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

Operator: License # 5208

Name: Mobil Oil Corporation

Address P.O. Box 2173

2319 North Kansas Avenue

City/State/Zip Liberal, KS 67905-2173

Purchaser: Spot Market

Operator Contact Person: Sharon Cook

Phone (316) 626-1142

Contractor: Name: Murfin Drilling Co., Inc.

License: 30606

Wellsite Geologist: L. J. Reimer

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

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

If Workover:

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. ______

12-11-95 Spud Date | 12-14-95 Date Reached TD | 1-12-96 Completion Date

API NO. 15- 129-214060000 ORIGINAL

County Morton

- NW - NE - SE Sec. 6 Twp. 34S Rge. 39 ___ E X W

2500 Feet from (S)/N (circle one) Line of Section

1250 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 M. Mangels Unit Well # 4

Field Name Hugoton

Producing Formation Chase

Elevation: Ground 3294 KB 3303

Total Depth 2943 PBTD 2909

Amount of Surface Pipe Set and Cemented at 591 Feet

Multiple Stage Cementing Collar Used? ___ Yes X No

If yes, show depth set NA Feet

If Alternate II completion, cement circulated from NA

feet depth to NA w/ NA sx cmt.

Drilling Fluid Management Plan Alt I 5-7-96
(Data must be collected from the Reserve Pit)

Chloride content 3,500 ppm Fluid volume 121 bbls

Dewatering method used Waste Minimization Mud System

Location of fluid disposal if hauled offsite:

Operator Name Mobil Oil Corporation

Lease Name Mangels #1-2 SWDW License No. 5208

SE Quarter Sec. 6 Twp. 34 S Rng. 39 E/(W)

County Morton Docket No. D-19,354

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1996 FEB -5 A 8:58

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, 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 *Sharon A. Cook* Sharon A. Cook

Title Regulatory Assistant Date 2-1-96

Subscribed and sworn to before me this 1st day of February, 19 96.

Notary Public *Dana S. Bailey*

Date Commission Expires August 30, 1999
6-58.kcc

NOTARY PUBLIC - State of Kansas
DANA S. BAILEY
My Appt. Exp. 8-30-99

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)

Form ACO-1 (7-91)

SIDE TWO

Operator Name Mobil Oil Corporation Lease Name M. Mangels Unit Well # 4

Sec. 6 Twp. 34S Rge. 39 ☐ East ☒ West County Morton

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:

High Resolution Dual Induction Focused Log Gamma Ray/Caliper
Z-Densilog Compensated Neutron Spectralog
Caliper Log Gamma Ray

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

Name	Top	Datum
Glorietta	1307	1470
Stone Corral	1763	1778
Chase	2542	2880
Council Grove	2880	--

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	12.250	8.625	24#	591	Class C Class C	200 150	50:50 C/poz 50:50 C/poz
Production Casing	7.875	5.500	14#	2933	Class C Class C	140 75	3% D79 2% B28

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose: ___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	Depth Top	Depth Bottom	Type of Cement	#Sacks Used	Type and Percent Additives

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
1 SPF	2605-2615 2771-2786	Acid: 1,000 gals 7.5% HCL	
	2638-2648	Fracd: 950 bbls 20# Crosslink gel	
	2658-2668	141,775 lbs 12/20 Brady Sand	
	2716-2731		

TUBING RECORD Size Set At Packer At Liner Run ☐ Yes ☒ No

Date of First, Resumed Production, SWD or Inj. 1-11-96 Producing Method ☒ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
		327			

Disposition of Gas: METHOD OF COMPLETION Production Interval

☐ Vented ☒ Sold ☐ Used on Lease (If vented, submit ACO-18.)

☐ Open Hole ☒ Perf. ☐ Dually Comp. ☐ Commingled 2605

☐ Other (Specify) _____ 2786

CEMENTING SERVICE REPORT

DS-496-A PRINTED IN U.S.A.

Schlumberger
Dowell
DOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER	DATE
29 611	1-11-96
STAGE / DS / DISTRICT	1 / 67 / 12

WELL NAME AND NO.	LOCATION (LEGAL)	
Mangels No. 4	Sec 6 34S-39W	
FIELD-POOL	FORMATION	
Hugoton	Chase	
COUNTY/PARISH	STATE	API. NO.
Morton	KS.	

NAME Mobil

AND

ORIGINAL

ADDRESS

ZIP CODE

SPECIAL INSTRUCTIONS
Bottom Plug ... Top Plug ...

IS CASING/TUBING SECURED? ☒ YES ☐ NO

LIFT PRESSURE 1700 PSI — CASING WEIGHT ÷ SURFACE AREA (3.14 × R²)

PRESSURE LIMIT 1500 PSI — BUMP PLUG TO 1270 PSI

ROTATE RPM — RECIPROCATE FT — No. of Centralizers

RIG NAME: Murfin 24

WELL DATA:		BOTTOM			TOP
BIT SIZE 7 7/8	CSG/Liner Size	[redacted]			
TOTAL DEPTH 2713	WEIGHT	14			
☐ ROT ☐ CABLE	FOOTAGE	2713			
MUD TYPE	GRADE				
☐ BHST ☐ BHCT	THREAD				
MUD DENSITY	LESS FOOTAGE SHOE JOINT(S)	2710			TOTAL
MUD VISC.	Disp. Capacity	71			

NOTE: Include Footage From Ground Level To Head In Disp. Capacity

Float TYPE	Auto Fill	Stage Tool	TYPE	
Float DEPTH	2710		DEPTH	
SHOE TYPE	Cmt nose		TYPE	
SHOE DEPTH	2713		DEPTH	

Head & Plugs	☐ TBG ☐ D.P.	SQUEEZE JOB
☐ Double	SIZE	TOOL TYPE
☐ Single	☐ WEIGHT	TOOL DEPTH
☐ Swage	☐ GRADE	TAIL PIPE: SIZE DEPTH
☐ Knockoff	☐ THREAD	TUBING VOLUME Bbls
TOP ☒R ☐W	☐ NEW ☐ USED	CASING VOL. BELOW TOOL Bbls
BOT ☐R ☐W	DEPTH	TOTAL Bbls
		ANNUAL VOLUME Bbls

JOB SCHEDULED FOR TIME: 02:00 DATE: 12-14 — ARRIVE ON LOCATION TIME: 02:00 DATE: 12-14 — LEFT LOCATION TIME: DATE:

TIME 0001 to 2400	PRESSURE TBG OR D.P.	PRESSURE CASING	VOLUME PUMPED BBL INCREMENT	VOLUME PUMPED BBL CUM	INJECT RATE	FLUID TYPE	FLUID DENSITY	SERVICE LOG DETAIL
								PRE-JOB SAFETY MEETING
05:35		1560		X		H2O	8.3	PSI Test
05:36		220	21	X	5.8	"	"	Start H2O
05:42		260	70	31	5.2	Cmt	11.5	Start Lead 71
05:55		90	18	101	2.6	Cmt	14.4	Start Tail Cmt
06:02		70		119	2.1	"	"	Shut down wash to pit
06:05		100		X	6.8	H2O	8.3	Drop Plug start Disp.
06:17		670		61	5.9	"	"	PSI check
06:17		500		65	2	"	"	Lower Rate
06:21		620		70	2	"	"	PSI check
06:21		1270		71	2	"	"	Bump Plug
06:23		—		—	—			Release PSI check Float

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REMARKS lost 25 bbls circulation ...

SYSTEM CODE	NO. OF SACKS	YIELD CU. FT/SK	COMPOSITION OF CEMENTING SYSTEMS	SLURRY MIXED BBLS	SLURRY MIXED DENSITY
1.	[redacted]	2.75	C + 3% D-79 + 0.2% D-46 + 1/4#sk D-29	70	11.5
2.					
3.	[redacted]	1.37	C + 2% B-28 + 2% S-1 + .6% D-60 + .2% D-46 + 1/4#sk D-29	18	14.4
4.					
5.					
6.					

BREAKDOWN FLUID TYPE — VOLUME — DENSITY — PRESSURE MAX. 1270 MIN: 70

☐ HESITATION SQ. ☐ RUNNING SQ. — CIRCULATION LOST ☐ YES ☒ NO — Cement Circulated To Surf. ☐ YES ☒ NO Bbls.

BREAKDOWN PSI — FINAL PSI — DISPLACEMENT VOL. 71 Bbls — TYPE OF WELL ☐ OIL ☐ GAS ☐ STORAGE ☐ INJECTION ☐ BRINE WATER ☐ WILDCAT

Washed Thru Perfs ☐ YES ☐ NO TO FT. — MEASURED DISPLACEMENT ☐ — ☐ WIRELINE

PERFORATIONS TO TO / TO TO

CUSTOMER REPRESENTATIVE: Russell Morley

DS SUPERVISOR: R. Farmer

CEMENTING SERVICE REPORT

DS-496-A PRINTED IN U.S.A.

Schlumberger Dowell

DOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER	DATE
93-12-7953	12-11-95
STAGE: 1	DS: UKS DISTRICT: 93-12

WELL NAME AND NO.	Maisclest M-4
LOCATION (LEGAL)	Sec 6-34S-39W
FIELD-POOL	HUGOTON
FORMATION	
COUNTY/PARISH	MORTON
STATE	KS
API. NO.	
RIG NAME	MURFIN #24

WELL DATA:

			BOTTOM		TOP
BIT SIZE 12 1/4		CSG/Liner Size	8 5/8		
TOTAL DEPTH 596		WEIGHT	24#		
☑ ROT ☐ CABLE		FOOTAGE	591		
MUD TYPE GEL		GRADE			
☐ BHST ☐ BHCT		THREAD	8RD		
MUD DENSITY		LESS FOOTAGE SHOE JOINT(S)	549		TOTAL
MUD VISC.		Disp. Capacity	35		

NOTE: Include Footage From Ground Level To Head In Disp. Capacity

Float TYPE	BAFFLE PLATE	Stage Tool	TYPE	
Float DEPTH	549		DEPTH	
SHOE TYPE	GUIDE		TYPE	
SHOE DEPTH	591		DEPTH	

Head & Plugs	☐ TBG ☐ D.P.	SQUEEZE JOB	
☐ Double	SIZE	TOOL TYPE	
☑ Single	☐ WEIGHT	TOOL DEPTH	
☐ Swage	☐ GRADE	TAIL PIPE: SIZE	DEPTH
☑ Knockoff	☐ THREAD	TUBING VOLUME	Bbls
TOP ☑ R ☐ W	☐ NEW ☑ USED	CASING VOL. BELOW TOOL	Bbls
BOT ☐ R ☐ W	DEPTH	TOTAL	Bbls
		ANNUAL VOLUME	Bbls

NAME MORIL OIL

AND

ORIGINAL

ADDRESS

ZIP CODE

SPECIAL INSTRUCTIONS

CEMENT 8 5/8 CASING AS PER

BELOW SCHEDULE

IS CASING/TUBING SECURED? ☑ YES ☐ NO

LIFT PRESSURE 242 PSI   CASING WEIGHT ÷ SURFACE AREA (3.14 × R²)

PRESSURE LIMIT 1500 PSI   BUMP PLUG TO 1270 PSI

ROTATE —— RPM   RECIPROCATE —— FT   No. of Centralizers 5

JOB SCHEDULED FOR TIME: 2100 DATE: 12-11-95 | ARRIVE ON LOCATION TIME: 2045 DATE: 12-11-95 | LEFT LOCATION TIME: 0100 DATE: 12-12-95

TIME 0001 to 2400	PRESSURE TBG. OR D.P.	PRESSURE CASING	VOLUME PUMPED BBL INCREMENT	VOLUME PUMPED BBL CUM	INJECT RATE	FLUID TYPE	FLUID DENSITY	SERVICE LOG DETAIL
2045	ARRIVE	LOC. -	SPOT	UNITS -	400K			PRE-JOB SAFETY MEETING TO TD HOLE ... CASING
	HOOK TO		CASING -	RIG TO			CIR-	CULATE HOLE
2300		2300				H_2O	8.3	TEST LINES
2310		~~110~~	~~20~~	~~0~~	~~5 BPM~~			BLEED PRESSURE
2320		110	20	0	5 BPM	H_2O	8.3	START WATER
2324		170	22	20	6 BPM	CMT	12.8	START LEAD SLURRY (SYSTEM 1)
2327		180	28	42	6 BPM	CMT	12.8	PRESSURE READING
2332		180	18	70	6 BPM	CMT	12.8	PRESSURE READING
2335		170	14	88	5 BPM	CMT	14.6	START TAIL SLURRY (SYSTEM 2)
2338		220	21	102	6 BPM	CMT	14.7	PRESSURE READING
2342		0		123				SHUT DOWN
2344		0	20	123	5 BPM	H_2O	8.3	DROP PLUG - START DISP.
2348		260	9	143	5 BPM	H_2O	8.3	PRESSURE READING
2350		180	6	152	2 BPM	H_2O	8.3	LOWER RATE
2353		1270		158				PLUG DOWN
2355								BLEED PRESSURE - SHUT IN HEADER

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REMARKS PRESSURE ON PACR 300 PSI HIGH

SYSTEM CODE	NO. OF SACKS	YIELD CU. FT/SK	COMPOSITION OF CEMENTING SYSTEMS	SLURRY MIXED BBLS	SLURRY MIXED DENSITY
1.	200	1.89	50/50 POZ/C 6% D20, 3% S1, 5% D44, 1/4# D29	67.3	12.8
2.	150	1.22	50/50 POZ/C 2.5% S1, 1/4# D29	32.5	14.6
3.					
4.					
5.					
6.					

BREAKDOWN FLUID TYPE	VOLUME	DENSITY	PRESSURE MAX. 1270 MIN. 0
☐ HESITATION SQ. ☐ RUNNING SQ.	CIRCULATION LOST ☐ YES ☑ NO		Cement Circulated To Surface ☑ YES ☐ NO 91 SKS 17 Bbls.
BREAKDOWN PSI FINAL PSI	DISPLACEMENT VOL. 35 Bbls		TYPE OF WELL ☐ OIL ☐ GAS ☐ STORAGE ☐ INJECTION ☐ BRINE WATER ☐ WILDCAT
Washed Thru Perfs ☐ YES ☑ NO TO FT.	MEASURED DISPLACEMENT ☑ ☐ WIRELINE		
PERFORATIONS TO TO	CUSTOMER REPRESENTATIVE Mr. RUSSELL WORLEY		DS SUPERVISOR Louis H Dillon