

**APPENDIX IX: RIG SPECIFICATIONS**

# MEREENIE RIG NO. 1

## DRILLING RIG AND EQUIPMENT

### DRAWWORKS

OIME Model SL-5 two speed drawworks complete with Parmac Model 342 hydromatic brake, twin disc model, PO-230 high and low drum clutches. Brake drum size is 22 1/2" x 44". Crown block protector, remote control from driller's stand on block derrick floor (18' above ground level) to drawworks (mounted 42" above ground level).

### CATWORKS/ROTARY DRIVE

OIME Unit complete with air operated make-up and break-out catheads, 14" Fawick catshaft brake, 1 1/4" triple input chain and 2" pitch double rotary drive chain. Catworks is driven from No. 1 engine shaft or rig compound driven by means of two (2) spiral bevel gear boxes (rated at 500 HP).

### COMPOUND

OIME compound drive group powered by 3 caterpillar D-3408 diesel engines and 3 Allison 6061 transmissions with torque converters.

The compound mounts directly to a 42" high substructure as do the engines. The substructure splits fore and AFT between compound and transmission, allowing the rig drive system to move in two loads.

Compound substructure has air receiver and diesel powered compressor, and engine substructure has fuel tank and fuel return tank.

### ENGINES

Three (3) caterpillar Model D-3408 PCTA Oilfield diesel engines turbocharged and aftercooled, rated at 385 HP.

### MUD PUMPS

Two (2) Continental Emso F-800 skid mounted triplex single acting mud pumps - V-belt driven from Omie three engine compound 6 3/4" x 9" with continental Emsco PD-45 pulsation dampeners and continental Emsco SD-6 suction desurgers.

### CHARGING PUMPS

Two (2) mission "Magnum 1" centrifugal pumps.

### MAST AND SUBSTRUCTURE

Parco Model P-131 cantilever mast, with a clear working height of 131'. Base dimensions of 18 1/2' x 7' top dimensions of 5 1/2' x 5 1/2', and supported on a Type SL substructure with overall base dimensions of 23'8" x 46'1", with a working floor elevation of 18'. Maximum static hook load rating with ten lines if 550,000 lbs, while the casing capacity of 467,000 lbs.

Racking platform with pipe rest and fingerboards for 13,500' of 4 1/2" O.D. drill pipe.

## **TRAVELLING BLOCK AND HOOK**

Continental Emso RA-36-5-H250 hook block assembly, utilising Web Wilson hydrahook. 250 ton rating with 5 x 36" diameter sheaves. Grooved for 1 1/8" drilling line.

## **SWIVEL**

Oilwell PC-300 swivel with 300 ton dead load capacity.

## **ROTARY TABLE**

Ideco 27 1/2" LR-275 maximum opening 27 1/2".

## **BLOWOUT PREVENTERS AND ACCUMULATORS**

- (a) Cameron Type "U" double gate unit. 13 5/8" bore - 5000 PSI W.P.
- (b) Cameron Type "D" super trim annular preventer. 13 5/8" - 3000 PSI W.P.
- (c) Shaffer Type 79 rotating blow out preventer. 13 5/8" - 3000 psi flange with 7 1/16" - 3000 psi flanged side outlet.
- (d) Kookey MA080-11SB3 blowout preventer control until - 3000 psi W.P. accumulator. 4 station unit.

## **SPOOLS AND ADAPTORS**

- 1 only Cameron drilling spool. 13 5/8" - 5000 psi
- 1 only Cameron double studded adaptor flange 13 5/8" - 5000 psi by 10" - 2000 psi
- 1 only companion flange 13 5/8" - 3000 psi to 16" O.D. conductor
- 1 only flo-nipple riser
- 1 only double studded adaptor flange. 13 5/8" - 5000 psi by 13 5/8" - 3000 psi
- 1 only double studded adaptor flange. 7 1/16" - 2000 psi by 13 5/8" - 5000 psi
- 1 only double studded adaptor flange. 13 5/8" - 5000 psi by 7 1/16" - 3000 psi
- 1 only double studded adaptor flange. 13 5/8" - 5000 psi by 11" - 2000 psi with 11" bore

## **CHOKE MANIFOLD**

3" - 5000 psi working pressure choke and kill manifold with one positive and one adjustable choke, and Cameron 3" - 5000 psi HCR flanged valve.

## **CUP TESTER**

1 only Cameron Type "F" cup tester mandrel. 4" I.F. pin/box connections with the following cup tester rubbers:

- 1 only 10 3/4" for 40.5 lb/ft casing
- 1 only 8 5/8" for 32 lb/ft casing

## **KELLY COCK**

- 1 only Hydril "Kellyguard" upper kelly cock. 6 5/8" reg. 10,000 psi working pressure.
- 1 only Hydril "Kellyguard" lower kelly cock. 4" I.F. 10,000 psi working pressure.
- 1 only Hydril "Kellyguard" drill pipe stabbing valve. 4" I.F. 10,000 psi working pressure.

### **MUD CHECK VALVE**

1 only Drilco mud-check kelly valve. 6 1/4" O.D. with 4" I.F. box up/pin down connections.

### **DEGASSER**

Vertical degasser. 20" O.D. x 12' mounted on shaker tank.

### **MUD SAVER**

Oteco mud bucket - for 4 1/2" drill pipe.

### **SHALE SHAKER**

Brandt single tandem. Powered by Toshiba electric induction motor. 460 volts 60 HZ 3 phase.

### **MUD MIXERS**

4 Brandt Model MA7-5, with 32" diameter blades powered by 4 Toshiba electric induction motors, 460 volts 60 hz 3 phase 7.5 HP.

### **MUD GUNS**

8 Demco model 33 LP 3" bottom mud guns.

### **MUD HOPPER**

2 Demco model 612B 6" mud hoppers with 6" venturi.

### **DESANDER**

Demco model 84. Comprising 4 x 8" cones, capacity 540 - 700 GPM.

### **DESILTER**

Demco model 412-H comprising 12 x 4" cones, capacity 960-1080 C.P.M. charged by mission "Magnum 1" centrifugal pump.

### **CENTRIFUGE**

NL Baroil standard mud centrifuge. 18 x 28 decanting centrifuge. Conical bowl with 30 GPM 12 lb/gal mud fluid capacity.

### **DRILL PIPE**

250 joints 4 1/2" O.D. 16.60 lb/ft A.P.I. Grade 'E' I.E.U.E. seamless drill pipe, range 2, 18° taper, internally plastic coated, with 6 1/2" O.D. by 3 1/2" I.D. tool joints, hard banded with 4" I.F. connections.

6000' 2 7/8" O.D. 10.40 lb/ft A.P.I. grade 'E' E.U.E. drill pipe, range 2, 18° taper, internally plastic coated with 4 1/8" O.D. by 2 1/8" I.D. tool joints, with 2 7/8" I.F. (NC 31) connections.

## **HEAVY WEIGHT DRILL PIPE**

14 joints 4 1/2" O.D. heavy wall range 2, 6 1/4" O.D. tool joints, 5" O.D. centre upset, 2 7/8" tool joint bore 4" I.F. box/pin connections - with hard banding on pin and box tool joints as well as centre upset.

## **DRILL COLLARS**

2 only 12 3/4" square x 2 3/4" I.D. with 6 5/8" regular box/box connections

6 only Drilco 8" O.D. x 2 13/16" I.D. x 31' long - hardbanded with 6 5/8" regular pin/box connections

1 only Drilco 8" O.D. x 2 13/16" I.D. x 10' long - hardbanded with 6 5/8" regular box/box connections and 5F-6R float recess.

2 only 7 3/4" square x 2 3/4" I.D. with 4 1/2" I.F. box/box connections

12 only Drilco 7" O.D. x 2 13/16" I.D. x 31' long - hardbanded with 4 1/2" I.F. pin/box connections

26 only Drilco 6 1/2" O.D. x 2 1/4" I.D. x 31' long - hardbanded with 4" I.F. pin/box connections

1 only Drilco 6 1/2" O.D. x 2 1/4" I.D. x 10' long - hardbanded with 4" I.F. box/box connections and 4R float recess

1 only Drilco 6 1/2" O.D. x 2 1/4" I.D. x 10' long - hardbanded with 4" I.F. box/pin connections

8 only Drilco 4 1/8" O.D. x 2" I.D. x 31' long - spiral with 2 7/8" I.F. pin/box connections

## **KELLYS**

2 only Drilco 5 1/4" hexagonal kellys x 40' long with 6 5/8" regular L.H. box up by 4" I.F. pin down connections.

1 only Drilco 3 1/2" hexagonal kelly x 40' long with 6 5/8" regular L.H. box up by 2 7/8" I.F. pin down connections.

## **KELLY DRIVE**

Varco MSPC solid pin drive master bushing to suite Ideco 27 1/2" L.R. - 275 rotary table, including insert bowls 1, 2 and 3 and Varco 27 HDP pin drive roller kelly bushing for 5 1/4" hexagonal kelly and 3 1/2" hexagonal kelly.

## **PIPE SPINNER**

Varco SSW-10 safety pneumatic spinner wrench reversible set up for 4 1/2" O.D. drill pipe.

## **BIT BREAKERS**

17 1/2"; 13 3/4"; 13 1/2", 9 7/8"; 8 1/2", 7 7/8"; 6 1/8"; 4 3/4";  
to suite 27 1/2" rotary table

## **STABILISERS**

3 only Drilco non-rotating stabiliser bodies - 7 1/2" O.D. nominal mandrel size with drill collar diameter ends to match 8" O.D. drill collars.

3 only Drilco P/N 2378-5 non-rotating stabiliser bodies - 6" O.D. nominal mandrel size with drill collar diameter ends to match 7" O.D. drill collars.

3 only Drilco P/N 2377-5 non-rotating stabiliser bodies - 5 1/2" O.D. nominal mandrel size with drill collar diameter ends to match 6 1/2" O.D. drill collars.

1 only 13 1/2" welded steel blade stabiliser with 6 5/8" regular box x 6 5/8" regular pin connections

**FISHING TOOLS**

- 1 only Gotco 9 1/8" O.D. slim hole overshot.
- 1 only Gotco 7 5/8" O.D. slim hole overshot.
- 1 only Gotco 4 11/16" O.D. slim hole overshot.
- 1 only 25885 taper tape 6" O.D. x 32" with 4" I.F. box connection
- 1 only magnet 9" O.D.
- 1 only magnet 7" O.D.

**ELEVATOR LINKS**

- 1 set Varco 350 ton 2 3/4" x 108"

**AIR HOIST**

- Two (2) Ingersoll-Rand HU-40 Air Hoist. Maximum load 4000 lbs

**RATHOLE DRILLER**

- Emso chain driven type for 5 1/4" hexagonal kelly.

**CATWALKS**

- 2 only 32' long by 4' wide by 43 1/4" high sections.

**PIPE RACKS**

- Set of 8 tumble type pipe racks. Each 30' long and 43 1/4" high to match catwalks.

**GENERATORS**

- 2 only Caterpillar 3408 P.C.T.A. generator sets. Each 265 K.W.

**MIXING PUMP**

- One (1) Mission "Magnum 1" centrifugal pump.

**WATER PUMPS**

- Two (2) Mission "Magnum 1" centrifugal pumps.

**CEMENT BIN**

- One (1) only 500 sack capacity bulk cement bin. Skid framed for transportation.

**RIG LIGHTING**

- Pauluhn heavy duty explosion proof harness.

**WIRELINE UNIT**

- Mathey retriever wireline (slickline) unit with 15,000' of 0.092" line.

## **DEVIATION RECORDER**

One (1) only geograph "E-C" inclinometer 0 to 16° range 1 3/8" O.D. barrel for wireline (0.092") or go-devil operation.

## **INSTRUMENTATION**

- (a) Totco model DR-4WPT drilling recorder. 4 pen to record: rate of penetration; weight on bit; pump pressure; and hydraulic torque.
- (b) Totco model WLA-50-L Type 50 weight indicator system.
- (c) Totco model DCT-020-BM tong torque system.
- (d) Totco model RT-500-200D-BM rotary torque system.
- (e) Totco model RMG-030-062-BM remote mud gauge system.
- (f) Martin Decker "Satellite A" automatic driller.
- (g) National Type 'D' wireline anchor with 1 1/8" grips.
- (h) Totco tension type load cell.
- (i) Swaco Model 96-11-321 digital pump stroke/rate counter.

## **MUD TANKS**

Shaker Tank - 25' x 8'9" x 6' high

Settling Tank - 34' x 8'9" x 6' high divided into 3 compartments - capacity 291 barrels

Suction Tank - 30' x 8'9" x 6' high. Tank divided into 3 sections - capacity 256 barrels

## **WATER TANK**

One (1) 36' x 8'9" x 7'9" high tank - capacity 424 barrels.

## **FUEL TANK**

One (1) 7'6" O.D. x 31'6" long cylindrical tank - capacity 278 barrels.

## **DOG HOUSE**

34' x 8' x 8' mounted on heavy duty skid. Skid extends past dog house to accommodate Koomey remote control panel.

## **UTILITY HOUSE**

40' x 8'9" x 9' high.

## **AIR PACKAGE:**

### **COMPRESSORS**

Three (3) sullair Model 900/250 air compressors by each compressor delivers 900 C.F.M./F.A.D. at 250 psi.

**BOOSTER**

One (1) Knight Industries Model KOA-2 booster compressor unit delivers 1500 C.F.M. at 1400 psi and 1200 RPM.

**MANIFOLD**

One (1) manifold unit for compressors and booster.

**AIR HAMMERS**

2 only Mission 9" 'Hammerdrill' oilfield type air hammer. 6 5/8" reg. Pinup. Complete with 7 5/8" and 6 5/8" reg. Anvils.

1 only Mission SD-10 industrial type air hammer to suite 9 7/8" industrial type hammer bit.

1 only Ingersoll-Rand HD-380M industrial type Air Hammer. 4 1/2" reg. Pin up. O.D. of body 7.087" to suite bit sizes 7 5/8" to 10 5/8". Operating pressure to 250 psi with 890 SCFM (min.) air volume.