

Huck Engineering Inc

Casing & Cementing Record

Marathon Oil Company
Mid-Continent Region

Well: Wam SL A/C 2 #25

Supr: J. Prindle

Date Job: 1/31/96

KB: 3994

# Joints	Size	Weight	Grade	Cplg	Thread	Range	Cond	Length	Bottom	Top
FS	5.5			LTC	8rd			0.88	8,149.00	8,149.12
2	5.5	17	K-55	LTC	8rd	3	new	88.47	8,149.12	8,059.65
FC	5.5			LTC	8rd			0.88	8,059.65	8,058.77
14	5.5	17	K-55	LTC	8rd	3	new	617.15	8,058.77	7,441.62
DOC	5.5			LTC	8rd			1.13	7,441.62	7,440.49
11	5.5	17	K-55	LTC	8rd	3	new	472.97	7,440.49	6,967.52
29	5.5	15.5	K-55	LTC	8rd	3	new	1,246.36	6,967.52	5,721.16
DV	5.5			LTC	8rd			2.09	5,721.16	5,719.06
132	5.5	15.5	K-55	LTC	8rd	3	new	5,678.93	5,719.06	40.15
LOLJ	5.5	15.5	K-55	LTC	8rd	3	new	42.89	40.15	2.74

189 Total # Joints Used

(LOLJ) is Length of Last Joint

8151.74 Total Length

Total Pipe Tally: 8271.7

AKB: 2.74

Total Length: 8151.74

Pipe Left Out: 118.76

KB: 13

Length of Cutoff: 15.74

AKB: 2.74

Length of cutoff: 15.74

KB: 13

Well Depth: 8150.2

Well Depth: 8149

of Centralizers: 37

Centralizers @: 25' thru 8103.89'

Float Shoe @: 8149

Liner Hanger @:

Frac Collars @:

of Shoe Joints: 2

PBR Length:

ECP @:

Csg Wt: 15.5 & 17

Float Collar/Insert: 8059

Liner Lap Length:

Stage Tool @: 5719.08 # of Plugs:

1st Lead - Spacers: 20 bbls of fresh water	Casing Transfers	2nd Lead - Spacers: 20 bbls of fresh water
# of Sacks: 700		# of Sacks: 1000
Type Cement: Premium Plus		Type Cement: Premium Plus Lite
Additives: 5 #/sk KCL, .8% Haled-322, .2% Econolite		Additives: .2% Econolite
Weight (#/gal): 15.6		Weight (#/gal): 12.4
Rate (bbl/min): 8		Rate (bbl/min): 8
Max Pressure (psi): 1000		Max Pressure (psi): 600
Yield (ft3/sk): 1.23		Yield (ft3/sk): 2
Water (gal/sk): 5.41		Water (gal/sk): 11.15
Fluid Loss (cc): 230		Fluid Loss (cc): 550
Free Water (%): 0		Free Water (%): 0
Pump Time (hrs): 3.75		Pump Time (hrs): 3.5
Strength 12/24/72: 2009/3464		Strength 12/24/72: 260/398
1st Tail - # of Sacks:		2nd Tail - # of Sacks: 100
Type Cement:		Type Cement: Premium Plus
Additives:		Additives:
Weight (#/gal):		Weight (#/gal): 14.8
Max Pressure (psi):		Max Pressure (psi): 600
Yield (ft3/sk):		Yield (ft3/sk): 1.32
Yield (ft3/sk):		Yield (ft3/sk):
Water (gal/sk):		Water (gal/sk): 6.3
Fluid Loss (cc):		Fluid Loss (cc): 1300
Free Water (%):		Free Water (%): 0.6
Pump Time (hrs):		Pump Time (hrs): 3.25
Strength 12/24/72:		Strength 12/24/72: 1056/2078
Displace - Fluid: water & mud		Displace - Fluid: water
Rate (bbl/min): 8		Rate (bbl/min): 9
Max Pressure (psi): 1000		Max Pressure (psi): 1200
Calculated Vol. (bbl): 191.2		Calculated Vol. (bbl): 136.2
Actual Volume (bbl): 188.7		Actual Volume (bbl): 135
Plug Pressure (psi): 1700		Plug Pressure (psi): 2800
CIP Time: 5		CIP Time:
Returns (full or %): full		Returns (full or %): full
Cmt. Circulated (sx): 100		Cmt. Circulated (sx): 0
Estimated TOC (ft): 5720		Estimated TOC (ft): 2500
Flowback (yes or no): no		Flowback (yes or no): no
WOC Time (hrs): 4		WOC Time (hrs): 0
Wt on Slips (#):		Wt on Slips (#): 125,000

Comments:

Huck Engineering Inc

Casing & Cementing RecordMarathon Oil Company
Mid-Continent RegionWell: **WARN ST. A/C 2 #25**Supv: **J. PRINGLE**Date Job: **1/14/96**KB: **13**

# Joints	Size	Weight	Grade	Cplg	Thread	Range	Cond	Length	Bottom	Top
GS	9.625			LTC	8rd		new	0.33	1,479.00	1,478.67
1	9.625	36	K-55	LTC	8rd	3	new	46.10	1,432.87	1,432.57
FC	9.625			LTC	8rd		new	1.17	1,432.97	1,431.40
30	9.625	36	K-55	LTC	8rd	3	new	1,398.76	1,431.40	32.64
									32.64	5.16
									5.16	5.16
									5.16	5.16
									5.16	5.16
									5.16	5.16
									5.16	5.16
LOJ	9.624	36	J-55	STC	8rd	3	new	37.80	5.16	NREFT
32 Total # Joints Used									(LOJ) is Length of Last Joint	
Total Pipe Tally: 1616.55									AKB: 5.16	
Pipe Left Out: 133.89									KB: 13	
AKB: 5.16									Length of cutoff: 18.16	
Well Depth: 1477.5									Total Length: 1484.16	
									Length of Cutoff: 17.58	
									KB: 13	
									Well Depth: 1479.16	

of Centralizers: **9**Centralizers @: **35' - 1454'**Guide Shoe @: **1479**Liner Hanger @: **n/a**Frac Collars @: **n/a**# of Shoe Joints: **1**PBR Length: **n/a**ECP @: **n/a**

Csg Wt:

Float Collar/Insert: **1432.9**Liner Lap Length: **n/a**Stage Tool @: **n/a**# of Plugs: **1**

1st Lead - Spacers: 20 bbls of water	Casing Transfers	2nd Lead - Spacers:
# of Sacks: 400		# of Sacks:
Type Cement: Premium Plus		Type Cement:
Additives: 4% gel 2 % CaCl ₂ , .25 pps floccle		Additives:
Weight (#/gal): 13.6		Weight (#/gal):
Rate (bbl/min): 5		Rate (bbl/min):
Max Pressure (psi): 220		Max Pressure (psi):
Yield (ft ³ /sx): 1.68		Yield (ft ³ /sx):
Water (gal/sx): 8.62		Water (gal/sx):
Fluid Loss (cc): 890		Fluid Loss (cc):
Free Water (%): 0		Free Water (%):
Pump Time (hrs): 0.4167		Pump Time (hrs):
Strength 12/24/72: 433/837		Strength 12/24/72:
1st Tail - # of Sacks: 200		2nd Tail - # of Sacks:
Type Cement: Premium Plus		Type Cement:
Additives: 2 % CaCl ₂		Additives:
Weight (#/gal): 14.8		Weight (#/gal):
Max Pressure (psi): 220		Max Pressure (psi):
Yield (ft ³ /sx): 1.32		Yield (ft ³ /sx):
Yield (ft ³ /sx):		Yield (ft ³ /sx):
Water (gal/sx): 6.32		Water (gal/sx):
Fluid Loss (cc): 1004		Fluid Loss (cc):
Free Water (%): 0.3		Free Water (%):
Pump Time (hrs): 0.1333		Pump Time (hrs):
Strength 12/24/72: 893/1732		Strength 12/24/72:
Displace - Fluid: water		Displace - Fluid:
Rate (bbl/min): 6		Rate (bbl/min):
Max Pressure (psi): 550		Max Pressure (psi):
Calculated Vol. (bbl): 111.1		Calculated Vol. (bbl):
Actual Volume (bbl): 111.1		Actual Volume (bbl):
Plug Pressure (psi): 1050		Plug Pressure (psi):
CIP Time:		CIP Time:
Returns (full or %): full		Returns (full or %):
Cmt. Circulated (sx): 0		Cmt. Circulated (sx):
Estimated TOC (ft): 172		Estimated TOC (ft):
Flowback (yes or no): n		Flowback (yes or no):
WOC Time (hrs): 12 +		WOC Time (hrs):
Wt on Slips (#): 0		Wt on Slips (#):

Comments:

1st top job 350 sks Class C Premium did not circulate

2nd top job 107 sks Class C Premium w/ 2 % CaCl₂ circulated 12 sks.