Form 3160-5 (August 1999)

## **UNITED STATES** DEPARTMENT OF THE INTERIOR OCD-ARTESIA

BUREAU OF LAND MANAGEMENT

NOTICES AND REPORTS ON WELLS

FORM APPROVED OMB NO. 1004-0135 Expires: November 30, 2000

5. Lease Serial No.

NM-36975

ab Hone; all. Use Form 3160-3 (APD) for such proposals.					Allottee or Tribe Name	
SUBMIT IN TRIPLICATE - Other instructions on reverse side					7. If Unit or CA/Agreement, Name and/or No	
1. Type of Well Oil Well X Gas Well Other  2. Name of Operator OXY USA WTP LP 192463					8. Well Name and No. Mossberg Federal #1Y	
3a. Address	3b. Phone No. (include area code)		30-015-35	5533		
P.O. Box 50250, Midland, TX 79710-0250 432-685-5717					10. Field and Pool, or Exploratory Area	
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)					ilaga Morrow	
725 FSL 809 FWL SWSW(M) Sec 28 T2	4S R28E					
					11. County or Parish, State	
		····		Eddy	<u> </u>	
12. CHECK APPROPRIATE	BOX(ES) TO IN	DICATE NATURE OF	NOTICE, REF	ORT, OR O	THER DATA	
TYPE OF SUBMISSION	TYPE OF ACTION					
Notice of Intent	Acidize	Deepen	Production	n (Start/Resume)	Water Shut-Off	
	Alter Casing	Fracture Treat	Reclamati	on	Well Integrity	
X Subsequent Report	Casing Repair	New Construction	Recomple	te	X Other Spud. Set	
Final Abandonment Notice	Change Plans	Plug and Abandon	Temporari	ily Abandon	Casing & Cement	
That Abandonium 19000	Convert to Injection	on Plug Back	Water Dis	posal	3201113	
3. Describe Proposed or Completed Operation (clearly If the proposal is to deepen directionally or recomp Attach the Bond under which the work will be per following completion of the involved operations.	lete horizontally, give so formed or provide the I	ubsurface locations and mea. Bond No. on file with BLM/	sured and true ve BIA. Required s	rtical depths of a ubsequent repor	all pertinent markers and zones.  ts shall be filed within 30 days	

following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

See Attached

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)  David_Stewart	itle	Sr Regulatory Ana	alvet
	ate	4(1307	ACCEPTED FOR RECORD
THIS SPACE FOR FEDERAL	OR ST	ATE OFFICE USE	MAY 1 4 2007
Approved by	Title		Date minimum in
Conditions of approval, if any, are attached. Approval of this notice 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.	Office		WESLEY W. INGRAM PETROLEUM ENGINEER

## **MOSSBERG FEDERAL #1Y**

Date: 03/29/2007

Supervisor 1:

JOHN R DOLLAHAN

(3/26/07 TO 3/27/07) B&H CONSTRUCTION EXTENDED LOCATION 65' ON NORTH SIDE & SET AN 8' X 8' X 6' DEEP CELLAR (3/27/07) BUTCH'S RAT HOLE SERVICE DUG A 48" HOLE TO 80' FGL (HIT WATER SAND FROM 60' TO 70') - SET 80' OF 30" CONDUCTOR PIPE & HALLIBURTON CEMENTED 30" CONDUCTOR PIPE DOWN 2 - 2" PIPES WELDED TO OUTSIDE OF 30" CONDUCTOR PIPE WITH 700 SX PREM. PLUS + 2% CACL MIXED @ 14.8 #/GAL. UP 1' IN BOTTOM OF CELLAR - LOST SEAL ON CONDUCTOR PIPE HALF WAY INTO JOB - TOP OF CEMENT INSIDE CONDUCTOR PIPE IS @ 22' FGL (3/28/07) BUTCH'S RAT HOLE SERVICE DUG RAT & MOUSE HOLES - LOCATION & CONDUCTOR PIPE IS READY FOR THE RIG SKID OF MCVAY RIG # 5 ON FRIDAY MORNING (3/30/07)

Date: 03/30/2007

WAITING ON TRUCKS TO SKID RIG FROM THE MOSSBERG FED. # 1 TO THE MOSSBERG FED. # 1Y ON THE MORNING OF 3/30/07

Date: 03/31/2007

SKID MCVAY RIG # 5 FROM THE MOSSBERG FED. # 1 TO THE MOSSBERG FED. # 1Y

**RU MCVAY RIG #5** 

SHUT DOWN FOR NIGHT

Date: 04/01/2007

RU MCVAY RIG #5 - T&C DRILLED GROUND ROD HOLES & SET 3 ANCHORS FOR MUD/GAS SEPARATOR

PU 26" BHA, WELD FLOW NIPPLE ON 30" CONDUCTOR PIPE, MIX SPUD MUD & PRESPUD SAFETY INSPECTION

SPUD 26" HOLE @ 16:30 (MDT) 3/31/2007 - DRILLED CEMENT INSIDE 30" CONDUCTOR PIPE FROM 40' TO 98'

DRILL 26" SURFACE HOLE FROM 98" TO 355" USING 65K AV. WOB, 80 ROTARY RPM, 434 GPM @ 300# PUMP PRESSURE - LOST 100% RETURNS @ 350" - NO DRILLING BREAK - NO BIT DROP

PUMP PREMIXED 175 BBLS VISCOUS SWEEP W/ LCM - NO CIRCULATION

WLS @ 308' = 1.50 DEG.

TOH - LD 26" BHA, SUBS, SHOCK SUB, BHR & BIT

Date: 04/02/2007

WAIT ON CASING CREW & LD MACHINE

RU BULL ROGERS CASING CREW & LD MACHINE - SAFETY MEETING

RAN 9 JTS. OF 20" 94# K-55 BUTTRESS NEW CASING W/ 20" WEATHERFORD FLOAT COLLAR @ 310' - 1 JT. UP FROM 20" WEATHERFORD TEXAS PATTERN SHOE (TOTAL PIPE = 379.38') SET @ 355'.RD CASING CREW VERY TIGHT HOLE FROM 170' TO 250' - FAIRLY TIGHT HOLE FROM 250' TO 355'

RU HALLIBURTON - SAFETY MEETING - HALLIBURTON CEMENTED 20" CASING WITH 150 SX PREM. PLUS THIXOTROPIC CEMENT + 10# CAL-SEAL + 10# GILSONITE + 2% CACL + 0.125 # POLY-E-FLAKE & 320 SX HALL. LIGHT CEMENT + 1/8# POLY-E-FLAKE + 2% CACL & 250 SX PREMIUM PLUS CEMENT + 2% CACL. PLUG DOWN @ 20:16 4/1/07 - PARTIAL TO NO RETURNS OF DRILLING FLUID TO SURFACE - NO CEMENT CIRCULATED

**WOC - JET & CLEAN STEEL PITS** 

PRECISION PRESSURE DATA RAN TEMPERTURE SURVEY - TOC @ 272' - (PBTD @ 302')

PU & TIH DOWN BACK SIDE W/ 1" TBG. - TAGGED UP SOLID @ 180'

SAFETY MEETING - HALLIBURTON CEMENTED DOWN 1" TBG. W/ 50 SX PREM. PLUS + 3% CACL MIXED AT 14.8 #/GAL. - TOH W/ 1" TBG.

WOC - TIH W/ 1" TBG. - TAGGED UP @ 165' (15' OF FILL)

SAFETY MEETING - HALLIBURTON CEMENTED DOWN 1" TBG. W/ 100 SX PREM. PLUS + 3% CACL MIXED AT 14.8 #/GAL, - TOH W/ 1" TBG.

BLM WAS NOTIFIED OF THE CASING & CEMENTING JOB @ 4:00 AM (MDT) 4/1/07 AFTER LOOSING RETURNS @ 350' - TALKED W/ WESLEY INGRAM -

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DARRELL CARTER W/ THE BLM WITNESSED THE CASING & CEMENTING JOB.

Date: 04/03/2007

Supervisor 1:

TONY DURAN

WOC, TAG CMT @ 165'

SAFETY MEETING, HALLIBURTON CEMENTED DOWN 1" TBG, w/ 100 SKS PREM. PLUS w/ 3% CACL MIXED @ 14.8 PPG - POH w/ 1" TBG

WOC, TAG CMT @ 95'

SAFETY MEETING, HALLIBURTON CEMENTED DOWN 1" TBG, w/ 150 SKS PREM. PLUS w/ 3% CACL MIXED @ 14.8 PPG - POH w/ 1" TBG

WOC, TAG CMT 4' ABOVE GROUND LEVEL. DARRELL CARTER W/ NM BLM. OK"d TAGGING OF CEMENT.

WOC, CUT OFF 30" CONDUCTOR BELOW CELLAR, CUT OFF 20" CSG, WELD ON 20" BELL NIPPLE AND FLOW LINE

P/U 17 1/2" BIT & DRLG BHA & TIH. TAG CMT @ 315"

P/U KELLY & STARTED DRILLING OUT CMT & FLOAT EQUIPMENT

Date: 04/04/2007

BIT PLUGGED, TOH TOO UNPLUG BIT, TIH

**DRLG OUT CMT & FLOAT EQUIPMENT** 

DRLG # 355- 659' ( 304' ), AVG ROP = 67.5 FPH, NOTE: LOST RETURNS @ 585', DRY DRLG # 585' - 659', TD 17 1/2" HOLE @ 659', @ 13:00 HRS ON 4-3-2007.

MIXED & PUMPED HI-VIS LCM PILL, SPOT PILL ON BOTTOM

RAN SURVEY @ 612' = 1 1/4 Deg.

TOH TO RUN CSG, L/D BHA

R/U CASING CREW & LAY DOWN MACHINE

RAN 16 JTS, 13 3/8", 48#, H-40, ST&C CASING, SET CSG @ 659', CASING DRESSED w/ 3 CZR'S, INSERT FLOAT @ 615.36'

R/D CASING CREW & LAY DOWN MACHINE. R/U HALLIBURTON CEMENITING LINES

TESTED CEMENTING LINES, HELD PRE-JOB SAFETY MEETING, MIXED AND PUMPED 20 BBLS FRESH WTR SPACER, PUMPED 27 BBLS CMT SLURRY (100 SKS PREMIUM PLUS THIXOTROPIC WT = 14.3 PPG, YLD = 1.49 CUFT/SK), FOLLOWED BY LEAD CMT SLURRY 107 BBLS (320 SKS HALLIBURTON LIGHT PREMIUM PLUS W 2 % CACL WT= 12.7 PPG, YLD= 1.89 CUFT/SK), FOLLOWED BY TAIL CMT SLURRY 60 BBLS (250 SKS PREMIUM PLUS W 2% CACL WT= 14.8 PPG, YLD = 1.34 CUFT/SK), DROP PLUG, DISPLACED W 97 BBLS, BUMPED PLUG W 400 PSI, FLOAT DID NOT HOLD, DID NOT CIRC CEMENT TO SURFACE, DID NOT HAVE RETURNS THRU OUT CEMENT JOB, CLOSED CEMENTING HEAD VALVE, R/D CEMENTING LINES. WOC

R/U PECISION PRESSURE DATA SLICKLINE TRUCK, RAN TEMPERATURE SURVEY, TAG CMT INSIDE OF 13 3/8" CASING @ 594' NOTE: TEMP SURVEY INDICATE TOC @ 400'

P/U & RAN 1" TBG, TAG CMT @ 392"

SAFETY MEETING, HALLIBURTON CEMENTED DOWN 1" TBG, W/ 25 SKS PREM. PLUS W/ 3% CACL MIXED @ 14.8 PPG - POH W/ 1" TBG. WOC

Date: 04/05/2007

P/U & RAN 1" TBG, TAG CMT @ 392'

SAFETY MEETING, HALLIBURTON CEMENTED DOWN 1" TBG. w/ 100 SKS PREM, PLUS w/ 3% CACL MIXED @ 14.8 PPG - POH w/ 1" TBG. WOC

P/U & RAN 1" TBG. TAG CMT @ 382"

HALLIBURTON CEMENTED DOWN 1" TBG, w/ 100 SKS PREM. PLUS w/ 3% CACL MIXED @ 14.8 PPG - POH w/ 1" TBG. WOC

P/U & RAN 1" TBG, TAG CMT @ 382'

HALLIBURTON CEMENTED DOWN 1" TBG, w/ 75 SKS PREM. PLUS w/ 3% CACL MIXED @ 14.8 PPG - POH w/ 1" TBG. WOC

P/U & RAN 1" TBG, TAG CMT @ 382"

HALLIBURTON CEMENTED DOWN 1" TBG, w/ 100 SKS PREM. PLUS w/ 3% CACL MIXED @ 14.8 PPG - POH w/ 1" TBG. WOC

P/U & RAN 1" TBG, TAG CMT @ 382"

HALLIBURTON CEMENTED DOWN 1" TBG, w/ 100 SKS PREM. PLUS w/ 3% CACL MIXED @ 14.8 PPG - POH w/ 1" TBG. WOC

Date: 04/06/2007

P/U & RAN 1" TBG, TAG CMT @ 382"

CONTACTED NEW MEXICO BLM ASKED FOR APPROVAL TO DUMP PEA GRAVEL DOWN ANNULUS.

NOTE: APPROVAL WAS GIVEN BY FREDDRICK WRIGHT DISTRICT ENGINEER FOR BLM @ 7:45AM 4-5-2007

W/O WELDER TO CUT OFF 20" CONDUCTOR

**CUT OFF 20" CONDUCTOR** 

STARTED TO FILL ANNULUS w/ PEA GRAVEL, GRAVEL BRIDGED OFF, P/U & RAN 1" TBG, TAG BRIDGE w/ 1" @ 60'

CONTACTED NEW MEXICO BLM.

NOTE: WESLEY INGRAM BLM DISTRICT ENGINEER ON LOCATION TO WITNESS TAGGING OF BRIDGE CAUSE BY PEA GRAVEL.

BLM INSTRUCTIONS WHERE TO MAKE AND ATTEMPT TO WASH THRU BRIDGE, IF BRDGE COULD NOT BE WASHED OUT, A LOW WATER LOSS

CEMENT WOULD BE USED TO FILL THE REMAINING ANNULUS TO SURFACE WITH CEMENT

WAITING ON LOW WATER LOSS CEMENT

MADE SEVERAL ATTEMPTS TO WASH THRU PEA GRAVEL BRIDGE @ 60', NO SUCCESS

NOTE: WESLEY INGRAM BLM DISTRICT ENGINEER ON LOCATION TO WITNESS, ATTEMPT TO WASH THRU BRIDGE.

PERMISSION WAS GIVEN TO CEMENT ANNULUS FROM 60' TO SURFACE WITH LOW WATER LOSS CEMENT IN 25 SKS STAGES.

ALSO BLM ADDED STIPULATION THAT CEMENT WOULD BE CIRCULATED FROM CASING SETTING DEPTH TO SURFACE ON BOTH 9 5/8" CASING AND 7" CASING.

SAFETY MEETING, HALLIBURTON CEMENTED DOWN 1" TBG, w/ 25 SKS PREM. PLUS w/ .4% HALAD-9 MIXED @ 14.8 PPG , YLD = 1.33 CUFT/SKS - POH w/ 1" TBG

WOC, P/U & RAN 1" TBG, TAG CMT @ 30"

SAFETY MEETING, HALLIBURTON CEMENTED DOWN 1" TBG, w/ 25 SKS PREM. PLUS w/ .4% HALAD-9 MIXED @ 14.8 PPG , YLD = 1.33 CUFT/SKS , CIRC 12 SKS CEMENT TO SURFACE - POH w/ 1" TBG. WOC

Date: 04/07/2007

ROUGH CUT 13 3/8" CASING, CUT OFF CASING & WELD ON "A" SECTION OF WELLHEAD.

TESTED VOID TO 500 PSI

N/U DIVETER BOP STACK ( 3000 PSI HYDRIL w/ DRILLING SPOOL ), N/U BELL NIPPLE & FLOWLINE, N/U PANIC LINE

P/U & M/U 12 1/4" BIT & DRILLING BHA.

TESTED CASING & BOP TO 800 SPI, HELD OK!

DRILL OUT CEMENT & FLOAT EQUIP f/ 594' TO 659'

DRLG f/ 659' - 941' ( 282' ), AVG ROP = 40.3 FPH, WT = 65, RPM = 90 RPM

Date: 04/08/2007

DRLG f/ 941' - 1023' (82' ), AVG ROP = 41 FPH, WT = 55, RPM = 65. RAN SURVEY @ 980' = 3/4 Deg.

DRLG f/ 1023' - 1247' ( 224' ), AVG ROP = 42.7 FPH, WT = 55, RPM = 65

INSTALL ROTATING HEAD & KELLY DRIVE BUSHING

DRLG f/ 1247' - 1460' ( 213' ), AVG ROP = 32.8 FPH, WT = 55, RPM = 65

RIG REPAIR, SWAP OUT # 2 PUMP ( SWAB WENT OUT )

DRLG f/ 1460' - 1527' (67'), AVG ROP = 17.9 FPH, WT = 55, RPM = 65. RAN SURVEY @ 1480' = 1 1/4 Deg.

DRLG # 1527' - 1684' (157'), AVG ROP = 33.0 FPH, WT = 55, RPM = 65

Date: 04/09/2007

DRLG f/ 1684' - 1777' (93'), AVG ROP = 26.6 FPH, WT = 55, RPM = 65. RAN SURVEY @ 1730' = 1.0 Deg.

DRLG f/ 1777' - 2028' (251'), AVG ROP = 28.7 FPH, WT = 55, RPM = 65. RAN SURVEY @ 1981' = 1 1/2 Deg.

DRLG f/ 2028' - 2306' ( 278' ), AVG ROP = 29.3 FPH, WT = 55, RPM = 65. RAN SURVEY @ 2259' = 2 1/4 Deg.

DRLG # 2306' - 2332' ( 26' ), AVG ROP = 20.8 FPH, WT = 55, RPM = 65

Date: 04/10/2007

DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,332' TO 2,492' USING 55K AV. WOB, 65 ROTARY RPM, 387 GPM @ 1,350# PUMP PRESSURE

DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,492' TO 2,528' USING 55K AV. WOB, 65 ROTARY RPM, 387 GPM @ 1,350# PUMP PRESSURE

WLS @ 2,479' = 2.09 DEG.

DRILL 12 1/4" INTERMEDIATE HOLE FROM 2,526' TO 2,727' (TD OF 12 1/4" HOLE) USING 55K AV. WOB, 65 ROTARY RPM, 387 GPM @ 1,350# PUMP PRESSURE

RU & RUN DEL'S FLUID CALIPER - 15 1/2" AVERAGE HOLE SIZE - 156% WASHOUT - WILL TAKE A MINIMUM OF 2,188 CU. FT. OF CEMENT TO CIRCULATE TO SURFACE W/ 9 5/8" CASING SET @ 2,727' - PUMP 80 BBL. VISCOUS SWEEP & CIRCULATE OUT

DROP TOTCO @ 2,627' = 2.37 DEG. - SET KELLY BACK - TOH LD 7 JTS. 4 1/2" DP

TOH STANDING BACK 19 STANDS 4 1/2" DP - (TIGHT HOLE FROM 1,119' TO 900' - VERY TIGHT HOLE FROM 900' TO 850')

RU BULL ROGERS LD MACHINE - SAFETY MEETING - POOH LD 21 - 8" DC'S, 12 1/4" BHA & 12 1/4" BHT

RU BULL ROGERS CASING CREW TO RUN 9 5/8" INTERMEDIATE CASING & SAFETY MEETING

Date: 04/11/2007

RAN 68 JTS. 9 5/8" 36# J-55 8RD LT&C NEW CASING (2,733.27' TOTAL PIPE) SET @ 2,727' WITH TOP OF HALLIBURTON FLOAT COLLAR @ 2,687.86' (1 JT. UP FROM HALLIBURTON FLOAT SHOE) - ALL ITEMS TORQUED TO 4,530#. NOTE:TIGHT HOLE FROM 730' TO 760' - THEN HAD TO WASH THROUGH 25' OF BRIDGES TO BOTTOM - RD CASING CREW

RU HALLIBURTON, SAFETY MEETING & CIRCULATE TO CLEAR CASING

TEST LINES TO 250# & 3,500# FOR 10 MINS.HALLIBURTON CEMENTED 9 5/8" CASING WITH (LEAD) 1,100 SX INTERFILL "C" CEMENT + 0.125 #/SX POLY-E-FLAKE; FOLLOWED BY (TAIL) 200 SX PREMIUM PLUS + 2% CAL PER SX - PLUG DOWN WITH 208 BBLS. FRESH WATER DISPLACEMENT & BUMPED W/ 750# AT 13:38 (MDT) 4/10/07 - BLED BACK 1 1/2 BBLS. - FLOATS HELD OK - CIRCULATED 160 SX (70 BBLS) CEMENT TO SURFACE. CEMENT CALCULATIONS BASED ON DEL'S FLUID CALIPER RAN ON 4/9/2007 + 30% EXCESS. RD HALLIBURTON

BLM WAS NOTIFIED OF CASING & CEMENT JOB AT 9:30 PM (MDT) 4/9/2007 -

TALKED WITH TERRY WILSON - TERRY WILSON W/ THE BLM WITNESSED THE RUNNING & CEMENTING OF THE 9 5/8" INTERMEDIATE CASING.

ND & PU 3M ANNULAR BOP

CAMERON SET 9 5/8" CASING SLIPS IN 90,000#, CUT OFF 9 5/8" CASING, INSTALL 11" 5M X 13 5/8" 3M WELL HEAD SPOOL & TEST TO 1,600# - OK NU 5M DOUBLE BOP - 5M ANNULAR BOP & CHOKE MANIFOLD W/ MAN WELDING NU CREW

TESTING BOP & CHOKE MANIFOLD TO 250# FOR 10 MINS. (LOW TEST) & 5,000# FOR 10 MINS. (HIGH TEST) - TERRY WILSON W/ THE BLM WAS NOTIFIED OF THE TESTS, BUT HAS NOT COME OUT TO WITNESS THE TESTS

Date: 04/12/2007

MAN WELDING TESTER TESTED BOP AS FOLLOWS - ALL TESTS LOW (250#) & HIGH (5,000#) 10 MINS. EACH WITH 11" C22 TEST PLUG SET IN WELLHEAD & CASING VALVE OPEN FOR ALL TESTS (EXCEPT # 1):

TEST # 1 - 9 5/8" CASING TEST TO 1.800# - 10 MINS.

TEST # 2 - BLIND RAMS, ADJUSTABLE CHOKE, HYDRAULIC CHOKE, OUTSIDE PANIC LINE VALVE & OUTSIDE KILL LINE VALVE

TEST # 3 - BLIND RAMS, OUTSIDE CHOKE MANIFOLD VALVES, INSIDE PANIC LINE VALVE & INSIDE KILL LINE VALVE

TEST # 4 - BLIND RAMS, INSIDE PANIC LINE VALVE, INSIDE CHOKE MANIFOLD VALVES & CHECK VALVE

TEST # 5 - PIPE RAMS, CHECK VALVE & CHOKE LINE VALVE

TEST # 6 - PIPE RAMS, HCR VALVE & CHECK VALVE

TEST # 7 - PIPE RAMS, INSIDE CHOKE LINE VALVE & CHECK VALVE

TEST #8 - ANNULAR BOP, INSIDE CHOKE LINE VALVE & CHECK VALVE - 3,000# HIGH TEST - 250# LOW TEST

TEST #9 - FLOOR SAFETY VALVE

TEST # 10 - LOWER KELLY VALVE

TEST # 11 - UPPER KELLY VALVE

TEST # 12 - VALVES TO MUD PUMPS, STAND PIPE VALVE & MUD LINES TO PUMP 2,500# HIGH TEST - 250# LOW TEST

TEST # 13 - DART VALVE

RU BULL ROGERS LAY DOWN MACHINE, SAFETY MEETING, PU & TIH W/ 8 3/4" BHA, 27 - 6 1/2" DC'S - RD LD MACHINE - TIH W/ 19 STANDS 4 1/2" DP OUT OF DERRICK - TAGGED UP ON CEMENT @ 2,628'

DRILL CEMENT, PLUG, FLOAT COLLAR, CEMENT & FLOAT SHOE FROM 2,628' TO 2,727'

DRILL 8 3/4" PRODUCTION HOLE FROM 2,727" TO 2,737" USING 40K AV. WOB, 50 ROTARY RPM, 387 GPM @ 1000# PUMP PRESSURE

FIT TEST @ 2,737' (10' OF OPEN HOLE) TO 13.5 #/GAL. EMW WITH 8.6 #/GAL. AMW WITH 697# PRESSURE APPLIED WITH RIG PUMP - OK

DRILL 8 3/4" PRODUCTION HOLE FROM 2,737' TO 2,956' USING 55K AV. WOB, 55 ROTARY RPM, 387 GPM @ 1,200# PUMP PRESSURE

WLS @ 2,927' = 1.87 DEG.

DRILL 8 3/4" PRODUCTION HOLE FROM 2,956' TO 3,375' USING 55K AV. WOB, 55 ROTARY RPM, 387 GPM @ 1,250# PUMP PRESSURE