

District I  
PO Box 1980, Hobbs, NM 88241 1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-101  
Revised February 10, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address: Conoco Inc 10 Desta Dr. Ste. 100W Midland, Tx. 79705-4500		OGRID No. 005073
		API Number 30-0 025-35176
Property Code 26605	Property Name Oxy State F-1	Well No. # 1

' Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
X	1	21S	36E		990	South	915	East	Lea

s Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Proposed Pool 1 Hardy Blinebry 29710					Proposed Pool 2				

" Work Type Code	" Well Type Code	" Cable/Rotary	" Lease type Code	14 Ground Level Elevation
P	O	R	S	3737'
16 Multiple	17 Proposed Depth	18 Formation Blinebry	19 Contractor	20 Spud Date

21 Proposed Casing and Cement Program

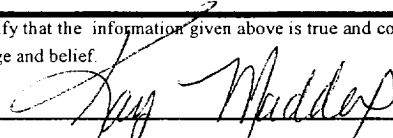
Hole Size	Casing Size	Casing weight /foot	Setting Depth	Sacks of Cement	Estimated TOC
Same as original					

Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Conoco proposes to perforate the Blinebry in this well using the attached procedure. Eventually the Hardy Tubb Drinkard and the Hardy Blinebry will be downhole commingled. Both pools are pre-approved and ownership is the same.

Permit Expires 1 Year From Approval  
Date Unless Drilling Underway

Plug-Back

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Kay Maddox		Approved by: ORIGINAL SIGNED BY	
Title: Regulatory Agent		PAUL F. KAUTZ	
Date: June 26, 2002		PETROLEUM ENGINEER	
Phone: (915) 686-5798		Approval Date: JUL 2 2002	
		Expiration Date:	
		Conditions of Approval:	
		Attached	

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Form C-102

Revised February 21, 1994  
instructions on back

Submit to Appropriate District Office  
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☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-35179	2 Pool Code 29710	3 Pool Name Hardy Blinebry
4 Property Code 26605	5 Property Name Oxy State F-1	6 Well Number # 1
7 OGRID No. 005073	8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500	9 Elevation 3497'

#### 10 Surface Location

UL or lot no. X	Section 1	Town ship 19S	Range 36E	Lot Idn	Feet from the 990	North/South line South	Feet from the 915	East/West line East	County Lea
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#### 11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 40	13 Joint or Infill	14 Consolidation Code	15 Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16			

#### 17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Kay Maddox

Printed Name

Regulatory Agent

Title

June 26, 2002

Date

#### 18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

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Form C-10

Revised February 21, 199  
instructions on bac

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☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-35176	2 Pool Code 29760	3 Pool Name Hardy Tubb Drinkard
4 Property Code 26605	5 Property Name Oxy State F-1	6 Well Number #1
7 OGRID No. 005073	8 Operator Name Conoco Inc., 10 Desta Drive, Ste. 100W, Midland, TX 79705-4500	9 Elevation 3497'

#### 10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
X	1	21S	36E		990	South	915	East	Lea

#### 11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 40	13 Joint or Infill	14 Consolidation Code	15 Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
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16				

A diagram showing a well location. A dashed line indicates a boundary. A horizontal dimension of 915' is shown from the boundary to the well. A vertical dimension of 990' is shown from the boundary to the well.

#### 17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief

Signature

Kay Maddox

Printed Name

Regulatory Agent

Title

August 7, 2001

Date

#### 18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

# Oxy State F. #1

## Blinebry Recompletion

April 30, 2002

### Well Information:

AFE Number:  
Spud Date: 10.19.2000  
Last Action to Well: Fished unscrewed rods, reran pump below perforations  
API Number: 30-025-35176  
Location: 990' FSL & 915' FEL of Section 1-T21S – R36E, Lea County, NM  
Zone: Blinebry  
Battery: Oxy State F-1 Battery  
Expected Production: 15 BOPD, 110 MCFGPD(Blinebry)  
40 BOPD, 250 MCFGPD(commingled Blinebry/Tubb)  
Orig TD: 8000'  
Current PBTD: 6985' (CIBP @ 7020' w/35' cement on top)  
DV Tool: 3883' (Drilled out)  
Elevation: GLE: 3497' KBE: 3508' AGL: 11'

### Casing Specifications:

Pipe	Depth (ft)	Drift ID (inches)	Collapse (psi)	Burst (psi)	Capacity (bbl/ft)
Surface: 8 5/8", 24#, J-55 STC	1,503	-	-	-	-
Cemented with 462 sxs class C cement w/ 2% SMS and 0.25 pps Celloflake. Tailed in with 195 sxs class C cement with 2% CaCl <sub>2</sub> . Circulated 76 sxs to the pit.					
Production: 5-1/2", 17#, J-55 LT&C	8,000	4.767	4,910	5,320	0.0232
1 <sup>st</sup> stage: Pumped 400 sxs class C 50/50 Pozmix cmt with 10% bentonite gel, 5% NaCl, 0.005 gps FP-6L, and 0.25 pps Celloflake. Tailed in with 390 sxs class C 15:61:11 Pozmix cmt w/5% NaCl, 1% FL-62, and 0.005 gps FP-6L. Opened DV tool and circulated 54 sxs to the pit.					
2 <sup>nd</sup> stage: Pumped 480 sxs class C 50/50 Pozmix cmt with 10% bentonite gel, 5% NaCl, 0.005 gps FP-6L, and 0.25 pps Celloflake. Tailed in with 530 sxs class C 15:61:11 Pozmix cmt w/5% NaCl, 1% FL-62, and 0.005 gps FP-6L. Circulated 139 sxs to the pit.					

### Tubing Specifications:

Pipe	Depth	Drift ID (in)	Collapse (psi)	Burst (psi)	Capacity (bbl/ft)
2 7/8", 6.5#, L-80, EUE 8rd	6,579	2.347	11,160	10,570	.00579

## **NOTES AND SAFETY PRECAUTIONS**

### **Notes:**

1. All depths in this procedure are referenced from KB unless noted otherwise.
2. Please give service companies 48 hours advance notice prior to performing work on the well.
3. Hold prejob safety meetings prior to beginning any new work.

### **Safety Precautions:**

1. Smoking will not be allowed within 100' of the wellhead and only in designated areas.
2. All on-site personnel are to wear safety glasses with side-shields, steel-toed boots, plastic hardhats, and 100% cotton outerwear at all times.
3. Eye protection and hand protection should be worn when handling acid/chemicals. Eye protection should be worn when there is the potential for acid/chemicals to blow or splash into the eyes.
4. While the perforating guns are in the open, radio's will not be used within 500' of the location. Signs indicating this will be placed on all access roads (signs will be provided by the perforating company).
5. The service company should bring communication devices for each individual operating pumps/valves and for the field engineer.
6. Fresh water will be on location in case of accidental discharge or an emergency (water to be provided by the treating company). Emergency shower trailer will be available and ready for use (and tested) when acidizing.
7. Eye wash bottles should be available and ready for use. All on-site personnel should be aware of the location of these bottles.
8. Only personnel needed for the job will be allowed on location. Only perforating company personnel will be allowed to handle the perforating guns.
9. Hold tailgate safety meetings daily prior to any work being performed. Determine safe location where all personnel will meet in the event of an emergency.
10. See attached Pre-Job Safety Assessment sheet.

### **Kill Fluids:**

10 ppg brine (Kill only)  
9.0 ppg brine (completion fluid)  
8.6 ppg brine (completion fluid)

### **Frac Fluids/Breakdown Fluids:**

As per BJ Services specs/procedure

## Procedure

1. MIRU. Kill the well with 8.6 ppg brine if necessary. TOOH with 76 rod string and 1¼" pump. Visually inspect for wear or pitting. Send pump to shop to be inspected. If scale is found, have Champion take a sample to be analyzed.
2. NU 5M BOP and test to 5000 psi according to SOP. TOOH with 2⅞" tubing. Scanalog tubing and lay down green and red joints. Hot oil tubing if necessary.
3. PU 5½" casing scraper on 2⅞" tubing and TIH to tag PBTD at ±6985'. Circulate hole with 8.6 ppg brine. TOOH.
4. PU 5 ½" RBP and TIH on 2⅞" tubing. Set RBP at ±5900'. PU and spot 100 lbs sand on top of RBP. Load the casing and test RBP to 4700 psi (90% rated casing burst). Spot 9 ppg brine pill from top of sand back to 5835'. PU to ±5832' and spot 250 gals 15% NEFE HCL
5. MIRU wireline. Install lubricator with pack-off. RIH with 4" HSC guns loaded 2 JSPF with 19 gm charges in 120° phasing (hole diameter: 0.43", penetration: 19") to perforate the Blinebry in acid. Use the Baker Atlas CBL/CCL dated 12.20.2000 for depth correlation on the following Blinebry intervals. RD wireline.

<u>Interval</u>	<u>NEP</u>	<u>Shots</u>
5686'-5694'	8'	17
5722'-5726'	4'	9
5786'-5792'	6'	13
5826'-5832'	6'	13
<b>Total Blinebry</b>	<b>24'</b>	<b>52</b>

6. ND BOP's and NU 5,000 psi frac valve and spool. Test frac valve to 4700 psi.
7. RU BJ services to the 5,000 PSIG WP frac valve to breakdown perforations with spearhead acid and sand frac the Blinebry down the 5 ½" casing. Install treating line with a nitrogen actuated relief valve and remote access ball injector. Pump the acid breakdown per attached BJ procedure. Divert acid with 7/8", 1.3 S.G. ball sealers. Surge back ball sealers.
8. Pump the Viking 3500 treatment as per attached BJ Services procedure. Tag the frac with a single radioactive isotope.

<b>TREATING LINE TEST PRESSURE: A minimum 1000 psig over MATP</b>	<b>4700</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE WORKING PRESSURE: Based on weakest component in system</b>	<b>4700</b>	<b>PSIG</b>
<b>NITROGEN POP OFF SET PRESSURE: Relief pressure set at the lesser of :</b>  300 psig less than 90% MAWP or, 300 psig over MATP	<b>3900</b>	<b>PSIG</b>
<b>MAXIMUM ALLOWABLE TREATING PRESSURE: If reached, human action required.</b>	<b>3700</b>	<b>PSIG</b>
<b>MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design</b>		<b>PSIG</b>

9. Shut down and record ISIP, 5, 10 and 15 minute pressures. RD BJ.
10. Flow back to the test tank until the well cleans up or dies. ND the frac valve. If necessary, kill the well with brine prior to removing the frac valve.
11. NU BOP and test to 5,000 PSIG according to SOP.
12. PU 4 ¾" bit and TIH. Tag sand and clean out wellbore to RBP at 5900'. POOH.
13. RU Baker Atlas. Run post-treatment GR/CCL over stimulated Blinbry interval. RD Baker.
14. PU retrieving head and TIH on tubing to 5900'. Release RBP and POOH.
15. TIH with following production string:
  - a) Poor boy mud anchor
  - b) 2 ⅞ standard SN
  - c) 2 ⅞ x 5½" tubing anchor at 5500'
  - d) 2 ⅜" J-55 tubing to surface, landed in hanger with MA intake at ± 5650'.

**Note:** Pump intake will be lowered once well has cleaned up and production stabilizes

16. ND BOP and NU original wellhead.
17. RIH with original 7/6 rod string and 1¼" pump(See attached beam pump design).
18. Place well on production and notify operator. RDMO.

Prepared by: Julian Carrillo  
Associate Engineer

## Beam Pump Design

### Initial setup after recompletion

Rod Type	C	Diameter	7/8	3/4
		Percent	30.6	69.4

ER 0.812e-6	AF 0.08947	F0/SKR 0.11167	F3/SKR 0.13516	N0 43.36
WR 1.813	N/N0 0.16719	F1/SKR 0.21089	TA 1.02476	N0' 46.72
FC 1.077	N/N0' 0.15520	F2/SKR 0.06747	2T/S2KR 0.16062	

Fluid Level, Ft.	5500	Plunger Stroke, in. (% Stroke)	111.2 (92.8)
Pump Depth, Ft.	5650	Pump Displacement, bbl/d (70%)	146.9 (102.8)
Stroke Length In.	120	Standing Valve Load, Lbs	8931
Pump Strokes/min.	7.25	Traveling Valve Load, Lbs	11853
Plunger Dia. In.	1.25	Peak Polished Rod Load, Lbs	14449
Specific Gravity	1	Min. Polished Rod Load, lbs	7166
Fluid Load	2922	Pumping Unit Type:	Conventional
Tubing	2 7/8 inches	Peak Crank Torque, in-lbs(at 83%)	258402 (311328)
Anchored at	5500 Feet	Polished Rod Horsepower	7.78

Counterweight Required, Lbs	11016
Load Range (Peak-Min)/Peak, Per.	50.41
Actual Rod Stress, psi (Allowable)	24029 (32660)
Stress to Unseat Pump psi (% Allow)	33887 (70.6)
Maximum Allowable Stretch, in (ft)	73 (6.1)

### After production stabilizes

Rod Type	C	Diameter	7/8	3/4
		Percent	30.6	69.4

ER 0.812e-6	AF 0.08947	F0/SKR 0.15111	F3/SKR 0.17122	N0 37.35
WR 1.813	N/N0 0.19412	F1/SKR 0.27185	TA 1.07054	N0' 40.23
FC 1.077	N/N0' 0.18019	F2/SKR 0.09336	2T/S2KR 0.21453	

Fluid Level, Ft.	6410	Plunger Stroke, in. (% Stroke)	108.9 (90.8)
Pump Depth, Ft.	6560	Pump Displacement, bbl/d (70%)	143.8 (100.7)
Stroke Length In.	120	Standing Valve Load, Lbs	10370
Pump Strokes/min	7.25	Traveling Valve Load, Lbs	13775
Plunger Dia. In.	1.25	Peak Polished Rod Load, Lbs	16496
Specific Gravity	1	Min. Polished Rod Load, lbs	8266
Fluid Load	3405	Pumping Unit Type:	Conventional
Tubing	2 7/8 inches	Peak Crank Torque, in-lbs(at 83%)	310528 (374130)
Anchored at	6400 Feet	Polished Rod Horsepower	8.49

Counterweight Required, Lbs	12797
Load Range (Peak-Min)/Peak, Per.	49.89
Actual Rod Stress, psi (Allowable)	27433 (32744)
Stress to Unseat Pump psi (% Allow)	39442 (82.2)
Maximum Allowable Stretch, in (ft)	80 (6.7)

Same for both cases:

Pump: 25-125- RHBC-20-6-0 Type "B" 0.004 clearance SM plunger with HF spiral guide

Rods: 7/8" and 3/4" C class

K-bars: 3- 1 1/2" w 3/4" API pins and T-couplings

Stabilizer Bars: 2- 40" x 7/8" x 3/4" pin KD-90 with 3 PPA Sidewinder guides (13% glass filled)

Guided Rods: 2 - 3/4" KD-90 rods with 3 PPA Sidewinder guides (13% glass filled)



# Gas Anchor Design and Schematic(Initial setup after recompletion)

Well name:\_\_\_Oxy St. F1 #1

POOR BOY GAS ANCHOR

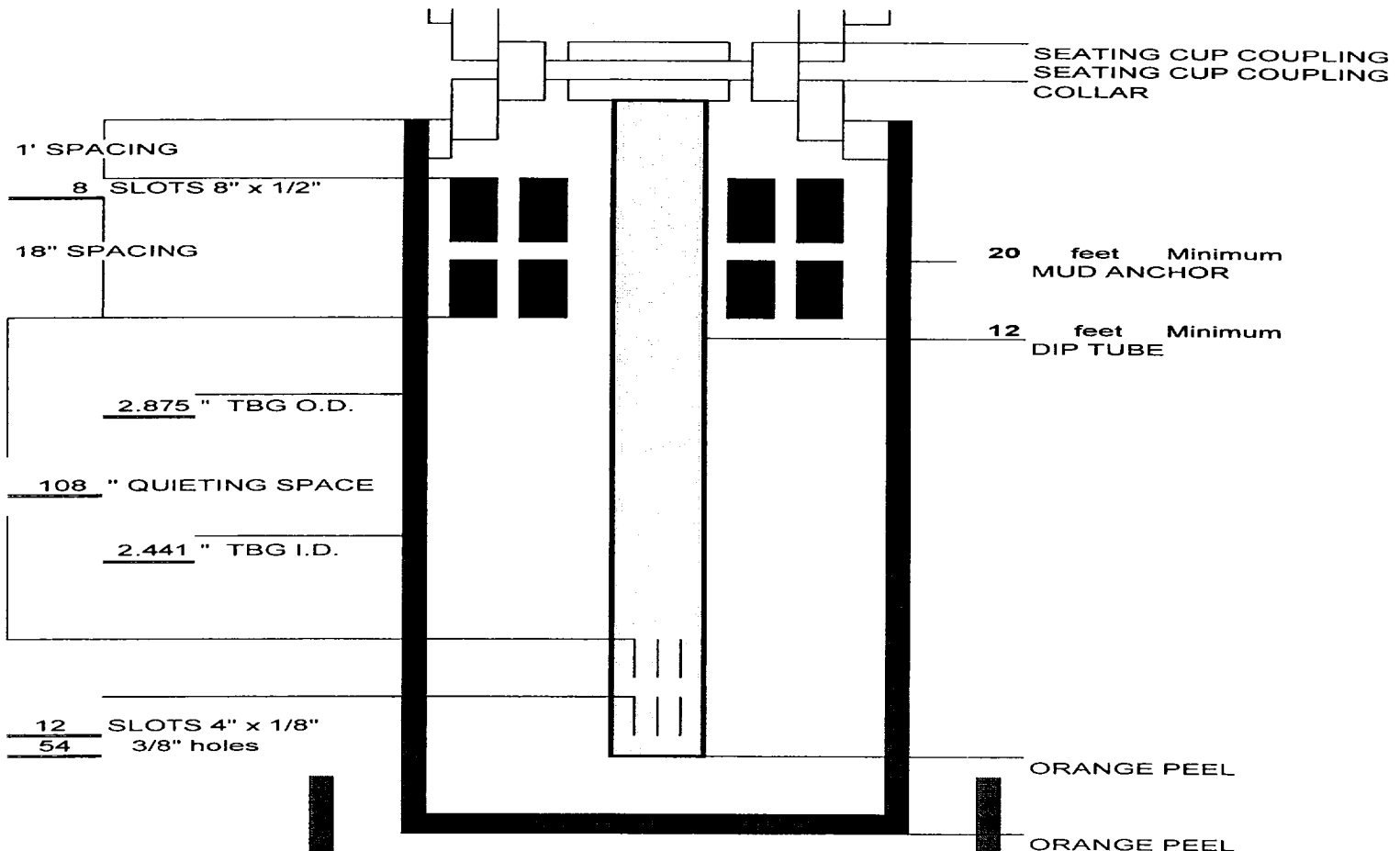
Blue values are manual entry

## ENTER DATA:

60	BARRELS OF FLUID PER DAY
0.8	PUMP VOLUMETRIC EFFICIENCY
2.5 "	NOMINAL TUBING SIZE AT PUMP* (1.5, 2, 2.5, or 3 input required)
1.25 "	NOMINAL DIP TUBE SIZE *
1.38 "	DIP TUBE I.D. *
1.66 "	DIP TUBE O.D. *
3/8 "	HOLE SIZES IN DIP TUBE (Inches)
2.875 "	MUD ANCHOR DIAMETER O.D.** ( 2.375, 2.875, or 3.5 input required)
2.441 "	MUD ANCHOR DIAMETER I.D.**
5.5 "	CASING O.D. ( 4.5, 5.5 or 7" input required)
4.767	CASING DRIFT DIAMETER
111.2 "	NET PLUNGER TRAVEL Base on Max. stroke length
1.25 "	PUMP DIAMETER

## RESULTS:

1.40	MINIMUM ANNULUS AREA OF DOWN PASSAGE (in <sup>2</sup> )
2.16	DIP TUBE O.D. AREA (in <sup>2</sup> )
3.57	MINIMUM MUD ANCHOR I.D. AREA (in <sup>2</sup> )
4.68	MUD ANCHOR I.D. AREA (in <sup>2</sup> )
1.89	MUD ANCHOR CLEARANCE (inches)
2.52	ACTUAL ANNULUS AREA (in <sup>2</sup> )
10.06	AREA OF MUD ANCHOR SLOTS (in <sup>2</sup> )
3	MINIMUM NUMBER OF SLOTS (MUD ANCHOR)***
1.50	DIP TUBE I.D. AREA (in <sup>2</sup> )
5.98	AREA OF DIP TUBE SLOTS (in <sup>2</sup> )
12	NUMBER OF SLOTS (DIP TUBE)
54	3/8 " holes
136	PUMP DISPLACEMENT (in <sup>3</sup> )
108	LENGTH OF QUIETING SPACE (inches)
9.04	LENGTH OF QUIETING SPACE (FEET)



## Gas Anchor Design and Schematic(after well cleans up)

### Natural gas anchor

blue numbers are manual entry

#### ENTER DATA:

60	BARRELS OF FLUID PER DAY
0.8	PUMP VOLUMETRIC EFFICIENCY
2.5 "	NOMINAL TUBING SIZE AT PUMP* (1.9, 2, 2.5, or 3 input required)
1.25 "	NOMINAL STRAINER NIPPLE SIZE *
1.38 "	DIP TUBE I.D. *
1.66 "	DIP TUBE O.D. *
7/32 "	HOLE SIZES IN DIP TUBE (Inches)
2.875 "	MUD ANCHOR DIAMETER O.D.**
2.441 "	MUD ANCHOR DIAMETER I.D.**
4.767 "	CASING DRIFT DIAMETER ID
108.9 "	NET PLUNGER TRAVEL Base on max. stroke length
1.25 "	PUMP DIAMETER

#### RESULTS:

1.40	MINIMUM ANNULUS AREA OF DOWN PASSAGE (in <sup>2</sup> )
6.49	MUD ANCHOR O.D. AREA (in <sup>2</sup> )
17.85	CASING O.D. AREA (in <sup>2</sup> )
11.36	ACTUAL MA BY CASING AREA OF DOWN PASSAGE (in <sup>2</sup> )
3.80	MUD ANCHOR CLEARANCE (in)
5.62	AREA OF MUD ANCHOR SLOTS (in <sup>2</sup> )****
6	NUMBER OF SLOTS (MUD ANCHOR)*** 4" x 1/4" slots
1.50	Strainer Nipple I.D. AREA (in <sup>2</sup> )
5.98	NUMBER OF SLOTS (DIP TUBE) or 159 7/32 " holes
11.97	NUMBER OF SLOTS (STRAINER NIPPLE)
133.64	PUMP DISPLACEMENT (in <sup>3</sup> )

15' + or - below lowest Active Perforation

