FORM MUST BE TYPED

SIDE ONE

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

ORIGINAL

API NO. 15- 135-23,571-0000

County Ness

NW - NE - NE - SW Sec. 25 Twp. 17 Rge. 26 E X W

2475' Feet from S/N (circle one) Line of Section

3135' Feet from E/W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, SE, NW or SW (circle one)

Lease Name NORTON Well # 1

Field Name

Producing Formation

Elevation: Ground 2412' KB 2420'

Total Depth 4430' PBTD

Amount of Surface Pipe Set and Cemented at 211' Feet

Multiple Stage Cementing Collar Used? ____ Yes X No

If yes, show depth set ____ Feet

If Alternate II completion, cement circulated from ____

feet depth to ____ w/ ____ sx cmt.

Drilling Fluid Management Plan A I T II Dkd
(Data must be collected from the Reserve Pit)

Chloride content ____ ppm Fluid volume ____ bbls

Dewatering method used Mud and water were hauled away for re-use.

Location of fluid disposal if hauled offsite:

Operator Name

Lease Name ____ License No. ____

____ Quarter Sec. ____ Twp. ____ S Rng. ____ E/W

County ____ Docket No. ____

Operator: License # 5663

Name: Hess Oil Company

Address P.O. Box 1009

City/State/Zip McPherson, KS 67460

Purchaser:

Operator Contact Person: Bryan Hess

Phone (316) 241-4640

Contractor: Name: Mallard JV, Inc.

License: 4958

Wellsite Geologist: Doug Bellis

Designate Type of Completion
X New Well ____ Re-Entry ____ Workover

____ Oil ____ SWD ____ SIOW ____ Temp. Abd.
____ Gas ____ ENHR ____ SIGW
X Dry ____ Other (Core, WSW, Expl., Cathodic, etc)

If Workover/Re-Entry: old well info as follows:

Operator:

Well Name:

Comp. Date ____ Old Total Depth ____

____ Deepening ____ Re-perf. ____ Conv. to Inj/SWD
____ Plug Back ____ PBTD
____ Commingled Docket No. ____
____ Dual Completion Docket No. ____
____ Other (SWD or Inj?) Docket No. ____

8-7-91 Spud Date | 8-13-91 Date Reached TD | 8-13-91 Completion Date

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature James N Hess

Title Vice President Date 9-20-91

Subscribed and sworn to before me this 20 day of September, 19 91.

Notary Public Bryan K Hess

Date Commission Expires

NOTARY PUBLIC - State of Kansas
BRYAN K. HESS
My Appt. Exp. 5-26-93

K.C.C. OFFICE USE ONLY
F ____ Letter of Confidentiality Attached
C ✓ Wireline Log Received
C ✓ Geologist Report Received

Distribution
✓ KCC ____ SWD/Rep ____ NGPA
____ KGS ____ Plug ____ Other (Specify)

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SEP 24 1991
CONSERVATION DIVISION
Wichita, Kansas

Form ACO-1 (7-91)

SIDE TWO

Operator Name Hess Oil Company Lease Name Norton Well # 1

Sec. 25 Twp. 17 Rge. 26 ☐ East ☒ West County Ness

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 (Attach Additional Sheets.) ☒ Yes ☐ No

Samples Sent to Geological Survey ☐ Yes ☒ No

Cores Taken ☐ Yes ☒ No

Electric Log Run (Submit Copy.) ☒ Yes ☐ No

List All E.Logs Run:

DST #1: 4107' - 4125'. 15-15-0-0. No blow. Rec. 2' mud. IHP 2099, IFP 11-11, ISIP 11, FHP 2091.

DST #2: 4123' - 4147'. 30-30-15-0. Very weak blow - 20 min. 2nd open - no blow, flushed tool, very weak blow - 5 min. Rec. 5' mud. IHP - 2144, IFP 11-22, ISIP 34, FFP 22-34, FHP 2140.

DST #3: 4336' - 4376'. 10-30-10-0. Very weak blow - 10 min. 2nd open - no blow. Rec. 5' mud. IHP 2266, IFP 11-22, ISIP 998.

☒ Log Formation (Top), Depth and Datums ☐ Sample

Name	Top	Datum
Anhydrite	1751'	+ 669'
Base Anhy.	1781'	+ 639'
Heebner	3709'	-1289'
Lansing	3748'	-1328'
Stark Shale	3994'	-1574'
Base K.C.	4060'	-1640'
Marmaton	4112'	-1692'
Fort Scott	4256'	-1836'
Cherokee	4329'	-1909'
Mississippi	4350'	-1930'
Dolomite	4369'	-1949'
Dol. Por.	4384'	-1963'
RTD	4430'	-2010'

CASING RECORD ☐ 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 Casing	12 1/4"	8 5/8"	20#	211'	60/40 Poz	150	2%gel, 3%cc

15-135-23571-0000

ORIGINAL

GEOLOGIC SUMMARY

Hess Oil No. 1 Norton
50' S of C E/2 W/2 Sec. 25-T17S-R26W
Ness County, Kansas
Drilling commenced 8-7-91
Drilling completed 8-15-91
Mallard Drilling
KB 2420
TD 4430 Driller
TD 4427 Logger
Wellsite Geologist: Doug Bellis

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Wichita, Kansas

SUMMARY

The objective of the Hess No. 1 Norton was the Mississippi Dolomite which produces in the Lazy 17 Field 3500' to the northeast of the No. 1 Norton and in the Aldrich N.W. Field located 4000' south of the No. 1 Norton. Though the well encountered the top of the Mississippi over 20' above the oil-water contact in either of these fields, porous and permeable Mississippi Dolomite was not developed until the oil-water contact. Sample shows in the Marmaton section were evaluated as tight in drill stem tests 1 and 2. Drill stem test 3 indicated the uppermost Mississippi dolomite was tight. Sample shows in the Lansing A calculated water bearing, as were all other Lansing through Mississippi porosity zones. Log Analyses, samples and drill stem tests all indicated the well should be plugged and abandoned. The seismic interpretation upon which the Norton No.1 location was picked, accurately pinpointed the isopach thin between the Anhydrite to Fort Scott. This internal in the No.1 Norton was the same as several producers in the Lazy 17 field and was 10 to 15' thinner than producers in the Aldrich N.W. Field.

EVALUATION OF OIL SHOWS

Lansing A 3762-3776 - This limestone exhibited good oomoldic porosity, with a trace of free oil and a light oil stain, spotty yellow-green florescence and an instant streaming cut. No odor was present in samples. The zone showed averaged 9% porosity and calculates 55 to 70% S.W.

Lansing D 3847 to 3855 - This limestone was offwhite and varies from fine to coarse crystalline. The lime has fair to good intercrystalline porosity, with a trace of vuggy porosity. The zone was oolitic in part. There is a light oil stain with a trace of free oil with a good yellow-green florescence. There was no cut except in one piece, which exhibited a weak stream cut. The zone has 8' of 16% porosity which calculates 100% S.W.

Lansing-Kansas City H zone 3920 to 3923 - This limestone is light gray and very fine to fine crystalline in nature. The zone has good intercrystalline porosity, with a trace of light oil stain with no florescence or cut. The zone has 11% porosity and calculates 87% S.W.

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STRUCTURE

The Hess No.1 Norton was compared structurally to the Pickwell No.2 Popp "A" in the SE SE of Section 24 4000' northeast of the No.1 Norton. This well is the closest producing well in the Lazy 17 Field to the No.1 Norton. Logs tops are 3' to 4' high to the sample tops throughout the well due to the 3' of discrepancy between driller and logger total depths.

NORTON NO. 1

	SAMPLE	LOG	RELATIVE TO POPP "A"
ANHYDRITE	1745 (+675)	1751 (+669)	-6
HEEBNER	3712 (-1292)	3709 (-1289)	-4
LANSING A	3744 (-1329)	3748 (-1328)	-2
STARK	4000 (-1580)	3994 (-1574)	-3
BASE K.C.	4067 (-1647)	4060 (-1640)	-6
UP. MARMATON	4116 (-1696)	4112 (1692)	-2
FORT SCOTT	4260 (-1840)	4256 (-1836)	-2
BASE CHEROKEE LIME	4335 (-1915)	4329 (-1909)	-3
MISSISSIPPI	4353 (-1933)	4350 (-1930)	-14
MISS. DOLOMITE	4372 (-1952)	4369 (-1949)	-2
MISS. DOLOMITE POROSITY	4387 (-1967)	4384 (-1963)	-16

In summary, the well ran 2' to 6' low from the Anhydrite all the way down to the base of the Cherokee Lime. From this point down, the Norton lost an additional 10' of structure to the Popp on the Mississippi and Mississippi Dolomite Porosity.

Three Drill Stem Tests were conducted. Two tests were carried out in the Marmaton section and one test in the upper Mississippi. All three tests found tight rock, with weak blows which died in the first flow period. All tests were aborted after a short shut-in periood and an attempt to flush the tool.

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Kansas City-Basal K 4014 to 4018 - This brown, very fine crystalline limestone has a trace of fair intercrystalline porosity with a trace of light oil stain, with good spotty yellow-green florescence and an instant weak streaming cut. The zone has 13% porosity and calculates 100% wet.

Upper Marmaton 4115 to 4123 - This offwhite to light brown fossiliferous limestone is vuggy in part with good fossil moldic porosity developed in Bryozoans. There is a trace of dead oil stain, with weak florescence and a weak stream cut in one piece. Most of sample appears barren with no show. D.S.T. 1 tested this zone tight and impermeable. Logs show 4 to 6% porosity. Though the logs are highly compensated due to the extreme washout.

Marmaton Viking Zone 4136 to 4144. This light gray, coarse crystalline limestone has good intercrystalline porosity with good vuggy porosity and an excellent show of free oil, spotty yellow-green florescence with an instant milky cut. D.S.T. 2 tested this zone tight. Logs indicate 2 to 5% porosity with the logs again highly compensated due to the extremely washed out hole.

Lower Fort Scott 4272 to 4280 - Light brown dense to coarse crystalline lime, in part oolitic, with fossilmoldic porosity. There is a trace of weak florescence and no cut. The zone has 2' of 5% porosity.

Cherokee Lime 4297 to 4301 - Light gray-brown to white limestone with no visible porosity. The zone is styolitic in part. A trace of light oil stain and yellow-green florescence are noticeable on fracture faces. There is a weak streaming cut present in some samples. The zone has 2' of 3% porosity on logs.

Mississippi Dolomite 4368 to 4378 - Light brown dolomite with good fossilmoldic and vuggy porosity. The rock varies from dense to sucrosic with the sucrosic rock having good intercrystalline porosity. The zone has good oil odor and a good show of free oil, with a light to strong oil stain on the samples, a strong yellow-green florescence and an instant milky cut with a secondary slow stream cut. The upper part of the zone which has 10% porosity tested tight by D.S.T.3. There was 3' of 13% porosity which calculates 65% SW that was untested within this interval. The zone is wet and tight and too thin to be of commercial importance.

Mississippi Dolomite 4384 to 4390 - Light green-gray dolomite with fair to good vuggy porosity, sucrosic in part with fair intercrystalline porosity. The zone is in part cherty. There is a trace of light oil stain with a weak yellow-green florescence, with an instant weak streaming cut. The sample have a fair odor. Logs show 6' of 16% to 19% porosity calculating 60% to 90% SW. The zone is definitely wet.

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D.S.T. 1 Upper Marmaton 4107 to 4125: 15" open, 15" shut-in. No blow; recovered 2' mud; IFP 10-10; ISIP 10'; flush tool no help.

D.S.T. 2 Viking Marmaton 4125 to 4147: 30" open, 30" shut-in, 15" open; no final shut-in; very weak blow 20" and died. No blow on second opening; flushed tool with weak blow for 5 minutes; recovered 5' mud; IFP 10 to 20; ISIP 30; FFP 20 to 30; no FSIP taken.

D.S.T. 3 Mississippi 4336 to 4376: 10" open, 30" shut-in, 10" open; no final shut-in; weak blow died in 10 minutes; no blow on final open period; flush tool with no effect; recovered 5' mud; IFP 10-20; ISIP 991.

ORIGINAL

15-135-23571-0000

ORIGINAL

Phone 913-483-2627, Russell, Kansas
Phone 316-793-5861, Great Bend, Kansas

Phone Plainville 913-434-2812
Phone Ness City 913-798-3843

ALLIED CEMENTING CO., INC. № 7370

Home Office P. O. Box 31 Russell, Kansas 67665

Date	Sec.	Twp.	Range	Called Out	On Location	Job Start	Finish
8-15-91	25	17	26	5:45 PM	[illegible]	[illegible]	[illegible]

Lease	Well No.	Location	County	State
[illegible]	1	Ness City [illegible]	[illegible]	[illegible]

Contractor [illegible]

Type Job [illegible]

Hole Size 7 7/8 T.D. 4430

Csg. Depth

Tbg. Size Depth

Drill Pipe Depth

Tool Depth

Cement Left in Csg. Shoe Joint

Press Max. Minimum

Meas Line Displace

Perf.

Owner [illegible]

To Allied Cementing Co., Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To [illegible]

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor

Purchase Order No.

X. [signature]

EQUIPMENT

	No.		
Pumptrk	63	Cementer	[illegible]
		Helper	Steve
Pumptrk		Cementer	
		Helper	
Bulktrk	149	Driver	Mike
Bulktrk		Driver	

CEMENT

Amount Ordered 205 [illegible]

Consisting of

Common	
Poz. Mix	
Gel.	
Chloride	
Quickset	
Sales Tax	
Handling	
Mileage	
Sub Total	
Total	

Floating Equipment

[illegible]

DEPTH of Job

Reference:	[illegible]	
	[illegible]	
	8 5/8 [illegible]	
	0 Sub Total	
	Tax	
	Total	

Remarks:

1780 50 sks
1200 80
230 40
40 10
rat hole 15
mouse hole 10

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CONSERVATION DIVISION
Wichita, Kansas

J-2627, Russell, Kansas
316-793-5861, Great Bend, Kansas

15-135-23571-0000

Phone Plainville 913-434-2812
Phone Ness City 913-798-3843

No. 2927

ALLIED CEMENTING CO., INC.

Home Office P. O. Box 31 Russell, Kansas 67665

ORIGINAL

New

Date	Sec.	Twp.	Range	Called Out	On Location	Job Start	Finish
8-7-91	25	17	26	6:30 P.m.	7:30 P.m.	9:10 P.m.	9:30 P.m.

Lease	Well No.	Location	County	State
Norton	1	Utica 1/2 E 6S 1/2 E Side	Ness	Ks.

Contractor Mallard J.V. Inc.

Type Job Surface

Hole Size 12¼	T.D. 215'
Csg. 8 5/8	Depth 211'
Tbg. Size	Depth
Drill Pipe	Depth
Tool	Depth
Cement Left in Csg. 15'	Shoe Joint
Press Max.	Minimum
Meas Line	Displace 12.5
Perf.	

EQUIPMENT

Pumptrk No. 141	Cementer	
	Helper	
Pumptrk No.	Cementer	Bob
	Helper	D.D.
	Driver	Mike
Bulktrk 169		
Bulktrk	Driver	

DEPTH of Job

Reference:		
	Pump Truck Charge	
	Mileage	
	8 5/8 - T.W.P.	
	Sub Total	
	Tax	
	Total	

Remarks:

Cement did Circulate

Thank you

Owner Hess Oil Company

To Allied Cementing Co., Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To Hess Oil Company

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Purchase Order No.

X

CEMENT

Amount Ordered 150 60/40 2% gel 3% C.C.

Consisting of

Common	
Poz. Mix	
Gel.	
Chloride	
Quickset	
Sales Tax	
Handling	
Mileage	
Sub Total	
Total	

Floating Equipment

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