



Cost Estimate - Drilling & Completion									
Operator: Gastar Exploration USA, Inc.				Prepared By: RDJ		Tax Rate			
Well Name: Unnamed 21-1H				Field: Sooner Trend		Depth: 12,750'			
Legal: T18N-R6W, Section 21				Parish/County: Kingfisher		Days: 30			
Contractor: TBD				State: OK		Spud Date: TBD			
Well Program-Drill and Complete Horizontal Hunton									
Casing	Hole Size	Casing Size Weight, & Grade		Depth	Drilling Fluid	Formation Evaluation			
Conductor	20	16		30'	N/A				
Surface	12 1/4	9 5/8" 36# J55		500'	FW				
Intermediate	8 3/4	7" 26# J55		7,700'	FW Gel w/ABO	CBL, Triple Combo, RSW Cores			
Production	6 1/8	4 1/2" 11.6# P110		12,700'	FW w/Gel	CBL, Triple Combo, FMI			
Costs					8300		8500		
Code	Item	Item Cost per Unit	Drilling Days/Units	Drilling Cost	Completion Days/No.	Completion Cost	Total	Cost	
Capitalized Intangible Drilling & Completion Costs									
100	Site Preparation & Maintenance			124,000		35,000	159,000		
	Permits & Surveys			5,000			5,000		
	Location, Roads, Pits			60,000		5,000	65,000		
	Water/Water Well/Plugging			30,000		5,000	35,000		
	Conductor/Mousehole Installation			9,000			9,000		
	Site Restoration & Land Use			10,000		5,000	15,000		
	Wellsite Security								
	Roustabouts & Labor			10,000		20,000	30,000		
110	Title Opinion			5,000		2,500	7,500		
120	Drilling/Completion Rig			785,000		4,500	789,500		
	Mob/Demob			125,000			125,000		
	Rig Rental	22,000	30	660,000		4,500	664,500		
	Top Drive & Mousehole								
	Additional Crew/Oil Base pay								
130	Engineering & Supervision			88,000		14,000	102,000		
	Wellsite Supervision	1,400	30	42,000	10	14,000	56,000		
	Engineering & Geology			15,000			15,000		
	Rig Supervisor Camp			30,000			30,000		
	Communications			500			500		
	Field/Office Supplies			500			500		
140	Fuel	1,200	30	36,000		1,500	37,500		
150	Well Evaluation			72,500		100,000	172,500		
	Open Hole Logging			35,000		80,000	115,000		
	Cased Hole Logging			7,500		10,000	17,500		
	Mud Logging	1,500	20	30,000			30,000		
	Core Analysis								
	Drill Stem Testing								
	Fluid Analysis								
	Production Testing				10	10,000	10,000		
160	Casing Services			23,500		29,500	53,000		
	Casing Crews & Rental Tools			20,000		25,000	45,000		
	Roustabouts & Cleaning			3,500		4,500	8,000		
	Thread Specialist								
170	Cementing Services			35,000		40,000	75,000		
	Primary Cementing			35,000		40,000	75,000		
	Remedial Cementing								
	Loss Circulation								
	Squeeze Packers & Cementers								
	Kick-Off Plugs								
180	Drilling Tools			60,000		7,500	67,500		
	Drill Bits			60,000		7,500	67,500		
	Core Bits								
	Stabilizers/Reamers								
	Performance Motors/Turbines (ATK)								
	Drilling Jars								
	Shock Subs								
190	Drilling/Completion Fluids & Services			130,000		10,000	140,000		
	Fluids & Services			125,000		10,000	135,000		
	Shaker Screens			5,000			5,000		
200	Equipment Rentals			62,500		53,500	116,000		
	Shale Shaker								
	Mud Cleaner								
	Centrifuge					10,000	10,000		
	Transfer Pumps								
	Steam Cleaners								
	Wear Bushing								
	Rentals - Surface			60,000			60,000		
	Rentals - Subsurface								
	PVT/Flo-Show								
	BOP Rental								
	Forklift			2,500		3,500	6,000		
	Hydraulic Choke								
	Tankage (Frac Tanks)					40,000	40,000		
210	Drill String			25,000			25,000		
	Drill Pipe			20,000			20,000		
	Drill Collars								
	Drill Pipe Protectors								
	Inspections & Repair			5,000			5,000		
	Corrosion Control								
220	Environmental			45,000		20,000	65,000		



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<b>Legal:</b> T18N-R6W, Section 21		<b>Parish/County:</b> Kingfisher		<b>Days:</b> 30	
<b>Contractor:</b> TBD		<b>State:</b> OK		<b>Spud Date:</b> TBD	
Solid Waste Disposal		5,000			5,000
Brine & Water Disposal		5,000		15,000	20,000
Cuttings Haul-off & Disposal		10,000		5,000	15,000
Closed Loop Services		25,000			25,000
Reserve & Flare Pit Closure					
Spill Cleanup					
<b>230 Miscellaneous</b>		<b>20,000</b>		<b>10,000</b>	<b>30,000</b>
<b>240 Specialty Tools &amp; Services</b>		<b>260,000</b>		<b>10,500</b>	<b>270,500</b>
Directional & MWD Services		260,000			260,000
Well Surveying (SS, EMS, Gyro)					
Fishing Tools and Services					
Sidetrack: Whipstock, Mills, Service					
Coring Services					
Safety (H2S)					
Control Of Well					
BOP NU & Testing Services				6,000	6,000
Wellhead Technician				4,500	4,500
<b>250 Trucking &amp; Transportation</b>		<b>10,000</b>		<b>7,500</b>	<b>17,500</b>
<b>260 Welding</b>		<b>7,500</b>		<b>3,000</b>	<b>10,500</b>
<b>270 Production Services</b>				<b>2,080,000</b>	<b>2,080,000</b>
Stimulation				1,600,000	1,600,000
Perforating				100,000	100,000
Wireline Services				25,000	25,000
Stimulation Water/ Transfer				80,000	80,000
Coil Tubing & Nitrogen Services				200,000	200,000
Misc. Rental Equipment				50,000	50,000
Pressure Testing Services					
Facilities Construction				25,000	25,000
<b>300 Contract Labor</b>		<b>10,000</b>		<b>20,000</b>	<b>30,000</b>
<b>310 Plug and Abandonment</b>					
<b>400 OEE Insurance</b>		<b>5,000</b>			<b>5,000</b>
<b>500 Overhead Allocation</b>		<b>15,000</b>		<b>10,000</b>	<b>25,000</b>
<b>Total Intangible Cost</b>		<b>\$1,819,000</b>		<b>\$2,459,000</b>	<b>\$4,278,000</b>
<b>Tangible Drilling &amp; Completion Costs</b>		<b>8400</b>		<b>8600</b>	
<b>100 Casing</b>		<b>164,600</b>		<b>152,400</b>	<b>317,000</b>
Conductor Casing				15,000	15,000
Surface Casing		22 500		11,000	11,000
Protection Casing		18 7700		138,600	138,600
Protection Casing					
Drilling Liner & Tieback					
Production Liner/Casing		12 12700		152,400	152,400
<b>110 Production Tubing</b>				<b>32,200</b>	<b>32,200</b>
Tubing		4 7800		31,200	31,200
Pups and cross-overs				1,000	1,000
<b>120 Subsurface Equipment</b>		<b>4,500</b>		<b>63,000</b>	<b>67,500</b>
Liner Hanger & Packer					
Production Packer, Anchor, Seals				8,000	8,000
Cementing Equipment		4,500		15,000	19,500
Gas Lift Mandrels & Valves				20,000	20,000
Pumps					
Bridge Plugs				20,000	20,000
<b>130 Wellhead Equipment</b>		<b>15,000</b>		<b>10,000</b>	<b>25,000</b>
<b>140 Production Equipment</b>				<b>78,000</b>	<b>78,000</b>
Stock Tanks 400 BL		10,500 2		21,000	21,000
Water Tank 400 BBL		9,000 1		9,000	9,000
Sand Separator				6,000	6,000
Gas Meters		4,500 3		13,500	13,500
Separator - 2 Phase 36"x 10'		8,500 1		8,500	8,500
Heater Treater 6"x 20"		20,000 1		20,000	20,000
<b>150 Miscellaneous Equipment</b>				<b>45,000</b>	<b>45,000</b>
Surface Lines/Gathering System				20,000	20,000
Line Pipe/Fittings				25,000	25,000
Sucker Rods					
<b>Total Tangible Cost</b>		<b>\$184,100</b>		<b>\$380,600</b>	<b>\$564,700</b>
		<b>Drilling</b>		<b>Completion</b>	<b>Total</b>
<b>Total Cost</b>		<b>\$2,003,100</b>		<b>\$2,839,600</b>	<b>\$4,842,700</b>
<b>Contengencies</b>		<b>5%</b>		<b>\$141,980.00</b>	<b>\$242,135</b>
<b>AFE Cost</b>				<b>\$2,981,580</b>	<b>\$5,084,835</b>
<b>W.I. Share</b>		<b>100.00%</b>		<b>\$2,981,580</b>	<b>\$5,084,835</b>

Approved By:

Company: *GASTAR EXPLORATION*

Title: *OPERATIONS MANAGER*

Signed this 30<sup>th</sup> day of September, 2013.