

## Project 1

North Oil Company (NOC) project to drill 70 new wells in the NOC area. These wells are required to sustain production at, or near, current levels (which has reduced because of wells watering out) and to increase overall production where possible. It is hoped that with this increase in production capability, the exports via the Iraq Turkey Pipeline (ITP) can be moved towards the theoretical design capacity of this system of 1.6 million barrels per day (mbpd).

### PHASE 7 - PROJECT 1

| <b>CODE</b>  | <b>ITEM DESCRIPTION</b>  | <b>UNIT</b> | <b>QTY</b> | <b>PROJECT</b>                            |
|--------------|--|-------------|------------|---|
| 08-7-01-0001 | CASING & TUBING (VARIOUS ,SIZES ,GRADES &WEIGHTS)                                    | MTR.        | 400000     | Drilling of 70 new wells in the NOC area. |
| 08-7-01-0002 | CASING ACCESSORIES (VARIOUS).  | NOS.        | 15000      | “   |
| 08-7-01-0003 | ROCK BITS (VARIOUS) & NOZZLES (VARIOUS) .  | NOS.        | 1500       | “   |
| 08-7-01-0004 | SINGLE PACKERS WITH ALL ACCESSORIES ( VARIOUS)                                       | SET         | 75         | “   |
| 08-7-01-0005 | PACKER AND PRODUCTION STRING WITH ALL ACCESSORIES FOR DUAL PRODUCTION.               | SET         | 4          | “   |
| 08-7-01-0006 | OIL WELL CEMENT &ADDITIVES   | TON         | 1000       | “   |
| 08-7-01-0007 | MUD MATERIALS  | TON         | 20000      | “   |
| 08-7-01-0008 | WELL HEADS & X-MAS TREES WITH ACCESSORIES AND SPARE PARTS (VARIOUS).                 | SET         | 70         | “   |
| 08-7-01-0009 | LINER HANGER CEMENTED & UNCEMENTED WITH SEATING TOOLS AND ACCESSORIES (VARIOUS).     | SET         | 50         | “   |
| 08-7-01-0010 | DRILLING SERVICE CONTRACT FOR DRILLING (33) WELLS IN DIFFERENT FIELDS OF N.O.C. AREA | WELL        | 33         | “   |

## Project 2

NOC project to work-over and repair 40 wells in the NOC region. In the period up to December 1999 at least 6 wells in the NOC have ceased to produce (and some of them give 40,000 barrels per day (bpd)) so the effects of insufficient workover capability can be dramatic.

### PHASE 7 – PROJECT 2

| CODE         | ITEM DESCRIPTION  | UNIT       | QTY | PROJECT                      |
|--------------|---|------------|-----|------------------------------|
| 08-7-02-0011 | X- MAS TREES & TUBING SPOOL WITH ALL ACCESSORIES & SPARE PARTS (VARIOUS).                 | ASSEMBLIES | 40  | Well workovers in NOC region |
| 08-7-02-0012 | DOUBLE STUDDED ADAPTERS & ACCESSORIES & SPARES FOR THE EXISTING WELL HEADS & X- MAS TREES | LOT        | 2   |                              |
| 08-7-02-0014 | SINGLE PACKERS WITH ALL ACCESSORIES   | SET        | 40  |                              |
| 08-7-02-0015 | UNCEMENTED LINER HANGER WITH SETTING TOOLS & ACCESSORIES.                                 | SET        | 10  |                              |
| 08-7-02-0016 | LINER HANGER SETTING TOOLS & SPARES (FOR THE EXISTING EQUIPMENT).                         | LOT        | 2   |                              |
| 08-7-02-0017 | CROSS –OVER SUBS  | NOS.       | 300 |                              |

### Project 3

NOC project related to physical production maintenance at the well head, and to provide mobile geological laboratories for field testing, and hardware/software requirements for production analyses, well logging interpretation and – most importantly – the archiving of existing material which is fast deteriorating in the hot and humid climate.

### PHASE 7 – PROJECT 3

| CODE         | ITEM DESCRIPTION   | UNIT  | QTY | PROJECT  |
|--------------|--|-------|-----|--|
| 08-7-03-0018 | CEMENTING UNITS COMPLETE WITH ACCESSORIES & SPARES FOR TWO YEARS OPERATION             | SET   | 2   | Materials and equipment required to sustain NOC production |
| 08-7-03-0019 | HEAVY DUTY TRACTIVE UNIT FOR CEMENTING UNITS   | NOS.  | 2   | '  |
| 08-7-03-0020 | SPARE PARTS FOR BJ CEMENTING UNIT & GM ENGINES.  | LOT   | 2   | '  |
| 08-7-03-0021 | SPARE PARTS FOR JOHNSTON FORMATION TESTING TOOLS.                                      | LOT   | 1   | '  |
| 08-7-03-0022 | AIR COMPRESSORS FOR CEMENTING WITH SPARES FOR TWO YEARS OPERATION                      | SET   | 5   | '  |
| 08-7-03-0023 | LIFTING CAR (FOR LIFT) ,TEN TONS LIFTING CAPACITY WITH SPARES FOR TWO YEARS OPERATION. | SET   | 2   | '  |
| 08-7-03-0024 | TRUCK MOUNTED WIRE-LINE UNIT   | SET   | 2   | '  |
| 08-7-03-0026 | MECHANICAL DOWNHOLE PRESSURE GAUGE (KPG TYPE) COMPLETE WITH SPARE PARTS                | SET   | 10  | '  |
| 08-7-03-0028 | STAINLESS STEEL WELL MEASURING SLICK-LINE  | DRUM. | 16  | '  |
| 08-7-03-0035 | SUBMERSIBLE PUMPS FOR INDUSTRIAL WATER FOR DRILLING                                    | SET   | 30  | '  |

## Project 4

NOC project related to the repair and maintenance of the ITP system, including electronic and electrical equipment for IT-1, IT-1A, IT-2 and IT-2A pumping stations. The project also includes a service contract for the intelligent pigging of the balance of the 40" line to the North and Zahko, (Fatha to MS-1) which – it seems – may be in a very poor state of repair as the previous section pigged showed 273 areas where work was necessary; obviously a serious concern.

The ITP pipeline, and it's associated tank farms and pumping stations, has been largely refurbished but will not be able to perform to specification (1.6 mbpd) until the last section of the 40" line to the border can accept a much higher pumping pressure; current performance is circa 1.05 mbpd, although limited by IT-2 still being under repair, and the limited supply of crude oil.

### PHASE 7 – PROJECT 4

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT                                |
|--------------|---|------|-----|--|
| 08-7-00-0036 | MAINTENANCE OF AUTOMATIC TAP CHANGER FOR 33/11 KV TRANSFORMERS AT IT1 & NEW PROCESS PLANT | NOS. | 6   | Repair and maintenance of ITP pipeline |
| 08-7-00-0037 | SPARES FOR SIEMENS SWITCH GEAR AT IT1A & IT2A   | NOS. | 200 | '                                      |
| 08-7-00-0038 | REPLACEMENT OF OBSOLETE CONTROL SYSTEM FOR ITP LINE                                       | LOT. | 1   | '                                      |
| 08-7-00-0041 | INTELLIGENT PIGGING OF REMAINDER OF THE ITP 40 INCH FROM FATHA TO (MS).                   | LOT. | 1   | '                                      |

### Project 5

NOC project covering four identified Sector Code Items relating to the repair of NOC Gas Process Plants. The Gas Processing Plants need to efficiently de-gas the crude oil before further treatment and eventual export, and the extracted gas can then be substituted as a fuel source rather than being flared, which is both wasteful and with the high levels of sulphur encountered extremely harmful to the environment.

#### PHASE 7 – PROJECT 5

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT |
|--------------|--|------|-----|---------|
| 08-7-00-0040 | AIR COMPRESSORS, ELEC. DRIVEN WITH HUMIDRYER TO BE USED IN PROCESS PLANTS. | NOS. | 12  | “       |
| 08-7-00-0043 | SPARE PARTS FOR VARIOUS TYPES OF PROCESS PUMPS                             | LOT. | 6   | “       |

### Project 6

The North Gas Plant has benefited from the refurbishment of one of the two flue stacks under previous phases; the repair of the 2<sup>nd</sup> flue stack will increase the efficiency of this plant.

#### PHASE 7 – PROJECT 6

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT                              |
|--------------|---|------|-----|--------------------------------------|
| 08-7-00-0044 | THERMAL INSULATING MATERIALS VARIOUS TYPES FOR HEATERS & CHIMNEYS: INSULATING, BRICKS, MORTAR, BRACKETS, JOINT MATERIALS(FILLING) & FIRE PROOF COATING ...ETC | LOT. | 3   | Repair of North Gas Plant Flue Stack |

## Project 7

The dramatic increases in production, and export, noted towards the end of Phase 6 was largely the result of overly ambitious water-flood techniques used in the production fields. The NOC water injection system now requires considerable repair, especially to the measurement and control systems, and the water purification plant. The accurate control of the water pressure in the fields is now of paramount importance due to the very small oil layer remaining, and watering-out of wells is an increasing problem.

### PHASE 7 – PROJECT 7

| CODE         | ITEM DESCRIPTION   | UNIT     | QTY | PROJECT  |
|--------------|--|----------|-----|--|
| 08-7-00-0045 | REWINDING OF 930 KW , 3.3 KV MOTOR ABROAD  | CONTRACT | 1   | Repair and refurbishment of NOC water injection and water pumping facilities |
| 08-7-00-0046 | REPLACEMENT OF CONTROL SYSTEM FOR (EM 85 ) GAS TURBINES AT WATER INJECTION PLANT                             | SET.     | 2   | “  |
| 08-7-00-0048 | SPARE PARTS FOR RIVER AND GRAVITY PUMPS IN ZAB – AREA.   | LOT.     | 2   | “  |
| 08-7-00-0049 | REPLACEMENT OF OBSOLETE PUMPS IN WATER INJECTION PLANT   | NOS.     | 4   | “  |
|              | - REPLACEMENT OF WATER INJECTION PUMPS WITH ACCESSORIES<br>- REPLACEMENT OF BACK WASH PUMPS WITH ACCESSORIES | NOS.     | 2   |  |
| 08-7-00-0050 | REPAIR OF ROTORS OF G.E.C TURBINES.  | NOS.     | 3   | “  |

## Project 8

This group of NOC Sector Code Items refer to engineering repair work required on gas turbines (via overseas service contracts) deployed in gas compressor stations throughout the NOC region, their control systems and air compressor components.

### PHASE 7 – PROJECT 8

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT   |
|--------------|---|------|-----|---|
| 08-7-00-0051 | SPARE PARTS FOR AIR COMPRESSOR.   | LOT  | 2   | Repairs, refurbishment and replacement of crude oil degassing and gas compressor plants in NOC region |
| 08-7-00-0052 | SPARE PARTS FOR 5 TON , 3 TON O.H. CRANE AT GAS COMPRESSOR STATIONS   | LOT  | 2   | “   |
| 08-7-00-0054 | SPARE PARTS FOR SOLAR GAS TURBINES AND GAS COMPRESSORS  | LOT. | 1   | “   |
| 08-7-00-0055 | REPAIR OF GAS TURBINE & GAS COMPRESSOR ROTORS FOR GAS COMP. STATIONS (SOLAR GAS TURBINES & MITSUBISHI GAS COMPRESSORS) ABROAD | SET  | 8   | “   |
| 08-7-00-0056 | SPARE PARTS FOR HITACHI GAS TURBINE AT GAS COMPRESSOR STATION   | LOT. | 1   | “   |
| 08-7-00-0057 | REPAIR OF SOLAR GAS TURBINE AT GAS COMPRESSOR STATIONS( AB-4 AND AB-5) ABROAD   | SET  | 2   | “   |
| 08-7-00-0058 | LUB OIL COOLERS FOR GAS COMPRESSOR STATIONS( AB4, AB5 & AB7)  | NOS. | 3   | “   |

## Project 9

NOC Sector Code Items all related to the K1 and K3 pumping stations covering 2 turbines to be serviced abroad, spare parts for GEC gas turbines, and related control systems.

### PHASE 7 – PROJECT 9

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-00-0059 | REPLACEMENT OF CONTROL SYSTEM FOR RUSTON GAS TURBINES AT K1 & K3 PUMPING STATIONS        | SET  | 4   | Repairs to controls, and turbines, at K1 and K3 pumping stations |
| 08-7-00-0060 | REPAIR OF TWO SULZER GAS TURBINE ROTORS ABROAD   | SET  | 2   | “  |
| 08-7-00-0061 | SPARE PARTS FOR G.E.C GAS TURBINE FOR K1 & K-3 PUMPING STATION FOR ( 8 SETS) OF TURBINES | LOT  | 8   | “  |

## Project 10

The generation of sufficient power – and it's voltage stability - in the NOC area is of great importance, and the Sector Code Items in this project relate to the repair and maintenance of NOC's power generation plants.

### PHASE 7 – PROJECT 10

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT |
|--------------|--|------|-----|---------|
| 08-7-00-0063 | ELECTRICAL FANS MOTORS & REDUCTION GEAR BOX FOR TWO COOLING TOWERS | SET  | 12  | “       |

## Project 11

Project 11, NOC, includes identified activities all related to the maintenance and upgrading of crude oil production throughout the NOC region, as follows:-

- Requirements for connection of Khurmala Dome wells, Kirkuk region.
- Requirements for gas production units in the Jambour field.
- Wet crude treatment plant for Baba Dome.
- **Requirements for the AB-6 compressor station which has been completely cannibalized in the past.**
- Requirements for the completion of surface installations for Saddam field.
- Requirements for wet crude treatment train at Jambour field
- Requirements for the K3 pumping station.
- Equipment for drilling wells at the Hamrin field, if these volumes are required to sustain and increase production.
- Requirements to construct 2 \* 20,000 M3 floating roof crude oil storage tanks near Kirkuk, to handle increased production.

### PHASE 7 – PROJECT 11

| CODE         | ITEM DESCRIPTION   | UNIT | QTY |  |
|--------------|--|------|-----|--|
| 08-7-7-0067  | <u>ACTIVITY NO. (07):</u><br>REHABILITATION OF AB-6<br>COMPRESSOR STATION(<br>MECHANICAL, ELECTRICAL,<br>INSTRUMENT)...ETC | LOT. | 4   |  |
| 08-7-04-0068 | COMPLETION/ REHABILITATION<br>OF SADDAM OIL FIELD (<br>ELECTRICAL, MECHANICAL,<br>INSTRUMENT) ...ETC                       | LOT. | 4   |  |
| 08-7-06-0070 | REHABILITATION OF K3 STATION,<br>COMPRISING: VALVES, FITTING,<br>FLANGES...ETC   | LOT. | 5   |  |
| 08-7-09-0071 | <u>ACTIVITY NO. (09):</u><br>PRODUCTION REQUIREMENTS FOR<br>HAMRIN FIELD   | LOT  | 10  |  |
| 08-7-00-0072 | FLOATING ROOF TANKS 20000 M3<br>WITH ALL ACCESSORIES FOR<br>OPERATIONAL FLEXIBILITY  | NOS. | 2   |  |

## Project 12

NOC requirements for both static and mobile workshops to allow mechanical repair and maintenance work both “on-site” and at Kirkuk to continue, in support of engineering Projects above.

### PHASE 7 – PROJECT 12

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT |
|--------------|---|------|-----|---------|
| 08-7-00-0075 | EQUIPMENT FOR OVER HEAD AND STREET LAMPS MAINTENANCE (ON TRUCK) | ITEM | 2   | “       |

### Project 13

NOC requirement for mobile non-destructive testing (NDT) capabilities without which repairs and new construction work cannot be checked for construction integrity, and operational safety.

### PHASE 7 – PROJECT 13

All items have been removed from the approved list

### Project 14

NOC requirements for static and mobile workshops in support of engineering repair and maintenance in the region.

### PHASE 7 – PROJECT 14

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT |
|--------------|--|------|-----|---------|
| 08-7-00-0080 | VARIOUS TOOLS FOR GENERAL MAINTENANCE AND REPAIR SUCH AS :- (EXTRACTORS, DRILLS, DICES, CUTTERS , CRUCIBLE ...ETC) AND SPARES FOR SERVICE GRINDING MACHINE | LOT  | 10  | “       |

### Project 15

NOC requirements for flow lines, well heads and necessary accessories to connect 46 pre-drilled wells in the region. Some of these wells were previously drilled for water injection purposes, and will now be used for production - subject to the availability of the required equipment.

### PHASE 7 – PROJECT 15

| CODE         | ITEM DESCRIPTION  | UNIT  | QTY | PROJECT  |
|--------------|---|-------|-----|--|
| 08-7-10-0084 | FLOW LINES, WELL HEAD ACCESSORIES FOR CONNECTING OF OIL WELLS | WELLS | 46  | The provision of flow lines and well head accessories for the connection of 46 wells in the NOC area |

## Project 16

The Iraqi oil industry is plagued by power shortages and outages which are extremely damaging to sensitive equipment, especially rotating machinery which “trips” when the voltage fluctuates; this can happen several times a day in some refineries! This project is to improve the delivery of fuel to the East Baghdad power station.

### PHASE 7 – PROJECT 16

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-11-0085 | LINE PIPES WITH FITTING AND WRAPPING MATERIALS AND VALVES                  | ITEM | 55  | This project is to allow more efficient and reliable fuel supply to the East Baghdad power station |
| 08-7-11-0086 | 10000 M3 FLOATING ROOF CRUDE OIL TANK COMPLETE WITH ACCESSORIES            | SET  | 1   | “  |
| 08-7-11-0087 | CRUDE OIL ELECTRIC DRIVEN PUMPS WITH SPARE PARTS                           | SET  | 4   | “  |
| 08-7-11-0088 | CRUDE OIL /DRY GAS METERING AND DEPRESSURIZATION STATIONS WITH SPARE PARTS | SET  | 4   | “  |
| 08-7-11-0089 | PROCESS CONTROL AND INSTRUMENTATIONS                                       | SET  | 2   | “  |
| 08-7-11-0090 | ELECTRICAL EQUIPMENT AND CABLES  | LOT  | 1   | “  |

**Project 17**

Fire fighting requirements, especially for Halon 1211 consumables used on crude oil floating roof tanks.

**PHASE 7 – PROJECT 17**

| <b>CODE</b>  | <b>ITEM DESCRIPTION</b>  | <b>UNIT</b>        | <b>QTY</b>       | <b>PROJECT</b> |
|--------------|--|--------------------|------------------|----------------|
| 08-7-00-0112 | FIRE FIGHTING EXTINGUISHERS WITH RECOMMENDED SPARE PARTS (TYPE : CO2, POWDER & FOOM)   | NOS.               | 1300             | “              |
| 08-7-00-0113 | CO2 REFILLING MACHINE WITH RECOMMENDED SPARE PARTS   | NOS.               | 2                | “              |
| 08-7-00-0114 | SPARE PARTS FOR BREATHING APPARATUS TYPE S.A.V.E.R MODEL C 8600 (VALVES, SEATS, GAUGES, HOSES, BAGS, SPANNER...ETC )   | NOS.               | 2000             | “              |
| 08-7-00-0115 | FIREMAN WEAR (COVER ALL)   | NOS.               | 1000             | “              |
| 08-7-00-0116 | FIRE BRIGADE SAFETY BOOTS  | PAIR               | 500              | “              |
| 08-7-00-0117 | SPARE PARTS FOR ROSENBUER UNIVERSAL FIRE FIGHTING TRUCK TYPE ULF 7000/1000 UK ON MB LK 2624/40-CHASSIS No. 343003-14-903252:- (IMPELLER, DIFFUSER, THROTTLE CONTROL AND CABLES, CYLINDERS, VALVES AND ACCESSORIES, BEACON, HORM...ETC) | NOS.               | 800              | “              |
| 08-7-00-0118 | REPLACEMENT OF HALON 1211 USED FOR FIRE FIGHTING SYSTEM OF FLOATING ROOF TANKS:-<br>OUTDOOR F.F. GAS<br>NOZZLES<br>CONTAINER   | KG<br>NOS.<br>NOS. | 660<br>660<br>33 | “<br>“<br>“    |

## Project 18

Requirement for hydrostatic testing unit to test integrity of pipelines before use, preventing leakages and possible environmental damage.

### PHASE 7 – PROJECT 18

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT  |
|--------------|---|------|-----|--|
| 08-7-00-0129 | HYDRAULIC TEST PUMP DRIVEN BY ELECTRIC MOTOR, DISCHARGE PRESSURE UP TO 5000 PSI WITH ALL REQUIRED FITTINGS AND FLEXIBLE HOSES OF 3/4 " SIZE & LENGTH OF 40 M. WITH SPARE PARTS. | NOS. | 2   | Test equipment for establishing line integrity prior to use, to prevent leakages and contamination |

## Project 19

NOC requirements to rehabilitate the Ain Zalah and Sufiya production fields.

### PHASE 7 – PROJECT 19

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT  |
|--------------|---|------|-----|--|
| 08-7-00-0130 | SPARE PARTS FOR CONTROL ROOM :- (PROCESS CONTROLLERS, INDICATORS, VARIOUS CARDS, INSTRUMENTS, POWER UNITS, LAMPS ...ETC.) | NOS. | 300 | Project to rehabilitate two fields in NOC area |
| 08-7-00-0131 | SPARE PARTS FOR FLOW TANK TK-102 A/B AND TEST TANK TK – 101:-(SWITCHES, TRANSMITTERS, INDICATORS ...ETC.)                 | NOS. | 20  | “  |
| 08-7-00-0132 | SPARE PARTS FOR SEPARATOR & DEHYDRATOR S101/S102 :- ( COUNTERS, TRANSMITTERS ...ETC)                                      | NOS. | 12  | “  |
| 08-7-00-0133 | SPARE PARTS FOR WATER SOFTENING UNIT(W201) :- (DISTRIBUTORS, METERS, DIAPHRAMS ...ETC)                                    | NOS. | 20  | “  |

|              |   |      |   |   |
|--------------|---|------|---|---|
| 08-7-00-0134 | SPARES FOR WATER PUMPING STATION :-<br>(PUMPS, CIRCUIT BREAKERS, PROTECTION UNIT ...ETC.) | NOS. | 5 | “ |
| 08-7-00-0135 | SPARE PARTS FOR REDA ELECT. SUBMERSIBLE :-<br>(SWITCHBOARDS, PUMPS ...ETC.)               | NOS. | 3 | “ |

## Project 20

NOC requirements to allow repair and maintenance to the ITP, used to export crude oil to Turkey for export.

### PHASE 7 – PROJECT 20

| CODE         | ITEM DESCRIPTION  | UNIT               | QTY           | PROJECT   |
|--------------|---|--------------------|---------------|---|
| 08-7-00-0136 | SPARE PARTS FOR HEAVY DUTY DIESEL GENERATOR ENGINE TYPE - BF 12 M 176 :- ( WATER PUMP SEALS ...ETC)   | NOS.               | 15            | Spare Parts and equipment required for maintenance of units on the ITP pipeline |
| 08-7-00-0137 | SPARE PARTS FOR AUXILIARY LUB OIL PUMP INSTALLED ON MAIN PUMP ZMI 480/08 & 480/09 :- (LUB. PUMP , SEALS , GEARS, BEARINGS...ETC)                        | NOS.               | 15            | “   |
| 08-7-00-0138 | SPARE PARTS FOR SLOP PUMP TYPE (PWZV 32-200) :- (SEALS BEARINGS ...ETC)   | NOS.               | 15            | “   |
| 08-7-00-0139 | SPARE PARTS FOR DETROIT DIESEL ENGINE TYPE 08 VF:- (FILTERS, PUMPS, CYLINDER, BEARING, RINGS ...ETC. )  | NOS.<br>SET        | 16<br>2       | “   |
| 08-7-00-0140 | PARE PARTS BEVEL GEAR BOX TYPE IB7 RATOR 6:1 & IB5 RATIO 4:1 :- (BEARINGS, WASHERS, GEARS, PINIONS, BUSHES ... ETC)                                     | NOS.               | 150           | “   |
| 08-7-00-0141 | SPARE PARTS FOR PERKINS DIESEL ENG. GEN. TYPE : 46215 (OVERHAUL KIT, FILTERS, BELTS, THERMOSTAT, INJECTORS, PUMPS, CYLINDER RINGS, BEARINGS ... ETC)    | NOS.<br>SET<br>KIT | 40<br>10<br>2 | “   |
| 08-7-00-0142 | SPARE PARTS FOR MWM DIESEL FIRE ENG TYPE TBD 234 V 12 :- (OVERHAUL KIT, FILTERS, BELTS, THERMOSTAT, INJECTORS, PUMPS, CYLINDER RINGS, BEARINGS ... ETC) | NOS.<br>SET        | 55<br>10      | “   |
| 08-7-00-0143 | AIR COMPRESSOR ,COMPLETE UNIT FOR STARTING FIRE DIESEL ENGINE MWM WITH SPARES   | SET                | 2             | “   |

| <b>CODE</b>         | <b>ITEM DESCRIPTION</b>   | <b>UNIT</b> | <b>QTY</b> | <b>PROJECT</b> |
|---------------------|---|-------------|------------|----------------|
| <b>08-7-00-0144</b> | <b>MECHANICAL SEAL FOR FIRE<br/>JOCKEY PUMP</b>                       | <b>NOS.</b> | <b>2</b>   | <b>“</b>       |
| <b>08-7-00-0145</b> | <b>GEAR BOX ,COMPLETE UNIT,<br/>INSTALLED ON GROVE BALL<br/>VALVE</b> | <b>NOS.</b> | <b>4</b>   | <b>“</b>       |

**Project 21**

NOC requirements for K-3 pumping station.

**PHASE 7 – PROJECT 21**

| <b>CODE</b>  | <b>ITEM DESCRIPTION</b>  | <b>UNIT</b>  | <b>QTY</b> | <b>PROJECT</b>                                       |
|--------------|--|--------------|------------|--|
| 08-7-00-0146 | GEAR BOX TYPE 1000 ,COMPLETE UNIT FOR COOLING TOWER SERIES 8600  | NOS.         | 1          | Equipment required for K3 pumping station at Haditha |
| 08-7-00-0147 | SPARE PARTS FOR MATHER AND PLAT PUMP (6"x7"):-<br>(IMPELLERS, SLEEVES, VALVES, BUSHES, RINGS ... ETC)  | NOS.         | 30         | “  |
| 08-7-00-0148 | SPARE PARTS FOR MATHER AND PLAT PUMP(4"x6"):-<br>IMPELLERS, SLEEVES, VALVES, BUSHES, RINGS ... ETC)    | NOS.         | 16         | “  |
| 08-7-00-0149 | AUDCO PLUG VALVE 12" x 600 & AUDCO VALVE STICK LUBRICANTS ( A, B, C, D, E, F, G )                      | NOS.<br>TINS | 4<br>400   | “  |
| 08-7-00-0150 | SPARE PARTS FOR BROOM & WADE AIR COMPRESSOR :-<br>(VALVES, GUIDES, SPRINGS, O-RINGS, LANTERNS ... ETC) | NOS.         | 80         | “  |
| 08-7-00-0151 | SPARE PARTS FOR MEDIVAN CENTRIFUGAL PUMP:-<br>(THRUST PADS, GLANDS, RINGS, BUSHES ...ETC)              | NOS.<br>SET  | 120<br>12  | “  |

**Project 22**

NOC requirements for K-3 and T-1 pumping stations.

**PHASE 7 – PROJECT 22**

| <b>CODE</b>  | <b>ITEM DESCRIPTION</b>   | <b>UNIT</b> | <b>QTY</b> | <b>PROJECT</b>                                      |
|--------------|---|-------------|------------|---|
| 08-7-00-0152 | 12 " RUBBER TUBE FOR GROVE FLEXFLO RELIEFE VALVE  | NOS.        | 3          | Equipment required for K-3 and T-1 pumping stations |
| 08-7-00-0153 | JOHN CRANE MECHANICAL SEAL COMPLETE UNIT FOR PLANTY PUMP W 80 x 45  | NOS.        | 100        | “   |
| 08-7-00-0155 | SPARES FOR CARRIER AIR CONDITIONING UNIT FOR CONTROL ROOM:-(COMPRESSORS, TRANSFORMER, CONTRACTOR, FAN MOTORS, THERMOSTAT, CONTROL SWITCHES ...ETC.) | NOS.        | 65         | “   |

## Project 23

NOC requirements for T-1 pumping station.

### PHASE 7 – PROJECT 23

| CODE         | ITEM DESCRIPTION  | UNIT        | QTY      | PROJECT                                    |
|--------------|---|-------------|----------|--|
| 08-7-00-0156 | SPARE PARTS FOR KSB PUMP WKF 100/10 :-<br>(COMPLETE BEARING, HOUSING & RESERVOIR, IMPELLER, SHAFT, DIFFUSER, SLEEVE, RINGS, BUSHES, CIRCELIPS...ETC.) | NOS.<br>SET | 80<br>15 | Equipment required for T-1 pumping station |
| 08-7-00-0157 | SPARE PARTS FOR 20"/20" CSBH MEDIVAN CENT.<br>OIL PUMP :- (SEALS SEPARATOR THRUST PADS, SLEEVES, RINGS ...ETC)  | NOS.        | 12       | “  |
| 08-7-00-0158 | SPARE PARTS FOR BROOM & WADE AIR COMPRESSOR TYPE BWZD:-<br>(VALVES, WATER PUMPS, COUBLINGS, RINGS, BELTS ...ETC.)                                     | NOS.        | 60       | “  |

## Project 24

NOC requirements for the repair and maintenance of process tanks, cylinders and storage vessels throughout the region. The lack of safe and dependable storage facilities impinges on the efficiency of the distribution system of oil products, gases, etc in the region which has an effect on transport and the ability to move equipment and staff to repair sites. The leakages from these tanks, many of which were badly damaged during past hostilities and only poorly repaired, are causing long-term environmental damage and are a safety hazard.

### PHASE 7 – PROJECT 24

| CODE         | ITEM DESCRIPTION  | UNIT | QTY    | PROJECT  |
|--------------|---|------|--------|--|
|              | MATERIALS REQUIRED FOR THE MAINTENANCE & REVAMPING OF PROCESS TANKS AND VESSELS CONSISTING OF:- |      |        | Repair of process tanks throughout NOC which are required to store products at all stages of extraction and refining |
|              | - C.S. PLATE A. 516 GR 70   | TON  | 4230   | “  |
|              | - C.S. PLATE A. 283 GRC   | TON  | 3154   | “  |
|              | - S.S. PLATE TP. 304 L  | TON  | 144    | “  |
| 08-7-00-0202 | - C.S. PLATE A. 515 GR 70   | TON  | 612    | “  |
|              | - C.S. PIPE A – 106 GRB( 1/2” – 20” )   | MTR. | 7320   | “  |
|              | - S.S. TUBE A – 132 TOANGE TP 304( 1/4” – 3/4” )  | MTR. | 684000 | “  |
|              | - F.S. FLANGE A – 105( 1/2” – 20” )   | NOS. | 2160   | “  |
|              | - F.S. BLIND FLANGE A – 105( 1/2” – 20” )   | NOS. | 1000   | “  |
|              | - A.S. BOLT A – 139 GR B7( 1/4” – 3/8” )  | NOS. | 36080  | “  |
|              | - A.S NUT A-194 GR 2H (1/4”-3/8”)   | NOS. | 55480  | “  |
|              | - C.A.F. &SILID FLAT METAL S.S. & FLAT METAL, IRON GASKET, DIF. SIZES                           | NOS. | 340    | “  |
|              | - R-B HEAT RESISTANT TEFLON SIZE (5X1000) mm.   | NOS. | 1200   |  |
|              | - AWS E7018 WELDING ELECTRODE & WELDING WIRE & FLUX.  | NOS. | 720    |  |
|              | - S.S. & C.S. ANGLE, CHANNEL, ROUND, L-SECTION.   | MTR. | 16700  |  |

## Project 25

Major SOC project covering the drilling and completion of new wells, and well work-over operations. This is a major undertaking (also identified by the SOC as a project) planned to ensure production and export levels can be sustained at the levels achieved during the latter part of Phase 6.

### PHASE 7 – PROJECT 25

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT |
|--------------|---|------|-----|---------|
| 08-7-20-0251 | CASING ACCESSORIES  | ITEM | 250 | “       |
| 08-7-20-0252 | DRILLING BITS AND NOZZLES   | NOS. | 250 | “       |
| 08-7-20-0253 | DRILLING FLUID MATERIALS & CEMENT ADDITIVES   | ITEM | 40  | “       |
| 08-7-20-0254 | AIR COMPRESSORS FOR OIL WELL CEMENTING  | NOS. | 10  | “       |
| 08-7-20-0255 | AGITATORS FOR OIL WELL CEMENTING  | NOS. | 20  | “       |
| 08-7-20-0256 | WELL-HEAD ACCESSORIES FOR SUBMERSIBLE PUMPS   | ITEM | 50  | “       |
| 08-7-20-0261 | MAST TRUCK  | NOS. | 2   | “       |
| 08-7-20-0262 | WIRE LINE TRUCK WITH CRANE  | NOS. | 4   | “       |
| 08-7-20-0264 | MOBILE VACUUM LOADER FOR DISLODGING OF WASTE OIL (VACALL) WITH ACCESSORIES & SPARES             | NOS. | 2   | “       |
| 08-7-20-0265 | CHIKSANS PIPING AND ACCESSORIES   | ITEM | 50  | “       |
| 08-7-20-0266 | BOTTOM-HOLE PRESSURE & TEMPERATURE RECORDERS (AMERADA & RT-7) & FLUID SAMPLERS WITH ACCESSORIES | ITEM | 200 | “       |
| 08-7-20-0267 | DOWN HOLE SCREEN FOR SAND CONTROL IN WELLS  | NOS. | 4   | “       |

## Project 26

Requirements (complementary with Project 25 above) for reservoir management, an external service contract to drill and complete 90 wells in N & S Rumailah, Luhais and Zubair fields, an external service contract for re-entry and horizontal drilling to enhance well productivity, and well logging contracts.

### PHASE 7 – PROJECT 26

| CODE         | ITEM DESCRIPTION   | UNIT     | QTY | PROJECT   |
|--------------|--|----------|-----|---|
| 08-7-21-0268 | SLICK-LINE WIRES OF DIFFERENT DELIMITERS.  | REEL.    | 100 | This SOC project concerns all producing fields and refers to drilling, completion and well workover |
| 08-7-21-0269 | SIMULATION SOFTWARE FOR RESERVOIR MANAGEMENT.  | ITEM     | 10  | “   |
| 08-7-21-0270 | SERVICE CONTRACT (TURNKEY) FOR DRILLING & COMPLETION OF 90 WELLS IN NORTH & SOUTH RUMAILAH, LUHIS & ZUBEIR FIELDS. | WELL     | 100 | “   |
| 08-7-21-0271 | SERVICE CONTRACT TO REPAIR (250) GATE VALVES.  | NOS.     | 250 | “   |
| 08-7-21-0272 | RE-INTERY AND HORIZONTAL DRILLING TO IMPROVE WELL PRODUCTIVITY (TURN-KEY).   | WELL     | 4   | “   |
| 08-7-21-0273 | SERVICE CONTRACT TO PERFORM COMPATIBILITY STUDIES FOR WATER INJECTION  | CONTRACT | 1   | “   |
| 08-7-21-0275 | OPEN & CASED HOLE LOGGING CONTRACT.  | CONTRACT | 2   | “   |
| 08-7-21-0276 | OIL WELL LOGGING UNIT  | UNIT     | 2   | “   |
| 08-7-21-0277 | OIL WELL LOGGING TOOLS   | SET      | 2   | “   |

## Project 27

SOC project to provide spare parts and equipment for the maintenance of de-gassing stations in the Zubair, and N & S Rumailah fields. A lack of efficient de-gassing operations has been a major constraint on the SOC's ability to sustain crude oil production and exports.

### PHASE 7 – PROJECT 27

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-00-0314 | PUMPS & SPARE PARTS FOR DESALTER SALTY WATER PUMPS             | ITEM | 44  | Maintenance of SOC degassing stations at Zubair, N & S Rumailah |
| 08-7-00-0315 | PUMPS & SPARE PARTS FOR DESALTER FRESH WATER PUMPS             | ITEM | 34  | “   |
| 08-7-00-0317 | SPARE PARTS FOR RUSTING GAS TURBINES TA-1750                   | ITEM | 130 | “   |
| 08-7-00-0318 | SPARE PARTS FOR BYRON AND JACKSON VERTICAL CENTRIFUGAL PUMPS   | ITEM | 20  | “   |
| 08-7-00-0319 | PUMPS & SPARE PARTS FOR FIRE FIGHTING PUMPS USSR               | ITEM | 36  | “   |
| 08-7-00-0320 | AIR FILTERS FOR SOLAR CENTAUR TURBO GENERATORS MODEL GC1-CB-ID | ITEM | 4   | “   |
| 08-7-00-0321 | SPARE PARTS FOR CENTAUR TURBINE – GENERATORS MODEL GC1-CB-ID   | ITEM | 42  | “   |
| 08-7-00-0322 | PUMPS & SPARE PARTS FOR WATER JOCKEY PUMPS                     | ITEM | 16  | “   |
| 08-7-00-0324 | PUMPS & SPARE PARTS FOR FIRE FIGHTING PUMPS                    | ITEM | 22  | “   |
| 08-7-00-0325 | PUMPS & SPARE PARTS FOR S.P.P. FIRE WATER PUMPS                | ITEM | 30  | “   |
| 08-7-00-0326 | SPARE PARTS FOR AIR COMPRESSOR BROOM WADE MODEL: V 150 DA      | ITEM | 48  | “   |
| 08-7-00-0327 | SPARE PARTS FOR BROOM & WADE COMPRESSORS TYPE: V 200 DA        | ITEM | 120 | “   |
| 08-7-00-0329 | SKID MOUNTED HEAVY DUTY OIL FREE AIR COMPRESSORS (12 NOS.)     | ITEM | 1   | “   |

## Project 28

SOC requirements to ensure sufficient gas compression capacity in North and South Rumailah fields to handle projected crude oil production, and to reduce the necessity of wasteful (and polluting) gas flaring.

### PHASE 7 – PROJECT 28

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-00-0330 | HEAT EXCHANGER & SPARE PARTS FOR HEAT EXCHANGER AIR COOLED GAS COOLERS S/N 48621 ITEM NO. 2204 EA3 | ITEM | 20  | Spare Parts and equipment for refurbishment of Gas Compressor Stations at N & S Rumailah |
| 08-7-00-0331 | COOLERS & SPARE PARTS FOR AIR COOLED NATURAL GAS COOLERS ITEM NO. E-611, E-811                     | ITEM | 110 | “  |
| 08-7-00-0333 | COOLERS & SPARE PARTS FOR GAZ COOLERS USED IN SOLAR CENTAUR TURBO COMPRESSORS MODEL: CS 4000       | ITEM | 6   | “  |
| 08-7-00-0334 | SPARE PARTS FOR CENTRIFUGAL COMPRESSORS  | ITEM | 50  | “  |
| 08-7-00-0335 | SPARE PARTS FOR NOUVO PIGNONE GAS TURBINES MS 1002B.   | ITEM | 90  | “  |
| 08-7-00-0336 | VALVE ACTUATORS AND SPARE PARTS FOR VALVES ACTUATORS   | ITEM | 110 | “  |
| 08-7-00-0337 | SPARE PARTS FOR BOOSTER BLOWERS  | ITEM | 80  | “  |

## Project 29

SOC project for service contracts to cover the repair and maintenance of Ruston motors, mainly situated in S Rumailah region.

### PHASE 7 – PROJECT 29

| CODE                | ITEM DESCRIPTION  | UNIT       | QTY      | PROJECT  |
|---------------------|---|------------|----------|--|
|                     | <b>RUSTON TA – 1750 , ROTORS &amp; STATORS REFURBISHMENT</b>              |            |          | <b>SOC service contracts for refurbishment of rotors, stators and compressors at Zubair and N &amp; S Rumailah</b> |
| <b>08-7-00-0345</b> | <b>EACH SET CONSIST OF :-1 NO. COMPRESSOR ROTOR, 1 NO.</b>                | <b>SET</b> | <b>4</b> |  |
|                     | <b>C.T. ROTOR, 1 NO. P.T. ROTOR, 1.NO. C.T. STATOR, 1 NO. P.T. STATOR</b> |            |          |  |

### **Project 30**

SOC project to supply pumps and spare parts for the main water injection and treatment plants in N & S Rumailah and Garma regions. To sustain production in the SOC region the water injection systems are crucial, as are the water treatment facilities, as the size of particulate matter in the injected water is currently far above the requirement of the field structures.

### **PHASE 7 – PROJECT 30**

All items have been removed

### Project 31 & 39

SOC project to provide badly needed spare parts for the hydraulic loading arms and capstans, and electrical materials, on the Mina al-Bakr loading platform

#### PHASE 7 – PROJECT 31

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-00-0347 | SPARE PARTS FOR LOADING ARMS<br>TYPE: 24" X80" F. P. D. C. M. A. | ITEM | 90  | Refurbishment<br>of Mina al-Bakr<br>loading terminal |
| 08-7-00-0348 | VALVE ACTUATORS & SPARES FOR<br>MAIN PIPE LINE 48"               | ITEM | 16  |  |
| 08-7-00-0349 | CAPSTANS & SPARE PARTS FOR<br>CAPSTAN PULL-PAK<br>MODEL : 110A,  | ITEM | 24  |  |

### Project 32

SOC requirements to ensure efficient operation of the West Qurna de-gassing stations.

#### PHASE 7 – PROJECT 32

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT |
|--------------|---|------|-----|---------|
| 08-7-00-0351 | ELECTRIC MOTOR DRIVEN<br>JOCKEY PUMPS, HORIZONTALLY<br>INSTALLED SKID MOUNTED | ITEM | 2   | "       |
| 08-7-00-0353 | SKID MOUNTED ELECT. FIRE<br>FIGHTING PUMPS (4NOS) WITH<br>SPARES              | ITEM | 2   | "       |

**Project 33**

SOC requirements to repair and maintain the de-gassing and desalting stations in North and South Rumailah, and to repair the Qurainat de-gassing station control system.

**PHASE 7 – PROJECT 33**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-00-0363 | QURAINAT DEGASSING STATION<br>CENTRAL CONTROL SYSTEM                             | ITEM | 100 | Repairs to N & S Rumailah de-gassing and de-salting stations to allow better treatment of crude oil before export |
| 08-7-00-0364 | SPARES FOR CONTROL VALVES<br>DESIGN V500 & DESIGN ED                             | ITEM | 100 | “   |
| 08-7-00-0365 | CONTROL & PROTECTION<br>INSTRUMENTS FOR WET CRUDE<br>BANKS AT DEGASSING STATIONS | ITEM | 100 | “   |

**Project 34 and 35**

Instrumentation to replace the control room equipment at North and South Rumailah, Zubair and Basrah gas compression stations.

**PHASE 7 – PROJECT 34**

| CODE         | ITEM DESCRIPTION                     | UNIT | QTY | PROJECT  |
|--------------|--------------------------------------|------|-----|--|
| 08-7-00-0366 | SPARES FOR CONTROL ROOM<br>EQUIPMENT | ITEM | 150 | Spares and instrumentation for N & S Rumailah gas compression stations |

## Project 34 and 35

Instrumentation to replace the control room equipment at North and South Rumailah, Zubair and Basrah gas compression stations.

### PHASE 7 – PROJECT 35

| CODE         | ITEM DESCRIPTION                                   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-00-0368 | SPARES FOR CONTROL ROOM OF<br>DEGASSING STATIONS   | ITEM | 200 | Maintenance<br>and<br>refurbishment<br>of Zubair and<br>Basrah<br>degassing<br>stations |
| 08-7-00-0369 | SPARES FOR CONTROL VALVES                          | ITEM | 100 | “   |
| 08-7-00-0371 | CONTROLLERS AND POSITIONERS<br>FOR DEGASSING BANKS | ITEM | 150 | “   |

## **Project 36 & 40**

Replacement units and spares for the chlorine injection systems at North and South Rumailah and Garma water injection stations to ensure contamination free water for injection purposes, and electrical spares.

### **PHASE 7 – PROJECT 36**

All items have been removed.

**Project 37 & 41**

SOC requirements for Phase 1 of the upgrading of DG-7 and DG-8 de-gassing stations situated in West Qurna.

**PHASE 7 – PROJECT 37**

| <b>CODE</b>         | <b>ITEM DESCRIPTION</b>                           | <b>UNIT</b> | <b>QTY</b> | <b>PROJECT</b>  |
|---------------------|---|-------------|------------|---|
| <b>08-7-00-0373</b> | <b>CONTROL VALVE FOR DEGASSING BANKS</b>          | <b>ITEM</b> | <b>50</b>  | <b>The upgrading of degassing banks at West Qurna field</b> |
| <b>08-7-00-0374</b> | <b>INSTRUMENTS AND SPARES FOR DEGASSING BANKS</b> | <b>ITEM</b> | <b>50</b>  | <b>“</b>  |

**Project 38 & 42**

SOC requirements for electrical materials and utilities to allow repairs to the North and South Rumailah degassing and compression stations.

**PHASE 7 – PROJECT 38**

| <b>CODE</b>  | <b>ITEM DESCRIPTION</b>   | <b>UNIT</b> | <b>QTY</b> | <b>PROJECT</b>   |
|--------------|---|-------------|------------|--|
| 08-7-00-0375 | SPARE PARTS FOR OVER HEAD CRANE   | ITEM        | 100        | Electrical materials for N & S Rumailah degassing and gas compression stations |
| 08-7-00-0376 | REPLACEMENT OF OLD BATTERIES FOR ALL AREAS  | ITEM        | 100        | “  |
| 08-7-00-0377 | ELECTRICAL VALVE ACTUATORS & SPARE PARTS  | ITEM        | 150        | “  |
| 08-7-00-0378 | SPARE PARTS FOR GAS TURBINE   | ITEM        | 150        | “  |
| 08-7-00-0379 | SPARE PARTS FOR MAIN MEDIUM VOLTAGE MOTOR   | ITEM        | 100        | “  |
| 08-7-00-0380 | U.P.S UNIT AND SPARE PARTS FOR ALL AREAS  | ITEM        | 100        | “  |
| 08-7-00-0382 | SPARE PARTS FOR DIESEL GENERATORS   | ITEM        | 100        | “  |
| 08-7-00-0383 | SPARE PARTS FOR MEDIUM, AND LOW VOLTAGE SWITCH GEAR, MCC PANEL WITH ALL ACCESSORIES | ITEM        | 150        | “  |
| 08-7-00-0384 | POWER TRANSFORMER & EARHLING TRANSFORMER  | ITEM        | 50         | “  |
| 08-7-00-0385 | BATTERY CHARGERS & SPARES   | ITEM        | 100        | “  |

### Project 31 & 39

SOC project to provide badly needed spare parts for the hydraulic loading arms and capstans, and electrical materials, on the Mina al-Bakr loading platform

#### PHASE 7 – PROJECT 39

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-00-0386 | LOW VOLTAGE & MEDIUM S.G. PANELS MCC, SPARE PARTS AND ACCESSORIES (EXPLOSION PROOF). | ITEM | 100 | Refurbishment of the Mina al-Bakr loading terminal |
| 08-7-00-0387 | SPARE PARTS FOR DIESEL ENGINE & FIRE FIGHTING ENGINE                                 | ITEM | 100 | “  |
| 08-7-00-0388 | ELECTRIC VALVE ACTUATORS AND SPARE PARTS   | ITEM | 75  | “  |
| 08-7-00-0389 | CONTRACTORS, CIRCUIT BREAKER, OVERLOAD, GLAND & ACCESSORIES                          | ITEM | 200 | “  |
| 08-7-00-0390 | SPARE PARTS FOR LOADING ARM  | ITEM | 50  | “  |

### Project 36 & 40

Replacement units and spares for the chlorine injection systems at North and South Rumailah and Garma water injection stations to ensure contamination free water for injection purposes, and electrical spares.

#### PHASE 7 – PROJECT 40

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-00-0391 | SPARE PARTS FOR MEDIUM & LOW VOLTAGE SWITCH GEAR             | ITEM | 100 | Spare parts for Water Injection systems at N & S Rumailah and Garmat |
| 08-7-00-0392 | BATTERY CHARGER AND SPARES                                   | ITEM | 115 | “  |
| 08-7-00-0393 | ELECTRICAL LAMP, LAMP FITTING, AND ACCESSORIES FOR ALL AREAS | ITEM | 200 | “  |
| 08-7-00-0394 | ELECTRIC MOTOR AND REPAIR MOTORS, AND SPARE PARTS            | ITEM | 100 | “  |
| 08-7-00-0395 | SOLAR CATHODIC PROTECTION                                    | ITEM | 100 | “  |

### Project 37 & 41

SOC requirements for Phase 1 of the upgrading of DG-7 and DG-8 de-gassing stations situated in West Qurna.

#### PHASE 7 – PROJECT 41

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT   |
|--------------|---|------|-----|---|
| 08-7-00-0400 | CABLE, HIGH, LOW VOLTAGE, ACSR BAR WIRE, CABLE JOINTS AND ACCESSORIES | ITEM | 200 | Spare parts required for degassing stations at West Qurna |
| 08-7-00-0402 | MATERIALS FOR CATHODIC PROTECTION                                     | ITEM | 100 | “   |
| 08-7-00-0403 | SPARE PARTS FOR LOW VOLTAGE SWITCH GEAR, & MCC, WITH ALL ACCESSORIES  | ITEM | 300 | “   |

### Project 38 & 42

SOC requirements for electrical materials and utilities to allow repairs to the North and South Rumailah de-gassing and compression stations.

#### PHASE 7 – PROJECT 42

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT   |
|--------------|---|------|-----|---|
| 08-7-00-0424 | SPARE PARTS FOR CRUSH VALVE & ROBOTARM ACTUATOR             | ITEM | 50  | Spare parts for utilities at N & S Rumaila degassing stations |
| 08-7-00-0425 | SPARE PARTS FOR HITACHI & DAIKEN A/C UNITS & DAIKEN CHILLER | ITEM | 18  | “   |

### Project 43 & 44

Requirements to allow efficient telecontrol of the loading operation between shore and vessels, portable communications for the platform personnel, and air-conditioning at the Mina al-Bakr loading terminal.

#### PHASE 7 – PROJECT 43

Phase VII

| CODE         | ITEM DESCRIPTION               | UNIT | QTY | PROJECT                                     |
|--------------|--------------------------------|------|-----|---|
| 08-7-00-0426 | A/C UNIT FOR AL-BAKER TERMINAL | ITEM | 2   | Utility equipment for Mina al-Bakr terminal |

**Project 43 & 44**

Requirements to allow efficient telecontrol of the loading operation between shore and vessels, portable communications for the platform personnel, and air-conditioning at the Mina al-Bakr loading terminal.

**PHASE 7 – PROJECT 44**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT |
|--------------|--|------|-----|---------|
| 08-7-00-0428 | PUBLIC ADDRESS SYSTEMS ON AN OPEN PLATFORM AL-BAKER TERMINAL | ITEM | 15  | “       |

**Project 45**

Telecontrol items to replace damaged units at West Qurna.

**PHASE 7 – PROJECT 45**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-00-0431 | DEHYDRATOR TYPE DBP-L5B2 TO REPLACE THE DAMAGE AT WEST QURNA | ITEM | 10  | Telecontrol items required for West Qurna field |

## Project 46

This major SOC project is to rehabilitate the Al-Fao Tank Farm with four 58,000 cubic metre crude oil storage tanks, and associated control systems and fire-fighting equipment. Completion of this project will result in enhanced crude oil storage capability at Al-Fao allowing, to some degree, the bulking of production before export and also the ability to store production – rather than shut out the producing wells - when there are no vessels loading at the Mina al-Bakr loading platform.

### PHASE 7 – PROJECT 46

| CODE         | ITEM DESCRIPTION   | UNIT   | QTY | PROJECT                                    |
|--------------|--|--------|-----|--|
| 08-7-23-0486 | LINE PIPE, PIPE FITTING, FLANGES, VALVES AND WELDING ELECTRODES.   | ITEM   | 465 | The rehabilitation of the Al-Fao tank farm |
| 08-7-23-0487 | 5000m <sup>3</sup> , FIRE WATER TANK                               | NOS.   | 1   | “  |
| 08-7-23-0490 | 58000M <sup>3</sup> FLOATING ROOF CRUDE OIL STORAGE TANKS          | NOS.   | 4   | “  |
| 08-7-23-0491 | INSTRUMENT EQUIPMENT   | ITEM   | 225 | “  |
| 08-7-23-0493 | CABLES OF DIFFERENT SIZE   | LOT    | 15  | “  |
| 08-7-23-0494 | FITTINGS   | LOT    | 1   | “  |
| 08-7-23-0496 | FIRE ALARM SYSTEM  | LOT    | 1   | “  |
| 08-7-23-0497 | MEDIUM VOLTAGE SWITCHGEAR, POWER RANSFORMERS, CABLES & ACCESSORIES | ITEM   | 14  | “  |
| 08-7-23-0498 | SURGE SYSTEM & PRESSURE REDUCTION SYSTEM                           | SYSTEM | 2   | “  |

## **Project 47**

SOC project to repair the 19 cluster water injection pumping stations associated with the North Rumailah fields. Enhanced, and controllable, water injection is necessary to manage the reservoir extraction systems and prevent the production of excessively wet crude.

### **PHASE 7 – PROJECT 47**

All items have been removed.

**Project 48 & 49**

SOC projects to upgrade the surface installations at the West Qurna oil field associated with the water intake system and water treatment procedures, and to source equipment for the improvement of gas handling and dehydration.

**PHASE 7 – PROJECT 48**

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT   |
|--------------|---|------|-----|---|
| 08-7-25-0501 | WATER DEOXIDIZATION UNIT  | SET  | 2   | “   |
| 08-7-25-0502 | UNIT FOR CATIONIC FLOCCULATION DISSOLVING WITH SPARES                                   | SET  | 2   | “   |
| 08-7-25-0503 | UNIT FOR FLOCCULATION DILUTION PREPARATION WITH SPARES                                  | SET  | 4   | “   |
| 08-7-25-0504 | WATER DESALTING UNITS ( VARIOUS CAPACITIES WITH SPARES                                  | SET  | 1   | “   |
| 08-7-25-0505 | PROCESS CONTROL PANEL & VARIOUS INSTRUMENT QUIPMENT WITH ACCESSORIES & SPARES           | LOT  | 3   | “   |
| 08-7-25-0508 | ANTI FOAM PACKAGE   | SET  | 1   | “   |
| 08-7-25-0509 | HOT OIL PACKAGE (HEATER, SURGE DRUM, PUMPS ...ETC)                                      | SET  | 1   | West Qurna surface installation repairs and upgrading |
| 08-7-25-0510 | INSTRUMENT AIR & UTILITY AIR PACKAGE (RECEIVERS, COMPRESSORS...ETC)                     | SET  | 1   | “   |
| 08-7-25-0513 | FIRE PROTECTION FACILITIES WITH SPARES  | ITEM | 60  | “   |
| 08-7-25-0514 | PIPES, FLANGES , VALVES & PIPE FITTING...ETC  | LOT  | 10  | “   |
| 08-7-25-0515 | PIPE LINES & PIPE COATING MATERIALS   | LOT  | 1   | “   |
| 08-7-25-0516 | COMPLETE PROCESS CONTROL SYSTEM   | SET  | 1   | “   |
| 08-7-25-0517 | INSTRUMENT EQUIPMENT WITH SPARES  | LOT  | 1   | “   |
| 08-7-25-0518 | GENERATORS, MED. VOLTAGE SWITCHGEAR, CABLES, POWER, TRANSFORMER ELECTRICAL MOTORS...ETC | ITEM | 100 | “   |
| 08-7-25-0519 | FILTERS FOR WATER   | NOS. | 10  | “   |
| 08-7-25-0520 | CABLES & FITTINGS   | ITEM | 60  | “   |

## Project 48 & 49

SOC projects to upgrade the surface installations at the West Qurna oil field associated with the water intake system and water treatment procedures, and to source equipment for the improvement of gas handling and dehydration.

### PHASE 7 – PROJECT 49

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-26-0522 | COMPRESSORS HIGH & LOW PRESSURE CENTRIFUGAL GAS COMPS. WITH GAS TURBINE DRIVER, ELE. MOTOR....ETC & SPARES   | SET  | 20  | Equipment to improve gas handling and utilization, thus improving efficiency and reducing pollution |
| 08-7-26-0523 | VESSELS, SCRUBBERS , SEPARATORS , RECEIVERS  | NOS. | 50  | “   |
| 08-7-26-0524 | AIR COOLERS (LOW PRESS & HIGH PRESS)   | NOS. | 25  | “   |
| 08-7-26-0525 | GAS SWEETENING PACKAGE CONSIST OF:<br>CONDENSERS, PUMPS, VESSELS, TANKS, ABSORBER, REBOILERS, REGENERATORS, HEAT EXCHANGERS, AIR COOLERS....ETC & SPARES | LOT  | 1   | “   |
| 08-7-26-0527 | BLOWERS & PUMPS WITH SPARES  | SET  | 50  | “   |

**Project 50**

SOC project at Zubair to utilize separated gas, currently flared, for power generation.

**PHASE 7 – PROJECT 50**

| <b>CODE</b>  | <b>ITEM DESCRIPTION</b>   | <b>UNIT</b> | <b>QTY</b> | <b>PROJECT</b> |
|--------------|---|-------------|------------|----------------|
| 08-7-27-0529 | AIR COOLERS   | NOS.        | 5          | “              |
| 08-7-27-0531 | AIR COMPRESSOR PACKAGES   | SET         | 5          | “              |
| 08-7-27-0532 | DRINKING WATER TANKS  | NOS.        | 5          | “              |
| 08-7-27-0533 | SLUG CATCHER  | NOS.        | 3          | “              |
| 08-7-27-0534 | COATED PIPE LINES ( 12 ” & 24”)   | KM          | 50         | “              |
| 08-7-27-0536 | PIG LAUNCHER & RECEIVER   | NOS.        | 6          | “              |
| 08-7-27-0538 | COMPLETE PROCESS CONTROL SYSTEM   | LOT         | 2          | “              |
| 08-7-27-0539 | ELECTRICAL EQUIPMENT AND CABLES   | LOT         | 2          | “              |
| 08-7-27-0540 | ACCESSORIES AND HANDLING EQUIPMENT & MATERIALS RELATED TO THE ACTIVITY. | LOT         | 2          | “              |

**Project 51**

SOC project in the South Rumailah field to re-construct the de-gassing stations at Mishrif Qurnainat and Mishrif Shamiya which were both heavily damaged during hostilities, including gas/oil separators and de-hydration/de-salting units.

**PHASE 7 – PROJECT 51**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-28-0541 | GAS/OIL SEPARATORS FOR QURAINAT DEG.STAT. INCLUDING ALL STEEL PLATES AND STRUCTURES, WITH ALL INTERNAL AND EXTERNAL ACCESSORIES, EACH SET CONSISTS OF 100 ITEMS. | SET  | 10  | SOC project for the reconstruction of Mishrif Qurnainat and Mishrif Shamiya (S Rumailah) degassing stations to enhance crude oil treatment. |
| 08-7-28-0542 | MANIFOLDS FOR OIL FLOW LIENS   | SET  | 4   | “   |
| 08-7-28-0543 | INTERCONNECTING PIPING, FITTING, VALVES AND ACCESSORIES FOR QURANAT DEG. STAT. EACH SET CONSISTS OF 200 ITEMS.   | SET  | 10  | “   |
| 08-7-28-0544 | FLARE SYSTEM WITH K.O DRUMS AND FLARE STACKS.  | SET  | 10  | “   |
| 08-7-28-0545 | INSTRUMENT AND CONTROL PACKAGES COMPLETE WITH ALL ACCESSORIES AND SPARE PARTS. FOR QURAINAT DEGASSING STATION.   | SET  | 20  | “   |
| 08-7-28-0546 | ELECTRICAL PUMPING SETS FOR QURAINAT DEGASSING STATION, COMPLETE WITH ALL COMPLEMENTARY SYSTEMS AND ACCESSORIES AND SPARE PARTS EACH SET CONSIST OF 20 ITEMS.    | SET  | 6   | “   |

**PHASE 7 – PROJECT 51 (Continuation)**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-29-0547 | COMPLETE PACKAGE OF FIRE FIGHTING SYSTEM FOR QURAINAT DEG. STAT. INCLUDING ALL FIRE WATER PUMPS, SENSING AND ALARM SYSTEM, FOAM SYSTEM AND ALL ACCESSORIES, PIPING, VALVES & FIRE HYDRANTS SPARES...ETC. EACH SET CONSISTS OF 50 ITEM. | SET  | 100 | SOC project for the reconstruction of Mishrif Qurnainat and Mishrif Shamiya (S Rumailah) degassing stations to enhance crude oil treatment. |
| 08-7-29-0548 | ELECTRICAL FEEDING AND DISTRIBUTION SYSTEM FOR QURAINAT DEG. STAT. INCLUDING ALL FEEDERS, SWICH GEARS, TRANSFORMERS, MCC BOARD, CABLING AND ALL ACCESSORIES AND SPARE PARTS SETS. EACH SET CONSISTS OF 150 ITEM                        | SET  | 20  | “   |

### Project 52

SOC project to source flow lines and associated valve work for the connection and completion of wells in the South Rumailah area.

#### PHASE 7 – PROJECT 52

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT   |
|--------------|---|------|-----|---|
| 08-7-30-0550 | - PIPE LINES SEAMLESS 5LX X-60 OF 6" AND 8" & 10" DIAMETERS COATED WITH EXTRUDED POLYETHYLENE COAT OF 3 MM THICKNESS. | KM.  | 400 | SOC requirement for crude oil flow lines in South area. |
| 08-7-30-0554 | - SERVICE AND HANDLING EQUIPMENT  | SET  | 10  | "   |

### Project 53

SOC project to repair and refurbish the de-gassing banks of 100,000 bpd capacity at DS-4 and DS-5 in the North Rumailah region.

#### PHASE 7 – PROJECT 53

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT  |
|--------------|---|------|-----|--|
| 08-7-31-0555 | GAS OIL DEGASSING BANK OF 100 000 B/D CAPACITY INCLUDING ALL SEPARATORS AND VESSELS, STEEL PLATES AND STRUCTURE WITH INTERNAL AND EXTERNAL ACCESSORIES FOR DS4 AND DS5. | SET  | 20  | Continuation of the upgrading to DS-4 and DS-5 degassing banks at N Rumailah |
| 08-7-31-0556 | INTERCONNECTING PIPING NETWORK COMPLETE WITH ALL VALVES AND FITTING FOR DS4 AND DS5.  | SET  | 10  | "  |
|              | COMPLETE PACKAGE OF INSTRUMENT AND CONTROL SYSTEM COMPLETE WITH ALL CABLING AND ACCESSORIES.  | SET  | 4   | "  |
| 08-7-31-0557 | FLARE SYSTEM WITH KNOCK OUT DRUMS AND FLARE STACK. FOR DS4 AND DS5.   | SET  | 10  | "  |
| 08-7-31-0558 | ELECTRICAL SYSTEM. EACH SET CONSISTS OF 100 ITEM.   | SET  | 2   | "  |

## Project 54

SOC project to source flow lines and associated valve work for the connection and completion of wells in the North Rumailah area.

### PHASE 7 – PROJECT 54

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-32-0559 | PIPE LINE API 5LX GR. B, X-60 OF 18", 16", 14", 10", 8" DIAMETER COATED WITH EXTRUDED POLY-ETHYLENE COATING OF 3 MM THICKNESS. | KM   | 600 | SOC project to install crude oil flow line and manifolds |
| 08-7-32-0561 | PIPE FITTING INCLUDING FLANGES, ELBOWS, TEES, REDUCERS, GASKETS, STUD BOLTS AND ACCESSORIES. EACH SET CONSIST S OF 100 ITEMS.  | SET  | 20  | "  |
| 08-7-32-0562 | OIL PRODUCTION, TEST & DRAIN MANIFOLDS   | SET  | 10  | "  |

## Project 55

SOC project to replace oil flow and floating roof crude oil storage tanks, and fire water tanks, at Bazergan, Mishri Hamman, Qu and Sham. This project will enhance the capability of the SOC to store production when loadings are interrupted at the Mina al-Bakr loading platform.

### PHASE 7 – PROJECT 55

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-33-0563 | FLOATING ROOF TANKS OF 28000/20000 m <sup>3</sup> CAPACITY FOR BAZERGAN STATION. COMPLETE WITH ALL STEEL PLATES AND STRUCTURE WITH INTERNAL AND EXTERNAL ACCESSORIES COMPLETE WITH ALL COMPLEMENTARY SYSTEM WHICH INCLUDES:-<br>INTERCONNECTING PIPING, MOTORIZED VALVES, FITTING AND ACCESSORIES FOR INSTRUMENTATION AND CONTROL PACKAGES, ELECTRICAL SYSTEM WITH CATHODIC PROTECTION, CONSUMABLES AND CONSTRUCTION TOOLS EACH SET CONSISTS OF 500 ITEMS. | SET  | 10  | SOC project to replace oil flow tanks and storage tanks and fire water tanks |
| 08-7-33-0564 | FLOW TANK FIXED ROOF OF 5000 M <sup>3</sup> CAPACITY CONSISTING OF ALL STEEL PLATES AND STRUCTURES WITH INTERNAL AND EXTERNAL ACCESSORIES, COMPLETE WITH ALL COMPLEMENTARY SYSTEMS INCLUDING:-<br>PIPING NETWORK WITH VALVES AND FITTING INSTRUMENT AND CONTROL PACKAGES ELECTRICAL SYSTEM, FLARE SYSTEM WITH ALL ACCESSORIES AND SPARE PARTS.   | SET  | 5   | “  |
| 08-7-33-0565 | WATER TANK, FIXED ROOF OF 3000 M3 CAPACITY INCLUDING ALL PLATES AND STRUCTURE/ STEEL & INTERNAL AND EXTERNAL ACCESSORIES WITH ALL PIPING GAUGES, SWITCHES, VALVES ... ETC.   | SET  | 2   | “  |
| 08-7-33-0567 | HANDLING AND SERVICE EQUIPMENT. EACH SET CONSIST OF 250 ITEMS.   | SET  | 5   | “  |

**Project 56**

SOC project to construct a replacement de-gassing separator bank of 40,000 bpd capacity at Subba.

**PHASE 7 – PROJECT 56**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
| 08-7-34-0568 | <p>REPLACEMENT DEGASSING STATION CONSISTING OF GAS/OIL DEGASSING SEPARATOR BANK OF 40 000 B/D CAPACITY AND TEST BANK WITH ALL COMPLEMENTARY SYSTEM AND ACCESSORIES WHICH INCLUDES:-</p> <ul style="list-style-type: none"> <li>- FLOW LINES</li> <li>- MANIFOLDS</li> <li>- GAS / OIL SEPARATORS</li> <li>- INSTRUMENT AND CONTROL PACKAGES</li> <li>- ELECTRICAL GENERATION &amp; DISTRIBUTION SYSTEM.</li> <li>- PIPING NET WORK</li> <li>- FLOW TANKS</li> <li>- FIRE FIGHTING SYSTEM</li> <li>- PUMPING SETS</li> <li>- ALL ACCESSORIES</li> </ul> <p>(EACH SET CONSISTS OF 250 ITEMS)</p> | SET  | 20  | SOC project to refurbish the Subba degassing station. |

**Project 57**

SOC project to replace the No 2 degassing station at Luhais.

**PHASE 7 – PROJECT 57**

| <b>CODE</b>         | <b>ITEM DESCRIPTION</b>  | <b>UNIT</b> | <b>QTY</b> | <b>PROJECT</b>   |
|---------------------|--|-------------|------------|--|
| <b>08-7-35-0569</b> | <b>DEGASSING STATION CONSISTING OF GAS / OIL DEGASSING BANK OF 60 000 M3/HR AND TEST BANK WITH ALL COMPLEMENTARY SYSTEMS AND ACCESSORIES WHICH INCLUDE:-</b> <ul style="list-style-type: none"><li>- FLOW LINES</li><li>- MANIFOLDS</li><li>- GAS / OIL SEPARATORS</li><li>- CONTROL AND INSTRUMENTATION</li><li>- ELECTRICAL FEEDING, GENERATION &amp; DISTRIBUTION SYSTEM.</li><li>- FLARE SYSTEM</li><li>- FLOW TANKS</li><li>- FIRE FIGHTING SYSTEM</li><li>- ALL PIPING WORK, VALVES.</li><li>- PIPING FACILITIES.</li><li>- ALL ACCESSORIES</li></ul> <b>(EACH SET CONSIST OF 250 ITEMS)</b> | <b>SET</b>  | <b>20</b>  | <b>SOC project to replace the Luhais degassing station No 2, to enhance the gas treatment capability</b> |

**Project 58**

Complementary parts and equipment to construct four crude oil flow tanks, to handle crude production and treatment at DS-6 station at West Qurna field.

**PHASE 7 – PROJECT 58**

| CODE         | ITEM DESCRIPTION                            | UNIT | QTY | PROJECT  |
|--------------|---|------|-----|--|
| 08-7-36-0570 | FLOW TANKS 5000m <sup>3</sup> FOR CRUDE OIL | NOS. | 4   | Complementary equipment required at DS-6 degassing station at West Qurna |
| 08-7-36-0572 | FLOW LINES, VALVES, FITTINGS                | ITEM | 100 | “  |
| 08-7-36-0573 | GAS TURBINE GENERATOR                       | NOS. | 2   | “  |
| 08-7-36-0574 | CABLES, ELECTRICAL EQUIPMENT & ACCESSORIES  | ITEM | 60  | “  |
| 08-7-36-0576 | CONTROL SYSTEM                              | LOT  | 2   | “  |
| 08-7-36-0577 | FIRE FIGHTING EQUIPMENT                     | LOT  | 1   | “  |
| 08-7-36-0578 | EMERGENCY DIESEL GENERATORS                 | SET  | 3   | “  |

**Project 59**

SOC project at the Messan field to construct a new pumping station for the Buzergan-Fao crude oil pipeline; complementary to *Project 46* above.

**PHASE 7 – PROJECT 59**

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT   |
|--------------|---|------|-----|---|
| 08-7-37-0579 | ELECTRICAL DRIVEN CRUDE OIL PUMPING SETS OF 200 000 B/D PUMPING RATE. COMPLETE WITH MOTOR, COUPLING, PUMP AND ALL ELECTRICAL AND CONTROL PACKAGES AND VALVES, WITH ALL ACCESSORIES AND SPARE PARTS. | SET  | 3   | New pumping station for Buzergan – Fao crude oil pipeline |
| 08-7-37-0580 | ELECTRICAL FEEDING AND SWITCHGEAR AND MCC PANELS FOR THE ABOVE PUMP SETS.   | SET  | 2   | “   |

**Project 60**

**SOC “pilot” project for a new experimental water injection system at the Missan field.**

**PHASE 7 – PROJECT 60**

All items have removed.

**Project 61**

SOC project for the construction of 3-stage separator de-gassing banks at the West Qurna field.

**PHASE 7 – PROJECT 61**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
| 08-7-39-0584 | DEGASSING BANKS CONSISTING OF 3-STAGE SEPARATORS INCLUDING ALL STEEL PLATES AND STRUCTURES WITH INTERNAL AND EXTERNAL ACCESSORIES. | SET  | 12  | 3 Stage Separator required to complement West Qurna degassing stations 7 & 8 |
| 08-7-39-0587 | CONSUMABLES INCLUDING WELDING RODS & GRINDERS.   | LOT  | 2   | “  |
| 08-7-39-0588 | HANDLING AND SERVICE EQUIPMENT   | SET  | 10  | “  |

**Project 62**

SOC project for de-hydration unit and necessary transportation equipment at the Luhais natural gas utilization unit.

**PHASE 7 – PROJECT 62**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT   |
|--------------|--|------|-----|---|
|              | TREATMENT PACKAGE OF 1ST STAGE GAS FEEDING , DEHYDRATION AND TRANSPORTATION WITH ALL COMPLEMENTARY SYSTEM & ACCESSORIES CONSISTING OF: |      |     | SOC project at Luhais field for natural gas utilization |
|              | - 1ST STAGE FEED GAS SEPARATOR UNITS   |      |     | “   |
|              | - GAS DEHYDRATION UNIT COMPLETE WITH ALL COMPLEMENTARY DEVICES, PUMPS...ETC  |      |     | “   |
| 08-7-40-0625 | - HEAT EXCHANGERS AND REGENERATION UNITS...ETC   | SET  | 20  | “   |
|              | - GAS COOLERS  |      |     | “   |
|              | - INSTRUMENT AND CONTROL PACKAGE   |      |     | “   |
|              | - K. O DRUMS   |      |     | “   |
|              | - INTER CONNECTING PIPING , FITTING , VALVES   |      |     | “   |
|              | - ALL NECESSARY ACCESSORIES AND SPARE PARTS  |      |     | “   |
|              | (EACH SET CONSISTS OF 100 ITEMS)   |      |     | “   |
| 08-7-40-0626 | PIPE FITTING , VALVES & ACCESSORIES EACH SET CONSISTS OF 100 ITEM  | SET  | 3   | “   |

**Project 63**

SOC project for the Nahr Umar natural gas treatment plant covering de-hydration and transportation.

**PHASE 7 – PROJECT 63**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT  |
|--------------|--|------|-----|--|
|              | TREATMENT PACKAGE OF 1ST STAGE GAS FEEDING, DEHYDRATION AND TRANSPORTATION WITH ALL COMPLEMENTARY SYSTEMS & ACCESSORIES CONSISTING OF: |      |     | SOC project for Nahr Umar natural gas treatment plant. |
|              | - 1ST STAGE FEED GAS SEPARATOR UNITS   |      |     | “  |
|              | - GAS DEHYDRATION UNIT COMPLETE WITH ALL COMPLEMENTARY DEVICES, PUMPS.   |      |     | “  |
| 08-7-41-0627 | - HEAT EXCHANGERS AND REGENERATION UNIT...ETC  | SET  | 20  | “  |
|              | - GAS COOLERS  |      |     | “  |
|              | - INSTRUMENT AND CONTROL PACKAGE   |      |     | “  |
|              | - K. O DRUMS   |      |     | “  |
|              | - INTER CONNECTING PIPING , FITTING , VALVES   |      |     | “  |
|              | - ALL NECESSARY ACCESSORIES AND SPARE PARTS  |      |     | “  |
|              | (EACH SET CONSISTS OF 100 ITEMS)   |      |     | “  |
| 08-7-41-0628 | TRUNK PIPE LINES OF 24”, 20”, 16” DIAMETERS 5 LX-X 60 COATED WITH POLYETHYLENE OF 3 MM THICKNESS.                                      | KM   | 30  | “  |
| 08-7-41-0629 | PIPE FITTING, VALVES AND ACCESSORIES. EACH SET CONSISTS OF 100 ITEM  | SET  | 30  | “  |

### Project 64

Equipment requirement for the South Rumailah field upper shell experimental water injection study.

#### PHASE 7 – PROJECT 64

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT |
|--------------|---|------|-----|---------|
| 08-7-42-0631 | WATER INJECTION MANIFOLDS OF (15) BRANCHES, SKID MOUNTED, COMPLETED WITH ALL ISOLATING, REGULATING VALVES AND CHECK VALVES. | SET  | 1   | “       |

### Project 65

Non-destructive testing (NDT) equipment requirements for inspection of pipe and tank construction work before use, to prevent leakages and contamination.

#### PHASE 7 – PROJECT 65

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT |
|--------------|---|------|-----|---------|
| 08-7-00-0799 | COATING & PAINT INSPECTION UNITS (HOLIDAY DETECTOR & THICKNESS GAUGE) | ITEM | 3   | “       |
| 08-7-00-0800 | PORTABLE HARDNESS TESTER  | NOS. | 1   | “       |
| 08-7-00-0801 | WELD SEAM VACUUM TEST DEVICE  | NOS. | 10  | “       |

## **Project 66 & 67**

Oil Exploration Company project to supply geophysical support services and geological studies – for oil field production enhancement – throughout Northern, Central and Southern oil fields.

### **PHASE 7 – PROJECT 66**

All items have been removed.

Project 66 & 67

Oil Exploration Company project to supply geophysical support services and geological studies – for oil field production enhancement – throughout Northern, Central and Southern oil fields.

**PHASE 7 – PROJECT 67**

All items have been removed.

## **Project 68**

Oil Exploration Company project, complementary to *Projects 66 & 67* above, to source office equipment hardware and software for seismic data storage.

### **PHASE 7 – PROJECT 68**

All items have been removed.

**Projects 69, 70 and 71**

North Refineries projects at Beiji Refinery for the repair and maintenance of the Blown Asphalt Bagging Unit, the repair and maintenance of three HDS units, and the repair and maintenance of the Sulphur Recovery Unit all of which were originally contracted under Phase 6.

**PHASE 7 – PROJECTS 69, 70 & 71**

|              | ITEM DESCRIPTION  | UNIT | QTY   | PROJECT                |
|--------------|---|------|-------|------------------------|
| 08-7-50-1000 | <u>ACTIVITY NO. (50)</u><br>REPAIR AND MAINTENANCE OF BLOWN ASPHALT BAGGING UNIT CONSISTING OF THE FOLLOWING ITEMS: |      |       | Refurbish Asphalt Unit |
|              | - INSTRUMENTATION AND CONTROL SYSTEMS   | SET  | 250   |                        |
|              | - COLUMN INTERNALS  | SET  | 200   |                        |
|              | - TUBES, PIPE FITTINGS  | NOS. | 2000  |                        |
|              | - PIPES OF DIFFERENT MATERIALS & SIZES  | MTR. | 10000 |                        |
|              | - HEAT EXCHANGER BUNDLES & -AIR COOLER FIN FAN BUNDLES  | SET  | 25    |                        |
|              | - ROTATING EQUIPMENT (PUMPS, COMPRESSORS, TURBINES) WITH SPARES   | SET  | 200   |                        |
| 08-7-51-1001 | <u>ACTIVITY NO. (51)</u><br>REPAIR AND MAINTENANCE OF THREE (L.G.O) H D S UNITS CONSISTING OF THE FOLLOWING ITEMS : |      |       | Refurbish 3 HDS units  |
|              | - BOILER SUPER HEATER BUNDLES & ANCILLARIES , WITH RECOMMENDED SPARE PARTS  | SET  | 20    |                        |
|              | - SPARE PARTS FOR THE BOILERS   |      |       |                        |
|              | - COMPLETE ROTATING EQUIPMENT WITH SPARES (PUMPS, COMPRESSORS, TURBINE ..... ETC )                                  | NOS. | 1000  |                        |
|              | - COOLING TOWER PACKINGS & ANCILLARIES  | SET  | 600   |                        |
|              | - INSTRUMENTATIONS & CONTROL SYSTEMS  | SET  | 10    |                        |
|              | - ELECTRICAL EQUIPMENT WITH SPARES  | SET  | 1000  |                        |
|              | - CABLES  | SET  | 500   |                        |
|              | - TUBE BUNDLES & FIN- FAN AIR COOLERS   | MTR  | 10000 |                        |
|              |   | SET  | 100   |                        |

|              | ITEM DESCRIPTION   | UNIT | QTY   | PROJECT                         |
|--------------|--|------|-------|---------------------------------|
| 08-7-52-1002 | <u>ACTIVITY NO.(52)</u><br>REPAIR AND MAINTENANCE OF SULFUR RECOVERY UNIT CONSISTING OF THE FOLLOWING ITEMS: |      |       | Refurbish Sulphur Recovery Unit |
|              | - MAINTENANCE TOOLS  | SET  | 100   |                                 |
|              | - AIR CONDITION SETS WITH SPARES   | SET  | 50    |                                 |
|              | - BEARINGS   | SET  | 500   |                                 |
|              | - ELECTRICAL EQUIPMENT WITH SPARES   | SET  | 500   |                                 |
|              | - GASKETS , VALVES , V- BELTS , BOLTS & NUTS   | SET  | 1000  |                                 |
|              | - TUBES , PIPE FITTINGS  | SET  | 500   |                                 |
|              | - PIPES OF DIFFERENT MATERIALS & SIZES   | MTR  | 10000 |                                 |
|              | - INSTRUMENTATION & CONTROL SYSTEMS  | SET  | 500   |                                 |

### Projects 72, 73 and 74

North Refineries projects at Beiji Refinery for the repair and maintenance of the destroyed Lube Oil complex (originally contracted under Phase 6), the repair and maintenance of de-mineralisation units for boiler water quality improvement, and the equipment required to construct a new Reverse Osmosis Unit for the desalination of boiler water.

### PHASE 7 – PROJECTS 72, 73 & 74

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT                             |
|--------------|--|------|-----|-------------------------------------|
| 08-7-54-1004 | <u>ACTIVITY NO. (54)</u><br>REPAIR AND MAINTENANCE OF FOUR DEMINERALIZATION UNITS CONSISTING OF THE FOLLOWING ITEMS (PUMPS, PIPES, INSTRUMENTATION, VALVES, BLOWERS, INTERNALS VESSELS, ANALYZERS, MOTORS, DISSOLVING SYSTEMS) | LOT  | 4   | Improvement of boiler water quality |
|              |  |      |     |                                     |

**Projects 75 and 76**

North Refineries project at Beiji for the installation of a fluidized catalytic cracker (FCC) unit to improve refined gasoline quality, and a small waste water treatment plant at the Kirkuk refinery.

**PHASE 7 – PROJECTS 75 & 76**

| CODE         | ITEM DESCRIPTION  | UNIT | QTY   | PROJECT                          |
|--------------|---|------|-------|----------------------------------|
| 08-7-57-1007 | ACTIVITY NO. (57)   |      |       | Waste water treatment facilities |
|              | - REPAIR AND MAINTENANCE OF KIRKUK REFINERY WASTE WATER UNIT REVAMP : |      |       |                                  |
|              | - PUMPS WITH RECOMMENDED SPARE PARTS                                  | NOS. | 40    |                                  |
|              | - OIL SKIMMERS & DAF UNIT   | NOS. | 3     |                                  |
|              | - PIPES OF DIFFERENT SIZES & TYPES                                    | MTR. | 10000 |                                  |
|              | - PIPE FITTINGS   | NOS. | 2000  |                                  |
|              | - TANKS WITH DIFFERENT SIZES AND ACCESSORIES                          | NOS. | 6     |                                  |
|              | - INSTRUMENTATION CONTROL SYSTEMS                                     | SET  | 30    |                                  |
|              | - ELECTRICAL EQUIPMENT WITH RECOMMENDED SPARE PARTS                   | SET  | 20    |                                  |
|              | - TESTING & MEASURING EQUIPMENT AND DEVICES                           | SET  | 50    |                                  |
| 08-7-00-1009 |   | SET  | 100   |                                  |

**Project 77**

Midland Refineries project at the Daura Refinery to establish a naphtha isomerisation unit to improve the quality of refined gasoline, and reduce the dependence on tetra-ethyl-lead (TEL) performance enhancers.

**PHASE 7 – PROJECT 77**

| CODE         | ITEM DESCRIPTION | UNIT | QTY   | PROJECT |
|--------------|------------------|------|-------|---------|
| 08-7-00-1060 | -                | SET  | 3     |         |
|              | -                | NOS. | 600   |         |
|              | -                | LOT  | 1     |         |
|              | -                | NOS. | 2000  |         |
|              | -                | LIT  | 50000 |         |

**Project 78**

South Refineries project at the Basrah Refinery for the repair and maintenance of the lube oil dewaxing unit.

**PHASE 7 – PROJECT 78**

All items have been removed

**Project 79**

North Gas Company project to install a 2-line boiler water de-mineralisation unit, to improve the quality of boiler water.

**PHASE 7 – PROJECT 79**

| <b>CODE</b>         | <b>ITEM DESCRIPTION</b> | <b>UNIT</b> | <b>QTY</b>   | <b>PROJECT</b> |
|---------------------|-------------------------|-------------|--------------|----------------|
|                     | -                       | <b>NOS.</b> | <b>30</b>    |                |
| <b>08-7-00-1150</b> | -                       | <b>NOS.</b> | <b>15</b>    |                |
|                     | -                       | <b>NOS.</b> | <b>2000</b>  |                |
|                     | -                       | <b>NOS.</b> | <b>500</b>   |                |
| <b>08-7-00-1152</b> |                         | <b>NOS.</b> | <b>150</b>   |                |
| <b>08-7-00-1154</b> | -                       | <b>NOS.</b> | <b>3000</b>  |                |
| <b>08-7-00-1155</b> |                         | <b>NOS.</b> | <b>5000</b>  |                |
| <b>08-7-00-1157</b> |                         | <b>SET.</b> | <b>400</b>   |                |
|                     |                         | <b>NOS.</b> | <b>10000</b> |                |

**Projects 80 and 81**

Two South Gas Company projects for the repair and maintenance of the Khor-Zubair NGL and LPG plants, and for the repair and maintenance of North Rumailah sour gas treatment plant and NGL plant.

**PHASE 7 – PROJECTS 80 & 81**

| CODE         | ITEM DESCRIPTION      | UNIT | QTY   | PROJECT |
|--------------|-----------------------|------|-------|---------|
| 08-7-00-1202 | MECHANICAL EQUIPMENT: | NOS. | 5000  |         |
|              |                       | TON  | 10    |         |
|              |                       | MTR. | 10000 |         |

**Projects 82 and 83**

Two South Gas Company projects for the construction of a nitrogen plant (N2 used for purging and inerting tanks) and a complete reverse osmosis (RO) waste water treatment plant.

**PHASE 7 – PROJECTS 82 & 83**

| CODE         | ITEM DESCRIPTION | UNIT | QTY | PROJECT |
|--------------|------------------|------|-----|---------|
| 08-7-00-1205 |                  | NOS. | 4   |         |
|              |                  | NOS. | 30  |         |
|              |                  | NOS. | 2   |         |
|              |                  | NOS. | 1   |         |
|              |                  | NOS. | 1   |         |
|              |                  | NOS. | 1   |         |
|              |                  | NOS. | 1   |         |
|              |                  | NOS. | 6   |         |
|              |                  | NOS. | 7   |         |
|              |                  | NOS. | 2   |         |
| 08-7-00-1208 |                  | LOT  | 1   |         |

**Project 84**

South Gas Company project for the repair and maintenance of the Khour-Zubair gas storage and cooling plant to allow the transfer of gas to be pumped to the North, or to store the gas when demand is low.

**PHASE 7 – PROJECT 84**

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT |
|--------------|---|------|-----|---------|
| 08-7-00-1211 | LPG. PUMPING STATION (MATERIALS & INSTALLATION) IN KHOUR - ZUBAIR STORAGE & COOLING PLANT | LOT  | 1   |         |

**Project 85**

Oil Pipelines Company project to build a pumping station in Mosul for distribution of oil products, especially to the Mosul City power station.

**PHASE 7 – PROJECT 85**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY  | PROJECT  |
|--------------|--|------|------|--|
| 08-7-00-1322 | <p><b>PUMPING STATION FOR OIL PRODUCTS COMPRISING THE FOLLOWING:</b></p> <ul style="list-style-type: none"> <li>- MAIN PUMPS, 700 M<sup>3</sup>/HOUR EACH OF 500 M HEAD</li> <li>- BOOSTER PUMPS, 700 M<sup>3</sup>/HOUR EACH OF 60 M HEAD</li> <li>- STATION PIPING, VALVES, FITTINGS AND ACCESSORIES</li> <li>- MEASURING AND CONTROL EQUIPMENT</li> <li>- REMOTE CONTROL PANEL</li> <li>- POWER AND CONTROL CABLES</li> <li>- METERING AND GAUGING</li> <li>- PROTECTION SYSTEM, COMPLETE (TEMPERATURE, VIBRATION, PRESSURE ... ETC.) WITH ALL REQUIRED ACCESSORIES TO COMPLETE THE ABOVE SYSTEM INCLUDING SPARE PARTS</li> </ul> | LOT  | 2    | Oil Pipelines Company pumping station in Mosul, for product distribution |
| 08-7-00-1323 |  | SET  | 6    |  |
| 08-7-00-1324 |  | NOS. | 200  |  |
| 08-7-00-1325 |  | NOS. | 4000 |  |
| 08-7-00-1326 |  | NOS. | 1000 |  |

**Project 86**

Oil Pipelines Company project to rehabilitate the telecommunications links between the various fuel depots and pumping stations.

**PHASE 7 – PROJECT 86**

| CODE         | ITEM DESCRIPTION | UNIT | QTY | PROJECT |
|--------------|------------------|------|-----|---------|
| 08-7-00-1338 |                  | NOS. | 5   |         |
| 08-7-00-1339 |                  | NOS. | 25  |         |
| 08-7-00-1340 | -                | NOS. | 2   |         |
|              | -                | NOS. | 2   |         |
| 08-7-00-1341 |                  | NOS. | 2   |         |
| 08-7-00-1342 |                  | NOS. | 5   |         |
| 08-7-00-1343 |                  | NOS. | 2   |         |

**Project 87**

Oil Pipelines Company project to rehabilitate the 24” N Rumailah-Nassiriya dry gas pipeline of 135 kms length, to rehabilitate the 10” Shuaba-Nassiriya products pipeline, and to contract for intelligent pigging of these pipelines, and to install the necessary pig traps to enable the intelligent pigging work. At present these lines are working well below capacity as the pumping pressures have to be reduced.

**PHASE 7 – PROJECT 87**

| CODE                | ITEM DESCRIPTION   | UNIT       | QTY      | PROJECT  |
|---------------------|--|------------|----------|--|
|                     | <b>REHABILITATION OF 24 INCHES DIAMETER, 135KM. LONG NORTH RUMAILA-NASSIRIYA DRY GAS PIPELINE &amp; THE 10 INCH DIA. 161KM. SHUABA-NASSIRIA PRODUCTS PIPE LINE<br/>REHABILITATION INCLUDES THE FOLLOWING ITEMS:-</b> |            |          | <b>Intelligent pigging contract for N Rumailah-Nassiriya dry gas pipeline, to identify necessary repairs</b> |
|                     | <b>- CLEANING THE PIPELINE USING CLEANING PIGS FOLLOWED BY RUNNING PIGS WITH GAUGING PLATES</b>  |            |          |  |
| <b>08-7-00-1354</b> | <b>- MEASURING AND RECORDING THE INTERNAL GEOMETRY OF THE PIPELINE USING CALIPER PIGS</b>  | <b>LOT</b> | <b>1</b> |  |
|                     | <b>- INTERNAL INSPECTION OF THE LINE USING INTELLIGENT PIGS TO DETECT AND LOCATE CORRODED AREAS AND DEFECTS</b>  |            |          |  |
|                     | <b>- SUPPLYING ALL TOOLS, PIGS, PIG TRACKING EQUIPMENT AND PRESSURE MONITORING EQUIPMENT REQUIRED FOR FULFILLMENT OF THE ABOVE MENTIONED OPERATIONS</b>  |            |          |  |

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT |
|--------------|---|------|-----|---------|
|              | SUBMITTING A FINAL REPORT<br>DETAILING RESULTS OF THE<br>INSPECTION SURVEY AND<br>SHOWING REMEDIAL<br>MEASURES AND MAINTENANCE<br>WORK REQUIRED FOR THE<br>REHABILITATION OF THE<br>ABOVE MENTIONED PIPELINE<br>INCLUDING MATERIALS<br>REQUIRED   |      |     |         |
| 08-7-00-1355 | PIG RECEIVING TRAP, 24 INCHES,<br>ANSI 600, SKID MOUNTED PIG<br>RECEIVING TRAP, SUITABLE TO<br>RECEIVE CURRENTLY AVAILABLE<br>INTELLIGENT PIG, TO BE<br>INSTALLED ON THE 24 INCHES DRY<br>GAS NORTH RUMAILA-NASSIRIYA<br>LINE COMPLETE WITH SERVICE<br>VALVES, PIG SIGNAL, PRESSURE<br>INDICATOR, CONNECTING PIPING<br>TO MAIN LINE, BY-PASS LINE AND<br>VENT LINE. | LOT  | 1   | “       |

### Projects 88 and 89

Oil Pipelines Company projects to construct a 15 kms, 8” fuel delivery pipeline for the power station at Beiji, and to construct a 70 kms, 16” fuel delivery pipeline to the Yousifiya power station.

### PHASE 7 – PROJECTS 88 & 89

| CODE         | ITEM DESCRIPTION  | UNIT | QTY | PROJECT  |
|--------------|---|------|-----|--|
| 08-7-00-1357 | LINE PIPE, CARBON STEEL, 16<br>INCHES, 70 KILOMETERS, FACTORY<br>COATED WITH EXTRUDED<br>POLYETHYLENE PLUS HEAT<br>SHRINKABLE SLEEVES FOR GIRTH<br>WELDS COMPLETE WITH ALL<br>ACCESSORIES INCLUDING<br>FITTINGS, VALVES, WELDING<br>ELECTRODES, CATHODIC<br>PROTECTION SYSTEM | LOT  | 1   | 70 KMS<br>PIPELINE TO<br>YOUSIFIYA<br>POWER<br>STATION |

## **Projects 90 and 91**

Oil Pipelines Company projects to rehabilitate the existing gas compressor station in North Rumailah, and to construct a 180 kms, 10” LPG pipeline from Beiji refinery to Mosul for the transfer of domestic gas thereby removing the necessity of road transport (dangerous and slow) to the local gas bottling facilities.

## **PHASE 7 – PROJECTS 90 & 91**

All items have been removed.

**Project 92**

Oil Pipelines Company project to construct a 143 kms, 42” dry gas pipeline to replace the current 24” line which is unable to meet demand.

**PHASE 7 – PROJECT 92**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT                               |
|--------------|--|------|-----|---------------------------------------|
|              | - LINE PIPE, CARBON STEEL, 42 INCHES DIAMETER, 143 KILOMETERS, FACTORY COATED WITH EXTRUDED POLYETHYLENE PLUS HEAT SHRINKABLE SLEEVES FOR GIRTH WELDS, COMPLETE WITH THE FOLLOWING |      |     | 143 kms 42” line to replace 24” line. |
|              | - SLEEVE PIPE, CARBON STEEL 48 INCHES, 500 METERS LENGTH, COATED WITH EXTRUDED POLYETHYLENE PLUS HEAT SHRINKABLE SLEEVES FOR GIRTH WELDS   |      |     |                                       |
| 08-7-00-1361 | - WELDING ELECTRODES, 125 TONS, OF DIFFERENT SIZES AND TYPES   | LOT  | 1   |                                       |
|              | - LINE BREAK VALVES, 42 INCHES, 17 NOS., 12 INCHES, 63 NOS..   |      |     |                                       |
|              | - LINE BREAK VALVES, SELF OPERATED, 14 INCHES, 2 NOS..   |      |     |                                       |
|              | - LAUNCHING AND RECEIVING STATIONS, 46 INCHES, 2 NOS..   |      |     |                                       |
|              | - FITTINGS, DIFFERENT SIZES AND TYPES FOR A/M PIPELINE   |      |     |                                       |
|              | - CATHODIC PROTECTION SYSTEM   |      |     |                                       |

**Projects 93 and 94**

Oil Pipelines Company projects to construct a 161 kms, 12” product line to allow repairs to the existing 10” line, and to construct a booster pumping station to increase product transfer rates between the North and South regions.

**PHASE 7 – PROJECTS 93 & 94**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY | PROJECT              |
|--------------|--|------|-----|----------------------|
| 08-7-00-1362 | PIPELINE, CARBON STEEL, 12 INCHES DIAMETER, 161 KILOMETER LENGTH, FACTORY COATED WITH EXTRUDED POLYETHYLENE, COMPLETE WITH:<br>- LAUNCHING AND RECEIVING TRAP STATIONS<br>- METERING AND PRESSURE REDUCTION STATIONS<br>- LINE BREAK VALVES<br>- CATHODIC PROTECTION SYSTEM<br>- ACCESSORIES INCLUDING VALVES, FLANGES, TEES, ELBOWS, REDUCERS, GASKETS, CAPS, STUD BOLTS AND NUTS<br>- WELDING ELECTRODES, FLOW METERS, FILTERS<br>- CONTROL EQUIPMENT<br>- HEAT SHRINKABLE SLEEVES | LOT  | 1   | 161 KMS 12” PIPELINE |

## Project 95

Oil Pipelines Company project to rehabilitate pipelines of uncommon diameters, and to repair and maintain both 12" and 42" lines in *Projects 92 and 93* above.

### PHASE 7 – PROJECT 95

| CODE         | ITEM DESCRIPTION  | UNIT | QTY   | PROJECT                     |
|--------------|---|------|-------|-----------------------------|
|              | MATERIALS FOR SPIRAL PIPES FOR REHABILITATION CONSISTING OF:-                                     |      |       | PIPING FOR PROJECTS 90 & 91 |
|              | - HOT ROLLED STEEL COILS TO BE ROLLED IN ACCORDANCE TO API S.T.D SIZE (1500X10.31) MM. GRADE X-52 | TON  | 7000  |                             |
|              | - HOT ROLLED STEEL COILS TO BE ROLLED IN ACCORDANCE TO API S.T.D SIZE (650X7.09)MM GRADE X-52     | TON  | 13000 |                             |
| 08-7-00-1364 | - WELDING RODS & WELDING WIRE OF DIFFERENT TYPES & SIZES  | TON  | 143.5 |                             |
|              | - WELDING FLUX L.761 (LINCOLN TYPE)   | TON  | 221   |                             |
|              | - GRINDING DISK DIFF. SIZES   | NOS. | 1500  |                             |
|              | - EPOXY POWDER  | TON  | 21.2  |                             |
|              | - BONDING AGENT   | TON  | 39.5  |                             |
|              | - POLY ETHYLEN (LOW DENSITY)  | TON  | 742   |                             |

## **Project 96**

Oil Pipelines Company project to construct a fuel depot in the mid-Euphrates area, to improve products distribution in the area with less reliance on vehicular traffic.

## **PHASE 7 – PROJECT 96**

All items have been removed.

**Project 97**

Oil Products Distribution Company project to construct product storage tanks in certain areas to improve distribution.

**PHASE 7 – PROJECT 97**

| CODE         | ITEM DESCRIPTION   | UNIT | QTY   | PROJECT  |
|--------------|--|------|-------|--|
| 08-7-00-1423 |  | NOS. | 50000 |  |
| 08-7-00-1424 |  | NOS. | 160   |  |
| 08-7-00-1425 |  | NOS. | 100   |  |
| 08-7-00-1426 |  | NOS. | 5000  |  |
| 08-7-00-1427 |  | MTR. | 20000 |  |
| 08-7-00-1428 |  | NOS. | 7000  |  |
| 08-7-00-1429 |  | NOS. | 300   |  |
| 08-7-00-1431 | OIL PRODUCTS STORAGE TANKS WITH ALL ACCESSORIES CAP.10000 M <sup>3</sup>               | NOS. | 4     | Product storage tanks to improve fuel distribution |
| 08-7-00-1432 | OIL PRODUCTS STORAGE TANKS WITH ALL ACCESSORIES CAP.50000 M <sup>3</sup>               | NOS. | 3     | “  |
| 08-7-00-1433 | OIL PRODUCTS STORAGE TANKS WITH ALL ACCESSORIES CAP.20000 M <sup>3</sup> FLOATING ROOF | NOS. | 2     | “  |
| 08-7-00-1434 |  | NOS. | 1000  |  |
| 08-7-00-1435 |  | KG.  | 1000  |  |
|              |  | NOS. | 100   |  |
|              |  | NOS. | 30000 |  |
| 08-7-00-1437 |  | NOS. | 5     |  |