

Drilling Economics

Knowing Your Cost of Drilling

A guide for every owner, project manager, drilling manager, engineer, and support staff

Presented by:

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Agenda

- Presenter Background and Introduction
- Job Costing
- Manpower Schedule
- Absorbing Cost Into Your Projects
- Pulling It All Together: Knowing Your Cost of Drilling
- Estimating & Quoting – Using Data to Make Decisions
- Q&A Session

Jake Rockefeller

Bio and Introduction

- Servant Leader and CEO of Rig Source LLC
- Previous roles in public accounting, finance, operations, manufacturing, and sales
- Have a holistic view of business and understand the interworking's of operations and its impact on profitability
- Constantly challenge how business is done and do not settle for the SALY approach (same as last year)
- Rely on numbers to make decisions – in the end you should always know where you will land when a project is complete (good or bad)



Job Costing:

The Holy Grail of Knowing Your Cost of Drilling

- Job costing is a method used to summarize Revenue and corresponding cost such as Labor, Materials, Overhead, and Outside Service costs used to complete a project
- Operations tool that supports improved profitability, historical trend analysis, and continuous improvement efforts
- If done properly, Job Costing can tell an owner or manager how profitable they were on a given project, or what needs to improve with the next project to reach desired profitability
- Provides a means for performance incentives by jobs completed
- Most accounting programs can do a version of job costing or project management
- If you commit to job costing, you must go all in and track all job-related expenses properly

Manpower Schedule & Efficiency Calc:

How Much Do Employees Really Cost/Hr.?

- Calculate your fully burdened cost of each employee, inclusive of overtime, benefits, and taxes

<u>Employee:</u>	<u>Max. Hours Available / Yr.</u>	<u>Hourly Wage</u>	<u>Annual</u>		<u>Total Wages</u>	<u>Total Benefits</u>	<u>Total Payroll Tax</u>	<u>Fully Burdened</u>		
			<u>Base Wages</u>	<u>Employee OT Wages</u>				<u>Gross Wages</u>	<u>Per/Hr.</u>	
Driller	1	2,080	\$ 45	\$ 93,600	\$ 20,250	\$ 113,850	\$ 8,095.50	\$ 9,801.53	\$ 131,747	\$55.36
Driller	2	2,080	43	89,440	19,350	108,790	7,735.70	9,414.44	125,940	52.92
Driller	3	2,080	42	87,360	12,600	99,960	7,366.80	8,738.94	116,066	50.91
Assistant	1	2,080	30	62,400	18,000	80,400	5,532.00	7,242.60	93,175	37.57
Assistant	2	2,080	28	58,240	16,800	75,040	5,163.20	6,832.56	87,036	35.10
Assistant	3	2,080	27	56,160	12,150	68,310	4,857.30	6,317.72	79,485	33.40
		<u>12,480</u>		<u>\$447,200</u>	<u>\$ 99,150</u>	<u>\$546,350</u>	<u>\$ 38,751</u>	<u>\$ 48,348</u>	<u>\$ 633,448</u>	

Manpower Schedule & Efficiency Calc:

Coming to grips with actual billable hours in a year

- How many hours are available for each driller to actually drill each year?

<u>Employee</u>		<u>Max. Hours Available per/yr.</u>	<u>Estimated Over time</u>	<u>Total Annual Hours</u>	<u>LESS: PTO & Training</u>	<u>LESS: Breaks and Meetings</u>	<u>Max Hours Avail. For Production</u>	<u>LESS: Non-Billable Time</u>	<u>Estimated Billable Hours</u>
1 Driller	1	2,080	300	2,380	(232)	(277)	1,871	(666)	1,204
2 Driller	2	2,080	300	2,380	(232)	(277)	1,871	(666)	1,204
3 Driller	3	2,080	200	2,280	(232)	(277)	1,771	(638)	1,132
4 Assistant	1	2,080	400	2,480	(232)	(277)	1,971	(694)	1,276
5 Assistant	2	2,080	400	2,480	(232)	(277)	1,971	(694)	1,276
6 Assistant	3	2,080	300	2,380	(232)	(277)	1,871	(666)	1,204
		12,480	1,900.00	14,380	(1,392)	(1,663)	11,325	(4,026.40)	7,298

50% Efficient Operation

Absorbing Costs Into Your Project:

Direct vs. Indirect Costs

Direct Project Costs:

Project specific cost that can be easily traced

- **Labor Costs:** wages and benefits of drillers and assistants
- **Equipment Costs:** rental costs of all equipment used on the project
- **Outside Services / Repairs**
- **Materials**
- **Job Specific Tooling**
- **Mob/DeMob Costs**
- **Testing & Sampling Costs**
- **Permits and Fees**

Indirect Project Costs:

Cost used by entire company, not project specific

- **Management salaries and benefits**
- **Overhead:** Rent, utilities, trash removal, maintenance, depreciation, drilling supplies, general tooling, fuel, rig repairs
- **Insurance:** Premiums for equipment, liability, and workers comp.
- **Training & Safety Programs**
- **Administration costs:** Invoicing, software, supplies, estimating salaries

Absorbing Costs Into Your Project:

Don't overcomplicate it!

- Review your chart of accounts and identify accounts that support the drilling operation but cannot easily be tracked by each project.
- Example of Indirect Expense accounts:

- **401k Match:** Shop, Mgmt, Admin
- **Bulk Consumables**
- **Depreciation:** Rigs and Support Equipment
- **Fuel**
- **General Tooling**
- **Health Insurance:** Shop, Mgmt, Admin
- **Insurance:** Building and Workers Comp
- **Insurance:** Equipment & Autos
- **Payroll Taxes:** Shop, Mgmt, Admin
- **Per Diem Expenses**
- **Rent:** Shop

- **Repairs and Maintenance**
- **Salaries:** Drilling Manager
- **Salaries:** Lab & Drilling Support
- **Salaries:** Project Manager
- **Salaries:** Shop
- **Shipping Supplies**
- **Shop Maintenance**
- **Shop Supplies**
- **Trash Removal**
- **Uniforms**
- **Utilities:** Electric, Gas, Water

Pulling It All Together: Knowing My Cost of Drilling!

GOAL:
Understand the drilling cost
per productive hour

- Done annually but can be reviewed if significant changes are made throughout the year to equipment, manpower, or management
- **Cost / Productive Hour:** Used for all estimating & quoting in the current year when work is steady & all rigs are working
- **Overhead / Hour:** Used when rigs & manpower are sitting idle – this will cover operational cost to avoid downsizing
- **Direct Labor + Fuel + Depreciation / Hour:** Used for Mob/DeMob only

<u>Account Description</u>	<u>Annual Total</u>	<u>Reference</u>
Direct Labor	\$ 546,350	Manpower Schedule
Benefits - Direct Labor	38,751	Manpower Schedule
Payroll Taxes - Direct Labor	48,348	Manpower Schedule
Per Diem Expenses	55,000	Estimate
401k Match - Shop, Mgmt, Admin	9,000	
Bulk Consumables	60,000	
Depreciation - Drill Rigs	85,714	
Depreciation - Shop & Support Equipment	60,000	
Fuel	120,000	
General Tooling	100,000	
Health Insurance - Shop, Mgmt, Admin	15,000	
Insurance - Building	8,000	
Insurance - Equipment & Autos	36,000	
Insurance - Workers Comp	42,500	
Insurance - Umbrella	25,000	
Payroll Taxes - Shop, Mgmt, Admin	27,000	
Rent - Shop	96,000	
Repairs and Maintenance	126,000	
Salaries - Shop, Mgmt, Admin	300,000	
Shop Maintenance	14,400	
Shop Supplies	30,000	
Trash Removal	12,000	
Uniforms	8,000	
Utilities	20,000	
Total Cost of Drilling Operations	\$ 1,883,063	
Productive Labor Hours	7,298	Efficiency Calc
Cost / Productive Hour	\$ 258.02	
Overhead / Hour	\$ 171.22	
Direct Labor + Fuel + Depreciation / Hour	\$ 123.20	
Direct Labor + Benefits / Hour	\$ 86.79	

Estimating:

Using Numbers to Make Quotation Decisions

Project Name: DrillExpo 2024

Direct Labor	<u>Qty</u>	<u>Rate</u>	<u>Total</u>
Site Prep	12	258.02	3,096.19
Drilling	16	258.02	4,128.25
Cleanup	4	258.02	1,032.06
Total Direct Labor	32.00		8,256.50
Travel Accommodations	2	150	300.00
Equipment Cost			
Drill Rig Rental	-		-
Specialty Equipment Rental	1	1,000	1,000
Total Equipment Cost			1,000
Materials			
Material 1			309.62
Material 2			2,064.13
Total Material Cost			2,373.74
Job Specific Tooling			
Specialty 1			412.83
Specialty 2			-
Total Specialty Cost			412.83
Mob/DeMob Cost	<u>Qty</u>	<u>Rate</u>	<u>Total</u>
Round Trip Drive Time	10	123.20	1,232.02
Testing and Lab Costs	5	250	1,250.00
Permits and Fees	1	500	500
Total Estimated Job Cost			15,325

Desired Margin On Drilling Projects	30%	25%	20%	15%
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Quoted Total to Client	21,893	20,433	\$ 19,156	\$ 18,030
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- The Drilling Manager can decide on the quoted total to the client based on upcoming projects and availability
- This Estimation becomes the road map for the drilling crew and actual results are tracked daily and reviewed when the job is complete
- Driller/Assistant incentives can be awarded for efficiency, material usage, and Estimate Vs. Actual costs

Questions?

Email: Jake@rigsourceinc.com

Thank You!

Slides and Excel
Templates
available here:

