

ORIGINAL

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 # 4549

Name: ANADARKO PETROLEUM CORPORATION

Address 701 S. TAYLOR, SUITE 400

City/State/Zip AMARILLO, TEXAS 79109

Purchaser: ANADARKO ENERGY SERVICES

Operator Contact Person: CRAIG WALTERS

Phone (806) 457-4600

Contractor: Name: NORSEMAN DRILLING

License: 3779

Wellsite Geologist: _____

Designate Type of Completion

New Well Re-Entry Workover

Oil SWD SLOW Temp. Abd.

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 PBSD

Commingled Docket No. _____

Dual Completion Docket No. _____

Other (SWD or Inj?) Docket No. _____

4-1-2001 4-26-2001 6-16-2001
Spud Date Date Reached TD Completion Date

API NO. 15- 129-21633 - 00 - 00

County MORTON

NE - NE - SE Sec. 4 Twp. 33S Rge. 39 X W

2310 Feet from S (circle one) Line of Section

330 Feet from E (circle one) Line of Section

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

Lease Name HJV MANGELS "A" Well # 1

Field Name CIMARON GAP

Producing Formation MORROW

Elevation: Ground 3226.2 KB _____

Total Depth 6225 PBSD 6103

Amount of Surface Pipe Set and Cemented at 1732 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set 4736, 2916 Feet

If Alternate II completion, cement circulated from _____

feet depth to ALT I 3/21/08 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content 1200 ppm Fluid volume 700 bbls

Dewatering method used DRY, BACKFILL & RESTORE LOCATION

Location of fluid disposal if hauled offsite: _____

Operator Name _____

Lease Name _____ License No. _____

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

County _____ Docket No. _____

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 L. Marc Harvey
L. MARC HARVEY

Title ENGINEERING TECHNICIAN III Date 8-1-01

Subscribed and sworn to before me this 1 day of August 2001.

Notary Public Lori Pearson

Date Commission Expires 2/26/05

K.C.C. OFFICE USE ONLY 8-9-02
F Letter of Confidentiality Attached
C Wireline Log Received
G Geologist Report Received
Distribution
_____ SWD/Rep _____ NGPA
_____ Plug _____ Other (Specify)
AUG - 6-2001 KGS
KCC-WICHITA



Operator Name ANADARKO PETROLEUM CORPORATION Lease Name HJV MANGELS "A" Well # 1

Sec. 4 Twp. 33S Rge. 39 East County MORTON
 West

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 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Attach Additional Sheets.) Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Submit Copy.) List All E.Logs Run: <u>CBL, DIL, CNL-LDT, ML, SONIC.</u>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datums <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>CHASE</td> <td>2413</td> <td></td> </tr> <tr> <td>COUNCIL GROVE</td> <td>2746</td> <td></td> </tr> <tr> <td>B/HEEBNER</td> <td>3974</td> <td></td> </tr> <tr> <td>MARMATON</td> <td>4778</td> <td></td> </tr> <tr> <td>MORROW</td> <td>5558</td> <td></td> </tr> <tr> <td>STE. GINEVIEVE</td> <td>6190</td> <td></td> </tr> </table>	Name	Top	Datum	CHASE	2413		COUNCIL GROVE	2746		B/HEEBNER	3974		MARMATON	4778		MORROW	5558		STE. GINEVIEVE	6190	
Name	Top	Datum																				
CHASE	2413																					
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MARMATON	4778																					
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STE. GINEVIEVE	6190																					

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	12-1/4"	8-5/8"	24.0	1732	P+ MIDCON/P+	420/100	3%CC, 1/2#/SK CF/2%CC, 1/4#/SK CF.
PRODUCTION	7-7/8"	5-1/2"	15.5	6146	50/50 POZ.	(1) 75 314 (2) 75	.75%h322, 10%SALT, 4#/SK CALSEAL, 1/4#/SK CF/SAME/SAME.
			PRT COLLAR @:	3296	15/85 POZ C	391 (3) 75 528	

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

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
6	6024-28, 5983-92.	ACID: 1300 GAL 7% HCL		5983-6028 (OA)
		FRAC: 38,300 GAL GEL & 75,000# 20/40 SD.		5983-6028 (OA)
6	5628-48.	NONE.		

TUBING RECORD	Size 2-3/8"	Set At 5628'	Packer At	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj. 6-17-2001		Producing Method <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf 4675	Water Bbls. 64	Gas-Oil Ratio Gravity

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION

Open Hole Perf. Dually Comp. Commingled

Other (Specify) _____

Production Interval 5628-6028 (OA)



JOB SUMMARY 70006

TICKET #	1267544	TICKET DATE	4-28-01
BDA - STATE	Ks	COUNTY	Morton
PSL DEPARTMENT	Z1	CUSTOMER REP	Jack Tuman
API - UWI #		JOB PURPOSE CODE	035 Prod Cseg
WELL TYPE	01	HES FACILITY (CLOSEST TO WELL SITE)	Hugoton

REGION: North America
 WBU ID - EMP #: MCL10110 106328
 LOCATION: Liberal
 TICKET AMOUNT: \$47,625.03
 WELL LOCATION: HJV Mangels A-1
 LEASE / WELL #: HJV Mangels A-1

NWA / COUNTRY: Mid Cont USA
 EMPLOYEE NAME: Nick Korbe
 COMPANY: APC
 WELL TYPE: 01
 DEPARTMENT: Cement
 SEC - TWP - RNG: 4-33S-39W

HES EMP NAME	EMP #	(EXPOSURE HOURS)	HRS	HES EMP NAME	EMP #	(EXPOSURE HOURS)	HRS	HES EMP NAME	EMP #	(EXPOSURE HOURS)	HRS	HES EMP NAME	EMP #	(EXPOSURE HOURS)	HRS
N. Korbe	106328		27	M. Heston	106292		25								
J. Evans	212723		27	S. Helms	216274		3								
R. Ferguson	106154		27												
G. Gore	106226		18												

HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES
421270	100	421756	100				
54218/78202	100	54225/75819					
10240236/10240245	25						
421664	100						

Form Name _____ Type: _____
 Form Thickness _____ From: _____ To: _____
 Packer Type _____ Set At _____
 Bottom Hole Temp: _____ Pressure _____
 Misc. Data _____ Total Depth _____

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY	MAKE
Float Collar 5/8" Baffle	1	Halco
Float Shoe 1FS	1	
Guide Shoes		
Centralizers S-4	30	
Bottom Plug		
Top Plug Freefall 3 stage	1	
Head DV	1	
Packer Type P-DV	1	
Other Basket	4	

MATERIALS

Treat Fluid	Density	Lb/Gal
Disp. Fluid	Density	Lb/Gal
Prop. Type	Size	Lb.
Acid Type	Gal.	%
Acid Type	Gal.	%
Surfactant	Gal.	In
NE Agent	Gal.	In
Fluid Loss	Gal/Lb	In
Gelling Agent	Gal/Lb	In
Frc. Red.	Gal/Lb	In
Breaker	Gal/Lb	In
Blocking Agent	Gal/Lb	
Perfpac Balls	Qty	
Other		
Other		
Other		
Other		

DATE TIME	CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
4-27-01 2000		4-27-01 2330	4-28-01 1130	4-29-01 0045

WELL DATA

	NEW/USED	WEIGHT	SIZE	FROM	TO	MAX ALLOW
Casing	N	15.5	5 1/2	0	6146	
Liner						
Liner						
Tbg/D.P.						
Tbg/D.P.						SHOTS/FT.
Open Hole						
Perforations						
Perforations						
Perforations						

HOURS ON LOCATION		OPERATING HOURS		DESCRIPTION OF JOB
DATE	HOURS	DATE	HOURS	
4-27-01	1/2	4-28-01	1 hr	3 stage DV
4-28-01	24	4-28-01	1 1/2 hrs	H-DV @ 4736
4-29-01	2 1/2	4-29-01	1	P-DV @ 2948
TOTAL	27 1/2	TOTAL	3 1/2 hrs	

ORDERED _____ HYDRAULIC HORSEPOWER _____
 TREATED _____ AVERAGE RATES IN BPM _____
 FEET 39 CEMENT LEFT IN PIPE 5 hjt.
 Reason _____

CEMENT DATA

STAGE	SACKS	CEMENT	BULK/SKS	ADDITIVES	YIELD	LBS/GAL
1-2-3	25/25/25	50% Poz H	B	10% salt, 4% calseal, .75% Halud-322, 1/8% Poly E Flake	635	10
1T	315	" " "	"	" " " " " " " "	7.48	13.8
2T	390	" " "	"	" " " " " " " "		
3T	525	" " "	"	" " " " " " " "		

RAMM 25
 Circulating _____ Displacement _____
 Breakdown _____ Maximum _____
 Average _____ Frac Gradient _____
 Shut In: Instant _____ 5 Min _____ 15 Min _____

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 CUSTOMER'S REPRESENTATIVE SIGNATURE _____

Frac Ring #1 _____ Frac Ring #2 _____ Frac Ring #4 _____



JOB LOG

ORDER NO. 70006

REGION North America	NWA COUNTRY MEXICO	TICKET # 1-02-004	TICKET DATE 1-2-01
MBU ID EMP # MEL 1646	EMPLOYEE NAME M. J. ...	BDA STATE K.	COUNTY ...
LOCATION ...	COMPANY N/C	PSL DEPARTMENT 21	CUSTOMER REP PHONE ...
TICKET AMOUNT ...	WELL TYPE OT	API UWI #	
WELL LOCATION ...	DEPARTMENT ...	JOB PURPOSE CODE 035	
LEASE (WELL #) ...	SEC. TWP. RNG ...	HES FACILITY (CLOSEST TO WELL SITE)	

HES EMP NAME, EMP # (EXPOSURE HOURS)	HRS	HES EMP NAME, EMP # (EXPOSURE HOURS)	HRS	HES EMP NAME, EMP # (EXPOSURE HOURS)	HRS	HES EMP NAME, EMP # (EXPOSURE HOURS)	HRS
N. K. ... 166228	27	M. W. ... 166222	25				
J. L. ... 212723	27	J. Helms 216274	3				
K. E. ... 166226	18						

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESS (psi)		JOB DESCRIPTION/REMARKS
				T	C	Tbg	Csg	
	2000							called out
	2330							on loc Held Safety mtg Set up Trucks Rig ID DP
	0500							ST F.E.
	0930							Break circ 1st Stage 6149'
	1134					3500		Test lines
	1137	5.5	0			200		st preflush 5bbl wtr, 10bbl Superflush, 5bbl wtr
	1142	6.5	20/0			250		st. scav. cmt 25sks @ 10#
	1144	6.5	28/0			250		st. Tail. cmt 315sks @ 13.8#
	1154		83					end cmt
	1155							wash pump lines
	1157							rel plug for 1st stage
	1158	6	00			50		st disp.
	1218	6	117			200		catch cmt
	1223	2.5	135			550		slow rate
	1226		145			900/150		Bump plug
	1227							rel pres
	1228					2475/250		open DV, circ 4 hrs 2nd stage
	1802					3000		Test lines
	1804	5	0			250		st preflush 5bbl wtr, 10bbl Superflush, 5bbl wtr
	1808	6	20/0			250		st scav. 25sks @ 10#
	1813	6	28/0			200		st Tail cmt 390sks @ 13.8#
	1833		103					end cmt
	1834							wash pump lines
	1836							release closing plug for 2nd stage
	1837	6	0			50		st disp.
	1848	5.5	53			150		catch cmt
	1858		103			850		slow rate
	1903		113			900/2100		Bump plug close DV
								Release pres DV closed
	1904							drop opening plug
	1917					675		open 3rd stage DV circ 4 hrs
								Plug RH & NH

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JOB LOG HAL-2013-C

DATE 4-29-01 PAGE NO. 2

CUSTOMER APC WELL NO. A-1 LEASE HJV Margals A-1 JOB TYPE 035 3stage TICKET NO. 1267544

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
2344							4000	Testlines
2345		5.5	0				200	st Preflush 5bbl wt, 10bbl Superflush, 5bbl wt
2350		6	20/0				175	st scav. cnt 25 sks @ 10"
2355		6	28/0				175	st Tail cnt 525 sks @ 15.8"
0022			137					end cnt
0023								wash pump 4 line
0026								rel plug (3stage closing)
0026		6.5	0				50	st disp
0028		6	13				175	catch cnt
0036		2	60				775	slow rate
0040		2	70				850	Bump plug
0041							2200	Close D.V.
0042								DV Closed

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Job complete
Thank you
Nick & crew

JOB SUMMARY 70006

1224108

4/2/01

REGION North America	NWA / COUNTRY	BDA / STATE KS	TICKET DATE 4/2/01
MBU ID / EMP # 570 104 / 106781	EMPLOYEE NAME Gene Montano	PSL DEPARTMENT ZI	COUNTY Morton
LOCATION Kulkaska	COMPANY Anadarko Petroleum Corp.	CUSTOMER REP / PHONE Jack Tuman	
TICKET AMOUNT	WELL TYPE 07	WELL UWI #	
WELL LOCATION	DEPARTMENT ZI	JOB PURPOSE CODE 010 85/8 Surface	
LEASE / WELL # HJV Mergels A-1	SEC / TWP / RANG 4-335-39W	HES FACILITY (CLOSEST TO WELL SITE) Liberal KS	

HES EMP NAME/EMP # (EXPOSURE HOURS) Roundtree 106781	HRS	HES EMP NAME/EMP # (EXPOSURE HOURS) J. Clemmons 198516	HRS	HES EMP NAME/EMP # (EXPOSURE HOURS) Raul 224608	HRS	HES EMP NAME/EMP # (EXPOSURE HOURS) Carlos 194445	HRS
---	-----	---	-----	--	-----	--	-----

HES UNIT NUMBERS 420 955 pickup	R/T MILES	HES UNIT NUMBERS 54218-78202 CMT 400	R/T MILES	HES UNIT NUMBERS 52947-6610 "660"	R/T MILES	HES UNIT NUMBERS 52920-75819 "660"	R/T MILES
---------------------------------------	-----------	--	-----------	---	-----------	--	-----------

Form Name _____ Type: _____
 Form Thickness _____ From: _____ To _____
 Packer Type _____ Set At _____
 Bottom Hole Temp: _____ Pressure _____
 Misc Data _____ Total Depth 1705

DATE	CALLLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
4/2/01	1800	4/2/01	4/2/01	4/2/01
		1400	1600	2000

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY	MAKE
Float Collar Insert / Auto	1	Howa
Float Shoe		
Guide Shoes 85/8 Reg	4	Howa
Centralizers 85/8	4	Howa
Bottom Plug		
Top Plug 85/8 Mastec	1	Howa
Head 85/8 PC Jman	1	Howa
Packer		
85/8 Basket	1	Howa

WELL DATA

	NEW/USED	WEIGHT	SIZE	FROM	TO	MAX ALLOW
Casing			85/8	0	1728	
Liner						
Liner						
Tbg/D.P.						
Tbg/D.P.						
Open Hole			12 1/4			SHOTS/FT.
Perforations						
Perforations						
Perforations						

MATERIALS

Treat Fluid	Density	Lb/Gal
Disp. Fluid Freshwater	Density 8.34	Lb/Gal
Prop. Type	Size	Lb.
Prop. Type	Size	Lb.
Acid Type	Gal.	%
Acid Type	Gal.	%
Surfactant	Gal.	In
NE Agent	Gal.	In
Fluid Loss	Gal/Lb	In
Gelling Agent	Gal/Lb	In
Fric. Red.	Gal/Lb	In
Breaker	Gal/Lb	In
Blocking Agent	Gal/Lb	
Perfpac Balls	Qty	
Other		
Other		
Other		
Other		

HOURS ON LOCATION

DATE	HOURS	DATE	HOURS	DESCRIPTION OF JOB
4/2/01	12:40	4/2/01	1h	Cement 85/8 Surface
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TOTAL				
TCC WICHITA				

CEMENT DATA

ORDERED	HYDRAULIC HORSEPOWER Avail.	Used
TREATED	AVERAGE RATES IN BPM Disp.	Overall
FEET 43	CEMENT LEFT IN PIPE Reason	Sheet

STAGE	SACKS	CEMENT	BULK/SKS	ADDITIVES	YIELD	LBS/GAL
Head	420	PP midcon	B	3% CC; 0.1% FWCA, 1/4 #/sk Poly E Flake	2.89	71.4
Tail	100	Pre Plus c	B	2% CC; 1/8 #/sk Poly E Flake	1.34	14.8

Circulating _____	Displacement _____	Preflush: _____	Gal-BBL 3 BSI	Type: Freshwater
Breakdown _____	Maximum _____	Load & Bkdn: _____	Gal-BBI	Pad: BBI-Gal
Average _____	Frac Gradient _____	Treatment _____	Gal-BBI	Disp: BBI-Gal
Shut In: Instant _____	5 Min _____	Cement Slurr _____	Gal-BBI 216 BBL head + 24 BBL tail	
	15 Min _____	Total Volume _____	Gal-BBI	

Frac Ring #1 _____ Frac Ring #2 _____ Frac Ring #3 _____ Frac Ring #4 _____

THE INFORMATION STATED HEREIN IS CORRECT

CUSTOMER'S REPRESENTATIVE SIGNATURE
Jack Tuman

JOB LOG

ORDER NO. 70006

TICKET #	1224108	TICKET DATE	4/2/01
BDA / STATE	KS	COUNTY	Morton
PSL DEPARTMENT	ZI		
CUSTOMER REP / PHONE	Jack Tuman		
API / UWI #			
JOB PURPOSE CODE	010 858 surface		
HES FACILITY (CLOSEST TO WELL SITE)	Liberal KS		

REGION	North America	NWA / COUNTRY	
MAJU ID / EMP #	KAO 104/106781	EMPLOYEE NAME	Cere Puentes
LOCATION	Kalkaska	COMPANY	Anadarko Petroleum Corp.
TICKET AMOUNT		WELL TYPE	01
WELL LOCATION		DEPARTMENT	ZI
LEASE / WELL #	HJV Mangels A-1	SEC / TWP / RNG	04-33g-39w

HES EMP NAME/EMP # (EXPOSURE HOURS)	HRS	HES EMP NAME/EMP # (EXPOSURE HOURS)	HRS	HES EMP NAME/EMP # (EXPOSURE HOURS)	HRS	HES EMP NAME/EMP # (EXPOSURE HOURS)	HRS
Puentes 106781		J. Clemmons 48516		Raul		Carlos	
				224608		194445	

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESS (psi)		JOB DESCRIPTION/REMARKS
				T	C	Tbg	Csg	
1400	(4/2/01)							arrive on location - discuss set up, safety and job plan
1630-								rig up equipment install FE on CSG 15 run
1835			216 BBLs total					plug 3 CSI RW ahead mix 420 PP Midcon w/ 3% CC; 0.1% Pwca; 1/4 #/sk Poly E Flake @ 11.4 #/gal
			24 BBLs total					mix 100 sts Prem. Plus-c w/ 2% CC; 1/8 #/sk Poly E Flake @ 14.8 #/gal
			60 BBLs total					Drop plug Displace w/ 108 BBLs of fresh water
1945								60 BBLs land plug float did not hold Got 10 BBLs cement to surface

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