NSAS

WELL COMPLETION REPORT AND DRILLER'S LOG

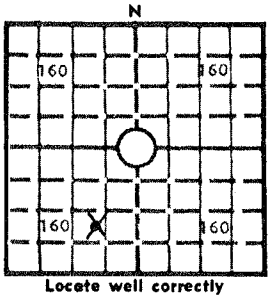
API No. 15 — 119 (County) — 20,493 (Number)

S. 14 T. 33S R. 30 W

Loc. SE NW SE SW
1770' FWL & 875' FSL of SW/4

County Meade

640 Acres
N



Locate well correctly

Elev.: Gr. 2718'

DF XXXX KB 2730'

Operator	
Deck Oil Co.	
Address	
Suite 4000, One Williams Center, Tulsa, OK 74172	
Well No.	**Lease Name**
2	Hamm
Footage Location	
875 feet from (S) line	1770 feet from (W) line
Principal Contractor	**Geologist**
Sage Drilling Co., Inc.	Tom Hammond
Spud Date / **Date Completed** / **Total Depth** / **P.B.T.D.**	
4-11-81 / 5-22-81 / 5900' / 5162'	
Directional Deviation	**Oil and/or Gas Purchaser**
	Jay Hawk Pipeline

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
Surface	12 1/4"	8 5/8"	24#	1603'	HCL Class "H"	600 200	¼#/sx Flowseal,2%CaCl 3% CaCl
Production	7 7/8"	5 1/2"	14.0# 15.5#	5899'	Poz A Class"H" Gilsonite	100 150	18% salt,3/4 of 1% CFR2 3/4 of 1% CFR-2

LINER RECORD

Top, ft.	Bottom, ft.	Sacks cement

TUBING RECORD

Size	Setting depth	Packer set at
2 3/8"	5162'	5162'

PERFORATION RECORD

Shots per ft.	Size & type	Depth interval
2	Csg Gun	5772'-78' & 5780'-84'
2	1-9/16" Tbg Gun	5204'-5211'

ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Amount and kind of material used	Depth interval treated
1000 gallons 15% MCA, 1 gallon HAI 55, 30 gallons Moreflo	5204'-5211'

RECEIVED
STATE CORPORATION COMMISSION
JUN - 1 1981
CONSERVATION DIVISION
Wichita, Kansas

INITIAL PRODUCTION

Date of first production	Producing method (flowing, pumping, gas lift, etc.)
5-21-81	Flowing

RATE OF PRODUCTION PER 24 HOURS	Oil	Gas	Water	Gas-oil ratio
	566/Calculated bbls.	TSTM MCF	XXXX bbls.	XXXX CFPB

Disposition of gas (vented, used on lease or sold)	Producing interval(s)
Vented	5204'-5211'

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 open file in the Oil and Gas Division, State Geological Survey of Kansas, Lawrence, Kansas 66044.

C-10-1972

Operator	DESIGNATE TYPE OF COMP.: OIL, GAS, DRY HOLE, SWDW, ETC.:
Deck Oil Co.	Oil

Well No.	Lease Name
2	Hamm

S 14 T 33S R 30 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
KB LOG TOPS				
Lansing (-1842)	4572		Compensated Neutron Formation Density	3800'-5891'
Kansas City (-2018)	4748			
B/Kansas City (-2294)	5024			
Marmaton (-2470)	5200		Dual Induction SFL	1607'-5886'
Perforations 5204-5211 Oil Zone				
Cherokee (-2642)	5372			
Morrow (-2998)	5728		Cement Bond Log with Wave Train Display	
Morrow Sand (-3042)	5772		#1	3748'-5823'
Perforations 5772'-5778' & 5780'-5784' Gas Zone			#2	4798'-5832'
Tested 1120 MCFPD. Temporarily shut in. Set Baker 5½" Model "D" retainer with flapper valve bottom & Model "D" packer on 2-3/8" tubing, set @ 5162'.			#3	4799'-5808'
			#4	4799'-5834'
Mississippi (-3120)	5850			
TD	5892			

DST #1 5765'-5795' Morrow

Initial Flow	15 min.	IFP 811 psi to 849 psi
Initial Shut-In	30 min.	ISIP 1702 psi
Final Flow	58 min.	FFP 873 psi to 842 psi
Final Shut-In	126 min.	FSIP 1681 psi
		Initial Hydrostatic 2825 psi
		Final Hydrostatic 2808 psi
		Temp. 130

Blow - Very strong throughout test. Gas to surface 1 min. into Initial Flow.
Recovery - 15' Oil, 75' Saltwater 115,000 PPM Cl.
Gas Flow - Gauged at 5483 MCF/D at end of flow period.

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

Date Received

A. S. Muller
Signature

A. S. Muller, Manager of Production
Title

May 28, 1981
Date

PI

DRILLERS LOG

HAMM NO. 2

CASING RECORD:

8-5/8" set @ 1603' w/800 sax cement

TOTAL DEPTH:
5900'

OPERATOR: Deck Oil Company

CONTRACTOR: Sage Drilling Co., Inc.

COMMENCED: April 11, 1981

COMPLETED: April 22, 1981

DESCRIPTION:

NW SW
Sec. 14-33S-20W,
Meade County,
Kansas

FORMATION	FROM	TO	REMARKS
Sand & Red Bed	0	885	
Shale & Anhydrite	885	1620	
Shale	1620	2440	
Shale & Lime	2440	2838	
Lime & Shale	2838	3115	
Shale & Lime	3115	3620	
Lime & Shale	3620	2865	
Shale & Lime	3865	4300	
Lime & Shale	4300	4545	
Shale & Lime	4545	4735	
Lime & Shale	4735	5149	
Shale & Lime	5149	5295	
Lime	5295	5425	
Lime & Shale	5425	5641	
Lime	5641	5670	
Lime & Shale	5670	5890	Ran DST#1 @ 5765'.
Shale & Lime	5890	5900	Logged Hole.
			5½" set @ 5899' w/250 sax cement.

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

SAGE DRILLING CO., INC.

By John R. Bartholomew
John R. Bartholomew

Subscribed and sworn to before me this 1st day of May, 1981.

Louise K. Whitted
Louise K. Whitted, Notary Public

LOUISE K. WHITTED
STATE NOTARY PUBLIC
Sedgwick County, Kansas
My Appt. Expires 11-26-82

AL COMPLETION FILED May 28, 1981 SIDE ONE

ATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION OR RECOMPLETION FORM
ACO-1 WELL HISTORY

DESCRIPTION OF WELL AND LEASE

Operator: License # 6731
Name Deck Oil Co.
Address Suite 2300
One Williams Center
City/State/Zip Tulsa, OK 74172

Operator Contact Person Terry Maxwell c/o
Phone Higginbottom Engineering
(316) 624-3767

Contractor: License # Unknown
Name Patrick Well Service (Recompletion)
Sage Drilling Co., Inc. (Drilled)

Wellsite Geologist. Tom Hammond
Phone (918) 583-0538
PURCHASER. Gas - Panhandle Eastern
Oil - Derby Refining

Designate Type of Completion — Dually Completed
☐ New Well ☐ Re-Entry ☒ Workover

☒ Oil ☐ SWD ☐ Temp Abd
☒ Gas ☐ Inj ☐ Delayed Comp.
☐ Dry ☐ Other (Core, Water Supply etc.)

If OWWO: old well info as follows:
Operator
Well Name
Comp. Date .....Old Total Depth.....

WELL HISTORY

Drilling Method:
☒ Mud Rotary ☐ Air Rotary ☐ Cable

04-11-81	04-21-81	05-22-81
Spud Date	Date Reached TD	Completion Date

5,900'	5,840
Total Depth	PBTD

Amount of Surface Pipe Set and Cemented at 1,602 Feet

Multiple Stage Cementing Collar Used? ☐ Yes ☐ No — Unknown
If yes, show depth set.....feet

If alternate 2 completion, cement circulated
from 1,603 feet depth to surf w/ 800 SX cmt

API NO. 15- 119-20,493

County Meade

SE NW SE SW Sec. 14 Twp. 33S Rge. 30 ☐ East ☒ West

875 Ft North from Southeast Corner of Section
3,510 Ft West from Southeast Corner of Section
(Note: Locate well in section plat below)

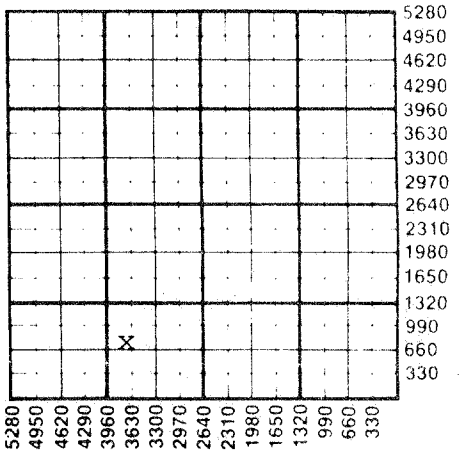
Lease Name Hamm Well # 2

Field Name Wildcat

Producing Formation Morrow and Marmaton

Elevation: Ground 2,718' KB 2,730'

Section Plat



WATER SUPPLY INFORMATION

Source of Water: Unknown
Division of Water Resources Permit # .....

☐ Groundwater.....Ft North from Southeast Corner
(Well) .....Ft West from Southeast Corner of
Sec Twp Rge ☐ East ☐ West

☐ Surface Water.....Ft North from Southeast Corner
(Stream, pond etc).....Ft West from Southeast Corner
Sec Twp Rge ☐ East ☐ West

☐ Other (explain) .....
(purchased from city, R.W.D.#)

Disposition of Produced Water: ☒ Disposal ☐ Repressuring

Docket # .....

METHOD OF COMPLETION

Disposition of gas: ☐ Vented ☒ Sold ☐ Used on Lease

☐ Open Hole ☐ Perforation
☐ Other (Specify) .....

☒ Dually Completed
☐ Commingled

Production Interval

Morrow 5,772'-5,784'

Marmaton 5,204'-5,211'

SIDE TWO

Operator Name Deck Oil Co. Lease Name Hamm Well# 2 SEC. 14 TWP. 33S RGE. 30 [ ] East [XX] West

WELL LOG

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken [XX] Yes [ ] No
Samples Sent to Geological Survey [ ] Yes [ ] No Unknown
Cores Taken [ ] Yes [XX] No

Formation Description
[XX] Log [ ] Sample

LOGS
Compensated Neutron Formation Density 3,800'-5891'
Dual Induction SFL 1,607'-5,886'
Cement Bond Log with Wave Train Display
#1 3,748'-5,823'
#2 4,798'-5,832'
#3 4,799'-5,808'
#4 4,799'-5,834'
NOTE: Logs were sent with original completion.

DST #1
Morrow 5,765'-5,795'
Initial Flow 15 mins. IFP 811 psi - 849 psi
Initial Shut-In 30 mins. ISIP 1,702 psi
Final Flow 58 mins. FFP 873 psi - 842 psi
Final Shut-In 126 mins. FSIP 1,681 psi
Initial Hydrostatic Pressure 2825 psi
Final Hydrostatic Pressure 2808 psi
Temperature 130
Blow - Very strong throughout test. Gas to surface in 1 min. into initial flow.
Recovered - 15' oil, 75' saltwater 115,000 ppm Chl. Gas Flow - Gauged at 5,483 MCFPD at end of flow period.

Name	Top	Bottom
KB LOG TOPS		
Lansing	(-1842) 4,572'	
Kansas City	(-2018) 4,748'	
B/Kansas City	(-2294) 5,024'	
Marmaton	(-2470) 5,200'	
Perforations	5,204'-5,211' Oil Zone	
Cherokee	(-2642) 5,372'	
Morrow	(-2998) 5,728'	
Perforations	5,772'-5,778' & 5,780'-5,784' Gas Zone	
Mississippi	(-3120) 5,850'	
TD	5,892'	

CASING RECORD [XX] New [ ] Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (in O.D.)	Weight Lbs/Ft.	Setting Depth	Type of Cement	#Sacks Used	Type and Percent Additives
Surface	12-1/4"	8-5/8"	24#	1,603'	HCL	600	1/4#/sx Flowse 2%
					Class"H"	200	3% CaCl
Production	7-7/8"	5-1/2"	14.0#	5,899'	PozACl"H"	100	18% salt 3/4 o 1%
			15.5#		Gilsonite	150	3/4 of 1% CFR2 CFR2

PERFORATION RECORD Shots Per Foot	Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
2	5,772'-5,778' & 5,780'-5,784'	None	
2	5,204'-5,211'	1000 gals. 15% MCA, 1 gal. HAI 55, 30 gals. Moreflo	

TUBING RECORD Size Set At Packer at Liner Run
Morrow 2-1/16" 5,772' 5,162' [ ] Yes [XX] No
Marmaton 2-1/16" 5,157'

Date of First Production
Morrow Gas 07-16-81
Marmaton Oil 05-21-84

Producing Method
[XX] Flowing [XX] Pumping [ ] Gas Lift [ ] Other (explain)
Morrow Gas Marmaton Oil

	Oil	Gas	Water	Gas-Oil Ratio	Gravity
Marmaton Oil Zone Estimated Production	32 BOPD	TSTM	2 BWPD		

RECEIVED 14-33-30W
STATE CORPORATION COMMISSION

2 12/76

STATE OF KANSAS – CORPORATION COMMISSION

STABILIZED OPEN FLOW OR DELIVERABILITY TEST

AUG 2 0 1984

CONSERVATION DIVISION
Wichita, Kansas

TYPE OF TEST:	INITIAL	ANNUAL	SPECIAL	TEST DATE
STATE	ONE POINT			07-31-84

COMPANY	LEASE & WELL NO.	ACRES
DECK OIL CO	HAMM 2	0

COUNTY	LOCATION	SEC.	TWN./BLK.	RNG./SRVY.	LEASE NO.
MEADE	NW SE	014	033S	030W	119-000000000

FIELD	FIELD NO.	RESERVOIR	PIPE LINE CONNECTION
NOVINGER	-	MORROW	PANHANDLE EASTERN

COMPLETION DATE	TOTAL DEPTH	PLUG BACK T.D.	ELEVATION
00-00-00	5900	5860	0

CASING SIZE	WT.	I.D.	SET AT:	PERFORATIONS	FROM	TO
5.5000	15.50	4.9500	5899		5772	5784

TUBING SIZE	WT.	I.D.	SET AT:	PERFORATIONS	FROM	TO
2.0630	3.30	1.7510	5748		0	0

TYPE OF COMPLETION	PACKER SET AT	PRODUCING THRU	RESERVOIR TEMP	P_a
DUAL OIL & G	5748	T	139 AT 05778	14.4

L.	H.	G_g	% CO	% N	H_2S	PROVER	METER RUN	TAPS
5778	5778	0.698	0.12	5.84	0.0		3	FLANGE

NO.	FLOW DATA (PROVER) (LINE) ORIFICE SIZE	FLOW DATA PRESS. PSIG.	FLOW DATA DIFF. (IN) ROOTS	FLOW DATA TEMP. °F	TUBING DATA PRESS. PSIG.	TUBING DATA TEMP. °F	CASING DATA PRESS. PSIG.	CASING DATA TEMP. °F	DURATION OF FLOW HOURS
SI					960.0	60			72.0
1	3 X 1.250	71.2	8.0	90	337.0	60			24.0
2									
3									
4									
5									

RATE OF FLOW CALCULATIONS

NO.	COEFFICIENT (24 HOUR)	$\sqrt{h_w P_m}$	PRESSURE PSIA	FLOW TEMPERATURE FACTOR (F_t)	GRAVITY FACTOR (F_g)	SUPER-COMP. FACTOR (F_{pv})	RATE OF FLOW Q, MCFD
1	7.7710	26.17	85.6	0.9723	1.196	1.007	238
2							
3							
4							
5							

NO.	P_r	TEMP. R	T_r	Z	P_w	P_w^2	$P_c^2 - P_w^2$
1	0.13	550	1.47	0.986	354.9	125.9	823.4
2							
3							
4							
5							

G.O.R.	119.1550	MCF/BBL
A.P.I. Gravity	40.000	@ 60° F
G_g	0.698	
G_m		0.726
P_{cr}	660 psia	659 psia
T_{cr}	374 R	384 R

OPEN FLOW OR DELIVERABILITY CALCULATIONS

P_c 974.4 P_c^2 949.4 P_d _____ P_d^2 _____ P_a^2 0.2

$P_c^2 - P_a^2$	$P_c^2 - P_w^2$	$\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	$\left[\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}\right]^n$	WELLHEAD OPEN FLOW	$P_c^2 - P_d^2$	$\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2}$	$\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2}\right]^n$	DELIVERABILITY
949.3	823.5	1.153	1.128	269			AUG 2 2 1984	

DAILY PRODUCTION (BBLS) - 2.0 -OIL

State Geological Survey
WICHITA BRANCH

WELLHEAD OPEN FLOW	269	ANGLE OF SLOPE θ	49 DEG 38 MIN	SLOPE, n	0.850

MARKS:

D BY COMMISSION	CONDUCTED BY	CALCULATED BY	CHECKED BY