

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 P. O. BOX 351

City/State/Zip LIBERAL, KANSAS 67905-0351

Purchaser: NATIONAL COOPERATIVE REFINING ASSOCIATION

Operator/Contact Person: DAVID W. KAPPLE

Phone (316) 624-6253

Contractor: Name: CHEYENNE DRILLING

License: 5382

Wellsite Geologist: _____

Designate Type of Completion
 New Well Re-Entry Workover

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

If Workover:

Operator: ANADARKO PETROLEUM CORPORATION

Well Name: MCHARGUE "A" NO. 4

Comp. Date 11-18-97 Old Total Depth 7969 MD

6181 TVD

Deepening Re-perf. Conv. to Inj/SWD

Plug Back PBT

Commingled Docket No. _____

Dual Completion Docket No. _____

Other (SWD or Inj?) Docket No. 194,850-C

HORIZONTAL WELLBORE (C-28,099)

11-24-97 12-4-97 12-17-97

Spud Date 11-24-97 Date Reached TD 12-4-97 Completion Date 12-17-97

County SEWARD

50'S- SW - SW - SW Sec. 2 Twp. 33 Rge. 34 X E

SHL 280 Feet from X(S) (circle one) Line of Section

SHL 330 Feet from X(W) (circle one) Line of Section

BHL: 1754 FSL & 821 FWL

Footages Calculated from Nearest Outside Section Corner:

NE, SE, NW or (SW) (circle one)

Lease Name MCHARGUE "A" Well # 4

Field Name SHUCK

Producing Formation ST. LOUIS "A"

Elevation: Ground 2875.2 KB _____

Total Depth 7571 MD, 6191 TVD PBT 7571 MD 6191 TVD

Amount of Surface Pipe Set and Cemented at 1640 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

Drilling Fluid Management Plan HOR. OWNED ALT 1 OK 5-11-98 JK

(Data must be collected from the Reserve Pit)

Chloride content 11000 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. _____

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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 DRILLING TECHNICAL ASSISTANT Date 2-12-98

Subscribed and sworn to before me this 12th day of February 19 98.

Notary Public Freda L. Hinz

Date Commission Expires _____

FREDA L. HINZ
Notary Public - State of Kansas
My Appt. Expires 5-15-99

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 PUGB Other
2-17-98
(Specify)

SIDE TWO

Operator Name ANADARKO PETROLEUM CORPORATION Lease Name MCHARGUE "A" Well # 4

Sec. 2 Twp. 33 Rge. 34 East County SEWARD
 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: ATTEMPTED, BUT UNABLE TO LOG REDRILLED LATERAL.

NEW SURVEY REPORT ATTACHED FOR NEW LATERAL.

Log Sample

Name	Top	Datum
CHASE	2551	
COUNCIL GROVE	2864	
HEEBNER	4168	
TORONTO	4203	
LANSING	4322	
MARMATON	4980	
CHEROKEE	5190	
MORROW	NOT LOGGED	
STE. GENEVIEVE	NOT LOGGED	
ST. LOUIS "A" POROSITY	6190 TVD	

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UNTIL 2-12-99

CASING RECORD							
*ORIGINAL COMPLETION <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"	9-5/8"	32.0	1640	P+ MIDCON 2/ P+	255/100	3%CC, 1/4#SK FLC/ 2%CC, 1/4#SK FLC.
*PRODUCTION	8-3/4"	7"	23.0	6336 MD	50/50 POZ/ CLASS H PREM	70/200	.75% HALAD-322, .1% FWCA/ .8% HALAD-322 .1% HR-5.
NO NEW CASING OR LINERS							

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		Acid, Fracture, Shot, Cement Squeeze Record	
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used)	Depth
OPEN HOLE	6336-7571 MD, (ST LOUIS)		ACID: 16500 GAL FOAMED 15% MCA	6336-7571 (MD)

TUBING RECORD	Size	Set At	Packer At	Liner Run
	2-7/8"	6015'		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Date of First, Resumed Production, SWD or Inj.	Producing Method
12-18-97	<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 Bbls.	Gas TSTM	Mcf	Water Bbls.	Gas-Oil Ratio TSTM	Gravity
	39			97		

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: 6336-7571 MD

Halliburton Drilling Systems

Survey Report

ORIGINAL

Calculated using the Minimum Curvature Method

Computed using WIN-CADDS REV2.2.2

Vertical Section Plane: 13.81 deg.

Date: 12/8/97
 Time: 5:00 pm
 Wellpath ID: SIDETRACK
 Date Created: 10/8/97
 Last Revision: 12/8/97

Survey Reference: WELLHEAD
 Vertical Section Reference: WELLHEAD
 Closure Reference: WELLHEAD
 TVD Reference: WELLHEAD

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ANADARKO PETROLEUM
 McHARGUE A-4
 SEWARD COUNTY, KANSAS
 SEC. 2 - T33S - R34W

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SIDETRACK #1 SURVEYS

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular (ft)	Offsets (ft)	DLS (dg/100ft)
5788.00	0.64	275.45	0.00	5787.70	7.61	7.00 N	3.40 E	0.00
5812.00	3.60	23.60	24.00	5811.68	8.33	7.70 N	3.57 E	16.03
5842.00	10.70	20.60	30.00	5841.43	12.03	11.18 N	4.93 E	23.69
5873.00	16.40	21.10	31.00	5871.56	19.24	17.96 N	7.52 E	18.39
5905.00	21.30	18.80	32.00	5901.83	29.51	27.68 N	11.02 E	15.48
5936.00	23.00	20.90	31.00	5930.54	41.13	38.67 N	14.99 E	6.05
5997.00	28.40	20.10	61.00	5985.49	67.40	63.45 N	24.24 E	8.87
6028.00	28.30	19.20	31.00	6012.77	82.04	77.31 N	29.19 E	1.42
6060.00	31.50	14.70	32.00	6040.51	97.96	92.56 N	33.81 E	12.21
6093.00	36.50	12.40	33.00	6067.86	116.40	110.50 N	38.10 E	15.64
6123.00	42.20	10.60	30.00	6091.05	135.40	129.14 N	41.88 E	19.38
6153.00	48.60	8.70	30.00	6112.11	156.69	150.18 N	45.44 E	21.80
6168.00	51.88	8.55	15.00	6121.70	168.17	161.58 N	47.16 E	21.88
6185.00	55.60	8.40	17.00	6131.75	181.82	175.14 N	49.18 E	21.89
6214.00	62.30	9.70	29.00	6146.70	206.56	199.66 N	53.10 E	23.42
6245.00	68.90	9.10	31.00	6159.50	234.69	227.50 N	57.70 E	21.36
6298.00	79.90	13.30	53.00	6173.74	285.60	277.47 N	67.65 E	22.11
6331.00	87.32	11.01	33.00	6177.41	318.36	309.51 N	74.55 E	23.52
6334.00	88.00	10.80	3.00	6177.53	321.35	312.45 N	75.11 E	23.72
INTERPOLATED POINT CASING POINT								
6336.00	88.00	10.97	2.00	6177.60	323.35	314.41 N	75.49 E	8.49
6377.00	87.90	14.40	41.00	6179.07	364.30	354.38 N	84.49 E	8.36

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ORIGINAL

Halliburton Drilling Systems

Survey Report

Page 2
Date: 12/8/97
Wellpath ID: SIDETRACK

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)		DLS (dg/100ft)
6409.00	87.00	13.60	32.00	6180.49	396.27	385.40 N	92.22 E	3.76
6421.00	86.90	13.50	12.00	6181.13	408.26	397.05 N	95.03 E	1.18
TIE IN TO ORIGINAL SURVEY								
6454.00	86.60	14.10	33.00	6183.00	441.20	429.05 N	102.89 E	2.03
SIDE TRACK ORIGINAL WELL @ 6472' M.D.								
6485.00	83.30	15.00	31.00	6185.73	472.07	458.93 N	110.64 E	11.03
BHA #1 IN @ 6472' 4 3/4" F2000 MED-SPEED F37P								
6516.00	80.30	15.90	31.00	6190.15	502.74	488.50 N	118.81 E	10.09
6547.00	80.30	17.80	31.00	6195.37	533.25	517.74 N	127.67 E	6.04
6579.00	81.00	19.10	32.00	6200.57	564.72	547.70 N	137.66 E	4.57
6607.00	83.00	20.30	28.00	6204.47	592.30	573.80 N	147.01 E	8.3
BHA #2 IN @ 6642' 4 3/4" F2000 MED-SPEED F37P								
6653.00	86.90	21.10	46.00	6208.52	637.78	616.65 N	163.21 E	8.65
BHA #3 IN @ 6665' 4 3/4" F2000 MED-SPEED F37P								
6685.00	88.70	21.30	32.00	6209.75	669.49	646.46 N	174.77 E	5.66
6716.00	89.70	21.10	31.00	6210.18	700.23	675.36 N	185.98 E	3.29
6747.00	90.60	20.50	31.00	6210.10	731.00	704.34 N	196.99 E	3.49
BHA #5 IN @ 6777' 6" F37PS BIT								
6779.00	91.50	20.60	32.00	6209.51	762.77	734.30 N	208.22 E	2.83
6810.00	92.00	20.20	31.00	6208.57	793.56	763.34 N	219.02 E	2.07
6842.00	92.40	20.30	32.00	6207.34	825.33	793.34 N	230.08 E	1.29
6874.00	92.80	20.40	32.00	6205.89	857.09	823.31 N	241.20 E	1.29
6906.00	92.60	20.60	32.00	6204.38	888.84	853.25 N	252.40 E	0.88
6938.00	92.50	20.70	32.00	6202.95	920.58	883.17 N	263.67 E	0.44
6969.00	93.00	20.60	31.00	6201.47	951.32	912.14 N	274.59 E	1.64
7000.00	93.00	20.90	31.00	6199.84	982.05	941.09 N	285.56 E	0.97
7032.00	92.90	20.90	32.00	6198.20	1013.76	970.95 N	296.96 E	0.31
BHA #6 IN @ 7062" 6" F37PS BIT								
7061.00	92.20	21.20	29.00	6196.91	1042.50	997.98 N	307.36 E	2.63
7093.00	91.30	21.20	32.00	6195.93	1074.22	1027.81 N	318.93 E	2.81
BHA #7 IN @ 7116' 6" F37PS BIT								
7126.00	90.90	21.80	33.00	6195.30	1106.92	1058.50 N	331.02 E	2.18
7158.00	91.00	21.60	32.00	6194.77	1138.61	1088.23 N	342.85 E	0.70
7189.00	91.20	21.80	31.00	6194.17	1169.31	1117.03 N	354.31 E	0.91
7221.00	91.10	21.60	32.00	6193.53	1201.00	1146.76 N	366.14 E	0.70
7249.00	90.70	22.40	28.00	6193.09	1228.72	1172.71 N	376.63 E	13.19
BHA #8 IN @ 7251' 6" F37PS BIT								
7281.00	89.40	21.80	32.00	6193.06	1260.38	1202.36 N	388.67 E	4.47

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Halliburton Drilling Systems

Survey Report

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	Course Length (ft)	TVD (ft)	Vertical Section (ft)	TOTAL Rectangular (ft)	Offsets (ft)	DLS (dg/100ft)
7306.00	89.70	21.30	25.00	6193.26	1285.15	1225.61 N	397.85 E	2.33
BHA #9 IN # 7311' 4 3/4" F2000 MED-SPEED F37P								
7337.00	90.60	21.40	31.00	6193.18	1315.88	1254.48 N	409.14 E	2.92
7369.00	90.30	20.80	32.00	6192.93	1347.62	1284.34 N	420.66 E	2.10
7401.00	89.90	20.70	32.00	6192.87	1379.39	1314.26 N	431.99 E	1.29
7432.00	91.00	20.30	31.00	6192.63	1410.18	1343.30 N	442.85 E	3.78
7464.00	91.50	20.90	32.00	6191.93	1441.94	1373.24 N	454.11 E	2.44
BHA #10 IN @ 7540' 4 3/4" F2000 MED-SPEED F37P								
7495.00	91.40	20.20	31.00	6191.14	1472.72	1402.26 N	464.98 E	2.28
PROJECTION TO BIT @ 7571'								
7571.00	90.50	19.70	76.00	6189.88	1548.27	1473.69 N	490.91 E	1.35

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280' FSL
 + 1473.69 N

 1753.69 N FSL

ORIGINAL

330 FWL
 + 490.91 E

 820.91 E FWL

BHL: 1754 FSL & 821 FWL

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ANADARKO PETROLEUM
 MCHARGUE A-4
 SEWARD COUNTY, KANSAS
 SEC. 2 - T33S - R34W

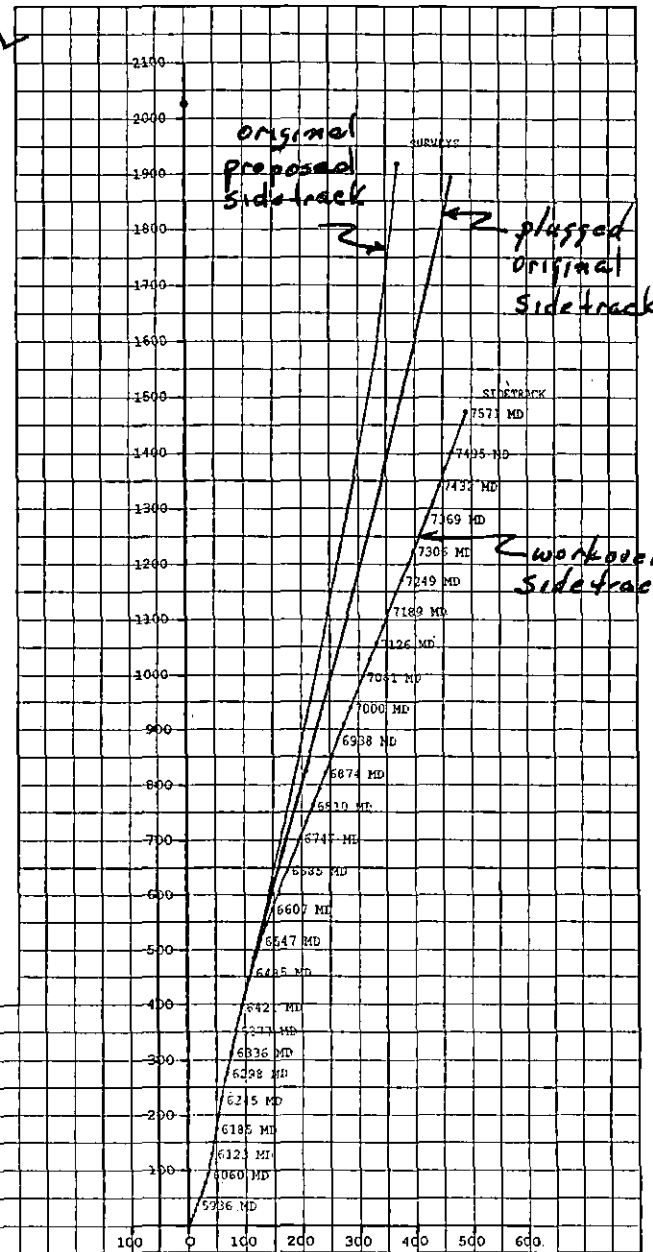


HALLIBURTON
 ENERGY SERVICES

DRILLING SYSTEMS

HORIZONTAL VIEW
 SCALE 100 ft. / in.

ORIGINAL



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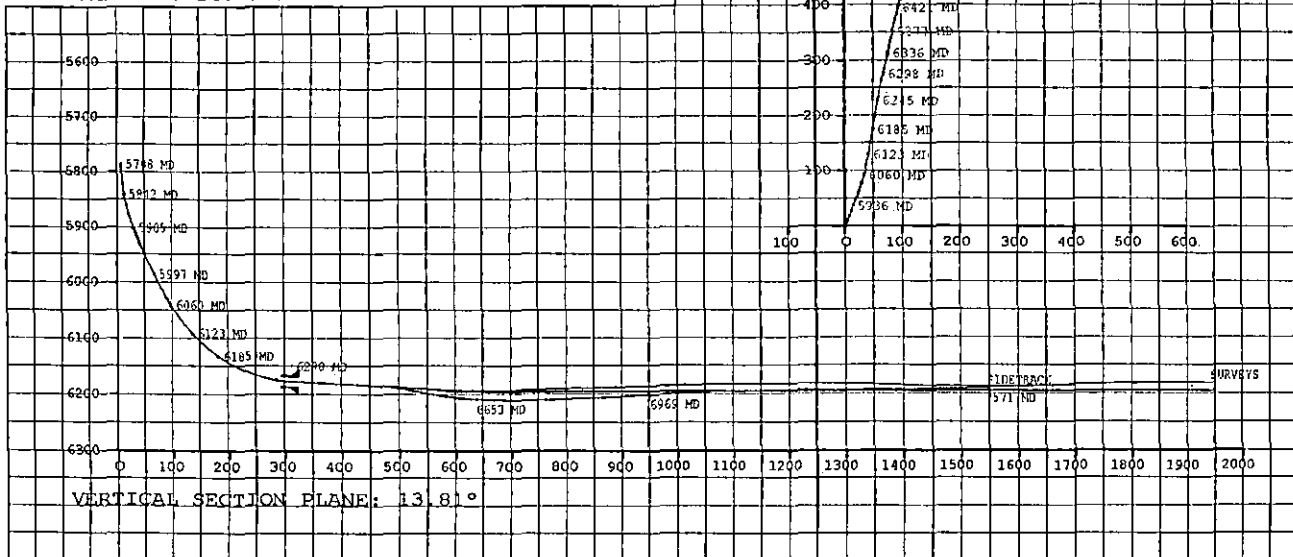
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VERTICAL VIEW
 SCALE 100 ft. / in.



VERTICAL SECTION PLANE: 13.81°

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