Northwest North Dakota Workforce Training

July 12, 2007

ND Oil and Gas Research Council
The Industrial Commission of North Dakota
ATTN: Karlene Fine
600 E Boulevard Avenue, Dept. 405
Bismarck, ND 58505-0840

RE: FINAL GRANT REPORT

Enclosed you will find the final grant report for the Petroleum Safety and Technology Center – Service Rig Training Program. The NW ND Workforce Training Division at Williston State College thanks the Council members for the support of this program.

Thank you for funding our initial grant application. If you need further information, feel free to contact me at deanette.piesik@wsc.nodak.edu or at 701-774-4246.

Sincerely,

Deanette Piesik

Deanette Piesik
Director
NW ND Workforce Training
Continuing Education

Enclosure

Final Grant Report

ND Oil and Gas Research Council

July, 12, 2007

The grant application requested from the ND Oil and Gas Research Council was used to hire a Service Rig Trainer for the period of April 1 – June 30, 2007. Office equipment was purchased for the trainer (computer, printer). This position's primary responsibility will be to provide service rig training. Materials needed for the course such as training videos/PowerPoints is listed, but most of the equipment for the hands-on training will be or has been donated. The curriculum development of the Service Rig Training Program was accomplished. The hands-on outline is attached to this report. The new curriculum will be reviewed by area Service Rig Companies throughout July. Any changes or refinements will then be made to the program. Also, a sample training manual for students has been developed. The Service Rig Trainer attended professional development conferences and training to add to their skill set.

WSC received $400,000 from the State of ND to develop the Petroleum Safety and Technology Center. Those dollars have been allocated to insure that donated equipment meets industry standards. In addition, area oilfield companies have donated over one million dollars in equipment and services. The equipment needed to fully-equip the rig have been secured. WSC will match the grant with $40,716 in salary, equipment, furnishings, etc.

ND Industrial Commission
Oil and Gas Research Program
Petroleum Safety and Technology Center
April 1, 2007- June 30, 2007

	Grant Request	Year to Date	WSC Match	Year to Date	Industry Match	Year to Date
Salaries:						
ISTP Specialist	$0.00	$0.00	$12,593.00	$12,593.00	$0.00	$0.00
Trainer	$19,389.00	$19,389.00	$0.00	$0.00	$0.00	$0.00
Director	$0.00	$0.00	$15,023.00	$15,023.00	$0.00	$0.00
Subtotal	*$19,389.00*	*$19,389.00*	*$27,616.00*	*$27,616.00*	*$0.00*	*$0.00*
Office Equipment:						
Furniture	$0.00	$0.00	$1,000.00	$1,000.00	$0.00	$0.00
Laptop Computer	$1,440.00	$1,440.00	$0.00	$0.00	$0.00	$0.00
Software	$60.00	$60.00	$100.00	$100.00	$0.00	$0.00
Printer	$177.00	$177.00	$200.00	$200.00	$0.00	$0.00
Subtotal	*$1,677.00*	*$1,677.00*	*$1,300.00*	*$1,300.00*	*$0.00*	*$0.00*
Training Equipment:						
Videos/ PowerPoint	$0.00	$0.00	$300.00	$300.00	$500.00	$500.00
Training Site Equipment/Services	$0.00	$0.00	$1,000.00	$1,000.00	$1,056,563.00	$1,056,563.00
Other Training Equipment	$4,500.00	$4,500.00	$6,500.00	$6,500.00	$10,000.00	$10,000.00
Subtotal	*$4,500.00*	*$4,500.00*	*$7,800.00*	*$7,800.00*	*$1,067,063.00*	*$1,067,063.00*
Professional Development:						
Conferences/Training	$1,500.00	$1,500.00	$4,000.00	$4,000.00	$0.00	$0.00
Subtotal	*$1,500.00*	*$1,500.00*	*$4,000.00*	*$4,000.00*	*$0.00*	*$0.00*
Total	**$27,066.00**	**$27,066.00**	**$40,716.00**	**$40,716.00**	**$1,067,063.00**	**$1,067,063.00**

Grant Amount: $27,066
WSC Match: $40,716
Industry Match: $1,067,063

Service Rig Training Program Curriculum

Write JSA and JSC:

(Job Safety Analysis and Job Safety Checklist)

Go over PPE before leaving change area:

Boots-ankle high, hard toes
Hard Hats-explain defects and when to replace
Safety Glasses (goggles if needed)
Gloves
Shirts with sleeves (H2S equipment if needed)

Talk about wind:

Wind Direction,
What to do if wind changes
Why the wind can be your friend
Move doghouse if needed
Escape Routes

Pre-Start Check of Rig:

Oil and Water
How to Service Air System
Drain and add methanol
-Methanol Safety
-Oiler System
Winter time pre-heat
-Hot Boxes
-Plug in Rig
Be aware of gas on location
-Blow down well after rig is started or if wind direction allows both operations at once
-Be aware that wind could change at any time

Location Inspection:

Look for Guy-Line anchors
Inspection tags and meaning of tags
What do if not properly tagged, or expired
Look for hazards on location
Power lines
Tripping hazards
Lockout/Tagout

Instruction in placing sheaves and clamps

Placement of fire extinguishers
Refresh fire extinguisher inspection process

Guylines

Unwrapping and wrapping
(Allow all students to cycle through and familiarize)
Inspection of lines for kinks, broken wires, frays, lower catwalks and add handrails

Placement of Rig Pads

Inspect rig up area
Level ground
Firmness of ground
Clean off ice and snow where pads will go (if needed)

Lower Jacks and Level Rigs, Set Lock-Nuts

Final Walk-Around of Rig

Visually inspect derrick
Point out locking pawls and explain function
Look for lines that might be snagged
Chains hooked to headache rack
Explain greasing crown
Talk about importance of not leaving tools in derrick
Instruction in derrick lifting procedure
Weight indicators (care and handling)

Lift Derrick

Level and set indicator pads
Unchain blocks
Instruct on swinging lines out from back of derrick and pulling lines so they do not snag when raising the derrick
(Rig should stay level so it will not move)

Raise Derrick

Inspect derrick locking pawls

Pull Guy-Wires

Instruct in proper tension
Proper placing of clamps (close to sheave and 12" apart)

Lower Blocks Level Side to Side if Needed

Post Rig Up

If rods and tubing not in hole
    Get all tubing equipment out
    Slips, subs, wrenches, hammers
    Tongs, elevators, links, tag lines
Change traveling block assembly to tubing if needed
Tie rig to single line
Go over rope socket and drill line inspection
    Brakes and draworks

Unflange Well and Nipple Up Blow Out Preventer

What is a BOP
How a BOP Works
How to start an accumulator
Equipment needed to pick up a BOP and place on well
Procedure and JSA on NOBOP
Use of hammer wrenches
What are the tubing lips
Lower work floor and install handrails and stairways
Instruction on tubing shut in valve and closing BOP

Pick Up Tubing Tongs: Teach

Lock-out of hydraulic power to tongs to change tong heads
Use of back-ups
Maintenance of tongs (rod tongs when used)

Pick up Tubing: Teach

Talley pipe
Drifting (rabbit) pipe
Proper (2 man) lift
Torque setting
Pick up and trip in the hole (TIH)
Add downhole tools if used
Give all students ample opportunity to cycle through picking up tubing and running tongs, changing tong heads, practice pulling slips and cleaning dies

Demonstrate Setting Downhole Tools if Applicable

Rig Down Tubing Equipment and Work Floor

Nipple down BOP

Flange up Well

Prepare to Run Rods

Change blocks over from tubing to rods
Pick up rod tongs and instruct
Instruct on setting and checking torque
Instructions on care and handling of rods along with proper lifting
Cycle all students through process from picking up rods to running rod tongs
Rig down rod equipment
Explain seating and spacing of pump
Explain "hanging on"
Clean location

Rig Down "Training Rig"

Note: The duration of this process will depend of the abilities of each class to pick up on each step, of more time is needed more time will be taken. If they catch on in two or three days, other simulations can be implemented such as 3rd party work, special instruction, etc. Special Instruction and 3rd party could consist of but not limited to, wireline, stimulation, tools, "downhole and fishing," speakers on slings and chains, BOP, hoses and fittings.