UNIVERSITY 8-10 E H #2MS

Piedra Operating, LLC

HOLE DIA	PIPE O.D.	WEIGHT	GRADE	TOP	BTM (MD)	SACKS	TOC
17 1/2	13 3/8	54.5	J-55 BTC	0	1,849'	1,270	SURF
12 1/4	9 5/8	40	HCL-80 BTC	0	6,784'		
12 1/4	9 5/8	47	HCL-80 BTC	6,784'	8,226'	1,815	
8 1/2	5 1/2	20	HCP-110 TCBC	0	17,130'	2,745	SURF
Spud Date: 5/18/2022	Rig Release: 11/1/2022		Rig: H&P #460				

API: 42-003-48555
SURF LOCATION: 1,670 ft. NORTH & 1,313 ft. EAST, Section 10, Block 8, Abstract U228, Survey UL
BH LOCATION: 100' FSL & 1,320' FEL, Section 15, Block 8, Survey UL / A-U233
COUNTY: Andrews, TX
GPS Location: N32°39'3786" W102°31'9429"

ELEVATION: 3,003'
KB: 26'
TD (MD): 17,140'
TD (TVD): 8,953'

DRILLING DATA

Hole Size/Casing Program

Hole Size 17 1/2
Surf. Casing Size: 13 3/8
Surf. Casing Grade: J-55 BTC
Surf. Casing Weight: 54 1/2
Depth: 1,849'

Int. Hole Size: 12 1/4
Int. Casing Size: 9 5/8
Int. Casing Grade: HCL-80
Int. Casing Weight: 40 & 47
Int. Casing Conn: BTC
Depth: 8,226'
DV Tool @ 6,917'

Prod. Hole Size: 8 1/2
Prod. Casing Size: 5 1/2
Prod. Casing Grade: HCP-110 TCBC
Prod. Casing Weight: 20
Prod. Casing Conn: TCBC HT
Depth: 17,140'

KO 100' Higher Than Plan
KOP: 8,349'
U. Spraberry 8,531'
M. Spraberry 8,749'

MD (Red) TVD (Black)	Geology
GAU 1,750'	
1,849'	Surface Casing
3,551'	Seven Rivers
4,260'	Queen
4,905'	Grayburg
5,149'	San Andres
6,917'	DVT/ECP
7,028'	Clearfork
7,816'	M. Clearfork
8,226'	Intermediate Csg
8,236'	L. CF shale

LP: 9,480' MD
8,974' TVD - Middle Spraberry Target
186° AZM

TD: 17,140' MD
8,953' TVD
8,888' VS
169° AZM

Lateral Window: 25' above and 25' below plan line. 25' left and 25' right of plan line

Mud	BHA	Drilling Parameters	Logging/Surveys	Cementing	NOTES (DRILLING)
	Preset @ 1,849'			**Surface Cement** HES: Pump 20 BBL FW spacer. Lead 825 SX, 12.3 PPG, 2.47 YLD, Class "C" cmt. Tail 445 SX, 14.8 PPG, 1.33 YLD, Class "C" cmt. DP. Disp w/ 279 BBL FW. BP w/ 1,290 PSI. Floats held. Bled back 2 BBL. Circulated 100 BBL cement to surface	Drill from 90' to 1,849' TD Surface Run 45 joints of 13 3/8" 54.5# J-55 BTC from surface to 1,849'
Drill out w/ 9.8 PPG Cut Brine 28 vis Disp w/ Slop Mud at 4,600' 9.1 PPG 47 - 49 vis	**BHA # 1 - Intermediate** 12.25" Ulterra Bit, SPL616, 6x13's, 9.625" BICO SSS 100 Mud Motor 7/8 4.8 1.5° FBH w/ 12" NBS, 11" Nortrac, 8.5" Shock Sub, 8" NMDC, 8" UBHO, 8" NMDC, 8" Filter sub, 8" to 6" X/O, 12 - 6.5" DC's, 6.5" Jars, 6-6.5" DC's, X/O	WOB 25/55, RPM 0/60, GPM 700/900, SPP 1,540/3,100, DIFF 250/725, TQ 14/24	SD 8,120': INC 2.3°, AZM 167.7°, TVD 8,070.5', VS 540.5'	**First Stage** HES: Pump 20 BBL FW spacer. Lead 150 SX, 11.0 PPG, 2.72 YLD, Class "H" cmt. Tail 195 SX, 14.5 PPG, 1.23 YLD, Class "H" cmt. DP. Disp w/ 615 BBL FW. BP w/ 1,490 PSI. Bled back 3.5 BBL. Floats held. DB. Open DVT w/ 480 PSI **Second Stage** HES: Pump 20 BBL FW spacer. Lead 1,370 SX, 11.5 PPG, 2.29 YLD, Class "C" cmt. Tail 100 SX, 14.8 PPG, 1.33 YLD, Class "C" cmt. DP. Disp w/ 524 BBL FW. BP w/ 2,410 PSI. Bled back 5 BBL	BHA # 1 - Drill from 1,849' to 8,226' TD ICP Run 9 5/8" 40 & 47# HCL-80 BTC from surface to 8,226'
At KOP begin additions of .05 -1.0 ppb EvoCon II and EvoLube G to achieve 2% by volume before landing the curve WBM 8.8 - 9.1 PPG 25 - 36 vis While drilling the lateral increase lube concentration to 3% - 4% and maintain through TD	**BHA # 2 - Drill Out & Curve** 8.5" Ulterra Bit, CF611, 6x14's, 6.75" Mud Motor 7/8 5.0 2.0° FBH SBTB w/ 8.125" NBS, 6.75" NMPC, 6.75" MWD, 6.75" NMFC, 6.75" Filter Sub, 5" DP **BHA # 2 - Drill Out & Curve** 8.5" Ulterra Bit, CF611, 6x14's, 6.75" Mud Motor 7/8 5.0 2.0° FBH SBTB w/ 8.125" NBS, 6.75" NMPC, 6.75" MWD, 6.75" NMFC, 6.75" Filter Sub, 5" DP	WOB 10/35, RPM 0/20, GPM 600, SPP 1,200/1,800, DIFF 200/300, TQ 10 WOB 35, RPM 0/30, GPM 600, SPP 2,250/2,350, DIFF 450/500, TQ 10	SD 9,480': INC 93.5°, AZM 185.5°, TVD 8,974.8', VS 1,255.7' SD 9,480': INC 93.5°, AZM 185.5°, TVD 8,974.8', VS 1,255.7'		BHA # 2 - Drill from 8,226' to 8,747' POOH for ROP/Bit BHA # 3 - Drill from 8,747' to 9,530 TD Curve & POOH For Lateral BHA
WBM 9.1 - 9.6 PPG 34 vis	**BHA # 3 - Lateral Assembly** 8.5" Reed Bit, TKC 66 AD, 6x16's, 7" NOV ERT Mud Motor 7/8 5.7 1.75° FBH SBTB w/ Slick Sleeve, 8-1/4" Nortrac, 6.75" NMDC, 6.75" UBHO, 6.75" NMDC, 6.75" Filter Sub, 28 stands 5" DP, 6.75" NOV Agitator	WOB 10/35, RPM 0/62, GPM 642, SPP 3,150/3,300, DIFF 350/450, TQ 27	SD 17,055': INC 90.5°, AZM 168.8°, TVD 8,954.8', VS 8,803.1'	**Production Cement** HES: Pump 40 BBL 9.0 PPG spacer. Lead 820 SX, 11.0 PPG, 2.72 YLD, Class "C" cmt. Tail 1,925 SX, 13.2 PPG, 1.44 YLD, Class "C" cmt. DP. 20 BBL SW. Disp w/ 379 BBL FW. BP w/ 2,790 PSI. Bled back 4 BBL. Floats held. Circulate 180 SX cement to surface	BHA # 4 - Drill from 9,530' to 17,140' TD Lateral L/D DP. Spot mud cap. L/D BHA. Run pipe Run 5.5" 20# P - 110 HC TCBC HT from surface to 17,130'