<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720

<u>District II</u> 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III

1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

### State of New Mexico

Form C-101 Revised July 18, 2013

### **Energy Minerals and Natural Resources**

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

☐AMENDED REPORT

			OWI	erator Name and L SWD Opera	ating, LLC				<sup>2</sup> OGRID Nur 308339		
8214 Westchester Dr., Ste. 850 Dallas, TX 75255								30-02	30-025- 42 98/		
"Property Code 3/4793 Limestone						Name SWD			6.	Well No.	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				7. Surface L. (To be verified by	ocation					
UL - Lot	ЛLot Section Township Range Lot Idn Feet f					'S Line	Feet From	E/W Line	County		
A	12	235		34E	24		FNL	626	FEL	LEA	
					R Proposed Botto (To be verified by		ation				
UL - Lot	Section	Township		Range	Lot Idn Feet f	rom N	'S Line	Feet From	E/W Line	County	
A	12	235		34E	24	7	FNL	626	FEL	LEA	
					9. Pool Infor	mation					
					Pool Name SWD; Devonian					Pool Co 9610:	
					SVVD, Devolitati					3010.	
II. Wa	rk Type		12	Well Type	Additional Well			ease Type	15.0	Fround Level Elevation	
	N Type			SWD	R	Kotary	L	P P		3364'	n
	ultiple			pposed Depth	18. Form			Contractor 20. Spud Date			
Depth to Grou	NO water		1	6,215'	Siluro-De ce from nearest fresh water					11/15/2015 arest surface water	
Depui to Oroi	mu water	250'		Distail	ce nom hearest fresh water	wen	>1 mile	Distance	o nearest surra	n/a	
	e using a	Closed-100	psysic	m in lieu of	Proposed Casing and	Cement Pr	ogram	70	np-1		
Туре	_	ole Size	Casi	ng Size	Casing Weight/ft	Setting Depth		Sacks of Cement		Estimated TO	C
Surface	2	24.0"	20	0.0"	133 lb/ft	1800′		2255 sx		Surface	
Intermed	1 1	7.5"	13.	.625"	88.2 lb/ft	88.2 lb/ft 535		4304	sx	Surface	
Intermed	2 1	2.25"	9.8	875"	62.8 lb/ft 11,4		415'	2188 sx		Surface	
Production	on g	8.5"	7	'.0"	32 lb/ft	15,215' 610 s		sx 11,215'			
				Casing	//Cement Program:	Additional (	Comments				11
5.875" Openh	ole comple	tion from 15	5,215' to	16,215'							_
				22. E	Proposed Blowout P	revention Pr	ngram				Well
	Туре				orking Pressure	- CVENTION I I	Test Pressur		N		- 1
Double H		Blinds, Pi	pe	**	10000					Cameron	- New
	,										1 3 0
23. I hereby o	ertify that th	he informat	ion give	en ahove is to	ie and complete to the					SION	Z d -
23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.						OIL C	ONSERVAT	ION DIVI	SION		
I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.					Approved B	y:	2/		PA	2 0 (5	
Signature:	, mine [	, appn	Q	9		7	1	Turn		4	Comp
Printed name	Ren Sto	ne		an June		Title:	Chrolenn	Engineer			00
Title: Agen			erating	2 IIC		Approved D	. 2	7	piration Date:	12/21	10
E-mail Addre		-				r spproved D	14	1/17	phanon Date.	1-1-11	4
	/2015 10				488-9850	Conditions	f Approval Atte	ached			$\neg$
Jate. 3702	, 2015 10	0,00,13	1.1	10110. JUJ-	100 3030	Conditions of Approval Attached					

Owl SWD Operating, LLC Limestone SWD Well No.2 244' FNL & 626' FEL Section 12, Twp 23-S, Rng 34-E Lea County, New Mexico

### Well Program - New Drill

Objective: Drill new well for commercial salt water disposal into the Siluro-Devonian formation.

### 1. Geologic Information - Siluro-Devonian Formation

The rocks immediately underlying the Upper Devonian Woodford shale and the pre-Woodford unconformity in Lea County have been commonly labelled "Devonian." However, recent biostratigraphic work has revealed these rocks are actually comprised of the Lower Devonian Thirtyone formation in southeastern Lea County and, where the Thirtyone has been removed by pre-Woodford erosion, the subjacent Upper Silurian Wristen group,.

The Thirtyone consists of siliceous carbonates and calcareous chert. It was deposited contemporaneously with the famous Caballos Novaculite of the Marathon region.

The Wristen group is divided into a basal Wink member, the Frame member, and the uppermost Faskin formation. The Wink is a gray limestone with some terrigenous clay and silt. It is characteristically more radioactive on gamma ray logs than the underlying Fusselman formation. The Wink grades upwards into the siltier and more argillaceous Frame member. The uppermost member of the Wristen group, the Fasken formation, contains most of the hydrocarbon reservoirs. The Faskin is made up of wackestones, grainstones, and boundstones, and forms platform-margin buildups in Texas. Karst-related features and dolomite are common.

The Limestone SWD No.2 is expected to encounter the top of the Siluro-Devonian at a measured depth of 15208 feet. The injection interval will extend from this point to the top of the Fusselman, which is expected to be encountered at a measured depth of 16,348 feet.

#### Estimated Formation Tops:

Fresh Water	252'
T/Rustler	1976'
T/Salado	3340'
Lamar	5359'
Bone Spring	8619'
3 <sup>rd</sup> Bone Spring	10,612
Morrow	13,830'
Mississippian Lime	14,548'
Woodford	14,974'
Devonian	15,208'
TD	16,215'
Fusselman	16,348'

### Well Program - New Drill (cont.)

### 2. Drilling Procedure

- a. MIRU drilling rig and associated equipment. Set up H<sub>2</sub>S wind direction indicators; brief all personnel on Emergency Evacuation Routes.
- All contractors conduct safety meeting prior to current task. All equipment inspected daily.
   Repair / replace as required.
- c. Well spud operations commence.
- Mud logger monitoring returns; cuttings & waste hauled to specified facility. (Sundance, Lea County)
- e. After surface casing set/drilled; if H<sub>2</sub>S levels >20ppm detected, implement H<sub>2</sub>S Plan accordingly. (e.g., cease operations, shut in well, employ H<sub>2</sub>S safety trailer & personnel safety devices, install flare line, etc. refer to plan.)
- f. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.
- g. Sundry forms filed as needed casing, cement, etc. operations continue to completion.

### 3. Casing program - Casing designed as follows:

STRING	HOLE SZ	DEPTH	CSG SZ	COND	WT/GRD	CLLPS/BR	TNSN
Surface	24.0"	0-1,800'	20.0"	New	133.0 lb. J/K-55 ST&C	1.51/1.02	1.8
Intermediate	17.5"	0-5,350'	13.625"	New	88.2 lb. P-110 BT&C	1.52/1.31	1.8
2nd Inter	12.25"	0-11,415'	9.875"	New	62.8 lb. P-110 BT&C	1.52/1.27	1.8
Prod/ Liner*	8.5"	11,215'-15,215'	7.0"	New	32.0 lb. P-110 BT&C	1.13/1.22	1.8
Openhole*	6.0" hole	15,215'-16,500'	ОН	n/a	n/a	n/a	n/a

### Notes:

- ✓ On both Intermediate casing strings, the cement will be designed to circulate to surface. Both strings will have cement bond logs run (radial, CET or equivalent) to surface.
- √ While running all casing strings, the pipe will be kept a minimum of I/3 full at all times to avoid approaching the collapse pressure of casing.
- ▼ Based on mudlogging and e-logs, 7.0" casing shoe may be set between 15,000' and 15,400'.

  Similarly, TD may be from 16,000' to 16,500' as determined by logging and suitable porosity has been exposed. IN ANY EVENT, maximum openhole interval would be from 15,000' to 16,500'.

### 4. Cementing Program:

**Surface** – LEAD 1350 sx (13.5#; 1.76 ft<sup>3</sup>/sk); TAIL 905 (14.8#; 1.34 ft<sup>3</sup>/sk) w/ 100 % excess; circulated to surface

**Ist Intermediate** – LEAD 3675 sx (12.7#; 1.94 ft³/sk); TAIL 629 sx (14.8#; 1.33 ft³/sk) 100% excess; circulated to surface

**2nd Intermediate** – LEAD 1950 sx (11.9#; 2.45 ft<sup>3</sup>/sk); TAIL 238 sx (14.2#; 1.27 ft<sup>3</sup>/sk) 50% excess; circulated to surface.

Production Liner - 610 sx (14.2#; 1.27 ft<sup>3</sup>/sk) 50% excess; TOC = 11,215' calc.

### Well Program - New Drill (cont.)

- 5. Pressure Control BOP diagram is attached to this application. All BOP and related equipment shall comply with well control requirements as described NMOCD Rules and Regulations and API RP 53, Section 17. Minimum working pressure of the BOP and related equipment required for the drillout shall be 5000 psi. The NMOCD Hobbs district office shall be notified a minimum of 4 hours in advance for a representative to witness BOP pressure tests. The test shall be performed by an independent service company utilizing a test plug (no cup or J-packer). The results of the test shall be recorded on a calibrated test chart submitted to the OCD district office. Test shall be conducted at:
  - a. Installation;
  - b. after equipment or configuration changes;
  - c. at 30 days from any previous test, and;
  - d. anytime operations warrant, such as well conditions
- 6. Mud Program & Monitoring Mud will be balanced for all operations as follows:

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
0-1800'	FW Spud Mud	8.5-9.2	70-40	20	12	NC	10.0
1800'-5350'	Brine Water	9.8-10.2	28-32	NC	NC	NC	10.0
5350'-11,415'	FW/Gel	8.7-9.0	28-32	NC	NC	NC	9.5-10.5
11,415'-15,215'	XCD Brine Mud	11.0-	45-48	20	10	<5	9.5-10.5
15,215'-16,215'	FW Mud	8.4-8.6	28-30	NC	NC	NC	9.5-10.5

Mud and all cuttings monitored w/ cuttings recovered for disposal. Returns shall be visually and electronically monitored. In the event of H2S, mud shall be adjusted appropriately by weight and H2S scavengers.

- 7. Auxiliary Well Control and Monitoring Hydraulic remote BOP operation, mudlogging to monitor returns.
- 8. **H<sub>2</sub>S Safety** This well and related facilities are not expected to have H2S releases. However, there may be H2S in the area. There are no private residences or pubic facilities in the area but a contingency plan has been developed. Owl SWD Operating, LLC will have a company representative available to personnel throughout all operations. If H2S levels greater than 10ppm are detected or suspected, the H2S Contingency Plan will be implemented at the appropriate level.

H2S Safety - There is a low risk of H2S in this area. The operator will comply with the provisions of 19.15.11 NMAC.

- a) Monitoring all personnel will wear monitoring devices.
- b) Warning Sign a highly visible H2S warning sign will be placed for obvious viewing at the vehicular entrance point onto location.
- c) Wind Detection two (2) wind direction socks will be placed on location.
- d) Communications will be via cellular phones and/or radios located within reach of the driller, the rig floor and safety trailer when applicable.

### Well Program - New Drill (cont.)

- e) Alarms will be located at the rig floor, circulating pump / reverse unit area and the flareline and will be set for visual (red flashing light) at 15 ppm and visual and audible (115 decibel siren) at 20 ppm.
- f) Mud program If H2S levels require, proper mud weight, safe drilling practices and H2S scavengers will minimize potential hazards.
- g) Metallurgy all tublars, pressure control equipment, flowlines, valves, manifolds and related equipment will be rated for H2S service if required.

# The Owl SWD Operating, LLC H2S Contingency Plan will be implemented if levels greater than 10ppm H2S are detected.

- 9. Logging, Coring and Testing Owl SWD Operating expects to run;
  - a. CBL (Radial, CET or equivalent) on both intermediate casing strings.
  - b. Standard porosity log suite from TD to approximately 14,500'.
  - No corings or drill tests will be conducted. (The well may potentially be step rate tested in the future if additional injection pressures are required.)
- 10. Potential Hazards No abnormal pressures or temperatures are expected.

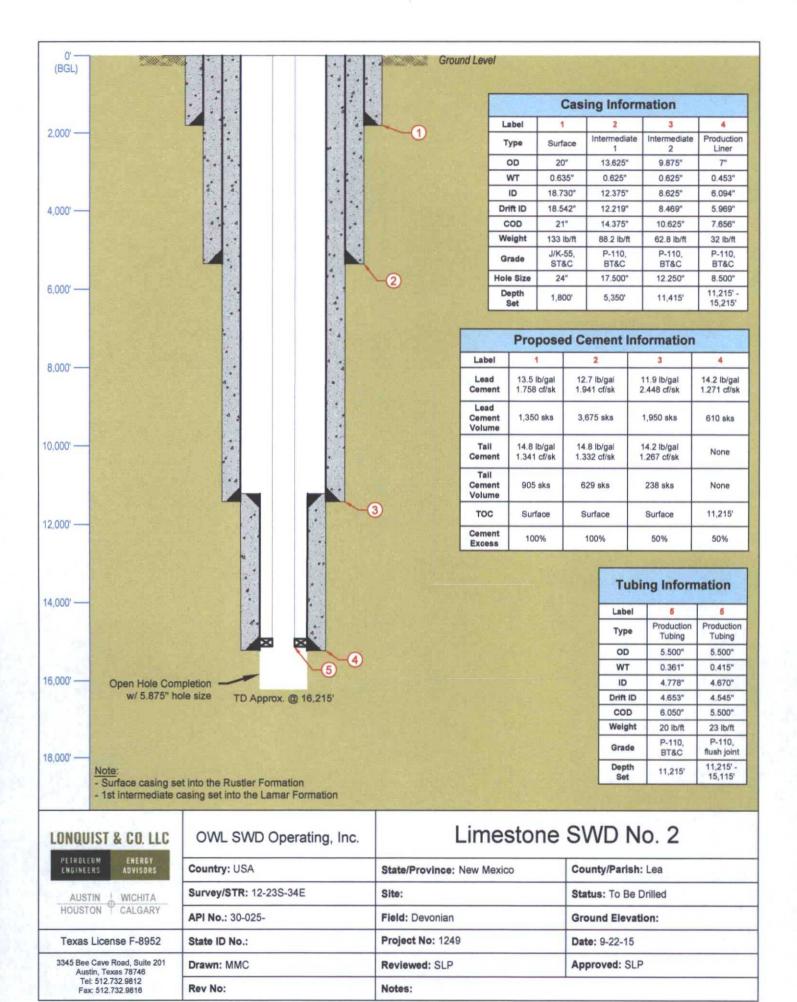
No loss of circulation is expected to occur with the exception of drilling into the target disposal zone. All personnel will be familiar with the safe operation of the equipment being used to drill this well.

The maximum anticipated bottom-hole pressure is 8900 psi and the maximum anticipated bottom-hole temperature is 180° F.

- 11. Waste Management All drill cuttings and other wastes associated with and drilling operations will be transported to the Lea County Sundance facility (or alternate), permitted by the Environmental Bureau of the New Mexico Oil Conservation Division.
- 12. **Anticipated Start Date** Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take six to seven weeks. Installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. At the time of this submittal, and subject to the availability of the drilling contractor, the anticipated start date is:

### November 15, 2015.

13. Configure for Salt Water Disposal – Subsequent to SWD permit approval from OCD and prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per BLM and OCD test procedures. (Notify BLM and NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity. Anticipated daily maximum volume is 20,000 bpd and average of 15,000 bpd at a maximum surface injection pressure of 3043 psi (0.2 psi/ft to uppermost injection interval, i.e., casing shoe). If satisfactory disposals rates cannot be achieved at default pressure of .2 psi/ft, Owl Oil and Gas, LLC will conduct a step-rate test and apply for an injection pressure increase 50 psi below parting pressure.



D Calulation Summary C295:K384.										
2nd Dia	20	surface	csg in a	24	inch hole.		Design	Factors	SUF	RFACE
	Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	Weight
	"A"	133.00	A CONTRACTOR OF THE PARTY OF	55	ST&C	5.23	1.51	1.02	1.800	239,400
	"B"								0	0
	w/8.4#/g	mud, 30min Sfo	Csg Test psig	1.357	Tail Cmt	does not	circ to sfc.	Totals:	1,800	239,400
					ment Volumes			10000	,,000	200,100
	Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Reg'd	Min Dist
	Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cple
	24	0.9599	2255	3587	1804	99	10.60	1825	2M	1.50
			Sale Manage (Act) of		20224 MASS		10.00	1020	-	
3rd Dia	13 5/8	casing in	side the	20	. May 2 May 2 May 2		Design	Factors	INTER	MEDIATE
	Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	Weight
	"A"	88.20	P	110	BUTT	4.58	1.52	1.31	5,350	471,870
	"B"								0	0
	w/8.4#/g	mud, 30min Sfo	Csg Test psig					Totals:	5,350	471,870
	The	cement volu	me(s) are in	tended to ac	hieve a top of	0	ft from su	rface or a	1800	overlap.
	Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Reg'd	Min Dist
									The state of the s	
	Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg
	Size 17 1/2	<b>Volume</b> 0.6578	Cmt Sx 4304	CuFt Cmt 7971	Cu Pt 3994	% Excess 100	Mud Wt 10.80	<b>MASP</b> 4249	BOPE 5M	Hole-Cplg 8.75
4th Dia	17 1/2	0.6578	4304	7971	A CHIEF CONTROL OF THE PARTY.		10.80	4249	5M	8.75
4th Dia	97/8	0.6578	4304 side the		3994	100	10.80  Design Fac	4249 ctors	6M PROD	8.75
4th Dia	97/8 Segment	0.6578  casing in #/ft	4304 side the Grade	7971	3994 Coupling	100 Joint	10.80  Design Fac	4249 ctors Burst	PROD Length	0CTION Weight
4th Dia	97/8 Segment "A"	0.6578	4304 side the Grade	7971	3994	100	10.80  Design Fac	4249 ctors	PROD Length 11,415	UCTION Weight 716,862
4th Dia	97/8 Segment "A" "B"	0.6578  casing in #/ft 62.80	4304 side the Grade	7971 13 5/8	3994 Coupling	100 Joint	10.80  Design Fac	4249  ctors  Burst 1.27	PROD Length 11,415 0	8.75 UCTION Weight 716,862
4th Dia	97/8 Segment "A" "B" w/8.4#/g	casing in #/ft 62.80	side the Grade	7971 13 5/8 110 2,511	3994  Coupling BUTT	Joint 2.21	Design Fac Collapse 1.52	4249  ctors  Burst 1.27  Totals:	PROD Length 11,415 0 11,415	8.75 Weight 716,862 0 716,862
4th Dia	97/8 Segment "A" "B" w/8.4#/g The	casing in #/ft 62.80 mud, 30min Sfc	4304 side the Grade P Csg Test psig: me(s) are in	7971  13 5/8  110  2,511 tended to ac	Coupling BUTT	Joint 2.21	Design Fac Collapse 1.52	4249  ctors  Burst 1.27  Totals:	PROD Length 11,415 0 11,415 5350	8.75  Weight 716,862 0 716,862 overlap.
4th Dia	97/8 Segment "A" "B"  w/8.4#/g The	casing in #/ft 62.80 mud, 30min Sfo	4304 side the Grade P Csg Test psig: me(s) are in 1 Stage	7971  13 5/8  110  2,511 tended to ac 1 Stage	Coupling BUTT	Joint 2.21	Design Fac Collapse 1.52	4249  ctors  Burst 1.27  Totals: rface or a Calc	PROD Length 11,415 0 11,415 5350 Req'd	Weight 716,862 0 716,862 overlap. Min Dist
4th Dia	9 7/8 Segment "A" "B" w/8.4#/g The	casing in #/ft 62.80 mud, 30min Sfc cement volu Annular Volume	4304 side the Grade P Csg Test psig me(s) are in 1 Stage Cmt Sx	7971  13 5/8  110  2,511 tended to ac 1 Stage CuFt Cmt	Coupling BUTT hieve a top of Min Cu Pt	Joint 2.21  0 1 Stage % Excess	Design Fac Collapse 1.52 ft from su Drilling Mud Wt	4249  Etors Burst 1.27  Totals: rface or a Calc MASP	PROD Length 11,415 0 11,415 5350 Req'd BOPE	Weight 716,862 0 716,862 overlap. Min Dist
4th Dia	97/8 Segment "A" "B"  w/8.4#/g The	casing in #ft 62.80 mud, 30min Sfc cement volu Annular Volume 0.2866	4304 side the Grade P Csg Test psig: me(s) are in 1 Stage	7971  13 5/8  110  2,511 tended to aci 1 Stage CuFt Cmt 5075	Coupling BUTT	Joint 2.21  0 1 Stage % Excess 50	Design Fac Collapse 1.52 ft from su Drilling Mud Wt 11.40	4249  ctors  Burst 1.27  Totals: rface or a Calc	PROD Length 11,415 0 11,415 5350 Req'd	8.75 Weight 716,862 0 716,862
4th Dia	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail on	casing in #ft 62.80  mud, 30min Sfc cement volu Annular Volume 0.2866 nt yld > 1.20	side the Grade P Cosg Test psigme(s) are in 1 Stage Cmt Sx 2188	7971  13 5/8  110  2,511 tended to aci 1 Stage CuFt Cmt 5075	Coupling BUTT hieve a top of Min Cu Pt 3379	Joint 2.21  0 1 Stage % Excess 50	Design Fac Collapse 1.52 ft from su Drilling Mud Wt 11.40 krta equip?	4249  Etors Burst 1.27  Totals: rface or a Calc MASP 6216	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	Weight 716,862 0 716,862 overlap. Min Dist
	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail on	casing in #ft 62.80 mud, 30min Sfc cement volu Annular Volume 0.2866	side the Grade P Cosg Test psigme(s) are in 1 Stage Cmt Sx 2188	7971  13 5/8  110  2,511 tended to aci 1 Stage CuFt Cmt 5075 MASP is with	Coupling BUTT hieve a top of Min Cu Pt 3379 in 10% of 5000	Joint 2.21  0 1 Stage % Excess 50 Opsig, need excess	Design Fac Collapse 1.52 ft from su Drilling Mud Wt 11.40 krta equip?	4249  Etors Burst 1.27  Totals: rface or a Calc MASP 6216	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	Weight 716,862 0 716,862 overlap. Min Dist Hole-Cple 0.81
	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail on	casing in #ft 62.80 mud, 30min Sfe cement volu Annular Volume 0.2866 nt yld > 1.20	side the Grade P Csg Test psigme(s) are in 1 Stage Cmt Sx 2188	7971  13 5/8  110  2,511 tended to aci 1 Stage CuFt Cmt 5075 MASP is with	Coupling BUTT hieve a top of Min Cu Pt 3379	Joint 2.21  0 1 Stage % Excess 50	Design Fac Collapse 1.52 ft from su Drilling Mud Wt 11.40 krta equip?	tors Burst 1.27 Totals: rface or a Calc MASP 6216	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	Weight 716,862 0 716,862 overlap. Min Dist Hole-Cple 0.81
	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail on	casing in #ft 62.80  mud, 30min Sfc cement volu Annular Volume 0.2866 nt yld > 1.20  Liner w #/ft	side the Grade P Csg Test psigme(s) are in 1 Stage Cmt Sx 2188	7971  13 5/8  110  2,511 tended to ac 1 Stage CuFt Cmt 5075 MASP is with	Coupling BUTT hieve a top of Min Cu Pt 3379 hin 10% of 5000	Joint 2.21  0 1 Stage % Excess 50 Opsig, need excess Body	Design Factorial Collapse 1.52  ft from surprilling Mud Wt 11.40 (crta equip?	4249  Etors Burst 1.27  Totals: rface or a Calc MASP 6216	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	Weight 716,862 0 716,862 overlap. Min Dist Hole-Cpli 0.81
	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail on	casing in #ft 62.80  mud, 30min Sfc cement volu Annular Volume 0.2866 nt yld > 1.20  Liner w #/ft 32.00	side the Grade P Csg Test psigme(s) are in 1 Stage Cmt Sx 2188	7971  13 5/8  110  2,511 tended to ac 1 Stage CuFt Cmt 5075 MASP is with	Coupling BUTT hieve a top of Min Cu Pt 3379 hin 10% of 5000	Joint 2.21  0 1 Stage % Excess 50 Opsig, need excess Body	Design Factorial Collapse 1.52  ft from surprilling Mud Wt 11.40 (crta equip?	tors Burst 1.27 Totals: rface or a Calc MASP 6216  Factors Burst 1.22	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	Weight 716,862 0 716,862 overlap. Min Dist Hole-Cple 0.81
	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail cn "A" "B" w/8.4#/g The	casing in #/ft 62.80  mud, 30min Sfc cement volu Annular Volume 0.2866 nt yld > 1.20  Liner w #/ft 32.00  mud, 30min Sfc cement volu	side the Grade P Cosg Test psig: me(s) are in 1 Stage Cmt Sx 2188 /top @ Grade P	7971  13 5/8  110  2,511 tended to ac 1 Stage CuFt Cmt 5075 MASP is with  11215  110  3,347	Coupling BUTT hieve a top of Min Cu Pt 3379 hin 10% of 5000	Joint 2.21  0 1 Stage % Excess 50 Opsig, need ex 2.11	Design Factorial Collapse 1.52  ft from surprilling Mud Wt 11.40 (crta equip?	tors Burst 1.27 Totals: rface or a Calc MASP 6216  Factors Burst 1.22 Totals:	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	Weight 716,862 0 716,862 overlap. Min Dist Hole-Cple 0.81
	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail cn  7 Segment "A" "B" w/8.4#/g	casing in #ft 62.80  mud, 30min Sfc cement volu Annular Volume 0.2866 nt yld > 1.20  Liner w #ft 32.00  mud, 30min Sfc	side the Grade P Cosg Test psig: me(s) are in 1 Stage Cmt Sx 2188 /top @ Grade P	7971  13 5/8  110  2,511 tended to ac 1 Stage CuFt Cmt 5075 MASP is with  11215  110  3,347	Coupling BUTT hieve a top of Min Cu Pt 3379 hin 10% of 5000	Joint 2.21  O 1 Stage % Excess 50 Opsig, need excess 2.11	Design Factorial Testing Mud Wt 11.40 crta equip?  Design I Collapse 1.13	tors Burst 1.27 Totals: rface or a Calc MASP 6216  Factors Burst 1.22 Totals:	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	Weight 716,862 0 716,862 overlap. Min Dist Hole-Cple 0.81
	97/8 Segment "A" "B" w/8.4#/g The Hole Size 12 1/4 Class 'H' tail cn "A" "B" w/8.4#/g The	casing in #/ft 62.80  mud, 30min Sfc cement volu Annular Volume 0.2866 nt yld > 1.20  Liner w #/ft 32.00  mud, 30min Sfc cement volu	side the Grade P Csg Test psig: me(s) are in 1 Stage Cmt Sx 2188 /top @ Grade P Csg Test psig: me(s) are in	7971  13 5/8  110  2,511 tended to ac 1 Stage CuFt Cmt 5075 MASP is with  11215  110  3,347 tended to ac	Coupling BUTT hieve a top of Min Cu Pt 3379 hin 10% of 5000	Joint 2.21  0 1 Stage % Excess 50 Opsig, need ex 2.11	Design Factorial Testing Mud Wt 11.40 crta equip?  Design I Collapse 1.13	tors Burst 1.27 Totals: rface or a Calc MASP 6216  Factors Burst 1.22  Totals: rface or a	PROD Length 11,415 0 11,415 5350 Req'd BOPE 10M	8.75  UCTION  Weight 716,862 0 716,862 overlap. Min Dist Hole-Cplg 0.81  NER  Weight 128,000 0 128,000



Work Order: 24263

Date: 05-Mar-12

Customer Name: Precision Drilling Oilfield

Contact: Raymond

Customer PO: N/A

AcceptanceCodes: ASAP's Quality Management System

Item: 01

Qty: 1

HeatNo: N/A

PartNo: SN-CP161282/3

Dwg No: N/A

Material Spec: N/A

Description: ASSET# 635-090-082, 13-5/8" 10,000 FLANGED x FLANGED TYPE "U" DOUBLE WITH (4) 4-

1/16" 10,000 FLANGED SIDE OUTLETS WITH BLIND FLANGES INSTALLED ON OUTLETS. NO

RAMS

QP: N/A

**Quality Assurance** 

Comments: RIG# 33

Statement: This is to certify that all items were manufactured and inspected in accordance with all applicable

instructions, specifications and drawings as specified by the Purchase Order.



Work Order: 24263 Date: 05-Mar-12

Customer Name: Precision Drilling Oilfield

Contact: Raymond

Customer PO: N/A

AcceptanceCodes: ASAP's Quality Management System

Item: 01 Qty: 1 HeatNo: N/A

PartNo: SN-CP161282/3 Dwg No: N/A Material Spec: N/A

Description: ASSET# 635-090-082, 13-5/8" 10,000 FLANGED x FLANGED TYPE "U" DOUBLE WITH (4) 4-

1/16" 10,000 FLANGED SIDE OUTLETS WITH BLIND FLANGES INSTALLED ON OUTLETS. NO

RAMS

QP: N/A

**Quality Assurance** 

Comments: RIG# 33

Statement: This is to certify that all items were manufactured and inspected in accordance with all applicable

instructions, specifications and drawings as specified by the Purchase Order.



Work Order: 24662

Date: 16-Mar-12

Customer Name: Precision Drilling Ollfield

Contact: Raymond

Customer PO: 859118

AcceptanceCodes: ASAP's Quality Management System

Item: 01

Qty: 1

HeatNo: N/A

PartNo: SN-CP160026/1

Dwg No: N/A

Material Spec: N/A

Description: RIG#95, ASSET# GWD-085-254, 13-5/8" 10,000 TYPE "U" SINGLE WITH FLANGE BOTTOM AND

STUDDED TOP, WITH (2) 4-1/16" 10,000 STUDDED SIDE OUTLETS WITH BLIND FLANGES

INSTALLED

QP: N/A

**Quality Assurance** 

Comments: RECERTIFIED PER API RP-53

Statement: This is to Certify that all items were Manufactured and Inspected and are in conformance with the

following specifications in accordance as per API RP-53



Work Order: 24662

Date: 16-Mar-12

Customer Name: Precision Drilling Oilfield

Contact: Raymond

Customer PO: 859118

AcceptanceCodes: ASAP's Quality Management System

Item: 01

Qty: 1

PartNo: SN-CP160026/1

Dwg No: N/A

Description: RIG#95, ASSET# GWD-085-254, 13-5/8" 10,000 TYPE "U" SINGLE WITH

FLANGE BOTTOM AND STUDDED TOP, WITH (2) 4-1/16" 10,000 STUDDED SIDE OUTLETS WITH BLIND FLANGES INSTALLED

SerialNo: 24662-01-01



Work Order: 24662

Date: 16-Mar-12

Customer Name: Precision Drilling Oilfield

Contact: Raymond

Customer PO: 859118

AcceptanceCodes: ASAP's Quality Management System

Item: 01

Qty: 1

HeatNo: N/A

PartNo: SN-CP160026/1

Dwg No: N/A

Material Spec: N/A

Description: RIG#95, ASSET# GWD-085-254, 13-5/8" 10,000 TYPE "U" SINGLE WITH FLANGE BOTTOM AND

STUDDED TOP, WITH (2) 4-1/16" 10,000 STUDDED SIDE OUTLETS WITH BLIND FLANGES

INSTALLED

QP: N/A

Quality Assurance

Comments: RECERTIFIED PER API RP-53

Statement: This is to Certify that all items were Manufactured and inspected and are in conformance with the

following specifications in accordance as per API RP-53



908 Blimp Rd. Houma, La 70363 Phone: 985.851.7272 Fax: 985.851.7271

### Quotation

Quote Precision Drilling To: 254 Stanford Dr. Eunice, LA 70535

Quote Number:

32537

Expires: 04/11/12

Confact:

Raymond

Quote Date:

03/12/12

Inquiry:

Net 30

Customer:

PRE DRILLING Steve Juckett

Terms: Phone:

Salesman: Ship Via:

**OUR TRUCK** 

FAX:

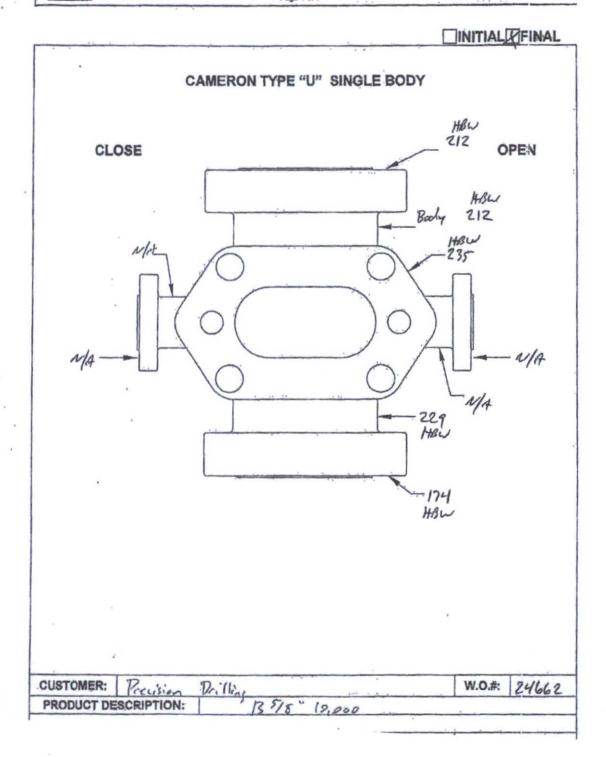
(713) 356-7244

RIG #: 33 MTR: 16383

Part Number

### Quantity Item Description Revision Price SN-CP-160026/1 RIG# 95, ASSET# GWD-085-254, 13-5/8" 10,000 TYPE "U" SINGLE STUDDED TOP x FLANGED BOTTOM WITH (2) 4-1/16" 10,000 STUDDED SIDE OUTLETS WITH BLIND FLANGES INSTALLED ON OUTLETS AND ONE SET 5" PIPE RAMS, LABOR AND SHOP FACILITIES TO PERFORM THE FOLLOWING: OPEN DOORS STEAM CLEAN, DIMENSIONALLY AND VISUALLY INSPECT RAM CAVITIES. FLUSH OUT HYDRAULIC SYSTEM AND PERFORM HYDRAULIC FUNTION TEST. (NO RAMS) ADDITIONAL WORK PERFORMED: PERFORMED HYDRAULIC FUNTION TEST, FOUND THAT SEALS WERE LEAKING, NOTIFIED CUSTOMER, PROCEEDED TO DISASSEMBLE OF BONNET ASSEMBLIES AND INSTALL NEW OEM SEAL KITS, REINSTALLED BONNETS ON BODY AND PROCEEDED TO HYDRAULIC FUNTION TEST AND WELD BORE TEST. RECERTIFY PER API RP-53 2 LABOR NEW OEM SEAL KITS

..... BONNET CENIC AND



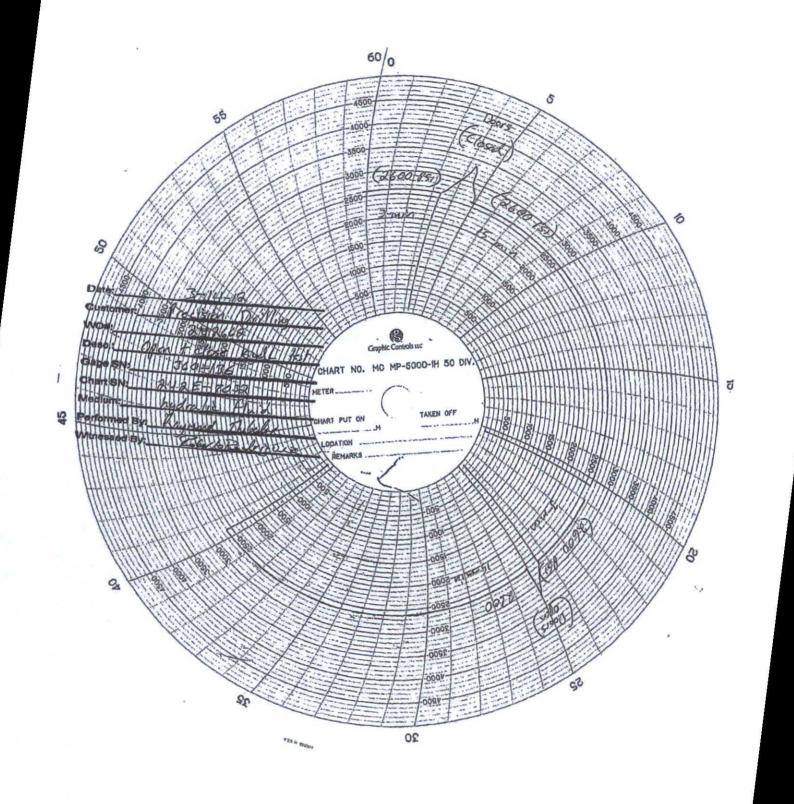
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CUSTOMER: Precision Prilling		W.O.#:	24662
PRODUCT DESCRIPTION: 13 3/8" 10,000	1-1-1-1		
QUANTITY: 2 SN (P160026/1	P.O.#:		
TESTED BY: T.LC PL	DATE	2 10	

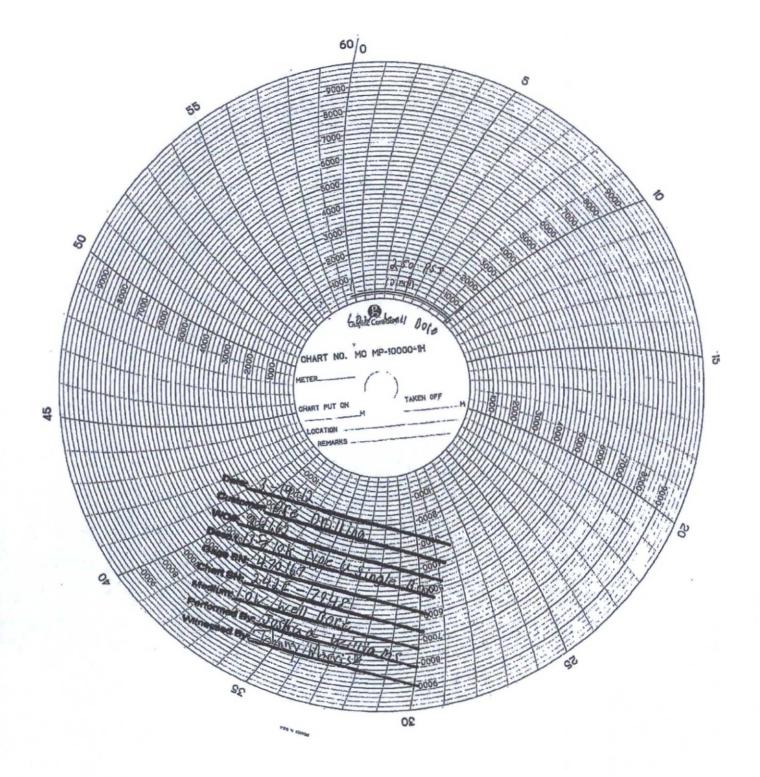
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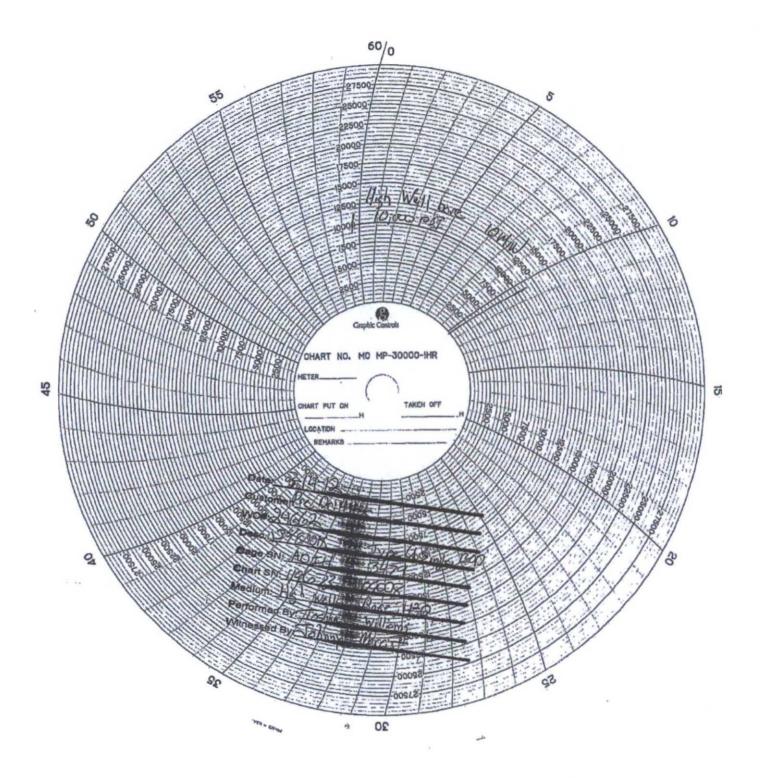
		In the same of Tables and
	CAMERON TYPE "U" INTERMEDIATE FLANGE	INITIAL ENINAL
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B) 229 HE	BW .	
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		A) 229 HBW
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		D)HBW
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PRODUCT E	Precision Prilling ESCRIPTION: 1378" 19,000	W.O.#: 24662
QUANTITY:	2 SN CP160026/1 P.O.#:	
TESTED BY:	-TH Ph	-

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# **Drift Test Report**

Approved By: R. Balley Date: 11/21/08

: :

Work Order No.: 24 662	Desc: Type U S	ingle Bop
Date: 3-14-12	Size: 13 58 Test Spec: 5 P 10 2	WP: 10,000 Rev:
Drift Gauge No: 5-00 8	A CONTRACTOR OF THE PARTY OF TH	
Drift Size: 13 5		· · · · · ·
Performed By: Conny L. Morris	1	¥
Results: Acceptable @ Reject D		,

# MCM OIL TOOLS

10422 W. Gulf Bank Road Houston, Texas 77040 Phone (713) 541-1212 Fax (713) 541-4664 Email: sales@mcmoiltools.com

# Letter of Compliance and Conformance

Date:

01/25/12

Part Number:

FCHY411610DDS

Traceability Number. 05396-35

Description:

Gate Valve 4- 1/16" 10M, Cameron Style, Type 'FC', Hydraulic Operated Gate Valve, Mat'l. Class: 'DD'

(H2S Service\Super Trim), Temp. Class; PU, PSL-1, PR-1, AP1 6A, Flanged End.

Serial #:

11-08-001, 11-08-007, 11-08-013, 11-08-018

MCM Oil Tools hereby certifies that the above listed Valves are API Monogramed conform to our Company Quality Control specifications and procedures and are in full compliance with API Spec 6A, 20th Edition, and NACE MR-0175

N 1/w.