

Operator Name Hess Oil Company Lease Name Steward Well # 1

Sec 19 Twp 7 Rge 22 East West County Graham

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 Yes No
 Samples Sent to Geological Survey Yes No
 Cores Taken Yes No

Formation Description
 Log Sample

DST #1: 3684-3725, 20-45-5-flushed tool (tool slid 12' to botoom). 1st Open-very weak blow, died after 20 minutes; 2nd Open- no blow, flushed tool, no help. Rec: 95' oil cut mud (2% oil). ISIP 169#, IFP 105-137#, FSIP NA, FFP NA, Hyd 1995-1963#, Tmp 118.

Name	Top	Bottom
Anhydrite	1925	1963
Heebner	3507	
Toronto	3535	
Lansing	3553	3753
R.T.D.	3760	

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> 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 1/2	8.5/8	20#	210.69'	60/40	1.40	3% cc. 2% ge
PERFORATION RECORD				Acid, Fracture, Shot, Cement Squeeze Record			
Shots Per Foot	Specify Footage of Each Interval Perforated			(Amount and Kind of Material Used)		Depth	
TUBING RECORD				Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No			
Date of First Production		Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (explain)					
Estimated Production Per 24 Hours	Oil	Gas	Water	Gas-Oil Ratio	Gravity		
	Bbls	MCF	Bbls	CFPB			

METHOD OF COMPLETION

Production Interval

Disposition of gas: Vented Open Hole Perforation
 Sold Other (Specify)
 Used on Lease Dually Completed
 Commingled

DRILLERS' LOG

COMPANY: Hess Oil Company WELL: Steward #1
 CONTRACTOR: Mallard Drilling API#: 15-065-22,387
 P. O. Box 1009 LOCATION: NE SW NW
 McPherson KS 67460
 COMMENCED: June 21, 1987 Sec. 19, Twp. 7S, Rge. 22W
 COMPLETED: June 26, 1987 COUNTY: Graham
 TOTAL DEPTH: 3760' ELEVATION: 2294' G. L.
2302' K. B.

FORMATION	FROM	TO
Soil, Shale	0'	215'
Shale, Sand	215'	1464'
Cedar Hills	1464'	1685'
Shale, Sand, Clay	1685'	1925'
Anhydrite	1925'	1962'
Shale	1962'	2881'
Shale, Lime	2881'	3760' R.T.D. Lansing

REMARKS

Cut 12 1/2" hole to 215' and ran 5 joints new 8 5/8" X 20# X 201.19' surface casing. Set at 210.69' and cemented with 140 sacks 60/40 poz mix, 3% cc, 2% gel. Cement did circulate. P.D. at 10:30 p.m., 6/21/87.

Ran 1 DST.

Plugged hole with 200 sacks 60/40 poz mix, 6% gel, 3% cc as follows:
 25 sacks @ 1950'
 100 sacks @ 1075' plus 1 sack hulls
 40 sacks @ 260'
 10 sacks @ 40'; circulated
 P.D. @ 5:15 p.m., 6/26/87

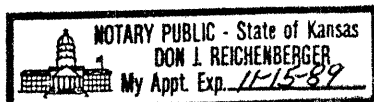
STATE OF KANSAS)
) SS:
 COUNTY OF McPHERSON)

I, BRYAN HESS of MALLARD DRILLING, do hereby certify that this is a true and correct copy of the log of the Steward #1 well as reflected by the files of Mallard Drilling.

Bryan Hess
 Bryan Hess, Gen. Mgr.

Subscribed and sworn to before me this 3rd day of August, 1987.

Don J. Reichenberger
 Notary Public



STATE OF KANSAS
 STATE COMMISSIONER OF COMMISSIONS

AUG 5 1987
 AUG 5 1987
 COMMISSIONER OF COMMISSIONS
 Topeka, Kansas