

FORM MUST BE TYPED

SIDE ONE

ORIGINAL

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

API NO. 15- 081-21347-01-00  
County HASKELL  
30' S & 130' W OF C \_\_\_\_\_ E  
\_\_\_\_\_ - E/2 - NW Sec. 13 Twp. 29S Rge. 34 X W

Operator: License # 4549  
Name: ANADARKO PETROLEUM CORPORATION  
Address P. O. BOX 351  
City/State/Zip LIBERAL, KANSAS 67905-0351

1350 (SHL) Feet from (N)X (circle one) Line of Section  
1850 (SHL) Feet from X(M)(circle one) Line of Section  
BHL: 1348 FNL & 1164 FWL  
Footages Calculated from Nearest Outside Section Corner:  
NE, SE, (NW) or SW (circle one)

Purchaser: NCRA  
Operator Contact Person: SHAWN YOUNG  
Phone (316) 624-6253

Lease Name HUNGATE "A" Well # 7  
Field Name KOENIG  
Producing Formation MARMATON, MORROW  
Elevation: Ground 2953.9 KB \_\_\_\_\_

Contractor: Name: NORSEMAN DRILLING  
License: 3779

Total Depth 5606 (MD) PBDT 5550 (MD)  
5501 (TVD)  
Amount of Surface Pipe Set and Cemented at 1770 Feet  
Multiple Stage Cementing Collar Used? X Yes \_\_\_\_\_ No  
If yes, show depth set 3276 Feet

Designate Type of Completion  
X New Well \_\_\_\_\_ Re-Entry \_\_\_\_\_ Workover  
X Oil \_\_\_\_\_ SWD \_\_\_\_\_ SLOW \_\_\_\_\_ Temp. Abs.  
\_\_\_\_\_ Gas \_\_\_\_\_ ENHR \_\_\_\_\_ SIGW  
\_\_\_\_\_ Dry \_\_\_\_\_ Other (Core, WSW, Expl., Cathodic, etc)

If Alternate II completion, cement circulated from \_\_\_\_\_  
feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

If Workover:  
Operator: JAN 04 2005  
Well Name: \_\_\_\_\_  
Comp. Date FROM CONFIDENTIAL Old Total Depth \_\_\_\_\_

Drilling Fluid Management Plan ALT 1 4/15/01 LB  
(Date must be collected from the Reserve Pit)  
Chloride content 900 ppm Fluid volume 700 bbls  
Dewatering method used DRY, BACKFILL & RESTORE LOCATION.

\_\_\_\_\_ Deepening \_\_\_\_\_ Re-perf. \_\_\_\_\_ Conv. to Inj/SWD  
\_\_\_\_\_ Plug Back \_\_\_\_\_ PBDT  
X Commingled \_\_\_\_\_ Docket No. PENDING CO12004  
\_\_\_\_\_ Dual Completion \_\_\_\_\_ Docket No. \_\_\_\_\_  
\_\_\_\_\_ Other (SWD or Inj?) \_\_\_\_\_ Docket No. \_\_\_\_\_  
9-22-2000 10-3-2000 11-16-2000  
Spud Date Date Reached TD Completion Date

Location of fluid disposal if hauled offsite:  
Operator Name \_\_\_\_\_  
Lease Name \_\_\_\_\_ License No. \_\_\_\_\_  
\_\_\_\_\_ Quarter Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S Rng. \_\_\_\_\_ E/W  
County \_\_\_\_\_ Docket No. \_\_\_\_\_

CONFIDENTIAL

DEC 15 2000

CONFIDENTIAL

RELEASED

RECEIVED  
STATE CORPORATION COMMISSION

DEC 19 2000

CONSERVATION DIVISION  
Wichita, Kansas

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  
Title ENGINEERING TECHNICIAN III Date 12-15-00  
Subscribed and sworn to before me this 15th day of December  
20 00.  
Notary Public Shirley J. Childers  
Date Commission Expires 11/14/02

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)

NOTARY PUBLIC - State of Kansas  
SHIRLEY J. CHILDERS  
My Appt. Exp. 11/14/02

SIDE TWO

Operator Name ANADARKO PETROLEUM CORPORATION Lease Name HUNGATE "A" Well # 7

Sec. 13 Twp. 29S Rge. 34  East County HASKELL  
 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  Yes  No  
 (Attach Additional Sheets.)  
 Samples Sent to Geological Survey  Yes  No  
 Cores Taken  Yes  No  
 Electric Log Run  Yes  No  
 (Submit Copy.)  
 List All E.Logs Run: CBL-CCL-GR, DIL, CNL-LDT, ML.

Name	TVD	MD	Top	Datum
CHASE	2565	2565		
COUNCIL GROVE	2863	2863		
B/HHEEBNER	3992	4018		
TORONTO	4018	4045		
MARMATON	4679	4756		
PAWNEE	4796	4882		
MORROW	5155	5258		
CHESTER	5338	5442		
STE. GENEVIEVE	5391	5498		

CASING RECORD							
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	1770	CLASS C/ CLASS C.	455/100	3% D79, .2% D46, 1/4#/SK D29/2% S1, 1/4#/SK D29.
PRODUCTION	7-7/8"	5-1/2"	15.5	5606	15/85 POZ/ CLASS H.	150/75	8% GEL, 10% SALT, 1/4#/SK CF/10% SALT, .75% FLCA, 1/4#/SK CF.
			PORT COLLAR @	3276	15/85 POZ	100	NEAT.

ADDITIONAL CEMENTING/SQUEEZE RECORD				
Purpose:	Depth		#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	
		4	5413-22.
		FRAC: 32000 GAL GEL & 55150# 20/40 SD.	5413-22.
4	4788-4804	ACID: 1600 GAL 15% HCL.	4788-4804.
		FRAC: 39300 GAL GEL & 77720# 20/40 SD.	4788-4804.
TUBING RECORD	Size 2-3/8" Set At 5397' Packer At	Liner Run	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Date of First, Resumed Production, SWD or Inj. 11-19-2000		Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
Estimated Production Per 24 Hours	Oil 115 Bbls.	Gas 50 Mcf	Water 105 Bbls.	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: 4788-4804  
5413-5422

CONFIDENTIAL

RELEASED ORIGINAL

JAN 04 2005

22-Sep-00

Schlumberger

Service Order

FROM CONFIDENTIAL

Customer ANADARKO PETROLEUM CORPORATI		Person Taking Call Trent Mitchell		Dowell Location Ulysses, KS		OrderDate 9/21/00		Job Number 20178955			
Well Name and Number Hungate A-7			Legal Location Sec 13-29S-34W		Field Koenig		County Haskell		State/Province Kansas		
Rig Name			Well Age New		Sales Engineer Trent Mitchell			Job Type Cem Surface Casing			
Time Well Ready:		Deviation 0 °		Bit Size 0 in		Well MD <del>1790</del> 1790 ft		Well TVD <del>1790</del> 1790 ft		BHP 0 psi	
								BHST 0 °F		BHCT 0 °F	
Treat Down Casing		Packer Type		Packer Depth 0 ft		WellHead Connection Single cement head		HHP on Location 0		Max Allowed Pressure 0	
										Max Allowed Ann Pressure 0	
		<b>Casing</b>					<b>Services Instructions:</b>				
Depth, ft		Size, in	Weight, lb/ft	Grade	Thread	8 5/8" Surface Casing set @ <sup>1790</sup> <del>1790</del> in 12 1/4" OH					
1790		8.63	23			445 sk Lead @ 11.4 ppg					
0		0	0			100 sk Tail @ 14.8 ppg					
		<b>Tubing</b>					<p><b>Extra Equipment:</b> 8 5/8" = TX pattern guide shoe, orifice fill insert float, 4 centralizers, 1 basket, top plug, threadlock kit</p> <p style="text-align: right;"><b>KCC</b> <b>DEC 15 2000</b> <b>CONFIDENTIAL</b></p>				
Depth,		Size, in	Weight, lb/ft	Grade	Thread						
0		0	0								
0		0	0								
<b>Perforated Intervals</b>											
Top, ft	Bottom, ft	spf	No. of Shots		Total Interval						
0	0	0	0		0 ft						
0	0	0	0		Diameter						
0	0	0	0		0 in						

Contact	Voice	Mobile	FAX	Notes
Jim Barlow	316-629-4350	281-543-2343		
Steve Ridenour		281-543-2330		

Notes:

Directions:

Take 160 East 20 miles - go South 2-3 miles - East into (across road from Yuncker A-9)

Other Notes:

If float does not hold, or any other problem document and let Trent know.

*Circulated 10 bbl to surface.*

**Comments:**

Anadarko  
8 5/8" surface  
Hungate A-7

**Fluid Systems:**

Lead			
445 sks Class C + 0.5 lbs/sk D029 + 0.2 % BWOB D046 + 3 % BWOB D079			
Density:	11.4 lb/gal	Thickening Time:	
Yield:	2.87 ft <sup>3</sup> /sk	Viscosity:	cp
H2O Mix:	17.7 gal/sk	Break Time:	
H2O:	7876.5 gal	Eq. Sack Weight:	94 lb
Dowell Code	Conc/ Amount	Total Quantity	
D903 "C"	94 lbs/sk	41830	
D079	3 % BWOB	1254.9	
D046	0.2 % BWOB	83.66	
D029	0.5 lbs/sk	222.5	

*Chem Extender  
Anti foamer  
- Cell Flake -*

Tail			
100 sks Class C + 0.25 lbs/sk D029 + 2 % BWOB S001			
Density:	14.8 lb/gal	Thickening Time:	
Yield:	1.32 ft <sup>3</sup> /sk	Viscosity:	cp
H2O Mix:	6.3 gal/sk	Break Time:	
H2O:	630 gal	Eq. Sack Weight:	94 lb
Dowell Code	Conc/ Amount	Total Quantity	
D903 'C'	94 lbs/sk	9400	
S001	2 % BWOB	188	
D029	0.25 lbs/sk	25	

*- CC -  
- Cell Flake -*

CONFIDENTIAL

KCC

ORIGINAL

DEC 15 2000

Schlumberger

Service Order

CONFIDENTIAL

04-Oct-00

Customer ANADARKO PETROLEUM CORPORATI		Person Taking Call Trent Mitchell		Dowell Location Ulysses, KS		OrderDate 10/4/00		Job Number 20181092			
Well Name and Number Hungate A-7			Legal Location Sec 13-29S-34W		Field Koenig		County Haskell		State/Province Kansas		
Rig Name NORSEMAN 3			Well Age New		Sales Engineer Trent Mitchell			Job Type Cem Prod Casing			
Time Well Ready:		Deviation 0 °		Bit Size 0 in		Well MD <i>5606</i> 5,600 ft		Well TVD <i>5501</i> 5,485 ft		BHP 0 psi	
BHST 135 °F		BHCT 0 °F		Treat Down Casing		Packer Type		Packer Depth 0 ft		WellHead Connection Single cement head	
HHP on Location 0		Max Allowed Pressure 0		Max Allowed AnnPressure 0		<b>Services Instructions:</b> <i>5606</i> Cement production casing at ~5600 MD with 7 bbls CW7 followed by 150 sks of lead (12.8 ppg) and 75 sks of tail (14.4 ppg). Bring another 25 sks of lead for rat and mouse hole.					
<b>Casing</b>						<b>Extra Equipment:</b> 5 1/2" float equipment: Guide shoe, auto fill insert, 12 centralizers, PORT COLLAR (set at 3350), threadlock kit, top plug					
Depth, ft		Size, in		Weight, lb/ft		Grade		Thread			
5600		5.5		15.5							
0		0		0							
<b>Tubing</b>											
Depth,		Size, in		Weight, lb/ft		Grade		Thread			
0		0		0							
0		0		0							
<b>Perforated Intervals</b>											
Top, ft		Bottom, ft		spf		No. of Shots		Total Interval			
0		0		0		0		0 ft			
0		0		0		0		Diameter			
0		0		0		0		0 in			

Contact	Voice	Mobile	FAX	Notes
Steve Ridenour	316-544-6208	281-543-2330		pgr 316-626-9115
Chris Sutherland	316-629-4325			

Notes:

Pump 8 bbls fresh water, 10 bbls CW7, and 8 bbls fresh water ahead of cement.

RELEASED

JAN 9 2005

Directions:

Take 160 East 20 miles - go South 2-3 miles - East into (across road from Yuncker A-9)

FROM CONFIDENTIAL

Other Notes:

Contact Trent with any problems

**Comments:**

**Fluid Systems:**

<b>CW7</b>			
10 bbls CW7			
<i>Density:</i>	8.34 lb/gal	<i>Thickening Time:</i>	
<i>Yield:</i>	ft <sup>3</sup> /sk	<i>Viscosity:</i>	cp
<i>H2O Mix:</i>	0 gal/sk	<i>Break Time:</i>	
<i>H2O:</i>	0 gal	<i>Eq. Sack Weight:</i>	0 lb
<b>Dowell Code</b>	<b>Conc/ Amount</b>	<b>Total Quantity</b>	
D122A	5 gal	5	
water	415 gal	415	

<b>Lead</b>			
150 sks 15/85 Poz/C. + 0.25 lbs/sk D029 + 0.2 % BWOB D046 + 10 % BWOW D044 + 8 % BWOB D020			
<i>Density:</i>	12.8 lb/gal	<i>Thickening Time:</i>	
<i>Yield:</i>	1.99 ft <sup>3</sup> /sk	<i>Viscosity:</i>	cp
<i>H2O Mix:</i>	12.4 gal/sk	<i>Break Time:</i>	
<i>H2O:</i>	1860 gal	<i>Eq. Sack Weight:</i>	91.75 lb
<b>Dowell Code</b>	<b>Conc/ Amount</b>	<b>Total Quantity</b>	
D132	11.85 lbs/sk	1777.5	
D029	0.25 lbs/sk	37.5	
D046	0.2 % BWOB	27.525	
D020	8 % BWOB	1101	
D903	79.9 lbs/sk	11985	
D044	10 % BWOW	1551.24	

<b>Rat hole</b>			
25 sks 15/85 Poz/C + 0.25 lbs/sk D029 + 0.2 % BWOB D046 + 10 % BWOW D044 + 8 % BWOB D020			
<i>Density:</i>	12.8 lb/gal	<i>Thickening Time:</i>	
<i>Yield:</i>	1.99 ft <sup>3</sup> /sk	<i>Viscosity:</i>	cp
<i>H2O Mix:</i>	12.4 gal/sk	<i>Break Time:</i>	
<i>H2O:</i>	310 gal	<i>Eq. Sack Weight:</i>	91.75 lb
<b>Dowell Code</b>	<b>Conc/ Amount</b>	<b>Total Quantity</b>	
D029	0.25 lbs/sk	6.25	
D044	10 % BWOW	258.54	
D020	8 % BWOB	183.5	
D046	0.2 % BWOB	4.5875	
D132	11.85 lbs/sk	296.25	
D903	79.9 lbs/sk	1997.5	

<b>Tail</b>			
75 sks SelfSTRESS (10-10) + 0.75% D167 + 0.25 pps D29 + 0.2% D46			
<i>Density:</i>	14.4 lb/gal	<i>Thickening Time:</i>	
<i>Yield:</i>	1.63 ft <sup>3</sup> /sk	<i>Viscosity:</i>	cp
<i>H2O Mix:</i>	7.85 gal/sk	<i>Break Time:</i>	
<i>H2O:</i>	588.75 gal	<i>Eq. Sack Weight:</i>	94 lb
<b>Dowell Code</b>	<b>Conc/ Amount</b>	<b>Total Quantity</b>	
D029	0.25 lbs/sk	18.75	
D167	0.75 % BWOB	52.875	
D046	0.2 % BWOB	14.1	
D053	10 % BWOB	705	
D909	94 lbs/sk	7050	
D044	10 % BWOW	491.0175	

CONFIDENTIAL

ORIGINAL



**CEMENT JOB REPORT**

CUSTOMER Anadarko Petroleum Corporation		DATE 17-OCT-00	F.R.# 211010331	SERV. SUPV. Tracey Arnold		
LEASE & WELL NAME Hungate A-7		LOCATION Sec.13-29S-34W		COUNTY-PARISH-BLOCK Haskell Kansas		
DISTRICT Perryton		DRILLING CONTRACTOR RIG # Bruce		TYPE OF JOB Squeeze-Block (Port Collar)		
SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE		PHYSICAL SLURRY PROPERTIES		
N/A				SLURRY WGT PPG	SLURRY YLD FT <sup>3</sup>	WATER GPS
				PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
MATERIALS FURNISHED BY BJ						
100sx 15:85:8 Poz C				12.7	1.96	10.78
H2O				8.34		35
						12.8
DEC 15 2000 CONFIDENTIAL				JAN 04 2001 FROM CONFIDENTIAL		
Available Mix Water 250 Bbl.		Available Displ. Fluid 220 Bbl.		TOTAL		47.8
						25.69

HOLE			TBG-CSG-D.P.				COLLAR DEPTHS			
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	GRADE	SHOE	FLOAT	STAGE
			2.375	4.7	TBG	3276				

LAST CASING				PKR-CMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN		WELL FLUID	
SIZE	WGT	TYPE	DEPTH	BRAND & TYPE		TOP	BTM	SIZE	THREAD	TYPE	WGT.
5.5	15.5	CSG	5606					2.375	BRD		

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER SOURCE
VOLUME	UCM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	
12.8	BBLs	H2O	8.34								X-Port

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION		
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>		
	PIPE	ANNULUS				TEST LINES	2000 PSI	
15:08	1000		1	1	H2O	CIRCULATING WELL - RIG	BJ	
15:13	0		0					
15:15	400		2	15	H2O			
15:23	0		2	35	CEM			
15:38	600		2	12	H2O			
15:44	300		0					
15:45	1000		1					
15:46	0		0					
15:54	400		2	30	H2O			
16:11	0		0					

BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERV. SUPV.
Y	N	0	Y	N	1	93	0
							Y
							N

CONFIDENTIAL

ORIGINAL

KCC

DEC 15 2000

Final Survey Report  
for

CONFIDENTIAL

# ANADARKO PETROLEUM

Hungate # A-7

RELEASED

Haskell County, Kansas

JAN 04 2005

FROM CONFIDENTIAL

Baker Hughes INTEQ

Mid-Continent District

6209 S. Sooner Rd.  
OKLAHOMA CITY, OK 73135

Phone: (405) 672-7881

Fax: (405) 672-8056

10- Oct - 2000



INTEQ



CONFIDENTIAL

ORIGINAL

ANADARKO PETROLEUM CORPORATION  
Hungate #A-7, sec 13, 29S - 34W, slot #1  
HASKELL COUNTY, KANSAS

SURVEY LISTING Page 1  
Your ref : s2515  
Last revised : 10-Oct-2000

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
1770.00	0.00	0.00	1770.00	0.00 N	0.00 E	0.00	0.00
2838.00	0.50	195.20	2837.99	4.50 S	1.22 W	0.05	1.22
2863.00	0.80	231.70	2862.98	4.71 S	1.39 W	1.99	1.39
2894.00	1.60	276.00	2893.98	4.80 S	1.99 W	3.77	1.99
2925.00	2.10	287.60	2924.96	4.58 S	2.96 W	2.01	2.96
2957.00	2.80	286.20	2956.93	4.19 S	4.27 W	2.20	4.27
2988.00	3.80	290.80	2987.88	3.61 S	5.96 W	3.33	5.96
3019.00	3.70	294.30	3018.81	2.83 S	7.83 W	0.81	7.83
3049.00	4.00	292.20	3048.75	2.04 S	9.68 W	1.10	9.68
3081.00	5.00	291.50	3080.65	1.11 S	12.01 W	3.13	12.01
3112.00	5.60	291.20	3111.52	0.07 S	14.68 W	1.94	14.68
3143.00	6.20	294.70	3142.35	1.18 N	17.61 W	2.26	17.61
3174.00	6.40	294.00	3173.16	2.58 N	20.71 W	0.69	20.71
3205.00	7.00	292.20	3203.95	4.00 N	24.03 W	2.05	24.03
3237.00	8.10	291.50	3235.67	5.56 N	27.94 W	3.45	27.94
3268.00	8.40	288.00	3266.35	7.06 N	32.12 W	1.89	32.12
3299.00	8.80	284.80	3297.01	8.37 N	36.57 W	2.01	36.57
3330.00	9.10	281.70	3327.63	9.47 N	41.26 W	1.83	41.26
3360.00	9.80	280.30	3357.22	10.41 N	46.10 W	2.46	46.10
3391.00	10.00	276.00	3387.76	11.16 N	51.37 W	2.47	51.37
3422.00	10.40	272.90	3418.27	11.58 N	56.84 W	2.19	56.84
3453.00	10.60	271.80	3448.75	11.82 N	62.49 W	0.91	62.49
3486.00	10.90	270.10	3481.17	11.92 N	68.64 W	1.32	68.64
3517.00	11.60	270.80	3511.58	11.96 N	74.69 W	2.30	74.69
3549.00	12.40	268.00	3542.88	11.89 N	81.34 W	3.09	81.34
3580.00	13.20	267.60	3573.11	11.63 N	88.20 W	2.60	88.20
3611.00	13.60	266.20	3603.26	11.24 N	95.37 W	1.66	95.37
3642.00	14.10	266.90	3633.36	10.79 N	102.78 W	1.70	102.78
3674.00	14.90	265.50	3664.34	10.26 N	110.78 W	2.73	110.78
3705.00	15.60	264.80	3694.25	9.57 N	118.90 W	2.33	118.90
3736.00	16.40	262.80	3724.05	8.64 N	127.39 W	3.13	127.39
3766.00	17.10	265.10	3752.78	7.73 N	135.99 W	3.21	135.99
3798.00	17.80	267.20	3783.30	7.09 N	145.56 W	2.94	145.56
3891.00	18.30	267.30	3871.73	5.71 N	174.34 W	0.54	174.34
3954.00	19.30	267.90	3931.36	4.86 N	194.63 W	1.62	194.63
4017.00	19.30	268.00	3990.82	4.12 N	215.44 W	0.05	215.44
4109.00	19.00	268.30	4077.73	3.14 N	245.60 W	0.34	245.60
4202.00	20.00	267.60	4165.40	2.03 N	276.63 W	1.10	276.63
4264.00	21.20	268.00	4223.43	1.19 N	298.42 W	1.95	298.42
4357.00	22.30	270.40	4309.81	0.73 N	332.87 W	1.52	332.87
4448.00	21.30	270.40	4394.30	0.96 N	366.67 W	1.10	366.67
4542.00	21.60	272.20	4481.79	1.75 N	401.03 W	0.77	401.03
4604.00	22.80	272.50	4539.20	2.71 N	424.44 W	1.94	424.44
4728.00	22.20	273.20	4653.76	5.06 N	471.83 W	0.53	471.83
4777.85	21.65	272.82	4700.00	6.04 N	490.42 W	1.14	490.42 * 4700 TVD
4819.00	21.20	272.50	4738.31	6.74 N	505.43 W	1.14	505.43
4849.00	21.10	271.80	4766.29	7.15 N	516.25 W	0.91	516.25
4881.00	20.50	271.50	4796.20	7.48 N	527.61 W	1.90	527.61
4912.00	19.80	271.50	4825.30	7.76 N	538.28 W	2.26	538.28

Assumed vertical to csg point 1770'

KCC

DEC 15 2000

CONFIDENTIAL

RELEASED

JAN 04 2005

FROM CONFIDENTIAL

All data is in feet unless otherwise stated.  
Coordinates from slot #1 and TVD from rotary table.  
Bottom hole distance is 686.28 on azimuth 270.17 degrees from wellhead.  
Vertical section is from N 0.00 E 0.00 on azimuth 270.00 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ

5.9° 4788

CONFIDENTIAL

ORIGINAL

ANADARKO PETROLEUM CORPORATION  
Hungate #A-7, sec 13, 29S - 34W, slot #1  
HASKELL COUNTY, KANSAS

SURVEY LISTING Page 2  
Your ref : s2515  
Last revised : 10-Oct-2000

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	RECTANGULAR COORDINATES		Dogleg Deg/100ft	Vert Sect
4944.00	19.50	270.40	4855.44	7.93 N	549.04 W	1.49	549.04
4975.00	18.70	269.00	4884.73	7.88 N	559.18 W	2.97	559.18
5006.00	18.30	268.30	4914.13	7.65 N	569.02 W	1.48	569.02
5038.00	17.50	268.70	4944.58	7.40 N	578.85 W	2.53	578.85
5070.00	16.40	266.90	4975.19	7.04 N	588.17 W	3.81	588.17
5100.00	15.60	267.30	5004.03	6.62 N	596.43 W	2.69	596.43
5131.00	15.00	266.90	5033.93	6.21 N	604.60 W	1.97	604.60
5161.00	14.40	268.30	5062.95	5.89 N	612.20 W	2.32	612.20
5191.00	13.80	267.60	5092.04	5.63 N	619.51 W	2.08	619.51
5223.00	12.90	266.50	5123.18	5.25 N	626.89 W	2.92	626.89
5254.00	12.10	265.80	5153.44	4.80 N	633.58 W	2.63	633.58
5285.00	11.30	266.50	5183.80	4.38 N	639.85 W	2.62	639.85
5317.00	10.90	266.50	5215.20	4.00 N	646.00 W	1.25	646.00
5349.00	10.50	266.50	5246.64	3.64 N	651.93 W	1.25	651.93
5380.00	9.60	265.50	5277.17	3.26 N	657.33 W	2.96	657.33
5410.00	8.60	265.60	5306.79	2.90 N	662.06 W	3.33	662.06
5441.00	7.60	268.00	5337.48	2.65 N	666.42 W	3.40	666.42
5504.00	7.20	269.00	5399.96	2.43 N	674.53 W	0.67	674.53
5566.00	6.50	268.00	5461.51	2.24 N	681.92 W	1.15	681.92
5606.00	6.00	268.00	5501.27	2.09 N	686.27 W	1.25	686.27

KCC  
DEC 15 2000  
CONFIDENTIAL  
RELEASED  
JAN 04 2005

FROM CONFIDENTIAL

5413 MD → 7.11° @ top of  
Narrow prod zone  
Last MWD Survey Projection to TD 7.11° ✓ OK

$$\tan \theta = \frac{686.27}{5501.27}$$

$$\theta = \tan^{-1} .12474$$

$$\theta = 7.11^\circ$$

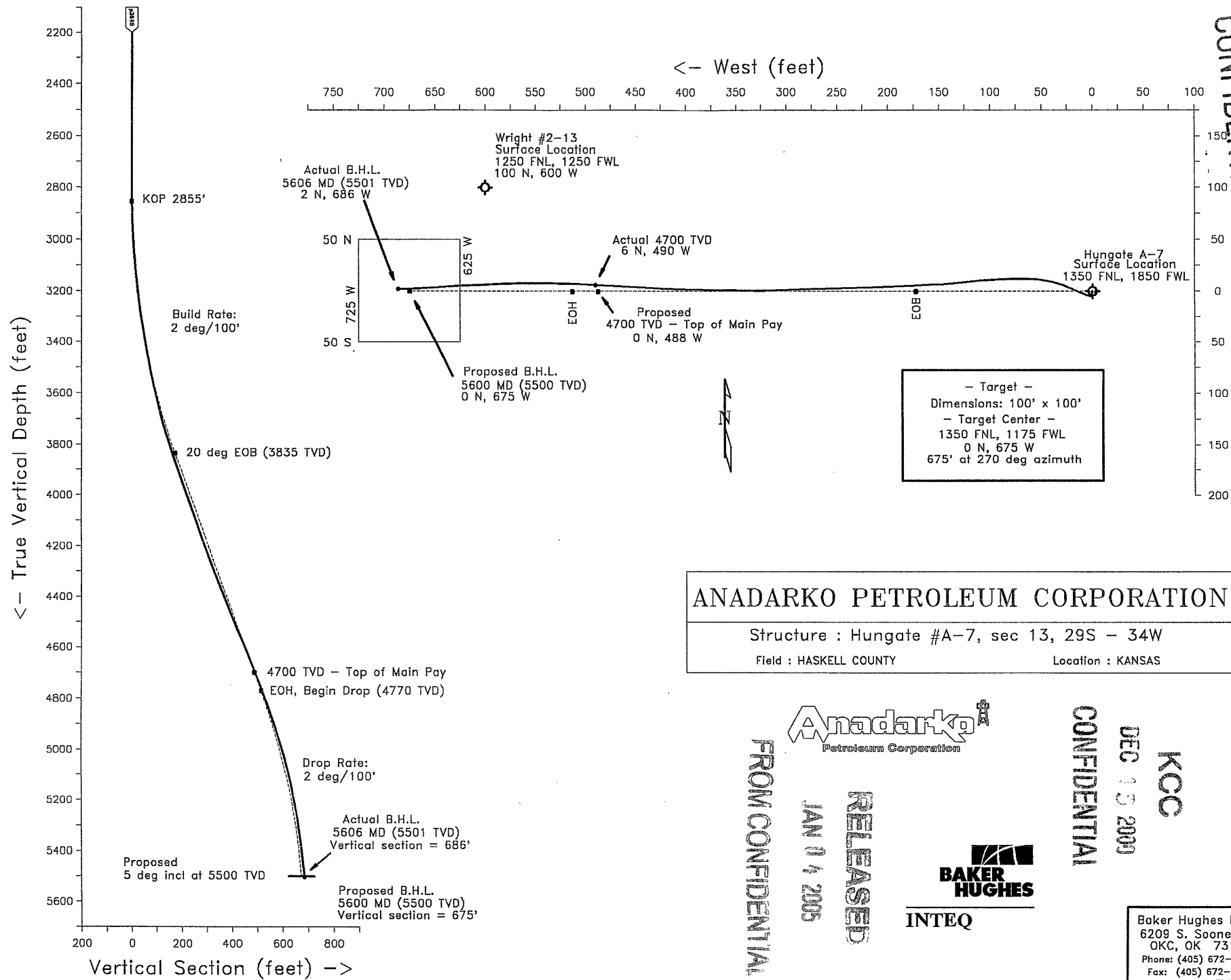
209 → 0 SW 1350 FWL  
686.2 1850 FWL

$$\begin{array}{r} 1350 \\ - 2.09 \\ \hline 1347.9 \\ \sim 1348 \text{ OK} \end{array}$$

$$\begin{array}{r} 1850 \\ - 686.27 \\ \hline 1163.7 \\ \sim 1164 \text{ OK} \end{array}$$

All data is in feet unless otherwise stated.  
Coordinates from slot #1 and TVD from rotary table.  
Bottom hole distance is 686.28 on azimuth 270.17 degrees from wellhead.  
Vertical section is from N 0.00 E 0.00 on azimuth 270.00 degrees.  
Calculation uses the minimum curvature method.  
Presented by Baker Hughes INTEQ

CONFIDENTIAL South (feet) ->



**ANADARKO PETROLEUM CORPORATION**

Structure : Hungate #A-7, sec 13, 29S - 34W  
Field : HASKELL COUNTY Location : KANSAS



FROM CONFIDENTIAL

RELEASED  
JAN 14 2005



CONFIDENTIAL

KCC  
DEC 13 2000

Baker Hughes INTEQ  
6209 S. Sooner Rd.  
OKC, OK 73135  
Phone: (405) 672-7881  
Fax: (405) 672-8056  
Drawn By: C. Rickey  
Date: 10-Oct-2000

ORIGINAL

Azimuth 270.00 with reference 0.00 N, 0.00 E from slot #1