of new 4 1/2" set at
5400' with 175 sacks
50-50 posmic, 18% CC
3/4% CFR-2. Plug
down at 6:45 P.M.
May 25, 1981

I certify that this is a true and correct copy of the above log to the best of my knowledge.

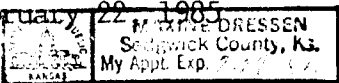
SEARCH DRILLING CO.

Robert S. May

 Robert S. May

Subscribed and sworn to before me this 28th day of May, 1981

My appointment expires:
February 22, 1985



RECEIVED
 STATE CORPORATION COMMISSION

 Maxine Dressen Notary Public

MAY 29 1981

CONSERVATION DIVISION
 Wichita, Kansas