



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

Target Depth (ftKB): 17,150

State/Province: Texas

Target Formation: WOLFCAMP C4

County: Upton

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 7/18/2019

Report Number: 1

End Depth (ftKB): 49

End Depth (TVD) (ftKB): 49

Days From Spud (days): -98.58

Job Day (days): 1.0

Depth Progress (ft): 23

Rotating Hours (hr): 2.00

Last Mud Check Density (lb/gal):

Daily Field Est Total (Cost): \$165,546

Cum Field Est To Date (Cost): \$165,546

Current Status: Drilling at 23' GL.

24 Hour Forecast: Drill to 500'GL (TD), Circulate sweep around, Lay down drill string, Run 12 Joints of casing, circulate casing, Cement surface casing, WOC..

24 Hour Summary: MIRU, Make up BHA #1, Spud in, Drill from 0' to 11', Rig repair, Drill to 23' GL..

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	08:00	8.00	RU/RD	PP	Reports on the A 1HA
08:00	17:30	9.50	RU/RD	PP	Skid over and rig up on the Warhead 0405 B 10HL. Contacted TRRC with intent to spud, Surface casing and Cement on 7/17/19 at 15:24, Spoke with Mrs Amanda. TRRC Job# - 185129.
17:30	18:00	0.50	PU/LD BHA	PP	Lay out, Strap and Caliper BHA #1. Begin making up BHA #1, Subs, Shock Sub, UBHO, Monel and bit,
18:00	19:00	1.00	PU/LD BHA	PP	Finish making up BHA #1, Subs, Shock Sub, UBHO, Monel and bit,
19:00	19:30	0.50	Drilling	PP	Spud in. Drill from 0' to 11' GL. Drilled 11' at 22'/hr with 10k wob, 90 rpm, 655 gpm, 250 psi, 3,000 torque, Spud in on the Warhead 0405 B 10HL at 19:00 on 7/18/2019.
19:30	22:30	3.00	Rig Repair	PP	Rig Repair. Guide block on top drive
22:30	00:00	1.50	Drilling	PP	Drill from 11' to 23' GL. Drilled 12' at 8'/hr with 10k wob, 90 rpm, 655 gpm, 250 psi, 3,000 torque,



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Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 7/19/2019

Report Number: 2

End Depth (ftKB): 526

End Depth (TVD) (ftKB): 526

Days From Spud (days): -97.58

Job Day (days): 2.0

Depth Progress (ft): 380

Rotating Hours (hr): 7.00

Last Mud Check Density (lb/gal):

Daily Field Est Total (Cost): \$23,840

Cum Field Est To Date (Cost): \$189,386

Current Status: Cement Surface Casing

24 Hour Forecast: Cement surface casing, WOC.. Drain, Cut and cap casing at GL, Release rig.

24 Hour Summary: Drill to 500'GL (TD), Circulate sweep around, Lay down drill string, Run 12 Joints of casing, circulate casing, Cement surface casing,

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drill from 23' to 120' GL. Drilled 97' at 16'/hr with 10k wob, 90 rpm, 655 gpm, 250 psi, 3,000 torque,
06:00	07:00	1.00	Rig Repair	PP	Rig Repair. Change out slip dies.
07:00	08:30	1.50	Drilling	PP	Drill from 120' to 176' GL. Drilled 56' at 37.3'/hr with 10k wob, 90 rpm, 655 gpm, 250 psi, 3,000 torque,
08:30	10:00	1.50	Rig Repair	PP	Rig repair. Tighten up Cradel bolts.
10:00	12:30	2.50	Drilling	PP	Drill from 176' to 297' GL. Drilled 121' at 48.4'/hr with 10k wob, 90 rpm, 655 gpm, 250 psi, 3,000 torque,
12:30	13:00	0.50	Safety Mtg	PP	Safety Stand Down. Held safety meeting with Integrity Superintendent and HSE. Topic was over head loads and dropped Objects.
13:00	16:00	3.00	Drilling	PP	Drill from 297' to 500' GL. Drilled 203' at 67.7'/hr with 10k wob, 90 rpm, 655 gpm, 250 psi, 3,000 torque, TD at 16:00 on 7/19/2019.
16:00	17:00	1.00	Circulating	PP	Circulate sweep around
17:00	17:30	0.50	PU/LD Pipe	PP	lay down drill pipe from 500' to 240', No issues.
17:30	20:30	3.00	PU/LD BHA	PP	lay down BHA from 240' to 0', Bit grade at 1/1.
20:30	23:00	2.50	Casing	PP	HSM, Rig up casing equipment, Run total of 12 joints (506.74') of 13-3/8" 48# H-40 ST&C casing with Texas pattern shoe and Float collar made up on 1 joint shoe track, Ran 4 Centralizers. Casing on bottom at 23:00 on 7/19/19.
23:00	23:30	0.50	Circulating	PP	Circulate 1.5x casing capacity.
23:30	00:00	0.50	Cmt-Primary	PP	HSM, Rig up Basic Energy, Begin Cement Surface casing with 500 sx of Class "C" cement, Mixed at 14.8 ppg, Yield at 1.32 FT³/sx, 117 bbl sly,



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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Operator: Apache Corporation

Rig: H&P 436, 10/24/2019 14:00

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 7/20/2019

Report Number: 3

End Depth (ftKB): 526

End Depth (TVD) (ftKB): 526

Days From Spud (days): -96.58

Job Day (days): 3.0

Depth Progress (ft): 0

Rotating Hours (hr):

Last Mud Check Density (lb/gal):

Daily Field Est Total (Cost): \$25,070

Cum Field Est To Date (Cost): \$214,456

Current Status: Reports on B 6HM

24 Hour Forecast: Rig released

24 Hour Summary: Cement surface casing, WOC.. Drain, Cut and cap casing at GL, Release rig.

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	01:00	1.00	Cmt-Primary	PP	HSM, Rig up Basic Energy, Continue Cementing Surface casing with 500 sx of Class "C" cement, Mixed at 14.8 ppg, Yield at 1.32 FT ³ /sx, 117 bbl sly, Drop wooden plug, Displace with 72 bbl fresh water. Plug down at 00:51 on 7/20/19 with 500 psi, final lift was 220 psi at 3 bpm, floats held. Circulated 195 sx back to surface.
01:00	05:00	4.00	WOC	PP	WOC. Rig down Basic Energy.
05:00	06:00	1.00	RU/RD	PP	Drain, Cut and cap casing at GL. Release rig to the B 6HM at 06:00 on 7/20/19.
06:00	00:00	18.00	RU/RD	PP	Reports on the B 6HM



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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Operator: Apache Corporation

Rig: H&P 436, 10/24/2019 14:00

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 10/24/2019

Report Number: 4

End Depth (ftKB): 526

End Depth (TVD) (ftKB): 526

Days From Spud (days): -0.58

Job Day (days): 99.0

Depth Progress (ft): 0

Rotating Hours (hr):

Last Mud Check Density (lb/gal): 9.10

Daily Field Est Total (Cost): \$81,554

Cum Field Est To Date (Cost): \$296,010

Current Status: P/U 12 1/4"BHA

24 Hour Forecast: N/U , Test BOP and Casing, P/U 12 1/4"BHA

24 Hour Summary: Prep and skid to 10HL, NU BOP and equipment, Work on Flowline and Flowline Manifold

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	14:00	14.00			See Warhead 0405 B 6HM
14:00	15:00	1.00	RU/RD	PP	RD Equipment- flowline, stairs, CRT - Prep to skid
15:00	16:00	1.00	Rig Skid/Walk	PP	Skid rig to Warhead 0405 B 10HL
16:00	17:00	1.00	NU/ND BOP	PP	Set BOP, Tighten quick change head
17:00	18:00	1.00	RU/RD	PP	RU flowline, kill line, choke line
18:00	00:00	6.00	RU/RD	PN	While Connecting Flow line to Flowline Manifold, Pulled flowline out of shaker manifold, Reset Flowline manifold back into shaker manifold, Noted that there was approximately 10 "inch gap between the Flowline coming from the BOP to flowline manifold. Attempted to get the Slip Joint on the Flowline to slide out (unsuccessful) Remove Flowline from BOP and Lower to ground, Pulled apart 10" with Fork lift at slip joint.



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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		Operator: Apache Corporation
API/Surface Loc: 4246141215		District: East District
Rig: H&P 436, 10/24/2019 14:00		
Location Note:		
Field Name: Spraberry Trend	State/Province: Texas	County: Upton
Target Depth (ftKB): 17,150	Target Formation: WOLFCAMP C4	Spud Date: 7/18/2019
AFE Number: 11-19-0273-DH		Supplemental AFE Number:
Total AFE + Supp Amount (Cost): \$3,074,500		AFE Description: Permian - Horizontal

Report Start Date: 10/25/2019	Report Number: 5
End Depth (ftKB): 2,115	End Depth (TVD) (ftKB): 2,108
Depth Progress (ft): 1,589	Rotating Hours (hr): 5.00
Daily Field Est Total (Cost): \$88,906	Cum Field Est To Date (Cost): \$384,916
Current Status: Drill 12 1/4" Intermediate @ 2,981' MD	
24 Hour Forecast: Drill toward Intermediate TD, Displace to Slop Mud 4.000'MD	
24 Hour Summary: Install Flowline, Test BOP and Surface Casing, PU BHA, TIH T/ 445' MD, DO Cement and FE T/ 526' MD, Drill F/ 526' MD T/ 2,116' MD	

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	01:30	1.50	RU/RD	PN	Prep Flowline, Raise and Hook up to BOP and Flowline Manifold.
01:30	02:30	1.00	NU/ND BOP	PP	Continue N/U BOP, Hook up fill line/Mud bucket line install Turn buckles center Stack.
02:30	04:30	2.00	BOP Test	PP	Install Test Plug, Test Blinds Annular, Upper/Lower Rams, Kill Line Valves and Choke Line Valves to 250psi low/ 1500psi High, 5 minutes each Test
04:30	05:00	0.50	Test Csg	PP	Test Surface casing to 500 psi for 30 minutes,
05:00	05:30	0.50	NU/ND WH/XT	PP	Install Wear Bushing
05:30	06:00	0.50	PU/LD BHA	PP	P/U 12 1/4" BHA
06:00	07:30	1.50	PU/LD BHA	PN	Forklift issues- forklift shutting down everytime a load is picked up/ unable to diagnose issue/ decision made to get 532's forlift to get bha picked up
07:30	11:00	3.50	PU/LD BHA	PP	PU BHA #2 - 12 1/4" SPL616, 7.75", 7/8, 4.0, 1.5", NOV motor w/ 11.75" NBS, 12" NM stab, NM pony, MWD, 2 NMDC, 12" Stab-steel, 8" Filter Sub, XO, 9-8" DC, XO, 12-6 1/2" DC, XO, 12-HWDP: TBHA= 1128.94' Surface test MWD - good No spills reported
11:00	12:30	1.50	TIH	PP	TIH w/ DC's T/ 455' MD Tag cement @ 445' MD
12:30	14:00	1.50	Drill-out Shoe Track	PP	DO cement, FC and cement F/ 445' MD T/ 526' MD FC @ 481' MD
14:00	18:00	4.00	Drilling	PP	Drilling 12 1/4" Intermediate F/ 526' MD T/ 1314' MD, 788' @ 197'/hr 15-25k wob / 20-60 rpm/ 850 gpm / 2300 psi off bottom 132k PU / 131k St wt/ 130k SO Last survey: MD:1314' / SD: 1068' / TVD:1067.96' / INC: 0.53° / AZM: 157.19° / East: 4.3' / South: 6.8' Pad Water Usage: Meter 1: 64,267 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 0 bbls Pad: 88,656 bbls No spills reported



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REGION: Permian
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Operations Summary					
Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
18:00	00:00	6.00	Drilling	PP	<p>Drilling 12 1/4" Intermediate F/ 1314' MD T/ 2,115 ' MD 802'ft @ 134'/hr 25-45 wob / 60-70 rpm/ 850gpm / 2400psi off bottom P/U 148k, S/O 139k Rot. 144k</p> <p>SPR @1,506'MD with 100spm, #1MP= 430psi, #2MP= 420psi, #3Mp=420psi</p> <p>Last survey: 2,011'MD, 2,005.8'TVD, 12.46inc, 85.07azm, 20'ft East, 3'ft south of plan</p> <p>Remove trip nipple and install rotating head at 1881' No spills reported</p>



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REGION: Permian
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Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 10/26/2019

Report Number: 6

End Depth (ftKB): 4,866

End Depth (TVD) (ftKB): 4,801

Days From Spud (days): 1.42

Job Day (days): 101.0

Depth Progress (ft): 2,750

Rotating Hours (hr): 14.84

Last Mud Check Density (lb/gal): 9.00

Daily Field Est Total (Cost): \$67,442

Cum Field Est To Date (Cost): \$452,358

Current Status: Drill 12 1/4" Intermediate @ 5,321' MD

24 Hour Forecast: Drill 12 1/4" Intermediate Towards T.D.

24 Hour Summary: Drill 12 1/4" Intermediate F/ 2,115' MD T/ 4,866' MD - Displace to slop mud @ 4000' MD

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drill 12 1/4" Intermediate F/ 2,116' MD T/ 2,981' MD 866'ft @ 144'/hr 20-45wob, 60-70rpm, 850gpm @ 2550psi P/U 162k, S/O 145k, Rot. 156k No Spills Reported Last Survey @ 2,765' MD, 2,742.00' TVD, 13.03inc, 86.38azm, 33'ft east, 2.1'ft south of plan.
06:00	12:15	6.25	Drilling	PP	Drilling 12 1/4" Intermediate F/ 2981' MD T/ 3673' MD, 692' @ 110.7'/hr 15-35k wob / 50-60 rpm/ 850 gpm / 2650 psi off bottom 170k PU / 165k St wt/ 160k SO SPR @ 100 spm = #1 @ 500 psi / #2 @ 510 psi / #3 @ 510 psi Last survey: MD: 3673' / SD: 3519' / TVD:3479.29' / INC: 12.13° / AZM: 83.79° / East: 55.9' / South: 3.8' of plan Pad Water Usage: Meter 1: 64,267 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 0 bbls Pad: 88,656 bbls No spills reported
12:15	12:30	0.25	Safety Mtg	PP	BOP Drill - 41 sec response time to positions
12:30	17:30	5.00	Drilling	PP	Drill 12 1/4" Intermediate F/ 3673' MD T/ 4236' MD, 563' @ 112.6'/hr 15-40 wob/ 50-60 wob/ 850 gpm/ 2600 psi off bottom 199k PU/ 186k St wt/ 175k SO Displaced to slop mud @ 4000' MD Last survey: MD 4145' / SD: 4085' / TVD: 4032.8' / INC: 11.88° / AZM: 87.32 / East: 68' / North: 6.8' of plan No spills reported
17:30	18:00	0.50	Rig Serv	PP	Rig service
18:00	18:30	0.50	Drilling	PP	Drilling 12 1/4" Intermediate F/ 4236' MD T/ 4273' MD, 37' @ 74'/hr 15-40k wob / 50-60 rpm/ 750 gpm / 2600 psi off bottom 200k PU / 187k St wt/ 176k SO
18:30	18:45	0.25	Safety Mtg	PP	BOP Drill - 43 sec response time to positions

Printed Date: 11/11/2019

Printed Time: 9:31 AM



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REGION: Permian

TYPE: Operated

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
18:45	00:00	5.25	Drilling	PP	<p>Drilling 12 1/4" Intermediate F/ 4273' MD T/ 4866' MD, 594' @ 113'/hr 30-35k wob / 50-55 rpm/ 700/850 gpm / 1950/2730 psi off bottom 206k PU / 186k St wt/ 166k SO</p> <p>Dumped total of 1150 bbl slop mud</p> <p>SPR's @ 4615' MD, 100 spm: MP1- 575 psi MP2- 565 psi MP3- 565 psi</p> <p>Note: Ran 700 gpm while pump #2 was being worked on</p> <p>Last survey: MD:4712' / SD:4652' / TVD:4587' / INC:10.77° / AZM:89.29° East: 70' / North: 5' of plan</p> <p>No spills reported</p>



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		
API/Surface Loc: 4246141215	Operator: Apache Corporation	
Rig: H&P 436, 10/24/2019 14:00	District: East District	
Location Note:		
Field Name: Spraberry Trend	State/Province: Texas	County: Upton
Target Depth (ftKB): 17,150	Target Formation: WOLFCAMP C4	Spud Date: 7/18/2019
AFE Number: 11-19-0273-DH		
Supplemental AFE Number:		
AFE Description: Permian - Horizontal		
Total AFE + Supp Amount (Cost): \$3,074,500		

Report Start Date: 10/27/2019	Report Number: 7		
End Depth (ftKB): 6,844	End Depth (TVD) (ftKB): 6,755	Days From Spud (days): 2.42	Job Day (days): 102.0
Depth Progress (ft): 1,977	Rotating Hours (hr): 10.76	Last Mud Check Density (lb/gal): 9.00	
Daily Field Est Total (Cost): \$79,816	Cum Field Est To Date (Cost): \$532,174		
Current Status: Drill 12 1/4" Intermediate @ 7506' MD			
24 Hour Forecast: Drill 12 1/4" Intermediate Towards T.D.			
24 Hour Summary: Drill 12 1/4" Intermediate F/ 4866' MD T/ 6846'			

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drilling 12 1/4" Intermediate F/ 4866' MD T/ 5321' MD, 455' @ 75.8'/hr 30-35k wob / 50-55 rpm/ 700/850 gpm / 1950/2730 psi off bottom 208k PU / 188k St wt/ 168k SO Note: Ran 700 gpm while pump #1 was being worked on Last survey: MD: 5279 SD: 5219 INC:10.74 AZM:87.35 TVD:5143.89, 86 ' east, 1' north of plan. No spills reported
06:00	17:00	11.00	Drilling	PP	Drilling 12 1/4" Intermediate F/ 5321' MD T/ 6125' MD, 804' @ 73.1'/hr 15-35k wob / 50-60 rpm/ 850 gpm / 2850 psi off bottom 242k PU / 220k St wt/ 200k SO Dumped 450 bbls of 9.2 slop mud SPR @ 100 spm = #1 @ 630 psi / #2 @ 620 psi / #3 @ 625 psi No flow on connectins Last survey: MD: 6033' / SD: 5973' / TVD: 5882.99' / INC: 9.99° / AZM: 86.55° / East: 84' / North: 1' of plan Pad Water Usage: Meter 1: 70,238 bbls Meter 2: 16,955 bbls Daily: 5,971 bbls Well: 5,971 bbls Pad: 94,627 bbls No spills reported Note: Set EM antenna in 5HM on wireline
17:00	17:30	0.50	Rig Serv	PP	Rig Service
17:30	21:00	3.50	Drilling	PP	Drilling 12 1/4" Intermediate F/ 6125' MD T/ 6,666 ' MD, 594' @ 113'/hr 30-35k wob / 70 rpm/ 850 gpm / 2940 psi off bottom 248k PU / 223k rot. / 200k SO SPR's @ 6408' MD, 100 spm: MP1- 735 psi MP2- 725 psi MP3- 725 psi
21:00	22:30	1.50	Circulating	PN	Circulate the hole with mud pump 3 while changing out liners and swabs in mud pump 1/module 3 and mud pump 2/module 3



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REGION: Permian
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Operations Summary					
Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
22:30	00:00	1.50	Drilling	PP	Drilling 12 1/4" Intermediate F/ 6666' MD T/ 6844' MD, 178' @ 119'/hr 30-40k wob / 70 rpm/ 850 gpm 2950 psi off bottom Last survey: MD:6788' / SD:6728' / TVD:6634' / INC:2.34° / AZM:77.02° East: 78' / North: 5' of plan No spills reported



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Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 10/28/2019

Report Number: 8

End Depth (ftKB): 8,715

End Depth (TVD) (ftKB): 8,626

Days From Spud (days): 3.42

Job Day (days): 103.0

Depth Progress (ft): 1,870

Rotating Hours (hr): 17.29

Last Mud Check Density (lb/gal): 9.10

Daily Field Est Total (Cost): \$68,114

Cum Field Est To Date (Cost): \$600,288

Current Status: Spot 200bbls brine and flow check

24 Hour Forecast: TOH, LDDC's/BHA, Run 9 5/8 casing

24 Hour Summary: Drill 12 1/4" Intermediate F/ 6846' T/ 8715' MD, Circulate Hole Clean, Drop Gyro, Spot 100bbl Starch Pill, TOH F/ 8715' T/ 8584' MD

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drilling 12 1/4" Intermediate F/ 6844' MD T/ 7506' MD, 662' @ 110'/hr 30-40k wob / 70 rpm/ 850 gpm 3000 psi off bottom Last survey: MD:7355' / SD:7295' / TVD:7201' / INC:1.37° / AZM:77.46° East: 94' / North: 9' of plan No spills reported
06:00	17:30	11.50	Drilling	PP	Drilling 12 1/4" Intermediate F/ 7506' MD T/ 8486' MD, 980' @ 85.2'/hr 40k wob / 70 rpm/ 850 gpm / 20 psi off bottom 284k PU / 261k St wt/ 230k SO Dumped 300 bbls of 9.2 slop mud SPR @ 100 spm = #1 @ 800 psi / #2 @ 790 psi / #3 @ 810 psi No flow on connections Last survey: MD: 8486' / SD: 8426' / TVD: 8332.19' / INC: 0.79° / AZM: 105.33° / East: 111.60' / North: 8.7' of plan Pad Water Usage: Meter 1: 70,238 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 5,971 bbls Pad: 94,627 bbls No spills reported
17:30	18:00	0.50	Rig Serv	PP	Rig service
18:00	20:30	2.50	Drilling	PP	Drilling 12 1/4" Intermediate F/ 8486' MD T/ 8715' MD, 229' @ 91.6'/hr 40k wob / 70 rpm/ 850 gpm / 2725 psi off bottom 296k PU / 265k St wt/ 233k SO TD 12 1/4" intermediate section at 2030 hours. 8715' MD Last survey: MD 8715' / SD: 8655' / TVD:8561' / INC:1.29° / AZM:100.54° 115' east of plan, 8' north of plan SPR @ 100spm (8715' MD): #1 @ 790 psi/ #2 @ 800 psi/ #3 @ 800 psi
20:30	23:30	3.00	Circulating	PP	Circulate hole clean, spot 100 bbl starch pill, flow check, no flow. Drop gyro, wait 20 minutes for gyro to freefall, and perform rotation shots. Prepare to TOOH
23:30	00:00	0.50	TOOH	PP	TOOH F/ 8715' T/ 8584' MD. No issues.

Printed Date: 11/11/2019

Printed Time: 9:31 AM



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		
API/Surface Loc: 4246141215		
Rig: H&P 436, 10/24/2019 14:00		
Operator: Apache Corporation		
District: East District		
Location Note:		
Field Name: Spraberry Trend		
State/Province: Texas		
County: Upton		
Target Depth (ftKB): 17,150		
Target Formation: WOLFCAMP C4		
Spud Date: 7/18/2019		
AFE Number: 11-19-0273-DH		
Supplemental AFE Number:		
AFE Description: Permian - Horizontal		
Total AFE + Supp Amount (Cost): \$3,074,500		

Report Start Date: 10/29/2019		Report Number: 9	
End Depth (ftKB): 8,715		End Depth (TVD) (ftKB): 8,626	
Depth Progress (ft): 0		Rotating Hours (hr):	
Daily Field Est Total (Cost): \$54,147		Cum Field Est To Date (Cost): \$654,434	
Days From Spud (days): 4.42			
Job Day (days): 104.0			
Last Mud Check Density (lb/gal): 9.10			
Current Status: Running 9 5/8" Casing @ 7700' MD			
24 Hour Forecast: Run Casing T/ 8,700' MD Pump Cement, PU Curve BHA, TIH			
24 Hour Summary: TOH, LDDC's/BHA, Run 9 5/8 casing T/ 3209' MD.			

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	05:00	5.00	TOOH	PP	TOH F/ 8584' MD T/ 3058' Note: Pulled 30-35k over through tight spots at 5289', 5192', 4978', 4917' MD. Went back through each spot to clean up. All spots correlate to slides in tangent section of hole.
05:00	06:30	1.50	Monitor Well	PP	Flow check at 3,058' MD. Well was flowing a 2.7 bbl/hr (8 sec./ vis cup). Pump 200 bbl brine cap and monitor for flow. Note: After 200 bbls BW - flow @15 gal/hr- Decision made to cont TOH to 2000' and check flow again
06:30	07:00	0.50	TOOH	PP	TOOH F/ 3000' MD T/ 2015' MD
07:00	07:30	0.50	Monitor Well	PP	Flow check @ 2015' MD - No flow at flow line
07:30	09:00	1.50	TOOH	PP	Cont TOH F/ 2015' MD T/ 744' MD
09:00	13:00	4.00	PU/LD BHA	PP	HSM; LD 12 - 6" & 9 - 8" DC's Note: Notice given to Tx RRC San Angelo office of intent to run casing and cement @ 10:03 am, 10/29/19 to Rachel.
13:00	15:00	2.00	PU/LD BHA	PP	HSM; LD BHA #2 Top IBS- 1/16" under-gauge Bottom IBS 1/16" under-gauge Motor- dry, no visible issues Bit- 3 chipped cutters, 2 missing cutters (primary & backup), In gauge Pad Water Usage: Meter 1: 72,238 bbls Meter 2: 16,955 bbls Daily: 2000 bbls Well: 7,971 bbls Pad: 96,627 bbls
15:00	15:30	0.50	NU/ND WH/XT	PP	Pull wearbushing
15:30	19:30	4.00	Casing	PP	HSM; RU HP CRT, Casing crew and Premiere Torq turn. Dump test good. Note: Issues hooking up H&P power tongs to rig hydraulics - swapping out hoses and fittings
19:30	00:00	4.50	Casing	PP	Hold PJSM with HP casing crew, Premiere crew, rig hands, and Apache safety and supervisors. Dry fit landing mandrel. Make up shoe track as follows: Reamer Shoe (threadlocked top) Float Collar (threadlocked top/bottom) 2 Joints 9 5/8" 40 #/ft HCL-80 Float Collar w/locking teeth for wiper plug (threadlocked top/bottom) 1 Joint 9 5/8" 40 #/ft HCL-80 Sting in a pump through to test floats. Test good. Run 9 5/8" 40 #/ft HCL-80 & J-55 BTC Casing F/ Float Collar T/ 3209' MD. No issues.



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		Operator: Apache Corporation
API/Surface Loc: 4246141215		District: East District
Rig: H&P 436, 10/24/2019 14:00		
Location Note:		
Field Name: Spraberry Trend	State/Province: Texas	County: Upton
Target Depth (ftKB): 17,150	Target Formation: WOLFCAMP C4	Spud Date: 7/18/2019
AFE Number: 11-19-0273-DH		Supplemental AFE Number:
Total AFE + Supp Amount (Cost): \$3,074,500		AFE Description: Permian - Horizontal

Report Start Date: 10/30/2019	Report Number: 10
End Depth (ftKB): 8,715	End Depth (TVD) (ftKB): 8,626
Depth Progress (ft): 0	Rotating Hours (hr):
Daily Field Est Total (Cost): \$428,869	Cum Field Est To Date (Cost): \$1,083,304
Current Status: TIH with 8 3/4" Curve Assembly	
24 Hour Forecast: TIH, Drill Out, Test Casing, and Drill 8 3/4" Curve	
24 Hour Summary: Run 9 5/8" casing F/ 3209' T/8,700' MD, Circulate, Cement 9 5/8" Casing, Circ off DVT, Cement 2nd stage, and PU 8 3/4" Curve BHA	

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Casing	PP	Run 9 5/8" 40 #/ft HCL-80 & J-55 BTC Casing F/ 3209' T/7700' MD. No issues. Note: Called C&J at 0300 hrs to be on location at 0900 hrs.
06:00	07:30	1.50	Casing	PP	Run 9 5/8", 40 #/ft HCL-80 & J-55, BTC Casing F/ 7700' T/8700' MD. No issues. No issues to bottom Confirmed landing mandrel w/ Cameron Ran 66 jts L-80HC and 143 jts J55, 40#, BTC casing w/ FS @ 8700', FC @ 8694', 2nd FC @ 8609', DVT/ECP @ 4010' MD; Ran 32 Centek centralizers below DVT/ECP and 26 Centek centralizers above DVT/ECP every 4th jt to 120' MD
07:30	11:00	3.50	Circulating	PP	Circ casing / Prep f/ cement job No returns Note: C&J on location @ 8:40 am, 10/30/19
11:00	14:00	3.00	Cmt-Primary	PP	HSM; RU CJ; Test lines to 4,000 psi. Pump 40 bbls FW spacer, Lead w/ 510 sx TXI Lite @ 11 ppg; Yield 2.74 ft³/sk; 250 bbl slurry; Tail w/ 320 sx TXI @ 13.6 ppg; Yield 1.26 ft³/sk; 71 bbl slurry. Displace w/ 360 bbls FW & 253 bbls Slop mud & 40 bbls FW; Bump plug @ 1:53 pm @ 4bpm @ 1460 psi; 866 psi prior; Inflated ECP to 2190 psi; lost 1/4 bbl to inflation; floats held. No returns during 1st stage cement job No spills reported
14:00	16:00	2.00	Circulating	PP	Drop bomb, open DVT with 483 psi. Returns to surface after 13 bbls, swap to rig pumps and Circ / Prep for 2nd stage Dumped 60 bbls H2S mud Note: No cement circ off DVT from 1st Stage
16:00	18:00	2.00	Cmt-Primary	PP	Pump 2nd stage: 40 bbl FW spacer; Lead w / 655 sx TXI @ 11.0 PPG; Yield 2.73 ft³/sk; 319 bbl slurry; Tail w/ 235 sx Class 'C' @ 14.8 ppg; Yield 1.33 ft³/sk; 55 bbl slurry; Drop plug & Displace w/ 293 bbl water; Bump & close DVT @ 1757 on 10/30/2019 w/ 1700 psi; Prior 680 psi @ 3 bpm; Floats holding; 14 bbls/28 sks cement to surface; Full returns while cementing.
18:00	21:30	3.50	NU/ND WH/XT	PP	Flush BOP, LD Landing jt, RD CRT and lay out, Install 9 5/8" Pack off, pull test, Test upper/ Lower seals to 5000 psi. Install wear-bushing
21:30	00:00	2.50	PU/LD BHA	PP	Hold PJSM with Phoenix, Apache, and HP crew to pick up 8 3/4" Curve BHA. P/U 8 3/4" Curve BHA, Scribe and Surface Test, M/U Bit P/U 8 3/4" Security GTD64C bit, 2.00°: 7/8; 5.0; 0.288 rpg Phoenix motor, 6 1/2" NMPC, Velocity MWD tool, 6 1/2" Flex NMDC, Filter sub, XO



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

Target Depth (ftKB): 17,150

State/Province: Texas

Target Formation: WOLFCAMP C4

County: Upton

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 10/31/2019

Report Number: 11

End Depth (ftKB): 9,248

End Depth (TVD) (ftKB): 9,102

Days From Spud (days): 6.42

Job Day (days): 106.0

Depth Progress (ft): 533

Rotating Hours (hr): 3.17

Last Mud Check Density (lb/gal): 12.00

Daily Field Est Total (Cost): \$110,725

Cum Field Est To Date (Cost): \$1,194,028

Current Status: Drilling 8 3/4" Curve @ 9593' MD

24 Hour Forecast: Drill 8 3/4" Curve to TD, TO, PU Lateral BHA

24 Hour Summary: TIH with 8 3/4" Curve Assembly, Drill Out DVT and Shoe Track, Test Casing to 1500 psi, Drill 8 3/4" Curve

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	00:30	0.50	PU/LD BHA	PP	Finish PU 8 3/4" curve assembly
00:30	03:00	2.50	TIH	PP	TIH with 8 3/4" Curve BHA T/ 3988' MD, Tagged Cement @ 3988' MD
03:00	04:30	1.50	Drill-out Shoe Track	PP	Perform 5 min casing Test to 1500psi ; Drill cement and DVT/ECP F/ 3988' MD T/ 4032' MD.
04:30	06:00	1.50	TIH	PP	TIH with 8 3/4" BHA F/ 4032' MD T/ 6900' MD No issues Tripping in hole No Spills Reported.
06:00	06:30	0.50	TIH	PP	TIH F/ 6900' MD T/ 8000' MD
06:30	08:00	1.50	PU/LD Pipe	PP	PU DP off racks T/ 8566' MD Install rotating head rubber
08:00	09:30	1.50	Slip/Cut DL	PP	Cut & slip Drill line Pad Water Usage: Meter 1: 72,238 bbls Meter 2: 16,955 bbls Daily: 5,857 bbls Well: 13,828 bbls Pad: 102,484 bbl
09:30	10:30	1.00	Test Csg	PP	Test casing to 1500 psi - 30 min test good
10:30	11:30	1.00	Drill-out Shoe Track	PP	Drill out cement, FC cement F/ 8603' T/ 8715' MD Tagged @ 8603' MD 1 st FC @ 8608' MD 5 min casing test good @ 8650' MD 2nd FC @ 8696' MD WWT Shoe @ 8700' MD No issue drilling out FE or WWT shoe Note: Worked thru shoe 3x before drilling ahead in new formation
11:30	18:00	6.50	Drilling	PP	Drilling 8 3/4 hole F/ 8715' MD T/ 8956' MD, 241' @ 37'/hr 15-50 wob/ 0-40 rpm/ 500 gpm/ 3100 psi off bottom 220k PU/ 197 St wt/ 177 SO Displaced to OBM @ 8750' MD SPR @ 100 spm = #1 @ 1650 psi / #2 @ 1690 psi / #3 @ 1660 psi Last Survey: MD: 8948' / SD: 8899' / INC: 14.72° / AZM: 33.98° / TVD: 8808.33' / 10' Ahead / 4' Left - Surveys not corrected yet Note: KOP @ 8791' MD

Printed Date: 11/11/2019

Printed Time: 9:31 AM



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Operations Summary					
Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
18:00	00:00	6.00	Drilling	PP	Drilling 8 3/4 hole F/ 8956' MD T/ 9248' MD, 292' @ 48'/hr 15-50 wob/ 0-40 rpm/ 525 gpm/ 3300 psi off bottom 224k PU/ 199 St wt/ 179 SO Last Survey: MD: 9137' / SD: 9088' / INC: 32.63° / AZM: 30.92° / TVD: 8981' / 18.5' Ahead / 7.5' right



APACHE PARTNER REPORT

Page 1 of 1

REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 11/1/2019

Report Number: 12

End Depth (ftKB): 9,825

End Depth (TVD) (ftKB): 9,294

Days From Spud (days): 7.42

Job Day (days): 107.0

Depth Progress (ft): 577

Rotating Hours (hr): 4.48

Last Mud Check Density (lb/gal): 12.70

Daily Field Est Total (Cost): \$98,631

Cum Field Est To Date (Cost): \$1,292,659

Current Status: Washing and reaming through curve

24 Hour Forecast: TIH and Drill 8 1/2" Lateral towards TD

24 Hour Summary: Drill 8 3/4" Curve F/ 9248' MD T/ 9825' MD, Land curve @ 1:00 pm, Circulate, TOH, LD curve BHA, PU Lateral BHA

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drilling 8 3/4 hole F/ 9248' MD T/ 9593' MD, 354' @ 57' /hr 15-50 wob/ 0-40 rpm/ 525 gpm/ 3300 psi off bottom 226k PU/ 200 St wt/ 181 SO SPR @ 9291': #1- 1560 psi #2- 1555 psi #3- 1550 psi Last Survey: MD: 9514' / SD: 9465' / INC: 64.41° / AZM: 18.76° / TVD: 8220' / 22' Ahead / 12' left
06:00	11:00	5.00	Drilling	PP	Drilling 8 3/4 hole F/ 9593' MD T/ 9825' MD, 232' @ 33.2'/hr 15-50 wob/ 0-40 rpm/ 525 gpm/ 3250 psi off bottom 250k PU/ 228k St wt/ 197k SO SPR @ 100 spm = #1 @ 1450 psi / #2 @ 1460 psi / #3 @ 1450 psi Last Survey: MD: 9798' / SD: 9749' / INC: 88.96° / AZM: 7.60° / TVD: 9292.42' / 1.5' Ahead / 7.2' Left Projecting 89.37° INC w/ 1.5° AZM @ 9293.6' TVD at bit Pad Water Usage: Meter 1: 78,095 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 13,828 bbls Pad: 102,484 bbls No spills reported Note: Landed curve @ 9825' MD @ 1:00 pm, 11/1/19
11:00	13:00	2.00	Circulating	PP	Circ F/ TOH
13:00	17:00	4.00	TOOH	PP	TOH F/ Lateral BHA No flow on flow check No issue thru curve Slug DP No spills reported
17:00	18:30	1.50	PU/LD BHA	PP	LD BHA #3 - Curve BHA Motor - drained good, no visible issue Bit - 2 depth wheels (training wheels missing), chipped cutters on shoulder and gauge, 1/16" out of gauge No spills reported
18:30	00:00	5.50	PU/LD BHA	PP	PU BHA #4 - Lateral BHA - NOV TKC-63, Fixed 1.50" w/ 8" sleeve, 8/9, 6, 0.20 rpg, NM IBS, Pony Collar, MWD, NMDC, Filter Sub, XO Sub, 2 jts DP, Typhoon Reamer, 30 stds DP, Agitator, 10 stds DP, 15 stds HWDP: TBHA= 5368.87'

Printed Date: 11/11/2019

Printed Time: 9:31 AM



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 11/2/2019

Report Number: 13

End Depth (ftKB): 10,970

End Depth (TVD) (ftKB): 9,287

Days From Spud (days): 8.42

Job Day (days): 108.0

Depth Progress (ft): 1,145

Rotating Hours (hr): 8.99

Last Mud Check Density (lb/gal): 12.80

Daily Field Est Total (Cost): \$73,623

Cum Field Est To Date (Cost): \$1,366,283

Current Status: Circulate and Condition for Bit Trip

24 Hour Forecast: Drill 8 1/2" Lateral Towards TD

24 Hour Summary: TIH with 8 1/2" Lateral BHA, Ream/wash thru curve, Drill 8 1/2" Lateral F/ 9,825' T/ 10,970' MD

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	03:00	3.00	TIH	PP	TIH with 8 1/2" Lateral Assembly F/ BHA T/ 9345' MD Checkshot curve @ 8963' for directional QC Tight spot at 9070', took 25k and broke over
03:00	05:00	2.00	TIH	PN	While TIH at 9345' MD SO weight dropped 30k lbs. Driller picked up 30 k over PU weight. String would not move. Screw into drill pipe and begin circulating at 450 gpm, good returns. Tried to rotate and stalled out. Working string, would not come free. Decision was made by drilling team to pull 150k over, string came free.
05:00	06:00	1.00	Circulating	PN	Circulate bottoms up and high side motor, prepare to trip through curve
06:00	08:30	2.50	Wash-Ream	PN	TOH 3 stands above 30°, wash/ream thru curve F/ 9090' MD T/ 9825' MD Wash/ream thru spot @ 9342' MD- worked thru 3x - clean Saw spots at 9381' & 9480' MD, torq came up then fell off Hung up again @ 9656' MD - worked 5 min; broke free @ 100k over; reamed thru and worked 3x - clean Wash/ream to bottom w/ no other issue
08:30	12:15	3.75	Drilling	PP	Drilling 8 1/2" Lateral F/ 9825' MD T/ 10,274' MD, 449' @ 119.7'/hr 15-50 wob/ 0-60 rpm/ 575 gpm/ 4050 psi off bottom 250k PU/ 235k St wt/ 197k SO SPR @ 100 spm = #1 @ 1920 psi / #2 @ 1900 psi / #3 @ 1910 psi Last Survey: MD: 10,274' / SD: 10,114' / INC: 90.78° / AZM: 2.43° / TVD: 9300.74' / 5.2' Below / 2.0' Left Pad Water Usage: Meter 1: 78,095 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 13,828 bbls Pad: 102,484 bbls No spills reported Note: DC inspection had 1 cracked pin on 8" DC - no other issues
12:15	12:30	0.25	Safety Mtg	PP	BOP Drill - 31 sec response time
12:30	17:30	5.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 10,274' MD T/ 10,628' MD, 354' @ 70.8'/hr 15-50 wob/ 0-60 rpm/ 600 gpm/ 5150 psi off bottom 255k PU/ 230k St wt/ 200k SO Last Survey: MD: 10,557' / SD: 10,491' / INC: 89.31° / AZM: 1.88° / TVD: 9293.21' / 2.2' Below / 6.4' Right No spills reported

Printed Date: 11/11/2019

Printed Time: 9:31 AM



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Operations Summary					
Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
17:30	18:00	0.50	Circulating	PN	Circ w/ 1 pump - finishing up changing 2 seats and valves on #2 pump, #1 pump had a piston rubber go out/ down 20 min while putting #2 back together and unlocking
18:00	00:00	6.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 10,628' MD T/ 10,970' MD, 342' @ 57'/hr 15-50 wob/ 0-70 rpm/ 600 gpm/ 5300 psi off bottom 260k PU/ 230k St wt/ 200k SO Last Survey: MD: 10,935' / SD: 10,869' / INC: 92.15° / AZM: .60° / TVD: 9289' / 2.8' Below / 2.8' Right No spills reported



APACHE PARTNER REPORT

Page 1 of 2

REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		Operator: Apache Corporation
API/Surface Loc: 4246141215		District: East District
Rig: H&P 436, 10/24/2019 14:00		
Location Note:		
Field Name: Spraberry Trend	State/Province: Texas	County: Upton
Target Depth (ftKB): 17,150	Target Formation: WOLFCAMP C4	Spud Date: 7/18/2019
AFE Number: 11-19-0273-DH		Supplemental AFE Number:
Total AFE + Supp Amount (Cost): \$3,074,500		AFE Description: Permian - Horizontal

Report Start Date: 11/3/2019	Report Number: 14
End Depth (ftKB): 11,527	End Depth (TVD) (ftKB): 9,281
Depth Progress (ft): 557	Rotating Hours (hr): 6.31
Daily Field Est Total (Cost): \$94,407	Cum Field Est To Date (Cost): \$1,460,690
Current Status: Drilling 8 1/2" Lateral @ 12,062' MD	
24 Hour Forecast: Drill 8 1/2" Lateral Towards TD	
24 Hour Summary: Drill 8 1/2 " Lateral F/ 10,970' MD T/ 11,162' MD, CUC, TOH due to low ROP, LD BHA, PU BHA #5, TIH, Drill 8 1/2" Lateral F/ 11,162' MD T/ 11,526' MD	

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	02:00	2.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 10,970' MD T/ 11,114' MD, 160' @ 32'/hr 15-50 wob/ 0-70 rpm/ 600 gpm/ 5300 psi off bottom 260k PU/ 230k St wt/ 200k SO No spills reported
01:00	04:00	3.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 11,114' MD T/ 11162' MD, 160' @ 32'/hr 15-50 wob/ 0-70 rpm/ 600 gpm/ 5300 psi off bottom 260k PU/ 230k St wt/ 200k SO Last Survey: MD: 11,124' / SD: 11,058' / INC: 89.95° / AZM: 1.7° / TVD: 9287' / 3.8' Below / 1.7' Right No spills reported Decision was made to TOOH to change out bit
02:00	01:00	-1.00	Drilling	PP	day light saving changed at 2:00 turning clocks back to 1:00. added a negative hour to show actual 5 hours of drilling but maintain a 24 hour day for phase reasons.
04:00	05:30	1.50	Circulating	PP	Circulate and condition hole in preparation for bit trip due to low ROP
05:30	05:45	0.25	Safety Mtg	PP	BOP Drill: 34 second response time
05:45	06:30	0.75	Circulating	PP	Circulate and Condition hole in preparation for bit trip
06:30	11:30	5.00	TOOH	PP	TOH due to low ROP No issue thru lateral or curve
11:30	12:00	0.50	PU/LD BHA	PP	LD BHA #4 - IBS- in gauge Motor- drained good, no visible issue Bit- 1" RO, DBR'd
12:00	13:00	1.00	PU/LD BHA	PP	PU BHA #5- Lateral BHA - SPL613, Fixed 1.50° w/ 8" sleeve, 8/9, 6, 0.20 rpg, NM IBS, Pony Collar, MWD, NMDC, Filter Sub, XO Sub, 2 jts DP, Typhoon Reamer, 90 jts DP, Agitator, 72 jts DP, 15 stds HWDP: TBHA= 6684.47'
13:00	16:30	3.50	TIH	PP	TIH W/ BHA #5 F/ 200' MD T/ 8565' MD Pad Water Usage: Meter 1: 78,095 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 13,828 bbls Pad: 102,484 bbls No spills reported
16:30	17:00	0.50	Rig Serv	PP	Rg service



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Operations Summary					
Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
17:00	18:30	1.50	TIH	PP	TIH W/ BHA #5 F/ 8565' MD T/ 11,150' MD No issue thru curve No issue thru lateral No spills reported
18:30	19:00	0.50	Wash-Ream	PP	Wash/ream F/ 11,150' MD T/ 11,162' MD
19:00	00:00	5.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 11,162' MD T/ 11,527' MD, 365' @ 73'/hr 15-50 wob/ 0-60 rpm/ 550 gpm/ 4800 psi off bottom 265k PU/ 225k St wt/ 200k SO SPR @ 100 spm = #1 @ 1930 psi / #2 @ 1925 psi / #3 Not tested, waiting for silicone to dry Last Survey: MD: 11499' / SD: 11435' / INC: 90.65° / AZM: .75° / TVD: 9283' / 5.2' Below / 9' Right No spills reported

**APACHE PARTNER REPORT**

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		
API/Surface Loc: 4246141215	Operator: Apache Corporation	
Rig: H&P 436, 10/24/2019 14:00	District: East District	
Location Note:		
Field Name: Spraberry Trend	State/Province: Texas	County: Upton
Target Depth (ftKB): 17,150	Target Formation: WOLFCAMP C4	Spud Date: 7/18/2019
AFE Number: 11-19-0273-DH		
Supplemental AFE Number:		AFE Description: Permian - Horizontal
Total AFE + Supp Amount (Cost): \$3,074,500		

Report Start Date: 11/4/2019 **Report Number: 15**

End Depth (ftKB): 13,347	End Depth (TVD) (ftKB): 9,267	Days From Spud (days): 10.42	Job Day (days): 110.0
Depth Progress (ft): 1,820	Rotating Hours (hr): 13.63	Last Mud Check Density (lb/gal): 12.80	
Daily Field Est Total (Cost): \$74,490		Cum Field Est To Date (Cost): \$1,535,180	

Current Status: Drilling 8 1/2" Lateral @ 13,860' MD**24 Hour Forecast:** Drill 8 1/2" Lateral Towards TD**24 Hour Summary:** Drill 8 1/2" Lateral F/ 11,526' T/ 13,347' MD**Operations Summary**

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 11,527' MD T/ 12062' MD, 536' @ 89'/hr 15-50 wob/ 0-60 rpm/ 550 gpm/ 4800 psi off bottom 265k PU/ 230k St wt/ 200k SO Step test F/ 11,247' T/11,589': 45,50,55,60,65,70 rpm and 30k,35k,40k, 45k wob SPR @ 100 spm = #1 @ 1930 psi / #2 @ 1925 psi / #3 Not tested, waiting for silicone to dry on suction screen cap Last Survey: MD: 11971' / SD: 11907' / INC: 90.20° / AZM: .54° / TVD: 9279' / 6.9' Below / 0' Right No spills reported
06:00	16:30	10.50	Drilling	PP	Drilling 8 1/2" Lateral F/ 12,062' MD T/ 12,912' MD, 850' @ 81'/hr 40 -45 wob/ 60 rpm/ 575 gpm/ 4800 psi off bottom 270k PU/ 230k St wt/ 180k SO SPR @ 100 spm = #1 @ 1910 psi / #2 @ 1900 psi / #3 @ 1920 psi Last Survey: MD: 12,12,819' / SD: 12,755' / INC: 90.87° / AZM: 0.94° / TVD: 9279.02' / 0' Below / 5.7' left Pad Water Usage: Meter 1: 78,095 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 13,828 bbls Pad: 102,484 bbls No spills reported
16:30	17:00	0.50	Rig Serv	PP	Rig service
17:00	18:00	1.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 12,912' MD T/ 13,008' MD, 96' @ 96'/hr 40 -45 wob/ 80 rpm/ 575 gpm/ 5000 psi off bottom 270k PU/ 230k St wt/ 180k SO SPR @ 100 spm = #1 @ 1910 psi / #2 @ 1900 psi / #3 @ 1920 psi Last Survey: MD: 13,008' / SD: 12,944' / INC: 91.68° / AZM: 1.15° / TVD: 9275.80' / 6' Above / 7.1' left No spills reported

Printed Date: 11/11/2019

Printed Time: 9:31 AM



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Operations Summary					
Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
18:00	00:00	6.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 13,008' MD T/ 13,347' MD, 339' @ 56'/hr 40 -45 wob/ 70-80 rpm/ 575 gpm/ 5000 psi off bottom 270k PU/ 230k St wt/ 180k SO SPR @ 100 spm = #1 @ 1940 psi / #2 @ 1930 psi / #3 @ 1920 psi @ 13,227' MD Last Survey: MD: 13,291' / SD: 13,227' / INC: 90.67° / AZM: 2.82° / TVD: 9266' / 19.6' Above / 3.8' left No spills reported



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		Operator: Apache Corporation
API/Surface Loc: 4246141215		District: East District
Rig: H&P 436, 10/24/2019 14:00		
Location Note:		
Field Name: Spraberry Trend	State/Province: Texas	County: Upton
Target Depth (ftKB): 17,150	Target Formation: WOLFCAMP C4	Spud Date: 7/18/2019
AFE Number: 11-19-0273-DH		Supplemental AFE Number:
Total AFE + Supp Amount (Cost): \$3,074,500		AFE Description: Permian - Horizontal

Report Start Date: 11/5/2019	Report Number: 16
End Depth (ftKB): 14,667	End Depth (TVD) (ftKB): 9,282
Depth Progress (ft): 1,320	Rotating Hours (hr): 11.60
Daily Field Est Total (Cost): \$75,881	Cum Field Est To Date (Cost): \$1,611,061
Current Status: TOH for bit @ 434'	
24 Hour Forecast: TOH for new bit, TIH, Drill 8 1/2" Lateral Towards TD	
24 Hour Summary: Drill 8 1/2" Lateral F/ 13,347' T/14,667' MD CUC, TOH due to low ROP T/ 12,184' MD	

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	02:30	2.50	Drilling	PP	Drilling 8 1/2" Lateral F/ 13,347' MD T/ 13,573' MD, 226' @ 90'/hr 40 - 45 wob/ 70-80 rpm/ 575 gpm/ 5000 psi off bottom 270k PU/ 230k St wt/ 180k SO
02:30	03:00	0.50	Rig Serv	PP	Change out swivel packing
03:00	06:00	3.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 13,573' MD T/ 13,860' MD, 297' @ 96'/hr 40 -45 wob/ 70-80 rpm/ 575 gpm/ 5000 psi off bottom 270k PU/ 230k St wt/ 190k SO Last Survey: MD: 13,763' / SD: 13,699' / INC: 87.80° / AZM: 2.08° / TVD: 9275' / 13.4' Above / 5' Right No spills reported
06:00	15:30	9.50	Drilling	PP	Drilling 8 1/2" Lateral F/ 13,860' MD T/ 14,516' MD, 656' @ 69'/hr 40 -45 wob/ 60 rpm/ 575 gpm/ 5350 psi off bottom 270k PU/ 230k St wt/ 180k SO SPR @ 100 spm = #1 @ 2100 psi / #2 @ 2080 psi / #3 @ off line Last Survey: MD: 14518' / SD: 14,454' / INC: 91.18° / AZM: 1.08° / TVD: 9284.89' / 1.4' Below / 13.5' Right Pad Water Usage: Meter 1: 78,095 bbls Meter 2: 16,955 bbls Daily: 0 bbls Well: 13,828 bbls Pad: 102,484 bbls No spills reported
15:30	16:00	0.50	Rig Serv	PP	Rlg service
16:00	17:00	1.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 14,516' MD T/ 14,667' MD, 151' @ 151'/hr 40 -45 wob/ 60 rpm/ 575 gpm/ 5350 psi off bottom 270k PU/ 230k St Wt/ 180k SO Last Survey: MD: 14,612' / SD: 14,548' / INC: 90.87° / AZM: 0.62° / TVD: 9283.21' / 0' Below / 13.0' Right No spills reported
17:00	22:30	5.50	Circulating	PP	Circulate F/bit trip
22:30	00:00	1.50	TOOH	PP	TOH F/ 14,667' T/12,184' MD Flow check after 10 stands racked back, no flow.



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

Target Depth (ftKB): 17,150

State/Province: Texas

Target Formation: WOLFCAMP C4

County: Upton

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 11/6/2019

Report Number: 17

End Depth (ftKB): 14,966

End Depth (TVD) (ftKB): 9,279

Days From Spud (days): 12.42

Job Day (days): 112.0

Depth Progress (ft): 299

Rotating Hours (hr): 5.34

Last Mud Check Density (lb/gal): 12.85

Daily Field Est Total (Cost): \$98,888

Cum Field Est To Date (Cost): \$1,709,949

Current Status: Drilling 8 1/2" Lateral @ 15,296' MD

24 Hour Forecast: Drill 8 1/2" Lateral Towards TD

24 Hour Summary: TOH, Change out bit, TIH, Drill Lateral F/ 14,667' T/ 14,966' MD

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:30	6.50	TOOH	PP	TOH F/ 12,184' T/ 143' MD No Issues, No spills Reported
06:30	07:00	0.50	PU/LD BHA	PP	LD BHA #5 - LD MWD tool carrier and break bit IBS - In gauge, no issue Motor- drained good, no slack in bearing housing Bit- 1/16" out of gauge, chipped cutters on top gauge row cutters, no other issue
07:00	08:30	1.50	PU/LD BHA	PP	PU BHA #6- Lateral BHA - SPL613, Fixed 1.50° w/ 8" sleeve, 8/9, 6, 0.20 rpg, NM IBS, Pony Collar, MWD, NMDC, Filter Sub, XO Sub, 2 jts DP, Typhoon Reamer, 90 jts DP, Agitator, 153 jts DP, 15 stds HWDP
08:30	12:30	4.00	TIH	PP	TIH T/ 8,700' MD Casing shoe Note: Pull trip nipple and install rotating head
12:30	13:30	1.00	Slip/Cut DL	PP	Slip and cut drilling line
13:30	16:30	3.00	TIH	PP	TIH F/ 8,700' MD T/ 14,667' MD No issue thru curve or lateral No spills reported
16:30	18:00	1.50	Drilling	PP	Drilling 8 1/2" Lateral F/ 14,667' MD T/ 14,729' MD, 62' @ 41'/hr 40-45 wob/ 80 rpm/ 520 gpm/ 5150 psi off bottom 270k PU/ 230k St wt/ 180k SO
18:00	00:00	6.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 14,729' MD T/ 14,966' MD, 237' @ 40'/hr 35-55 wob/ 55-80 rpm/ 560 gpm/ 5370 psi off bottom 275k PU/ 217k St wt/ 170k SO

Printed Date: 11/11/2019

Printed Time: 9:31 AM



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

Target Depth (ftKB): 17,150

State/Province: Texas

Target Formation: WOLFCAMP C4

County: Upton

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 11/7/2019

Report Number: 18

End Depth (ftKB): 16,308

End Depth (TVD) (ftKB): 9,278

Days From Spud (days): 13.42

Job Day (days): 113.0

Depth Progress (ft): 1,342

Rotating Hours (hr): 17.30

Last Mud Check Density (lb/gal): 12.80

Daily Field Est Total (Cost): \$71,323

Cum Field Est To Date (Cost): \$1,781,272

Current Status: Drilling 8 1/2" Lateral @ 16,642'

24 Hour Forecast: Drill 8 1/2" Lateral Towards TD

24 Hour Summary: Drill 8 1/2" Lateral F/ 14,966' T/ 16,308' MD

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 14,966' MD T/ 15,296' MD, 330' @ 55'/hr 35-55 wob/ 55-80 rpm/ 560 gpm/ 5370 psi off bottom 275k PU/ 217k St wt/ 168k SO Last Survey: MD: 15,273' / SD: 15,209' / INC: 89.42° / AZM: 0.35° / TVD: 9280' / 2.4' Below / 2.0' Right No spills reported
06:00	16:00	10.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 15,296' MD T/ 15,837' MD, 541' @ 54'/hr 40-55 wob/ 60-80 rpm/ 550 gpm/ 5250 psi off bottom 275k PU/ 218k St wt/ 170k SO SPR @ 100 SPM 12.8 ppg @ 15,366' MD MP1 - 2250 psi MP2 - 2215 psi MP3 - 2230 psi
16:00	16:30	0.50	Rig Serv	PP	Rig Service - Top Drive
16:30	00:00	7.50	Drilling	PP	Drilling 8 1/2" Lateral F/ 15,837' MD T/ 16,308' MD, 471' @ 63'/hr 40-55 wob/ 60-80 rpm/ 550 gpm/ 5250 psi off bottom 275k PU/ 218k St wt/ 170k SO SPR @ 100 SPM 12.7 ppg @ 16,023' MD MP1 - 2205 psi MP2 - 2185 psi MP3 - 2180 psi



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 11/8/2019

Report Number: 19

End Depth (ftKB): 17,078

End Depth (TVD) (ftKB): 9,262

Days From Spud (days): 14.42

Job Day (days): 114.0

Depth Progress (ft): 770

Rotating Hours (hr): 10.77

Last Mud Check Density (lb/gal): 12.80

Daily Field Est Total (Cost): \$64,831

Cum Field Est To Date (Cost): \$1,846,103

Current Status: TOH to run 5 1/2" casing

24 Hour Forecast: TOH, run 5 1/2" casing

24 Hour Summary: TD Lateral @ 1400 hrs, Circulate hole clean and TOH for 5 1/2" casing

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	06:00	6.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 16,308' MD T/ 16,642' MD, 334' @ 55'/hr 40-55 wob/ 60-80 rpm/ 550 gpm/ 5250 psi off bottom 275k PU/ 218k St wt/ 170k SO
06:00	14:00	8.00	Drilling	PP	Drilling 8 1/2" Lateral F/ 16,642' MD T/ 17,078' MD, 436' @ 54'/hr 40-55 wob/ 60-80 rpm/ 550 gpm/ 5400 psi off bottom 275k PU/ 218k St wt/ 170k SO TD @ 18:20 on 9/16/2019 Final survey: 15,886' MD, 97.16° Inc, 359.25°, Azm, 8,282.6' TVD, 2' Above, 18' left. SPR @ 100 SPM 12.8 ppg @ 16,686' MD MP1 - 2230 psi MP2 - 2200 psi MP3 - 2210 psi
14:00	19:30	5.50	Circulating	PP	Circulate clean up cycle @ 575 GPM No spills reported.
19:30	23:30	4.00	TOOH	PP	Rack 10 stands back and conduct flow check. No flow. Pump slug and TOOH T/9,987' MD No Issues, no spills
23:30	00:00	0.50	Rig Repair	PN	Change out blown ST-80 hose

Printed Date: 11/11/2019

Printed Time: 9:31 AM



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL

API/Surface Loc: 4246141215

Rig: H&P 436, 10/24/2019 14:00

Operator: Apache Corporation

District: East District

Location Note:

Field Name: Spraberry Trend

State/Province: Texas

County: Upton

Target Depth (ftKB): 17,150

Target Formation: WOLFCAMP C4

Spud Date: 7/18/2019

AFE Number: 11-19-0273-DH

Supplemental AFE Number:

AFE Description: Permian - Horizontal

Total AFE + Supp Amount (Cost): \$3,074,500

Report Start Date: 11/9/2019

Report Number: 20

End Depth (ftKB): 17,078

End Depth (TVD) (ftKB): 9,262

Days From Spud (days): 15.42

Job Day (days): 115.0

Depth Progress (ft): 0

Rotating Hours (hr):

Last Mud Check Density (lb/gal): 13.00

Daily Field Est Total (Cost): \$74,353

Cum Field Est To Date (Cost): \$1,920,456

Current Status: Cementing 5 1/2" Production Casing

24 Hour Forecast: Run 5 1/2" casing T/ 17,075', Pump cement, set slips, cut off casing

24 Hour Summary: TOH and Run 5 1/2" casing T/ 14,512' MD

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	00:30	0.50	Rig Repair	PN	Change out blown ST-80 hose
00:30	06:00	5.50	TOOH	PP	TOOH F/ 9,987' T/ 800' MD Notified Gina (Operator #14) at TRRC San Angelo office of upcoming production casing and cement job @ 0230
06:00	07:00	1.00	TOOH	PP	TOOH T/ BHA SLM: -3.75' no changes made
07:00	08:00	1.00	PU/LD BHA	PP	LD Lateral BHA Note: Motor draing good, Stab 1/8" under gauge, Bit had worn teeth
08:00	08:30	0.50	NU/ND WH/XT	PP	Pull Wear bushing
08:30	10:00	1.50	RU/RD	PP	HSM RU Gabes & Tubular Solutions
10:00	00:00	14.00	Casing	PP	Run 5½", 20#, CYP-110, GBCD casing T/14,512' MD Make up Gryphon float shoe, 1 jt casing, float collar, 1 jt casing, toe sleeve, checked floats



APACHE PARTNER REPORT

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REGION: Permian
TYPE: Operated

Legal Well Name: WARHEAD 0405 B 10HL		
API/Surface Loc: 4246141215	Operator: Apache Corporation	
Rig: H&P 436, 10/24/2019 14:00	District: East District	
Location Note:		
Field Name: Spraberry Trend	State/Province: Texas	County: Upton
Target Depth (ftKB): 17,150	Target Formation: WOLFCAMP C4	Spud Date: 7/18/2019
AFE Number: 11-19-0273-DH		
Supplemental AFE Number:		AFE Description: Permian - Horizontal
Total AFE + Supp Amount (Cost): \$3,074,500		

Report Start Date: 11/10/2019	Report Number: 21		
End Depth (ftKB): 17,078	End Depth (TVD) (ftKB): 9,262	Days From Spud (days): 16.42	Job Day (days): 116.0
Depth Progress (ft): 0	Rotating Hours (hr):	Last Mud Check Density (lb/gal): 13.00	
Daily Field Est Total (Cost): \$427,731	Cum Field Est To Date (Cost): \$2,348,187		
Current Status: See Warhead 0405 B #6HM			
24 Hour Forecast: Rig released to Warhead 0405 B 6HM			
24 Hour Summary: Run 5 1/2" casing T 17,073' MD, Circulate 1.5x casing capacity, Cement 5 1/2" production casing, Set slips and cut casing, clean pits, release rig to Warhead 0405 B 6HM			

Operations Summary

Start Time	End Time	Dur (hr)	Time Code	Op Type	Operation Details
00:00	02:30	2.50	Casing	PP	Run 5.5" #20.0 production casing F/14,512' MD T/17,073' MD Ran 369 jts 5½", P-110 CYP-110, 20#, GB CD; FS @ 17,073', FC @ 17,022'; Marker Jt's @ 15,970' & 8,698'. 103 Centek centralizers and 45 Bow Spring centralizers No spills reported. C&J on location @ 02:30
02:30	05:30	3.00	Circulating	PP	HSM; R/D Gabe's Casing & R/U C&J Circulate 1.5 x casing capacity. No spills reported
05:30	06:00	0.50	Cmt-Primary	PP	Test lines to 7,500 psi. Pump 50 bbls @ 13.5 ppg mud flush spacer. Lead w/ 1,390 sx Poz class H @ 13.5 ppg; Yield 1.45 ft³/sk; 359 bbl slurry
06:00	10:00	4.00	Cmt-Primary	PP	Cont Cementing w/ Lead w/ 1,390 sx Poz class H @ 13.5 ppg; Yield 1.45 ft³/sk; 358 bbl slurry; Tail w/ 2,240 sx Poz class H @ 14.2 ppg; Yield 1.25 ft³/sk; 482 bbl slurry. Displace w/378 bbls FW w/biocide (first 20 bbls sugar water). Bump plug @ 09:38 hrs on 11/10/2019 w/ 4400 psi @ 5 bpm; 3400 psi prior, held 5 min, floats held. Circulated 90 bbls/ 348 sks to surface. No spills reported
10:00	13:00	3.00	NU/ND WH/XT	PP	Wash stack and lines; ND quick change head. Disconnect flowline. Lift BOP, set slips with 135k St wt (180k HL), Cut off Casing. Install Threaded flange and dry cap Rig released @ 13:00 hrs on 11/10/2019
13:00	00:00	11.00	Rig Skid/Walk	PP	Refer to Reports on Warhead 0405 #6HM well.