

Form 3160-3
(April 2004)HOBBS OCD
SEP 06 2013
RECEIVED

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other <i>SWD</i> ☒ Single Zone ☐ Multiple Zone		8. Lease Name and Well No. WBR 13 SWD #1 <i><40116></i>
2. Name of Operator OXY USA Inc.		9. API Well No. 30-025- <i>41380</i>
3a. Address P.O. Box 50250 Midland, TX 79710	3b. Phone No. (include area code) 432-685-5717	10. Field and Pool, or Exploratory <i>SWD - Red Tank Delaware, West</i> <i><96100></i>
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1974 FSL 697 FEL NESE(I) At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area Sec 13 T22S R32E
14. Distance in miles and direction from nearest town or post office* 24 miles NE from Loving, NM		12. County or Parish Lea
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 697'		13. State NM
16. No. of acres in lease 600	17. Spacing Unit dedicated to this well 40	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1356'	19. Proposed Depth 5350'	20. BLM/BIA Bond No. on file ESB000226 - NMB000862
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3666.5' GR	22. Approximate date work will start* 12/01/2012	23. Estimated duration 30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>David Stewart</i>	Name (Printed/Typed) David Stewart	Date <i>04/02/13</i>
Title Regulatory Advisor /s/ James Stovall		
Approved by (Signature) <i>Cody R. Layton</i>	Name (Printed/Typed) <i>Cody R. Layton</i>	Date <i>04/02/13</i>
Title <i>Manager</i>	Office <i>CFO</i>	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special Stipulations Attached

SEP 12 2013

APD DATA - DRILLING PLAN - 7/25/13

HOBBS OCD

OPERATOR NAME / NUMBER: OXY USA Inc

16696

LEASE NAME / NUMBER: WBR 13 SWD # 1

Federal Lease No. NMNM058940

SEP 06 2013

STATE: NM

COUNTY: Eddy

RECEIVED

SURFACE LOCATION:

1974 FSL 697 FEL NESE(I) Sec 13 T22S R32E

SL: LAT: 32.3899045 N LONG: 103.6215807 W X: 506293.0' Y: 719703.2'

NAD: 27

C-102 PLAT APPROX GR ELEV: 3666.4'

EST KB ELEV: 3682.9 (16.5' KB)

1. GEOLOGIC NAME OF SURFACE FORMATION

a. Permian

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS (FROM KB)

Formation	TV Depth Top	Expected Fluids
T. Rustler	924	-
T. Salado/Salt	1334	-
B. Anhydrite/Salt	4494	-
T. Lamar	4884	-
T. Bell Canyon	4939	Formation Water
T. Cherry Canyon	5434	Formation Water
TD	5350	-

Fresh Water has been found above the Rustler. The deepest water zone in the area has been found at +/- 340' per the NMOSE.

GREATEST PROJECTED TD 5350' MD/ 5350' TVD OBJECTIVE: Bell Canyon/Cherry Canyon

3. CASING PROGRAM (All Casing is in NEW CONDITION)

New Surface Casing: 11.75" casing set at ± 950' MD/ 950' TVD in a 14 3/4" hole filled with 8.40 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0' - 950'	950'	42	H-40	ST&C	1070	1980	307	11.084	4.77	3.34	1.28	8.83

New Intermediate Casing: 8.625" casing set at ± 4600' MD / 4600' TVD in a 10 5/8" hole filled with 10 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0' - 4600'	4600'	32	J-55	LT&C	2530	3930	417	7.92	7.80	1.52	2.02	3.28

New Production Casing: 5.5" casing set at ± 5350' MD / 5350' TVD in a 7 7/8" hole filled with 8.90 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0' - 5350'	5350'	17	J-55	LT&C	4910	5320	247	4.89	4.77	1.98	2.74	3.14

Collapse and burst loads calculated using Stress Check with actual anticipated loads.

4. CEMENT PROGRAM:

Surface Interval

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft ³ /sk	24 Hr Comp
Surface TOC: Surface (0' - 950')							
Lead: 0' - 950' ^{975'} (150% Excess)	780	950'	Premium Plus Cement, with 2% Calcium Chloride.	6.39	14.8	1.35	2500 psi

Intermediate Interval

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft ³ /sk	24 Hr Comp
Intermediate TOC: Surface (0' - 4600')							
Lead: 0' - 4117' (150% Excess)	880	4117'	Light Premium Plus Cement, with 5% Salt, 3 lb/sk Kol-Seal, & 0.125 lb/sk Poly-E-Flake	9.68	12.9	1.87	650 psi
Tail: ^{4800'} 4117' - 4600' (150% Excess)	200	483'	Premium Plus cement with 1% Calcium Chloride	6.36	14.8	1.34	1343 psi

Production Interval

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft ³ /sk	24 Hr Comp
Production TOC: Surface (0' - 5350')							
Lead: 0' - 4750' (200% Excess)	520	4750'	Light Premium Plus Cement	9.99	12.7	1.85	560 psi
Tail: 4750' - 5350' (35% Excess)	240	600'	Premium Plus, 0.5 Halad 344, 0.4% CFR 3, 3lbm/sk Kol Seal, 1 lbm/sk Salt	5.59	14.2	1.29	1817 psi

Description of Cement Additives: Poly-E-Flake (Lost Circulation Additive), Calcium Chloride - Flake (Accelerator), Kol-Seal (Lost Circulation Additive), Halad®-344 (Low Fluid Loss Control), CFR-3 (Dispersant).

5. PRESSURE CONTROL EQUIPMENT

Surface: 0 - 950' None.

Intermediate: 0 - 4600' the minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required to drill below the surface casing shoe shall be 3000 (3M) psi. Operator will be using an 11" 5M two ram stack with 3M annular preventer and 3M Choke Manifold.

- The 11" 3000 psi blowout prevention equipment will be installed and operational after setting the 11 3/4" surface casing and the 11 3/4" SOW x 13 5/8" 3K conventional wellhead; the rotating head body will be installed but the rubber will be installed when it becomes operationally necessary.
- The BOP and ancillary BOPE will be tested by a third party. All equipment will be tested to 250/1386 against the surface casing (70% of casing burst) psi for 30 minutes by a third party and charted.

- c. The pipe rams will be function tested every 24 hours; the blind rams will be function tested on every trip out of the hole. These tests will be documented on the Daily Driller's Log.
- d. Other accessory equipment (BOPE) will include a safety valve and subs as needed to fit all drill strings, and a 2" kill line and 3" choke line having a 5000 psi WP rating, tested to 3000 psi.

Production: 0 – 5350' will be drilled with an 11" 5M two ram stack with a 3M annular preventer and 3M Choke Manifold.

- a. The BOP and ancillary BOPE will be tested by a third party upon installation to the 8 5/8" intermediate casing. All equipment will be tested to 3000 psi (high) and 250 psi (low) except the annular, which will be tested to 70% of its rated working pressure (high) and also to 250 psi (low). All test will performed against a test plug with the Section B Wellhead valve open to assure that the test is not being performed against the casing.
- b. The pipe rams will be function tested every 24 hours; the blind rams will be function tested on every trip out of the hole. These tests will be documented on the Daily Driller's Log.
- c. Same "c" and "d" as above
- d. Oxy requests a variance to use a co-flex line between the BOP and choke manifold.

(schematic attached)

Manufacturer: ContiTech Beattie Co.

Serial Number: 60220

Length: 25' Size: 3" Ends: flanges

WP rating: 5000 psi

Anchors required by manufacturer: No

- e. See attached BOP & Choke manifold diagrams.

MUD PROGRAM:

Depth	Mud Wt ppg	Vis Sec	Fluid Loss	Type System
0 – 950'	8.4 – 8.8	32 – 38	NC	Fresh Water /Spud Mud
950' – 4600'	9.8 – 10.0	28 – 29	NC	Brine Water
4600' – 5350'	8.4 – 8.9	26 – 28	NC	Fresh Water

Remarks: Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times.

- A. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. **If Hydrogen Sulfide is encountered , measured amounts and formations will be reported to the BLM**

8. POTENTIAL HAZARDS:

- See COA
- A. H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6.
 - B. The bottomhole pressure is anticipated to be **between 2476 psi.**
 - C. No abnormal temperatures or pressures are anticipated. **The highest anticipated pressure gradient is 0.46 psi/ft.** All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

9. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 35 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

10. WIRELINE LOGGING

Run Spectral Gamma/Neutron/Density/Resistivity from TD to Intermediate casing, with Gamma/Neutron to surface.

COMPANY PERSONNEL:

<u>Name</u>	<u>Title</u>	<u>Office Phone</u>	<u>Mobile Phone</u>
Carlos Mercado	Drilling Engineer	(713)366-5418	(281) 455-3481
Sebastian Millan	Drilling Engineer Supervisor	(713)350-4950	(832) 528-3268
Roger Allen	Drilling Superintendent	(713)215-7617	(281) 682-3919
Douglas Chester	Drilling Manager	(713)366-5194	(713) 918-9124



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the
POD suffix indicates the
POD has been replaced
& no longer serves a
water right file.)

(R=POD has
been replaced,
O=orphaned,
C=the file is (quarters are 1=NW 2=NE 3=SW 4=SE)
closed) (quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Subbasin	County	64	16	4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02096			ED	2	3	14	22S	32E	627204	3584464*	435	360	75	
C 02821	C		LE	2	2	3	14	22S	32E	627303	3584563*	540	340	200

Average Depth to Water: **350 feet**

Minimum Depth: **340 feet**

Maximum Depth: **360 feet**

Record Count: 2

PLSS Search:

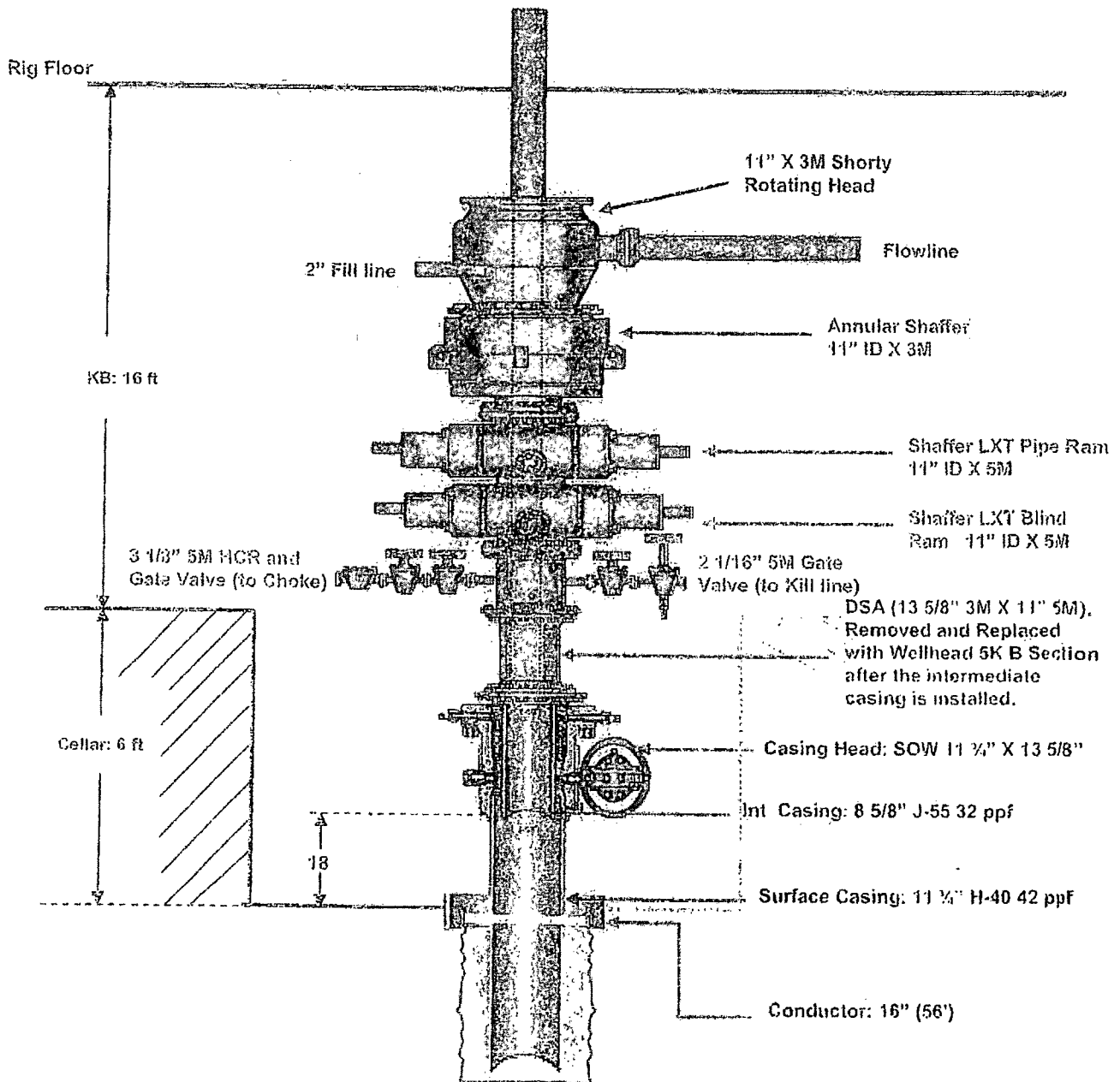
Section(s): 11, 12, 13, 14, 23, 24 **Township:** 22S **Range:** 32E

No records found.

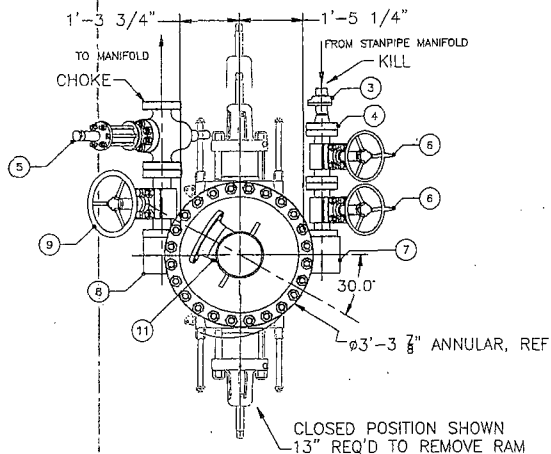
PLSS Search:

Section(s): 7, 18, 19 **Township:** 22S **Range:** 33E

BOP Diagram



BOP-2



PROPER TORQUE FOR BOLTS

COMPONENT	FLANGE SIZE & RATING	BOLT SIZE	TORQUE	(FT/LBS)
			CF=0.07	CF=0.13
SPOOLS, ANNULAR & RAMS	11"x5M	1 7/8" DIA.	1890	3330
BLOCKS	3 1/8x5M	1 1/8" DIA.	401	686
CHOKE VALVES	3 1/8x5M	1 1/8" DIA.	401	686
KILL VALVES	2 1/16x5M	7/8" DIA.	188	319

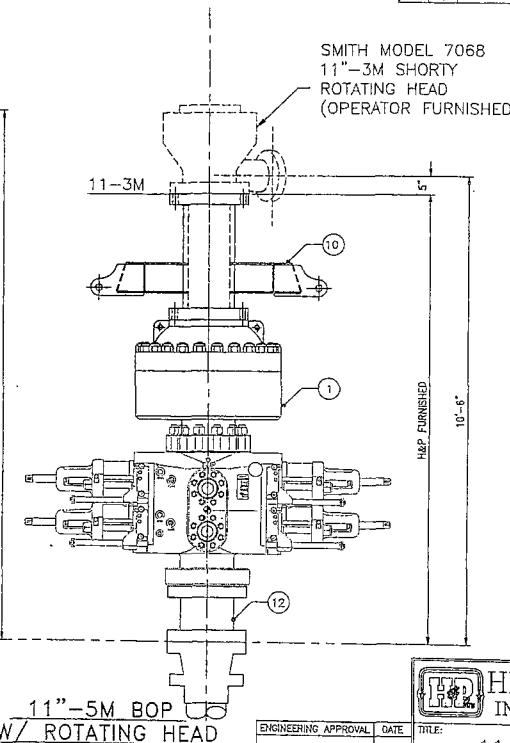
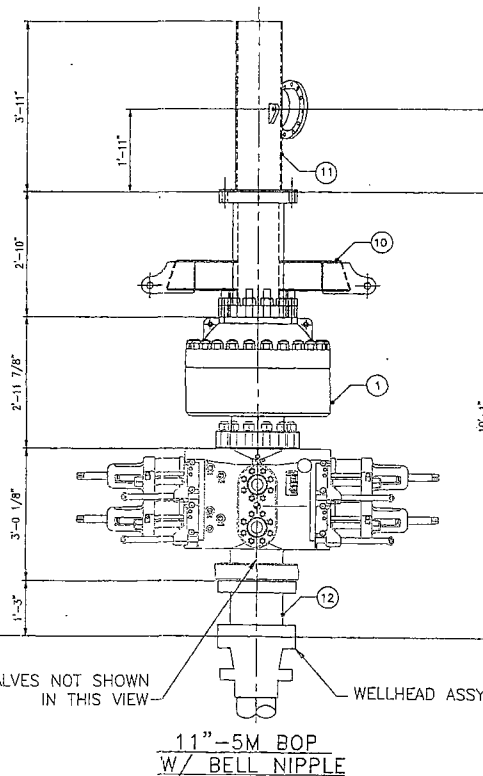
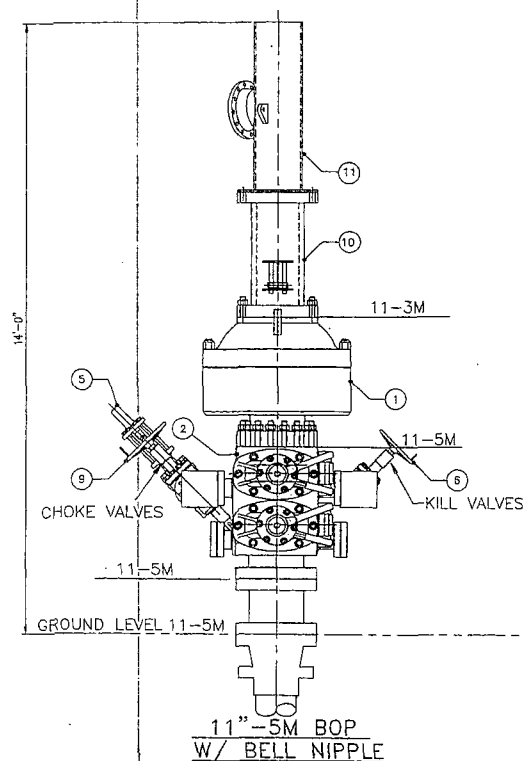
BILL OF MATERIAL

ITEM NO.	QUAN.	DESCRIPTION	PART NUMBER	WEIGHT
		11"-5M BOP ASSEMBLY		
1	1	ANNULAR, 11x3M BOLTED TYPE		6005
2	1	BOP DOUBLE RAM		7600
4		RAM ELEMENTS		444
3	1	HAMMER UNION, 2-1502# XXH (BW)		5
4	1	FLANGE, WN 2 1/16-5M API		42
5	1	VALVE, GATE FLS-HCR 3 1/8-5M		396
6	2	VALVE, GATE 2 1/16-5M		350
7	1	90° STUDDED BLOCK, 3 1/8-5M X 2 1/16-5M		240
8	1	90° STUDDED BLOCK, 3 1/8-5M X 3 1/8-5M		250
9	2	VALVE, GATE 3 1/8-5M		720
10	1	BELL NIPPLE BOP LIFTING SECTION	HK F4M-H-318.01A	780
11	1	BELL NIPPLE EXTENSION	HK F4M-H-318.01A	396
12	1	11"-5M x 11"-5M x 1'-3" LONG SPACER		800
		SPOOL- WORKING PRESSURE 5000 PSI		

HARDWARE

ITEM NO.	QUAN.	DESCRIPTION	PART NUMBER	WEIGHT
		RINGS AND BOLTS		400

APPROX. TOTAL WEIGHT = 18,228 LBS.



ISSUED FOR FABRICATION
August-08-2008
DRAFTSMAN
ENGINEER

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF A HELMERICH & PAYNE

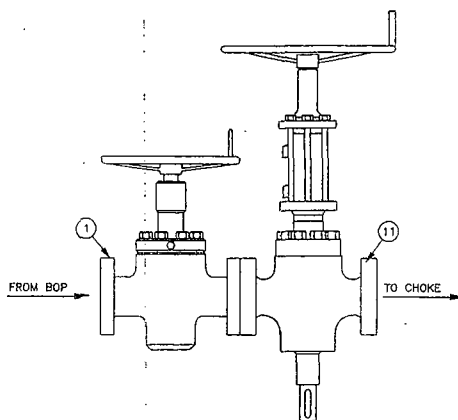
NOTES:

1. ALL BOP RAMS SHOWN ARE SHAFFER MODEL LXT

HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

TITLE: 11"-5M BOP EQUIPMENT GENERAL ARRANGEMENT
CUSTOMER: OXY-PERMIAN
PROJECT: F4M
DRAWN: DUNHAM DATE: 07/14/08 DWG. NO.:
ENGINEERING APPROVAL DATE: 08/08/08
ADDED 1 OF 4 SHOTS WAS 1 OF 3 DRJ

Chk Mutl 2-1

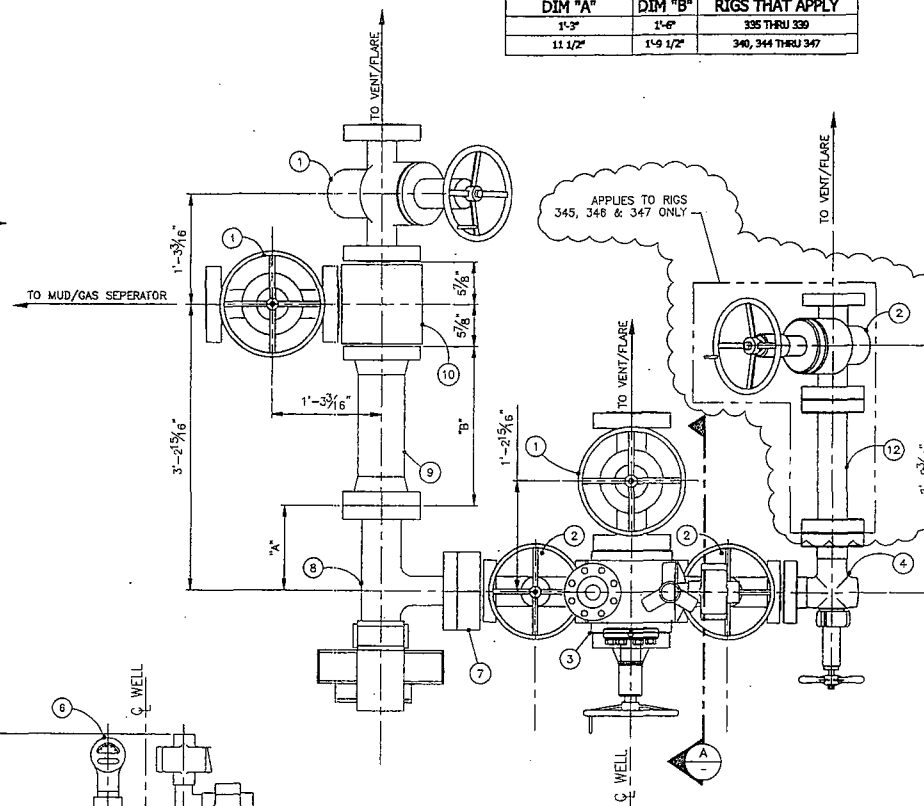


BOP SIDE OUTLET VALVES

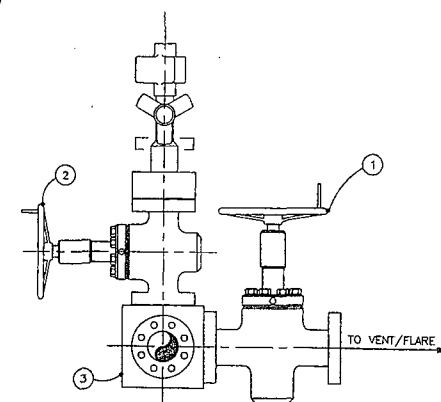
DIMENSION NOTATION		
DIM "A"	DIM "B"	RIGS THAT APPLY
1'-3"	1'-6"	335 THRU 339
11 1/2"	1'-9 1/2"	340, 344 THRU 347

LEGEND

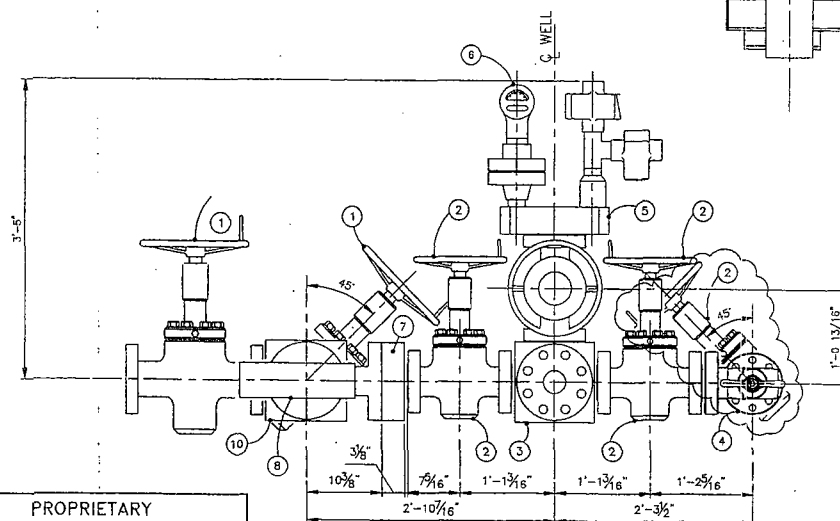
- ①—3 1/8"-5M FLANGED END GATE VALVE
- ②—2 1/16"-5M FLANGED END GATE VALVE
- ③—BLOCK WITH TRANSMITTER FLANGE AND PRESSURE GAUGE
- ④—2 1/16"-5M ADJUSTABLE CHOKE
- ⑤—TRANSMITTER FLANGE
- ⑥—PRESSURE GAUGE
- ⑦—DSA 2 1/16"-5M x 3 1/16"-10M
- ⑧—3 1/16"-10M HYDRAULIC CHOKE
- ⑨—3 1/8"-5M x 3 1/16"-10M SPOOL
- ⑩—3 1/8"-5M x 3 1/8"-5M STUDDED TEE
- ⑪—3 1/8"-5M FLANGED END HCR GATE VALVE
- ⑫—2 1/16"-5M x 2 1/16"-5M SPOOL



PLAN VIEW
CHOKE MANIFOLD



VIEW A-A



ELEVATION VIEW

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

ISSUED FOR FABRICATION
October-17-2008
DRAFTSMAN
ENGINEER

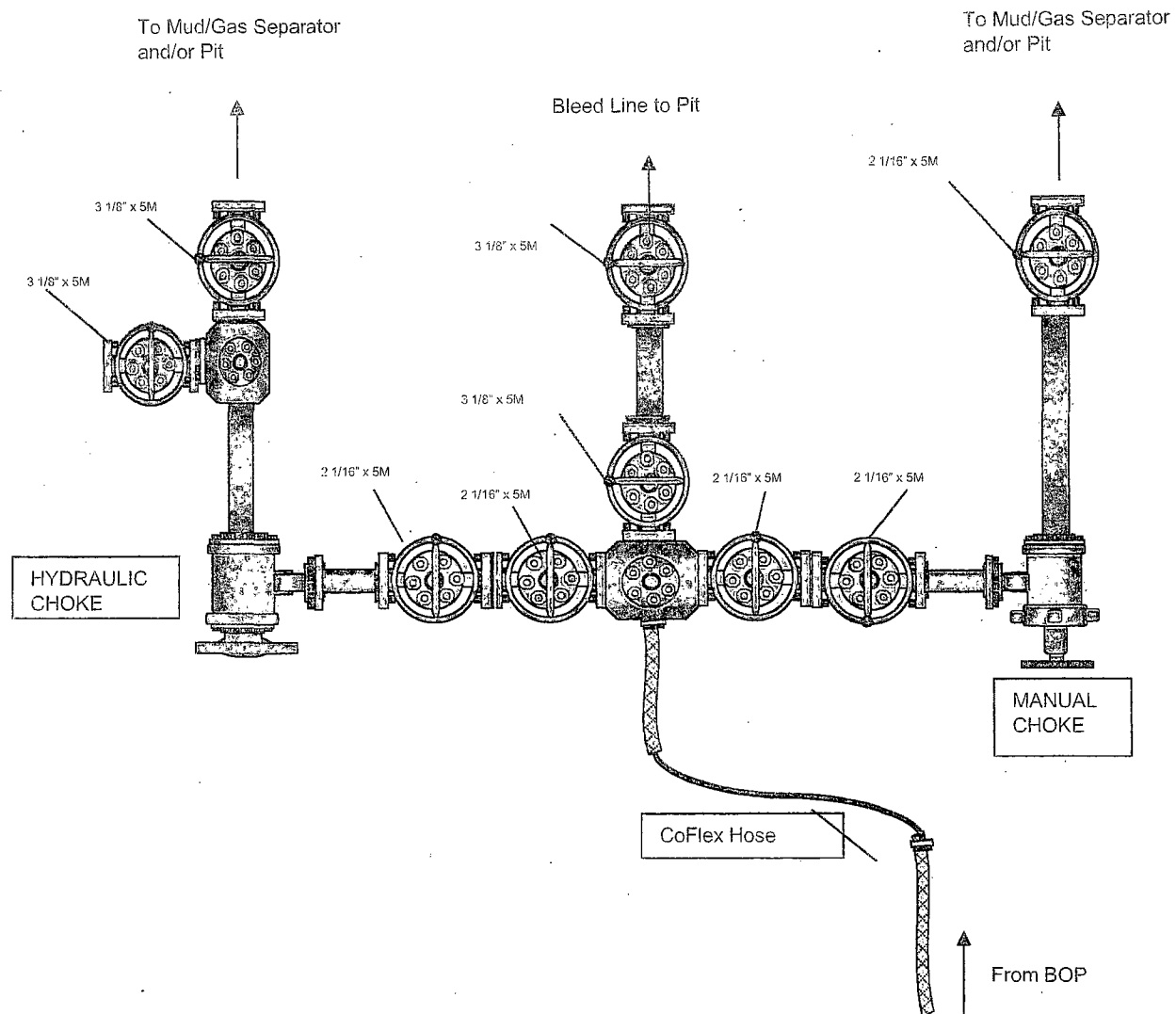
ENGINEERING APPROVAL		DATE	TITLE
△			
△			
△	10-17-08	ADDED QTY (1) ITEM 2 & ITEM 12	NWL
△	03-26-08	ADD DIM NOTATION BOX FOR DIFFERENT SIZE HYD. CHOKE	NWL
△	7/7/08	REVIEW FOR FABRICATION APPROVAL ISSUE 7 - 10	ONLY
CUSTOMER: OXY SOUTH AMERICA			PROJECT: FAM
DRAWN: JAV			DATE: 01/07/08 DWG. NO.:
			REV:

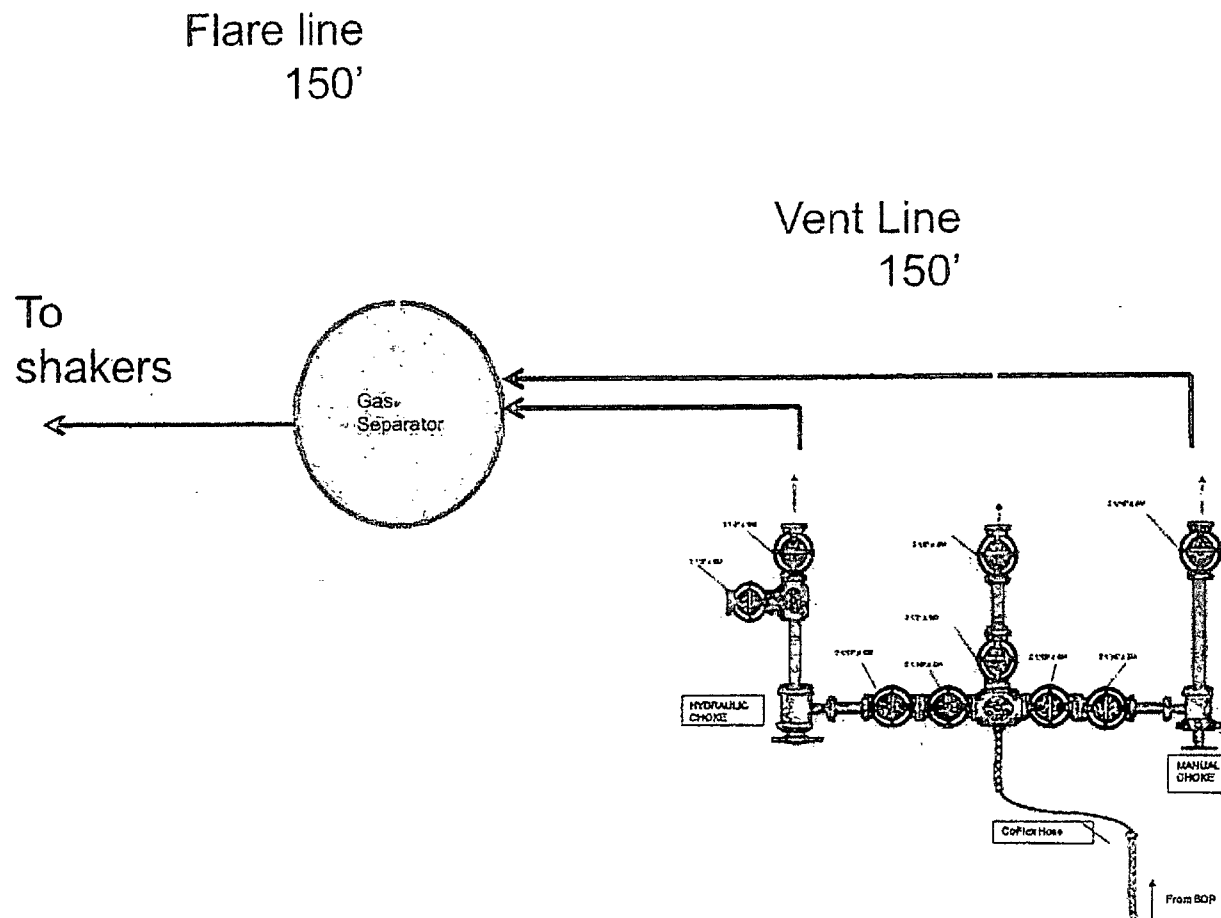
HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.

CHOKE MANIFOLD DETAIL ARRANGEMENT

Chk. Manifold
2

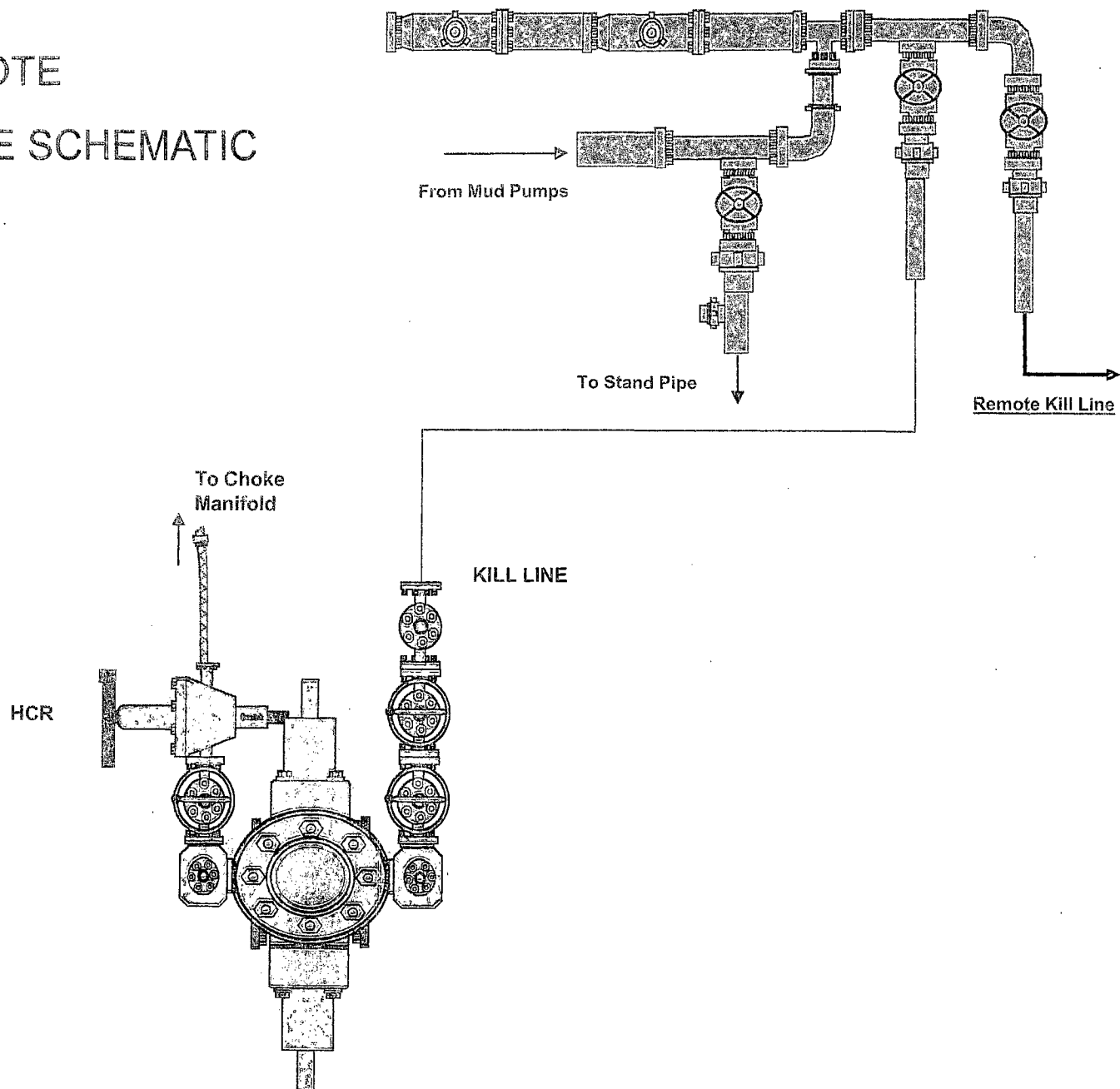
5M CHOKE MANIFOLD CONFIGURATION





ChkMate
3

5M REMOTE KILL LINE SCHEMATIC



QUALITY CONTROL	No.: QC-DB- 35 / 2011
	Page : 1 / 68
Hose No.: 60220, 60221, 60222, 60223	Revision : 0
	Date: 16. February 2011.
	Prepared by : <i>[Signature]</i>
	Appr. by: <i>[Signature]</i>

CHOKE AND KILL HOSES

id.: 3" 34,5 MPa x 25 ft (7,62 m) 1 pc
x 30 ft (9,14 m) 3 pcs

DATA BOOK

Purchaser:

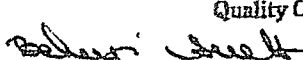
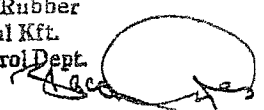
Purchaser Order No.:

ContiTech Rubber Order No.: 490278

ContiTech Beattie Co. Order No.: 004721

ASSET # 66-0606, 66-0607, 66-0608, 66-0609



QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 128	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 004721	
CONTITECH ORDER N°: 490278		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 60220		NOMINAL / ACTUAL LENGTH: 7,62 m / 7,64 m			
W.P. 34,48 MPa 5000 psi		T.P. 68,9 MPa 10000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature					
See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 20 MPa					
COUPLINGS Type		Serial N°		Quality	
3" coupling with		160 159		AISI 4130	
4 1/16" Flange end				AISI 4130	
ASSET NO. : 66-0606				API Spec 16 C	
Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date: 07. February 2011.		Inspector		Quality Control ContiTech Rubber Industrial Kft. Quality Control Dept.  	

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 129	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 004721	
CONTITECH ORDER N°: 490278		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 60221		NOMINAL / ACTUAL LENGTH: 9,14 m / 9,17 m			
W.P. 34,48 MPa 5000 psi		T.P. 68,9 MPa 10000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature					
See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 20 MPa					
COUPLINGS Type		Serial N°		Quality	
3" coupling with 4 1/16" Flange end		155 157		AISI 4130 AISI 4130	
				Heat N° Y0515A 31694	
ASSET NO. : 66-0607				API Spec 16 C Temperature rate:"B"	
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date: 07. February 2011.		Inspector		Quality Control ContiTech Rubber Industrial Kft. Quality Control Dept. (1)	



Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 130	
PURCHASER: ContiTech Beattie Co.			P.O. N°: 004721		
CONTITECH ORDER N°: 490278		HOSE TYPE: 3" ID		Choke and Kill Hose	
HOSE SERIAL N°: 60222		NOMINAL / ACTUAL LENGTH: 9,14 m / 9,17 m			
W.P. 34,48 MPa 5000 psi		T.P. 68,9 MPa 10000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature					
See attachment. (1 page)					
↑ 10 mm = 10 Min. → 10 mm = 20 MPa					
COUPLINGS Type		Serial N°		Quality	
3" coupling with		161 163		AISI 4130	
4 1/16" Flange end				AISI 4130	
ASSET NO. : 66-0608				API Spec 16 C	
				Temperature rate: "B"	
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:		Inspector		Quality Control	
07. February 2011.				ContiTech Rubber Industrial Kft. Quality Control Dept. (1)	

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 131	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 004721	
CONTITECH ORDER N°: 490278		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 60223		NOMINAL / ACTUAL LENGTH: 9,14 m / 9,18 m			
W.P. 34,48 MPa 5000 psi		T.P. 68,9 MPa 10000 psi		Duration: 60 min.	
Pressure test with water at ambient temperature See attachment. (1 page) ↑ 10 mm = 10 Min. → 10 mm = 20 MPa					
COUPLINGS Type		Serial N°		Quality	
3" coupling with		158 156		AISI 4130	
4 1/16" Flange end				AISI 4130	
ASSET NO. : 66-0609				API Spec 16 C	
Temperature rate: "B"					
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:		Inspector		Quality Control	
07. February 2011.				ContiTech Rubber Industrial Kft. Quality Control Dept. (1)	

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 35 / 2011
	Page: 52 / 68

ContiTech Rubber Industrial Kft. Szeged/Hungary		Examination record Vizsgálati jegyzőkönyv Liquid penetrant examination Festékdifúziós vizsgálat ☒ Magnetic particle examination Mágneses repedésvizsgálat	Record No. Jegyzőkönyv száma : 76/11
Manufacturer Gyártó	JE-ZO Kft.	Serial No. Gyári szám	155-162
Customer Megrendelő	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2104-5000
Object Tárgy	coupling(s)	Material Anyagminőség	AISI 4130
Quantity Mennyiség	8 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hőkezelés	yes
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztő	Szabó T.

Liquid penetrant examination /Folyadékbehatolós vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Előhívó
Dwell time Behatolási idő	Drying Szárítás	Developing time Előhívási idő
Surface temperature A felület hőmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhető poros vizsgálat

Equipment type Készülék típusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesező áram	990 A
Black light type UV-A lámpa típusa	Superlight C 10A-HE	Field strength checking Térerőmérő	Berthold disc	Field strength Térerő	4,2 kA/m
Surface temperature A felület hőmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm ²

Test results

Eredmények :

satisfactory

megfelelő..... 8..... pc(s)/db

not accepted

nem megfelelő..... pc(s)/db

Performed by NDE Level II.
Vizsgálatot végezte

Signature Dávid Ferenc

Aláírás

Place/Date

Kelt Szeged, 17. 01. 2011

Revised by Q. C. manager
Ellenőrizte – MEO vezető

Signature Markó László

Aláírás

Place/Date

Kelt Szeged, 17. 01. 2011

ContiTech Rubber
Industrial Kft.
QC 1

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 35 / 2011
	Page: 53 / 68

ContiTech Rubber Industrial Ltd. Szeged/Hungary		Examination record Vizsgálati jegyzőkönyv ☒ Liquid penetrant examination Festékdifúziós vizsgálat Magnetic particle examination Mágneses repedésvizsgálat		Record No. Jegyzőkönyv száma : 76 /a/11
Manufacturer Gyártó	JE-ZO Kft.	Serial No. Gyári szám	155-162	
Customer Megrendelő	ContiTech Rubber Industrial Ltd.	Drawing No. Rajzszám	MT 2104-5000	
Object Tárgy	coupling(s) (ring grooves)	Material Anyagminőség	AISI 4130; Fox Sas 4	
Quantity Mennyiség	8 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside	
Requirements Követelmények	ASTM E 165	Welding procedure Hegesztési eljárás	WPS No.140-72 rev.3	
Written Procedure No. Vizsgálati eljárás száma	QCP-12-1	Welder Hegesztő	Szabó T.	

Liquid penetrant examination /Folyadékbehatolósos vizsgálat

Penetrant Behatoló anyag	MR 68	Remover Tisztító	MR 79	Developer Előhívó	MR70
Dwell time Behatolási idő	10 min	Drying Szárítás	8 min	Developing time Előhívási idő	10 min
Surface temperature A felület hőmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 lx

Magnetic particle examination/Mágnesezhető poros vizsgálat

Equipment type Készülék típusa	Testing material Vizsgáló anyag	Magnetizing current Mágnesező áram
Black light type UV-A lámpa típusa	Field strength checking Téroró mérő	Field strength Téroró
Surface temperature A felület hőmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Test results

Eredmények :

satisfactory

megfelelő..... 8..... pc(s)/db

not accepted

nem megfelelő..... pc(s)/db

Performed by NDE Level II.
Vizsgálatot végezte

Signature Dávid Ferenc

Aláírás

Place/Date

Kelt Szeged, 17. 01. 2011

Revised by Q. C. manager
Ellenőrizte – MEO vezető

Signature

Aláírás

Place/Date

Kelt Szeged, 17. 01. 2011

ContiTech Rubber
Industrial Kft.
QC 1

Markó László

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 35 / 2011 Page: 54 / 68
-------------------------------------	---------------------------------------

ContiTech Rubber Industrial Kft. Szeged/Hungary	Examination record Vizsgálati jegyzőkönyv Liquid penetrant examination Festékdifúziós vizsgálat ☒ Magnetic particle examination Mágneses repedésvizsgálat	Record No. Jegyzőkönyv száma : 87/11
---	--	--

Manufacturer Gyártó	JE-ZO Kft.	Serial No. Gyári szám	163-164
Customer Megrendelő	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2104-5000
Object Tárgy	coupling(s)	Material Anyagminőség	AISI 4130
Quantity Mennyiség	2 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hőkezelés	yes
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztő	Szabó T.

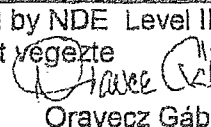
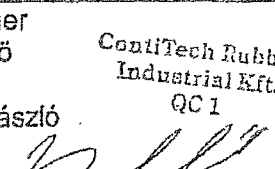
Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Előhívó
Dwell time Behatolási idő	Drying Szárítás	Developing time Előhívási idő
Surface temperature A felület hőmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhető poros vizsgálat

Equipment type Készülék típusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesező áram	990 A
Black light type UV-A lámpa típusa	Superlight C 10A-HE	Field strength checking Térerőmérő	Berthold disc	Field strength Térerő	4,2 kA/m
Surface temperature A felület hőmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm ²

Test results Eredmények : satisfactory megfelelő..... 2..... pc(s)/db not accepted nem megfelelő..... pc(s)/db					
---	--	--	--	--	--

Performed by NDE Level II. Vizsgálatot végezte  Signature Aláírás Place/Date Kelt Szeged, 19. 01. 2011	Revised by Q. C. manager Ellenőrizte – MEO vezető  Signature Aláírás Place/Date Kelt Szeged, 19. 01. 2011
---	--

Flex Hose-
9

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 35 / 2011
	Page: 55 / 68

ContiTech Rubber Industrial Ltd. Szeged/Hungary		Examination record Vizsgálati jegyzőkönyv ☒ Liquid penetrant examination Festékdifúziós vizsgálat Magnetic particle examination Mágneses repedésvizsgálat		Record No. Jegyzőkönyv száma : 87 /a/11	
Manufacturer Gyártó		JE-ZO Kft.		Serial No. Gyári szám	
Customer Megrendelő		ContiTech Rubber Industrial Ltd.		Drawing No. Rajzszám	
Object Tárgy		coupling(s) (ring grooves)		Material Anyagminőség	
Quantity Mennyiség		2 pc(s)		Extent of examination Vizsgálat terjedelme	
Requirements Követelmények		ASTM E 165		Welding procedure Hegesztési eljárás	
Written Procedure No. Vizsgálati eljárás száma		QCP-12-1		Welder Hegesztő	
Liquid penetrant examination /Folyadékbehatolásos vizsgálat					
Penetrant Behatoló anyag		MR 68		Developer Előhívó	
Dwell time Behatolási idő		10 min		Developing time Előhívási idő	
Surface temperature A felület hőmérséklete		23 °C		Lighting intensity Megvilágítás	
Remover Tisztító		MR 79		Drying Szárítás	
Surface condition Felület állapota		machined		1000 lx	
Magnetic particle examination/Mágnesezhető poros vizsgálat					
Equipment type Készülék típusa		Testing material Vizsgáló anyag		Magnetizing current Mágnesező áram	
Black light type UV-A lámpa típusa		Field strength checking Térrőmérő		Field strength Térrő	
Surface temperature A felület hőmérséklete		Surface condition Felület állapota		Lighting intensity Megvilágítás	
Test results Eredmények :					
satisfactory megfelelő..... 2..... pc(s)/db					
not accepted nem megfelelő..... pc(s)/db					
Performed by NDE Level II. Vizsgálatot végezte			Revised by Q. C. manager Ellenőrizte – MEO vezető		
Signature Aláírás			Signature Aláírás		
Place/Date Kelt			Place/Date Kelt		
Szeged, 19. 01. 2011			Szeged, 19. 01. 2011		

ContiTech Rubber Industrial Kft. Szeged/Hungary		Examination record Vizsgálati jegyzőkönyv Liquid penetrant examination Festékdifúziós vizsgálat ☒ Magnetic particle examination Mágneses repedésvizsgálat		Record No. Jegyzőkönyv száma: 56/11	
Manufacturer Gyártó		GLB Kft.		Serial No. Gyári szám	
Customer Megrendelő		ContiTech Rubber Industrial Kft.		101022/1-8	
Object Tárgy		reinforced lifting collar(s)		Drawing No. Rajzszám	
Quantity Mennyiség		8 pc(s)		MT 2840-0040 d=246	
Requirements Követelmények		ASTM E 709		Material Anyagminőség	
Written Procedure No. Vizsgálati eljárás száma		QCP-11-1		P265GH	
				Extent of examination Vizsgálat terjedelme	
				100 % outside	
				Heat treatment Hőkezelés	
				not	
				Welder Hegesztő	
Liquid penetrant examination /Folyadékbehatolós vizsgálat					
Penetrant Behatoló anyag		Remover Tisztító		Developer Előhívó	
Dwell time Behatolási idő		Drying Szárítás		Developing time Előhívási idő	
Surface temperature A felület hőmérséklete		Surface condition Felület állapota		Lighting intensity Megvilágítás	
Magnetic particle examination/Mágnesezhető poros vizsgálat					
Equipment type Készülék típusa		Testing material Vizsgáló anyag		Magnetizing current Mágnesező áram	
TSW 1000		MR 76F		980 A	
Black light type UV-A lámpa típusa		Field strength checking Térerőmérő		Field strength Térerő	
Superlight C 10A-HE		Berthold disc		4,2 kA/m	
Surface temperature A felület hőmérséklete		Surface condition Felület állapota		Lighting intensity Megvilágítás	
23 °C		machined		1000 µW/cm ²	
Test results Eredmények :					
satisfactory megfelelő.....8..... pc(s)/db					
not accepted nem megfelelő.....-..... pc(s)/db					
Performed by NDE Level II. Vizsgálatot végezte			Revised by Q.C. manager Ellenőrizte – MEO vezető		
Signature Aláírás			Signature Aláírás		
Place/Date Kelt			Place/Date Kelt		
Dávid Ferenc Szeged, 06. 01. 2011.			Markó László Szeged, 06. 01. 2011.		

ContiTech Rubber Industrial Kft. Szeged/Hungary		Examination record Vizsgálati jegyzőkönyv Liquid penetrant examination Festékdifúziós vizsgálat ☒ Magnetic particle examination Mágneses repedésvizsgálat		Record No. Jegyzőkönyv száma: 8/11	
Manufacturer Gyártó		GLB Kft.		Serial No. Gyári szám	
Customer Megrendelő		ContiTech Rubber Industrial Kft.		Drawing No. Rajzszám	
Object Tárgy		Safety clamp(s)		Material Anyagminőség	
Quantity Mennyiség		8 pc(s)		Extent of examination Vizsgálat terjedelme	
Requirements Követelmények		ASTM E 709		Heat treatment Hőkezelés	
Written Procedure No. Vizsgálati eljárás száma		QCP-11-1		Welder Hegesztő	
Liquid penetrant examination /Folyadékbehatolósos vizsgálat					
Penetrant Behatóló anyag		Remover Tisztító		Developer Előhívó	
Dwell time Behatólási idő		Drying Szárítás		Developing time Előhívási idő	
Surface temperature A felület hőmérséklete		Surface condition Felület állapota		Lighting intensity Megvilágítás	
Magnetic particle examination/Mágnesezhető poros vizsgálat					
Equipment type Készülék típusa		TSW 1000		Magnetizing current Mágnesező áram	
Black light type UV-A lámpa típusa		Superlight C 10A-HE		Field strength Térerő	
Surface temperature A felület hőmérséklete		23 °C		Lighting intensity Megvilágítás	
Testing material Vizsgáló anyag		MR 76F		Field strength checking Térerőmérő	
Surface condition Felület állapota		machined		Field strength Térerő	
Field strength checking Térerőmérő		Berthold disc		Field strength Térerő	
Lighting intensity Megvilágítás		1000 µW/cm²		Field strength Térerő	
Test results Eredmények :					
satisfactory megfelelő..... 8..... pc(s)/db					
not accepted nem megfelelő.....-..... pc(s)/db					
Performed by NDE Level II. Vizsgálatot végezte			Revised by Q.C. manager Ellenőrizte – MEO vezető		
Signature Aláírás			Signature Aláírás		
Place/Date Kelt			Place/Date Kelt		
Dávid Ferenc Szeged, 06. 01. 2011.			Markó László Szeged, 06. 01. 2011.		

ContiTech Rubber Industrial Kft. Szeged/Hungary	Examination record Vizsgálati jegyzőkönyv Liquid penetrant examination Festékdifúziós vizsgálat ☒ Magnetic particle examination Mágneses repedésvizsgálat	Record No. Jegyzőkönyv száma : 111/11
---	--	---

Manufacturer Gyártó	GLB Kft.	Serial No. Gyári szám	101053/1-2
Customer Megrendelő	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2820-0030 d=176
Object Tárgy	Safety clamp(s)	Material Anyagminőség	S355J2+AR
Quantity Mennyiség	2 pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hőkezelés	not
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztő	

Liquid penetrant examination /Folyadékbehatolósos vizsgálat

Penetrant Behatoló anyag	Remover Tisztító	Developer Előhívó
Dwell time Behatolási idő	Drying Szárítás	Developing time Előhívási idő
Surface temperature A felület hőmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhető poros vizsgálat

Equipment type Készülék típusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesező áram	980 A
Black light type UV-A lámpa típusa	Superlight C 10A-HE	Field strength checking Téroró mérő	Berthold disc	Field strength Téroró	4,2 kA/m
Surface temperature A felület hőmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm ²

Test results Eredmények :	satisfactory megfelelő..... 2..... pc(s)/db not accepted nem megfelelő..... pc(s)/db
------------------------------	---

Performed by NDE Level II. Vizsgálatot végezte Signature Aláírás Place/Date Kelt	Revised by Q.C. manager Ellenőrizte – MEO vezető Signature Aláírás Place/Date Kelt	ContiTech Rubber Industrial Kft. QC 1 Szeged, 24. 01. 2011.
---	---	--

ContiTech Rubber Industrial Kft. Szeged/Hungary	Examination record Vizsgálati jegyzőkönyv Liquid penetrant examination Festékdifúziós vizsgálat ☒ Magnetic particle examination Mágneses repedésvizsgálat	Record No. Jegyzőkönyv száma : 146/11
---	--	---

Manufacturer Gyártó	GLB Kft.	Serial No. Gyári szám	101068/1-22
Customer Megrendelő	ContiTech Rubber Industrial Kft.	Drawing No. Rajzszám	MT 2820-0030 d=176
Object Tárgy	Safety clamp(s)	Material Anyagminőség	S355J2+AR
Quantity Mennyiség	22pc(s)	Extent of examination Vizsgálat terjedelme	100 % outside
Requirements Követelmények	ASTM E 709	Heat treatment Hőkezelés	not
Written Procedure No. Vizsgálati eljárás száma	QCP-11-1	Welder Hegesztő	

Liquid penetrant examination /Folyadékbehatolásos vizsgálat

Penetrant Behatóló anyag	Remover Tisztító	Developer Előhívó
Dwell time Behatólási idő	Drying Szárítás	Developing time Előhívási idő
Surface temperature A felület hőmérséklete	Surface condition Felület állapota	Lighting intensity Megvilágítás

Magnetic particle examination/Mágnesezhető poros vizsgálat

Equipment type Készülék típusa	TSW 1000	Testing material Vizsgáló anyag	MR 76F	Magnetizing current Mágnesező áram	980 A
Black light type UV-A lámpa típusa	Superlight C 10A-HE	Field strength checking Térerőmérő	Berthold disc	Field strength Térerő	4,2 kA/m
Surface temperature A felület hőmérséklete	23 °C	Surface condition Felület állapota	machined	Lighting intensity Megvilágítás	1000 µW/cm ²

Test results

Eredmények :

satisfactory

megfelelő.....22..... pc(s)/db

not accepted

nem megfelelő.....-..... pc(s)/db

Performed by NDE Level II.

Vizsgálatot végezte

Signature

Aláírás

Place/Date

Kelt

Szeged, 24. 01. 2011.

Revised by Q.C. manager

Ellenőrizte – MEO vezető

Signature

Aláírás

Place/Date

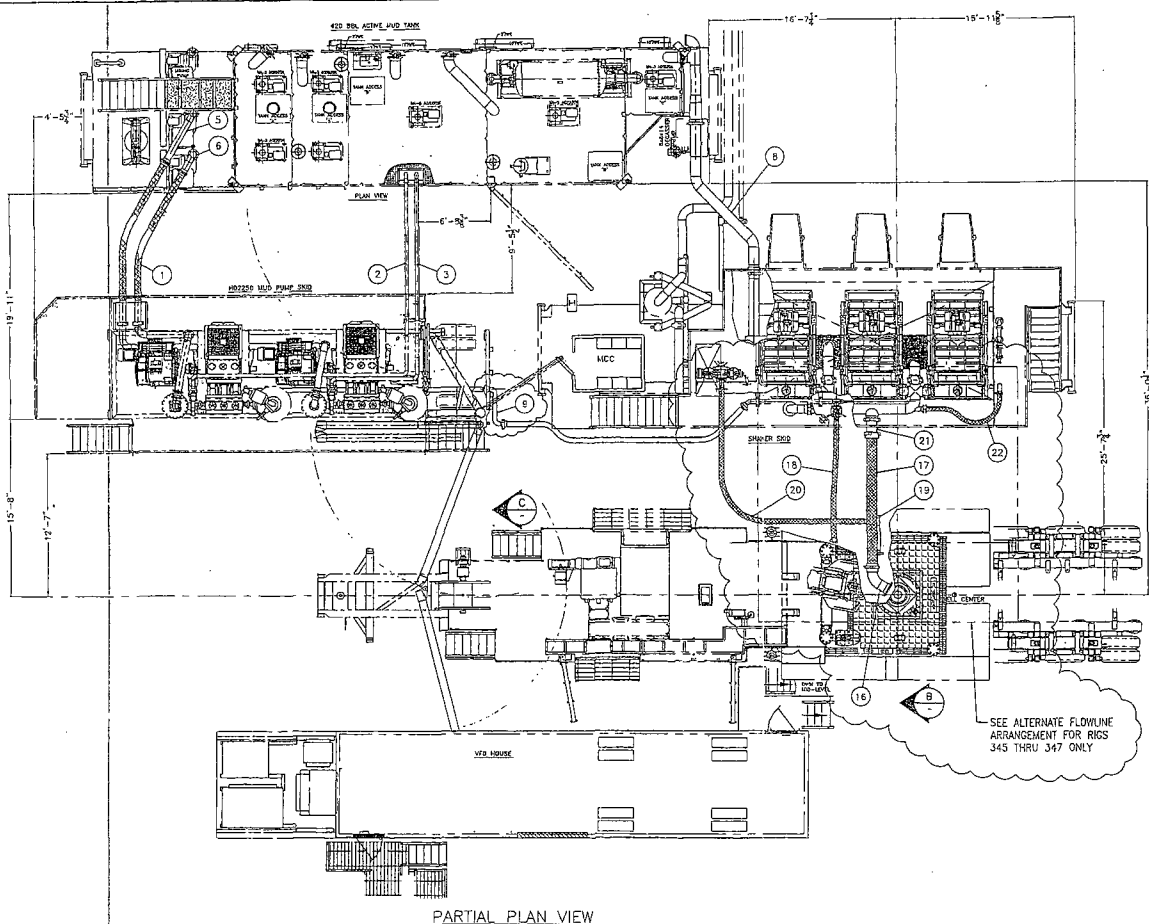
Kelt

Szeged, 24. 01. 2011.

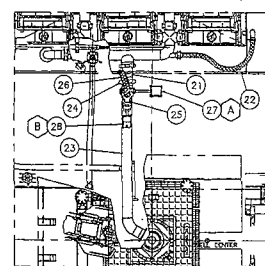
ContiTech Rubber
Industrial Kft.

QC 2

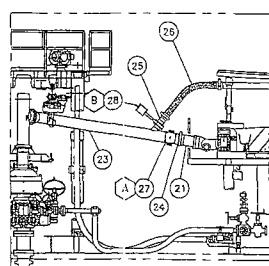
ContiTech Rubber
Industrial Kft.
QC 2



PARTIAL PLAN VIEW



PARTIAL PLAN VIEW



PARTIAL ELEVATION VIEW

ISSUED FOR FABRICATION
October-23-2008
DRAFTSMAN _____
ENGINEER _____

ISSUE
FABRICATION
October-23-2008
DRAFTSMAN _____
ENGINEER _____

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED
IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE
REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER,
WITHOUT THE PRIOR, WRITTEN CONSENT OF A DULY AUTHO-
RIZED OFFICER OF HELMERICH & PAYNE INT'L DRILLING CO.

BILL OF MATERIAL

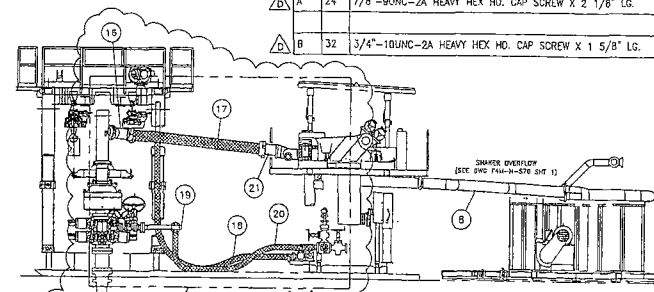
ITEM NO.	QTY.	DESCRIPTION	PART NUMBER	WT.
Δ 1	2	LOW PRESSURE SPOOL #1	UKF4H-R-570.D10	239
Δ 2	1	POP-OFF/BLEED SPOOL #1	UKF4H-R-570.D10	157
Δ 3	1	POP-OFF/BLEED SPOOL #2	UKF4H-R-570.D10	140
Δ 4		DELETED		
Δ 5	1	LOW PRESSURE SUCTION SPOOL #1	UKF4H-R-570.D10	199
Δ 6	1	LOW PRESSURE SUCTION SPOOL #2	UKF4H-R-570.D10	101
Δ 7	1	HOSE-HIGH PRESSURE	UKF4H-R-570.D10	278
Δ 8	1	OVERFLOW RETURN SPOOL	UKF4H-R-564.D06	678
Δ 9	1	MUD PUMP/SHAKER SKID SPOOL	UKF4H-R-570.D10	161
10	22FT	TS 1 1/2x1 1/2x3/16 (A500)		150
Δ 11	1	POP-OFF PIPE HANGER SUPPORT	UKF4H-R-570.D10	30
12	1	1.3x3x1/4 (1'-6" LG) (A36)		7
13	1	1.3x3x1/4 (1'-8" LG) (A36)		7
14	1	PLATE, 1/4" THK. 4x2'-3 1/4" (A36)		8
15	1	1.3x3x1/4 (4'-11 3/4" LG) (A36)		230
Δ 16		SHAKER FLOWLINE	UKF4H-R-562.D08	25
Δ 17	1	SHAKER FLOWLINE	UKF4H-R-562.D08	281
Δ 18	1	HOSE	UKF4H-R-561.D3E	
Δ 19	1	SPOOL #1	UKF4H-R-564.D20	182
Δ 20		HIGH PRESSURE HOSE, 3" I.D. x 29'-0" LG.	PHOENIX BEATTY	
		WITH 3 1/8" - SM FLANGED ENDS		
Δ 21	1	SHAKER FLOWLINE	UKF4H-R-562.D08	73
Δ 22	1	SHAKER SPOOL	UKF4H-R-562.D08	177

RIGS 345 - 347 ONLY

BILL OF MATERIAL

ITEM NO.	QUAN.	DESCRIPTION	PART NUMBER	WT.
23	1	SHAKER FLOWLINE	UKF-FW-H-559-040	656
24	1	SHAKER FLOWLINE	UKF-FW-H-559-048	118
25	1	SHAKER FLOWLINE	UKF-FW-H-559-047	67
26	1	SHAKER FLOWLINE HOSE	UKF-FW-H-559-040	77
27	1	FABRI - 10" AIR ACTUATED KNIFE GATE VALVE		86
28	1	FABRI - 6" AIR ACTUATED KNIFE GATE VALVE		52
HARDWARE				
A	24	7/8"-BUNG-2A HEAVY HEX HD. CAP SCREW X 2 1/8" LG.		18
B	32	3/4"-10BUNG-2A HEAVY HEX HD. CAP SCREW X 1 5/8" LG.		12

THESE ITEMS REPLACE
ITEMS 16 & 17



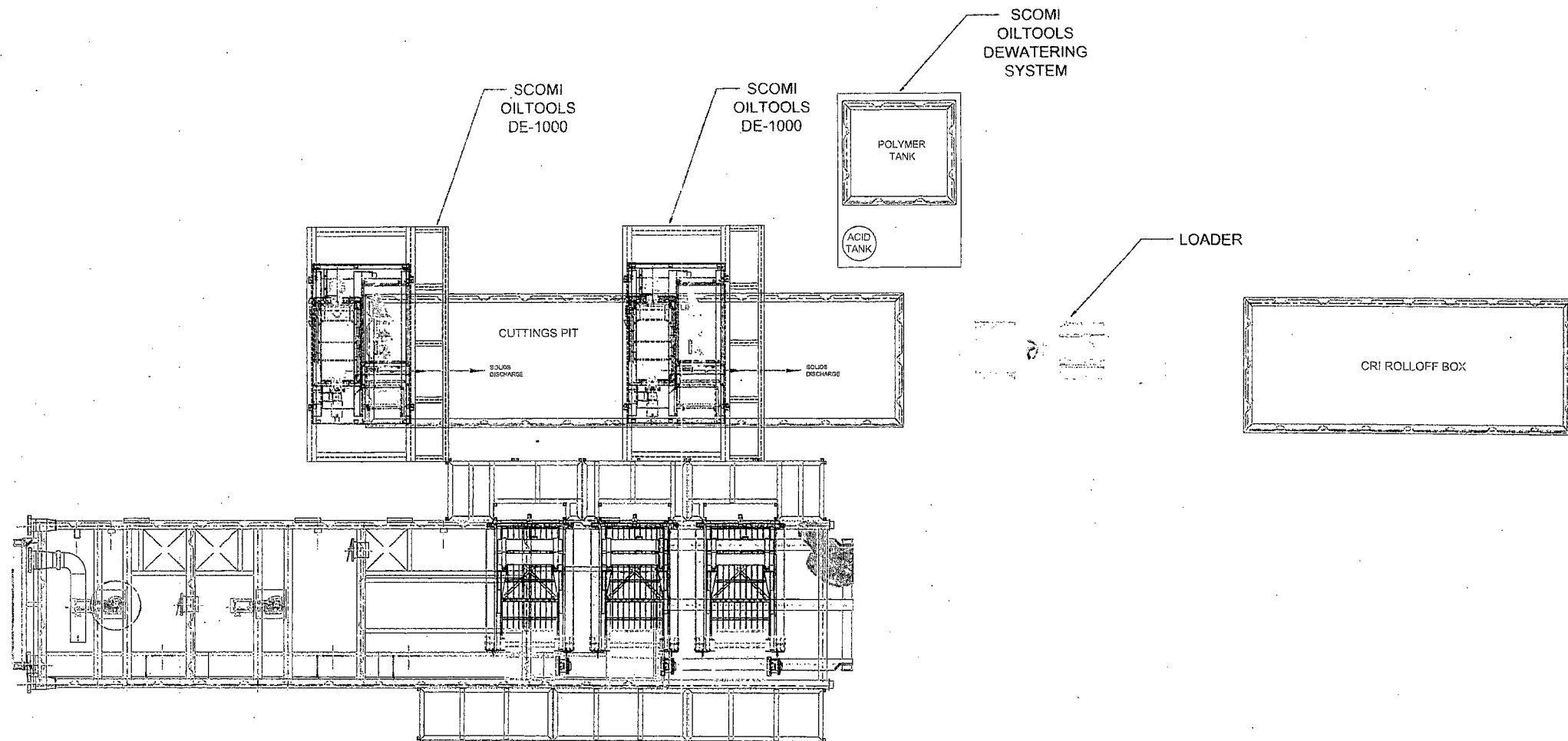
SECTION B-B

SEE ALTERNATE FLOWLINE
ARRANGEMENT FOR RIGS
345 THRU 347 ONLY

[illegible]

1-1

BILL OF MATERIAL			
ITEM	QTY.	DESCRIPTION	WEIGHT



				1. ALL STRUCTURAL MATERIAL SHALL BE ASTM - A36. 2. ALL PIPE SCH. 40 MATERIAL SA 105 Gr. B 3. ALL FLANGES SHALL BE SCH. 150 & MATERIAL SA 105. 4. ALL FITTINGS SCH. 40 MATERIAL SHALL BE SA 234 Gr. WPB. 5. TANK FABRICATION SHALL BE IN ACCORDANCE WITH API-650.	TITLE: CLOSED LOOP SYSTEM BASIC LAYOUT OXY - H&P - FLEX 4 M				
The design, information and disclosures on this drawing or copies are the exclusive confidential property of Scomi International Limited and are not to be reproduced or disclosed to others by any means, in any format or transmitted, or translated into a machine language or used for manufacture or other purpose without the written permission of Scomi International Limited. In receipt of such permission, solely and directly for the purpose consented. This drawing and any copies shall be returned to Scomi International Limited upon request.					DESIGNED BY PDL		DATE 3/20/00	CHECKED BY	DATE
					APPROVED		DATE	SCALE NTS	ACD DWD
DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED	DATE	SCALE	ACD DWD	JOB NO.	DRAWING NO.
									521S-027

H2S Detectors. At least three detectors will be installed: bell nipple, rig floor and Shakers.

Briefing Areas. At least two briefing areas will be placed, 90 deg off.

Wind direction indicators. Visible from rig floor and from the mud pits area.

A gas buster is connected to both the choke manifold and flowline outlets.

Secondary Briefing Area

Exit to road. Caution sign placed here.

N

