

AUTHORITY FOR EXPENDITUR. STAGHORN PETROLEUM, LLC

One West Third Street, Suite 1000 Tulsa, Oklahoma 74103 (918) 584-2558

	(918) 584-2558 me and Number: Tule 18-06-10 #2H	Operator:	Staghorn Pe	trole	um. LLC
	The and Humber.	TD & Formation			/D Osweg
	escription.	Date Prepared			6 Northcu
-	State.		Бу. 10	20-1	0 140111100
cope o	of Work: Drill, Complete and Equip an 11,400' MD Os		SS COST EST	ΤΔΛΛΙ	
CCT.	DESCRIPTION OF EXPENDITURE	DRILL (1562)			
	2.50 使以使用的 1910年			\$	35,000
01	Damages, Permits, Surveys, Right of Way, etc.	\$ 35,000 70,000		\$	70,000
_	Location and Roads	195,000		\$	195,00
	Drilling Rig:	195,000	Partie and Sept. Control of the Control	\$	35,00
	Completion Rig:	75,000		\$	75,00
	Mobilize, RU, RD, Demobilize	36,000		\$	43,50
05	Fuel & Power	6,000		\$	56,00
06	Drilling Water and Completion Fluids	60,000		\$	85,00
07	Contract Labor, Welding, Casing Crews	45,000		\$	50,00
80	Bits Cil Board	.0,000			
09	Drilling Fluids - Oil Based Drilling Fluids - Water-Based	55,000	的复数形式学校	\$	55,00
10			110000000000000000000000000000000000000	\$	20,00
11	Formation Testing Openhole Logging and Surveys				
12	Cementing and Cement Services	35,000		\$	35,00
13	Downhole Rentals and Services	15,000	10,000	\$	25,00
15	Casedhole Logging, Perforating and Other Wireline Services	THE SECTION OF	170,000	\$	170,00
16	Stimulation and Services		650,000	\$	650,00
17	Supplies, Materials, Misc.	1,000	1,000	\$	2,00
18	Geological Services, Mudlogging, Other Professional Services	12,000	Control of the Name of the	\$	12,00
19	Wellsite Supervision	45,000	30,000	\$	75,0
20	Abandonment Expenses and Location Reclamation	15,000	500 Lt 47 Lt 100	\$	15,00
21	Installation Services (through wellhead)	12,000	8,000	\$	20,00
22	Trucking, Hauling, Other Transportation Services	10,000	6,000	\$	16,00
23	Surface Rentals	42,000	20,000	\$	62,0
24	Directional Drilling Tools and Services	80,000	角的数据处理	\$	80,0
25	Closed Mud System Rentals and Services	16,000		\$. 16,0
26	Fishing Tools and Services				
27	Lost or Damaged Tools and Equipment			8	
80	Title Opinion and DOTO	20,000		\$	20,0
90	Overhead	5,000	5,000	\$	10,0
92	Insurance	20,000	20,000	\$	40,0
95	Contingency 5%	45,300	53,100		98,4
	TOTAL INTANGIBLE COSTS	\$ 950,300			2,065,9
· 会对解题	TANGIBLES	DRILL (1572)	COMP (1573)	TOT	TAL
NATIONAL PROPERTY.	THE CONTRACTOR OF THE CONTRACT	10,000	The second secon	\$	10,0
01	Conductor Casing: 20" Pre-Set with Deep Mousehole Surface Casing: 9.625", 40#, J55, LTC @ 450'	10,200	福华献政	\$	10,2
02	Intermediate Casing: 7", 29#, P110, Mod BTC @ 6800'	126,400		\$	126,4
03	Production Csg/Liner: 4.5", 13.5#, P110, Mod BTC Lnr @ 11,400		TO THE PARTY OF	\$	48,2
05	Tubing: 2.875", 6.5#, N80, EUE @ 6350'		29,500	\$	29,5
06	Sucker Rods	25点是有5次数			
	Downhole Pump, Gas Lift, Tubing Anchor, etc.	· 大学 在现在发生			
				\$	17,5
07	Wellhoad Equipment Pun Joint for Mandrel Hanger	10,000	7,500	-	45.0
07 08	Wellhead Equipment, Pup Joint for Mandrel Hanger	10,000	7,500 15,000		
07 08 09	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment	- 015-25-25-30-30-30-30-30-30-30-30-30-30-30-30-30-	15,000 10,000	\$	
07 08 09 10	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools		15,000	\$	46,0
07 08 09 10	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs	36,000	15,000 10,000	\$ \$	46,0 25,0 40,0
07 08 09 10 11 12	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG	36,000	15,000 10,000 25,000	\$ \$ \$	46,0 25,0 40,0
07 08 09 10 11 12 13	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor	36,000	15,000 10,000 25,000 40,000	\$ \$ \$ \$	46,0 25,0 40,0 20,0
07 08 09 10 11 12 13	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO	36,000	15,000 10,000 25,000 40,000 20,000	\$ \$ \$ \$	46,0 25,0 40,0 20,0
07 08 09 10 11 12 13 14	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines	36,000	15,000 10,000 25,000 40,000 20,000 35,000	\$ \$ \$ \$	46,0 25,0 40,0 20,0 35,0
07 08 09 10 11 12 13 14 15	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines	36,000	15,000 10,000 25,000 40,000 20,000 35,000	\$ \$ \$ \$ \$	46,0 25,0 40,0 20,0 35,0
07 08 09 10 11 12 13 14 15 16	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines Controllable Valves and Fittings	36,000	15,000 10,000 25,000 40,000 20,000 35,000	\$ \$ \$ \$	46,(25,(40,(20,(35,(
07 08 09 10 11 12 13 14 15 16 17	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines Controllable Valves and Fittings Float Equipment & Centralizers	36,000	15,000 10,000 25,000 40,000 20,000 35,000	\$ \$ \$ \$ \$	46,0 25,0 40,0 20,0 35,0 20,0 40,0
07 08 09 10 11 12 13 14 15 16 17 18	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines Controllable Valves and Fittings Float Equipment & Centralizers Non-Controllable Lease Materials	36,000 40,000	15,000 10,000 25,000 40,000 20,000 35,000 20,000	\$ \$ \$ \$ \$	46,(25,(40,(20,(35,(20,(40,(20,(
07 08 09 10 11 12 13 14 15 16 17 18 19	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines Controllable Valves and Fittings Float Equipment & Centralizers Non-Controllable Lease Materials Installation Costs	36,000 40,000	15,000 10,000 25,000 40,000 20,000 35,000 20,000 20,000 17,000	\$ \$ \$ \$ \$ \$	46,0 25,0 40,0 20,0 35,0 20,0 40,0 20,0 17,0
07 08 09 10 11 12 13 14 15 16 17 18 19 20	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines Controllable Valves and Fittings Float Equipment & Centralizers Non-Controllable Lease Materials Installation Costs Line Pipe Metering Equipment	36,000 40,000	15,000 10,000 25,000 40,000 20,000 35,000 20,000 20,000 20,000	\$ \$ \$ \$ \$ \$ \$	46,0 25,0 40,0 20,0 35,0 20,0 40,0 20,0 17,0 10,0
07 08 09 10 11 12 13 14 15 16 17 18 19 20 21	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines Controllable Valves and Fittings Float Equipment & Centralizers Non-Controllable Lease Materials Installation Costs Line Pipe Metering Equipment	36,000 40,000 414,000	15,000 10,000 25,000 40,000 20,000 35,000 20,000 20,000 20,000 17,000 10,000 12,500	\$ \$ \$ \$ \$ \$ \$	46,0 25,0 40,0 20,0 35,0 20,0 40,0 20,1 17,1 10,26,
07 08 09 10 11 12 13 14 15 16 17 18 19 20	Wellhead Equipment, Pup Joint for Mandrel Hanger Artificial Lift Equipment Packers and Subsurface Tools Installation Costs Tanks and Accessories 2 x 300 bbls ST, 2 x 300 bbl FG Production Unit, Dehydrator, Compressor Heater Treater. FWKO Electrical Systems and Lines Lease Lines Controllable Valves and Fittings Float Equipment & Centralizers Non-Controllable Lease Materials Installation Costs Line Pipe Metering Equipment	36,000 40,000 40,000 5 294,800	15,000 10,000 25,000 40,000 20,000 35,000 20,000 20,000 20,000 17,000 10,000 12,500	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	15,0 46,0 25,1 40,0 20,1 35,0 20,1 40,1 17,1 10,26,556,2,622,2

his AFE is only an estimate. By	returning a signed copy, you agree to pa	y your proportionate share of actual costs incurred.
V.I. OWNER APPROVAL:		
VIII. OWNER, VIII. VIII.	Bv:	Title:
	Name (Print):	Date:

CD 16-53071

RAMINE SHIPMAN

EXHIBIT Z

C.S.R.

C.S.R.