

Submit 1 Copy To Appropriate District Office  
 District I - (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II - (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV - (505) 476-3460  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 Revised July 18, 2013

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-40997 ✓
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> / FEE <input type="checkbox"/>
2. Name of Operator CHEVRON U.S.A. INC.		6. State Oil & Gas Lease No.
3. Address of Operator 15 SMITH ROAD, MIDLAND, TEXAS 79705		7. Lease Name or Unit Agreement Name CENTRAL VACUUM UNIT ✓
4. Well Location Unit Letter: N 570 feet from SOUTH line and 2180 feet from the WEST line Section 25 Township 17S Range 34E NMPM County LEA		8. Well Number 437 ✓
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 4004' GL		9. OGRID Number 4323
10. Pool name or Wildcat VACUUM; GRAYBURG SAN ANDRES		

HOBBS OCD  
 DEC 26 2013  
 RECEIVED

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<b>NOTICE OF INTENTION TO:</b> PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/> DOWNHOLE COMMINGLE <input type="checkbox"/> CLOSED-LOOP SYSTEM <input type="checkbox"/> OTHER:		<b>SUBSEQUENT REPORT OF:</b> REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/> OTHER: DRILL NEW WELL	
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13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

08/09/2013: SPUD WELL. DRILL 78-753,1160,1578. SURF TD  
 08/10/2013: RAN 11.75" 42# H-40 SURF CSG - SET @ 1578. CMT W/1035 SX CMT.  
 08/12/2013: DRILL 1588,1920,3230. INTER TD  
 08/13/2013: RAN 8 5/8" 32# J-55 INTER CSG - SET @ 3222', CMT W/595 SX CMT.  
 08/14/2013: DRILL 3230-3313,3320,3358,3367,3401,3409,3449,3456,3498,3506,3540,351,3584,3596,3628,3638,3675, 3686,3720,3765,3777,3810,3824,3858,3868,3900,3908,3944,3958,3988,3999,4035,4046,4080,4091,4124,4138,4168,4181, 4219,4230,4264,4271,4305,4316,4351,4360,4450,4756,4759,4772,4800,4815,4937,4952,5015,5025,5160. PROD TD (8-19)  
 08/20/2013: RAN 5 1/2" CSG - SET @ 5153. CMT W/1150 SX CMT.  
 08/21/2013: RELEASE RIG @ 12:00

Spud Date:  Rig Release Date:

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

SIGNATURE *Denise Pinkerton* TITLE REGULATORY SPECIALIST DATE 12/13/2013  
 Type or print name DENISE PINKERTON E-mail address: leakejd@chevron.com PHONE: 432-687-7375  
 For State Use Only  
 APPROVED BY: *Denise Pinkerton* TITLE Petroleum Engineer DATE DEC 30 2013  
 Conditions of Approval (if any):

DEC 30 2013



# Summary Report

Drill  
Drill and Suspend  
Job Start Date: 8/7/2013  
Job End Date: 8/21/2013

Well Name CENTRAL VACUUM UNIT 437		Lease Central Vacuum Unit	Field Name Vacuum	Business Unit Mid-Continent	
Ground Elevation (ft) 4,004.00	Original RKB (ft) 4,022.50	Current RKB Elevation 4,022.50, 7/9/2013		Mud Line Elevation (ft)	Water Depth (ft)

Report Start Date: 8/7/2013

Com

PJSM with H&P, H&P Rig Movers and Trend Services. Review rig move check list. Discussed hazards assoc with rig move.  
Load & Move H&P 356 from CVU 438 to the CVU 437, spot parts house, spot subs, pin derrick, installed center steel. set back yard components, R/U H&P 356.

Note:  
Notified OCD @9:00pm on 8/7/13 for prespud  
Wait on daylight to scope derrick out

Report Start Date: 8/8/2013

Com

Continue to R/U back yard componenets, spool up drawworks & misc equipment

Note:  
Raise derrick @ 6:00 8/8/13

N/U Conductor pipe, install flow line, kill line,  
Continue to R/U front & back yard components, run all electric wires, power up motors & drawworks, undock top drive, dress rig floor & misc equipment, Perform rig inspections, organize all tools and equipment. Address action items from pre-spu inspection.

Note:  
Accept rig @ 24:00

*spud*  
Com

Report Start Date: 8/9/2013

L/O strap & caliper BHA, Install trip nipple, Continue to fill mud tank, change shaker screen, Fuction test pumps & electrical equipment.

P/U NOV .26 rpg Motor, X-O, M/U 14 3/4 Halliburton bit. TIH to 78'

Drill 14 3/4" Surface hole section from 78' to 753'. Pumping high visc sweeps every 90'

AROP = 135 FPH  
WOB = 5-20 Klbs  
TD RPM = 75 - 150  
Motor RPM = 182  
GPM = 700  
SPP = 1000 psi  
Torque 3 Kft\*lbs  
Differential = 400 psi

Install rotating head

Drill 14 3/4" Surface hole section from 753' to 1,160'. Pumping high visc sweeps every 90'

AROP = 162.8 FPH  
WOB = 13 Klbs  
TD RPM = 130  
Motor RPM = 182  
GPM = 700  
SPP = 2405 psi  
Torque 5 Kft\*lbs  
Differential = 300-500 psi

Circ while change out shaker screens

Drill 14 3/4" Surface hole section from 1,160' to 1578' TD. Pumping high visc sweeps every 90'

AROP = 92 FPH  
WOB = 21 Klbs  
TD RPM = 150  
Motor RPM = 182  
GPM = 700  
SPP = 3000 psi  
Torque 5 Kft\*lbs  
Differential = 500 psi

Pump two 40 bbls high vis sweeps, Circ hole clean

Flow check - well static, TOH with 14.75" Surface BHA from 1,578' to 1,418'.

Note:  
Hole took proper fill  
Pulled slick

Pull rotating head



# Summary Report

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Drill and Suspend  
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Well Name CENTRAL VACUUM UNIT 437	Lease Central Vacuum Unit	Field Name Vacuum	Business Unit Mid-Continent
Ground Elevation (ft) 4,004.00	Original RKB (ft) 4,022.50	Current RKB Elevation 4,022.50, 7/9/2013	Mud Line Elevation (ft) Water Depth (ft)

TOH with 14 3/4" Surface BHA from 1,418' to 1,410' (Back reamed from 1,410' to 1,190'. ) TOH with 14 3/4" Surface BHA from 1,190' to 517' Hole pulled slick

Note:  
Pump 40 bbl high vis sweep  
Changed shaker screen  
Hole took proper fill.  
Hole pulled slick  
Out side of Bit & XO pack with red bed

Report Start Date: -8/10/2013

TOH from 517' to surface.  
L/D BHA, Motor & Bit  
Clean rig floor

Note:  
Hole took proper fill

Held PJSM with CVX, H&P 356 & Petro Safety. R/U H&P 11 3/4" CRT  
R/U H&P 11 3/4" CRT & equipment.  
Held PJSM with CVX, H&P 356, Franks casing crew & Petro Safety. On R/U Franks casing crews casing running equipment  
R/U Franks casing equipment

Ran 11.75" 42# H-40 surface casing and tag bottom at 1578'. (Wash down casing from 1500' to 1578')

*Surf csg*

Circ 2 time casing volume

Note  
PJSM with CVX, H&P 356, Halliburton, R/U cement equipment.  
R/U Halliburton cement equipment.

Test lines to 3500 psi, Cement per Halliburton pump schedule. Displace 1180 bbls of FW. Bumped plug and held 1230 psi for 5 minutes (FCP=730 psi), test good. Checked floats, bled back 1 bbl. Full returns throughout the job. Returned 150 bbls of cement to surface.

	bbls	sacks	bpm	wt. (ppg)
Spacer	20	n/a	4	8.4
Lead	201	610	6	12.9
Tail	101.4	425	3	14.8
Disp.	180	n/a	6	8.7

Flush surface lines and rig down Halliburton.  
PJSM with Cotton Welding H&P 356 and CVX  
R/D turnbuckles and flowline from conductor pipe. Rough cut conductor and surface casing & L/D same. Make final cut and dress conductor and surface casing for wellhead, Install and weld 11 3/4" SOW x 11" 5M multibowl wellhead.

Report Start Date: 8/11/2013

PJSM W/Mans NU crew  
NU 11"x5M BOP, flow, kill, and choke lines, turn buckles, accumulator lines  
PJSM for RD H&P CRT  
RD H&P CRT  
PJSM w/Manns test equipment  
Pressure test BOP to 250/3000 psi per drilling procedure and MCBU SOP. Perform accumulator function test. Test 11 3/4" casing to 1500 psi. All tests good. R/D pressure tester.  
Test CSG to 1500psi hold for 30min and record on chart  
TIH with 10 5/8" Bit & Intermediate BHA #2 to 979' as follows: 10 5/8" PDC bit (Halliburton MM65DM) 8" Motor (0.22 rev/gal), new teledrift, 10 1/2" stabilizer, 8" DC, 10 1/2" stabilizer, 8" DC, XO sub, 9 6 1/2" DC, 16 4 1/2" HWDP, XO sub.  
BHA=894.04'  
Pull wear bushing, Pull trip nipple and install rotating head, install and lock wear bushing  
TIH #979' to 1517'  
Perform choke, fire, well control, man down, spill, and evacuation drills  
Displace fresh water w/9.9ppg brine



# Summary Report

**Drill**  
**Drill and Suspend**  
**Job Start Date: 8/7/2013**  
**Job End Date: 8/21/2013**

Well Name <b>CENTRAL VACUUM UNIT 437</b>		Lease <b>Central Vacuum Unit</b>	Field Name <b>Vacuum</b>	Business Unit <b>Mid-Continent</b>	
Ground Elevation (ft) <b>4,004.00</b>	Original RKB (ft) <b>4,022.50</b>	Current RKB Elevation <b>4,022.50, 7/9/2013</b>		Mud Line Elevation (ft)	Water Depth (ft)

Com

Drill cmt f/1534' to 1578'

Float collar @ 1536'  
Shoe @ 1578'

**Report Start Date: 8/12/2013**

Com

Drill 10' of new formation f/1578' to 1588'

Circulate bottoms up and perform FIT for EMW of 17.0ppg @ 582psi

Drill intermediate hole section f/1588' to 1920'

We Held A Pre Tour Safety Meeting @ 5:30 am Discussing The Tenet For The Day # 2 (We Always Operate In A Safe And Controlled Condition) The Crew Discussed The Hazard ID Tool (Motion) DSM Explained The Daily Operations. The Tool Pusher Discussed Operations: We Reviewed From Chevron Contractors Hand Book. Page 7.0 Transportation) Standards And Guide Lines From H&P Page# 28 Confined Space Entry Also Hazard ID Tool Definitions One Thru 10 With Both Crews. We had the folling drills, BOP, Fire, Man down, Spill, and evacuation

Drill 10 5/8" intermediate hole section f/1920' to 3230'

We Held A Pre Tour Safety Meeting @ 17:30 am Discussing The Tenet For The Day # 2 (We Always Operate In A Safe And Controlled Condition) The Crew Discussed The Hazard ID Tool (Motion) DSM Explained The Daily Operations. The Tool Pusher Discussed Operations: We Reviewed From Chevron Contractors Hand Book. Page 7.0 Transportation) Standards And Guide Lines From H&P Page# 28 Confined Space Entry Also Hazard ID Tool Definitions One Thru 10 With Both Crews

Pump 2ea high vis sweeps and circulate hole clean

Drop scientific gyro tool

TOH W/BHA f/3230' to 800'

**Report Start Date: 8/13/2013**

Com

Finish TOH w/BHA f/954' to surface

PJSM for RU H&P CRT

Offload H&P CRT, RU CRT, inspect and caliper elevators

service rig. change oil in motors, check radiators, and hydraulic fluid levels

RIH w/8 5/8" 32# J55 intermediate casing to 750'

Cleaned up a plug on motorboard and reset some parameters on top drive, the same one that keep changing on there own. SLPC is coming in the morning

Continue to RIH w/8 5/8" 32# J55 intermediate casing to 1580' , pull stripping rubber and install trip nipple, finish running casing to 3222'

Intermediate Casing as follows

- 1 Float Shoe
- 2 Casing jts
- 1 Float Collar
- 42 Casing jts
- 1 ECP
- 34 Casing jts

Circulate 2 bottoms up

PJSM w/Halliburton Cement

Land Casing and RU Halliburton Cement



# Summary Report

Drill and Suspend  
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Com

Test all iron to 4000psi  
Pump Cement as follows

LEAD

10bbls of H2O Spacer  
Pump 24bbls of Super Flush  
Pump 10bbls of H2O Spacer  
Pump 405 sacks of Lead cmt @12.9ppg-1.83 yield-9.47 H2O=132bbls

TAIL

Pump 190 sacks of tail cement@14.8ppg-1.35 yield-6.15 H2O=46bbls

Drop 8 5/8" Plug

Pumped 190bbls of brine water to displace cement

Plug bump@800psi and pressure up 500psi, over=1300psi hold for 5min 3/4bbls of returns

Pressure up to 2900psi to set packer, release pressure and 1 1/2bbls in returns

15bbls of total returns to surface

Remove landing joint and flush BOP

405  
+ 190  
-----  
595

PJSM for RD H&P CRT and Halliburton cmt  
RD H&P CRT and casing equipment, RD Halliburton cement

Report Start Date: 8/14/2013

Com

M/U Packoff and set. Test to 1500 psi

Set Wearbushing

PJSM with Chevron, Scientific & H&P on making directional BHA

M/U 7 7/8" MM65DM Bit & Scientific Directional BHA, Scribe Motor & Surface Test MWD

TIH With 7 7/8" Scientific Directional BHA to 3100'

Perform choke drill with H&P crew

Test 8 5/8" Intermediate Casing to 1500 psi for 30 min

Pull trip nipple and install rotating head, Continue TIH tag cement @ 3141'

Drilling cement & float equipment from 3141' to 3230'

Drilling Rotating 7 7/8" production hole from 3230' to 3313' Pumping high visc sweeps every 90'

AROP = 33.2 FPH  
WOB = 5-10 Klbs  
TD RPM = 70  
Motor RPM = 168  
GPM = 493  
SPP = 1700 psi  
Torque = 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3313' to 3320'

AROP = 14 FPH  
WOB = 5-10 Klbs  
Motor RPM = 120  
GPM = 352  
SPP = 1700 psi  
Differential = 100 psi



# Summary Report

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Well Name CENTRAL VACUUM UNIT 437		Lease Central Vacuum Unit	Field Name Vacuum	Business Unit Mid-Continent	
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Com

Drilling Rotating 7 7/8" production hole from 3230' to 3358' Pumping high visc sweeps every 90'

AROP = 38 FPH  
WOB = 5-10 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3358' to 3367'

AROP = 18 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1700 psi  
Differential = 100 psi

Drilling Rotating 7 7/8" production hole from 3367' to 3401' Pumping high visc sweeps every 90'

AROP = 68 FPH  
WOB = 5-10 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3401' to 3409'

AROP = 16 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1700 psi  
Differential = 100 psi

Drilling Rotating 7 7/8" production hole from 3409' to 3449' Pumping high visc sweeps every 90'

AROP = 40 FPH  
WOB = 7-12 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3449' to 3456'

AROP = 14 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1700 psi  
Differential = 100 psi

Drilling Rotating 7 7/8" production hole from 3456' to 3498' Pumping high visc sweeps every 90'

AROP = 80 FPH  
WOB = 7-12 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque= 5 Kft\*lbs  
Differential = 300-500 ps



# Summary Report

Drill  
Drill and Suspend  
Job Start Date: 8/7/2013  
Job End Date: 8/21/2013

Well Name CENTRAL VACUUM UNIT 437	Lease Central Vacuum Unit	Field Name Vacuum	Business Unit Mid-Continent
Ground Elevation (ft) 4,004.00	Original RKB (ft) 4,022.50	Current RKB Elevation 4,022.50, 7/9/2013	Mud Line Elevation (ft) Water Depth (ft)

Com

Drilling Slide 7 7/8" production hole from 3498' to 3506'

AROP = 14 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1800 psi  
Differential = 200 psi

Drilling Rotating 7 7/8" production hole from 3506' to 3540' Pumping high visc sweeps every 90'

AROP = 68 FPH  
WOB = 7-12 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque = 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3540' to 3551'

AROP = 22 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1800 psi  
Differential = 200 psi

Drilling Rotating 7 7/8" production hole from 3551' to 3584' Pumping high visc sweeps every 90'

AROP = 66 FPH  
WOB = 7-14 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque = 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3584' to 3596'

AROP = 24 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1800 psi  
Differential = 200 psi

Drilling Rotating 7 7/8" production hole from 3596' to 3628' Pumping high visc sweeps every 90'

AROP = 64 FPH  
WOB = 8-16 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque = 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3628' to 3638'

AROP = 20 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1800 psi  
Differential = 200 psi



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Com

Drilling Rotating 7 7/8" production hole from 3638' to 3675' Pumping high visc sweeps every 90'

AROP = 74 FPH  
WOB = 8-16 Klbs  
TD RPM = 70  
Motor RPM = 176  
GPM = 518  
SPP = 1700 psi  
Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3675' to 3686'

AROP = 22 FPH  
WOB = 5-10 Klbs  
Motor RPM = 125  
GPM = 370  
SPP = 1800 psi  
Differential =200 psi

Report Start Date: 8/15/2013

Com

Drilling Rotating 7 7/8" production hole from 3686' to 3720' Pumping high visc sweeps every 90'

AROP = 64 FPH WOB = 14-16 Klbs TD RPM = 70 SPM=210 Motor RPM = 167 GPM = 493 SPP = 1700 psi Torque= 5Kft\*lbs Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3720' to 3732'

AROP = 24 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 1800 psi Differential =200 psi

Drilling Rotating 7 7/8" production hole from 3686' to 3720' Pumping high visc sweeps every 90'

AROP = 64 FPH WOB = 14-16 Klbs TD RPM = 70 SPM=210 Motor RPM = 167 GPM = 493 SPP = 1700 psi Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3765' to 3777'

AROP = 24 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 1900 psi Differential =200 psi

Drilling Rotating 7 7/8" production hole from 3777' to 3810' Pumping high visc sweeps every 90'

AROP = 66 FPH WOB = 14-16 Klbs TD RPM = 70 SPM=210 Motor RPM = 167 GPM = 493 SPP = 1900 psi Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Displace 10 ppg Brine with 11 ppg mud

Drilling Slide 7 7/8" production hole from 3810' to 3824'

AROP = 14 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 1900 psi Differential =200 psi

Drilling Rotating 7 7/8" production hole from 3824' to 3858' Pumping high visc sweeps every 90'

AROP = 68 FPH WOB = 14-16 Klbs TD RPM = 65 SPM=210 Motor RPM = 167 GPM = 493 SPP = 2000 psi Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3858' to 3868'

AROP = 10 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 2000 psi Differential =200 psi

Drilling Rotating 7 7/8" production hole from 3868 to 3900' Pumping high visc sweeps every 90'

AROP = 64 FPH WOB = 14-16 Klbs TD RPM = 65 SPM=210 Motor RPM = 167 GPM = 493 SPP = 2100 psi Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3900' to 3908'

AROP = 16 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 2100 psi Differential =200 psi

Drilling Rotating 7 7/8" production hole from 3908' to 3944' Pumping high visc sweeps every 90'

AROP = 36 FPH WOB = 14-16 Klbs TD RPM = 65 SPM=210 Motor RPM = 167 GPM = 493 SPP = 2200 psi Torque= 5 Kft\*lbs  
Differential = 300-500 ps

Drilling Slide 7 7/8" production hole from 3944' to 3958'

AROP = 28 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 2100 psi Differential =200 psi



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Ground Elevation (ft) 4,004.00	Original RKB (ft) 4,022.50	Current RKB Elevation 4,022.50, 7/9/2013	Mud Line Elevation (ft) Water Depth (ft)

Com
Drilling Rotating 7 7/8" production hole from 3958' to 3988' Pumping high visc sweeps every 90' AROP = 30 FPH WOB = 14-16 Klbs TD RPM = 65 SPM=210 Motor RPM = 167 GPM = 493 SPP = 2200 psi Torque= 5 Kft*lbs Differential = 300-500 ps
Drilling Slide 7 7/8" production hole from 3988' to 3999' AROP = 22 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 2400 psi Differential =200 psi
Drilling Rotating 7 7/8" production hole from 3999' to 4035' Pumping high visc sweeps every 90' AROP = 72 FPH WOB = 14-16 Klbs TD RPM = 65 SPM=210 Motor RPM = 167 GPM = 493 SPP = 2400 psi Torque= 5 Kft*lbs Differential = 300-500 ps
Drilling Slide 7 7/8" production hole from 4035' to 4046' AROP = 22 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 2400 psi Differential =200 psi
Drilling Rotating 7 7/8" production hole from 4046' to 4080' Pumping high visc sweeps every 90' AROP = 64 FPH WOB = 14-16 Klbs TD RPM = 65 SPM=210 Motor RPM = 167 GPM = 493 SPP = 2400 psi Torque= 5 Kft*lbs Differential = 300-500 ps
Drilling Slide 7 7/8" production hole from 4080' to 4091' AROP = 11 FPH WOB = 5-10 Klbs Motor RPM = 120 SPM=150 GPM = 352 SPP = 2000 psi Differential =200 psi
Drilling Rotating 7 7/8" production hole from 4091' to 4124' Pumping high visc sweeps every 90' AROP 66 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft*lbs Differential, 300-500 psi
Drilling Slide 7 7/8" production hole from 4124' to 4138' AROP 14 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 1500 psi, Differential 200 psi
Drilling Rotating 7 7/8" production hole from 4138' to 4168' Pumping high visc sweeps every 90' AROP 30 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft*lbs Differential, 300-500 psi
Drilling Slide 7 7/8" production hole from 4168' to 4181' AROP 26 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 1500 psi, Differential 200 psi
Drilling Rotating 7 7/8" production hole from 4181' to 4219' Pumping high visc sweeps every 90' AROP 76 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft*lbs Differential, 300-500 psi
Perform regular rig service
Drilling Slide 7 7/8" production hole from 4219' to 4230' AROP 22 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 1500 psi, Differential 200 psi
Drilling Rotating 7 7/8" production hole from 4230' to 4264' Pumping high visc sweeps every 90' AROP 68 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft*lbs Differential, 300-500 psi
Drilling Slide 7 7/8" production hole from 4261' to 4271' AROP 10 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 1500 psi, Differential 200 psi
Drilling Rotating 7 7/8" production hole from 4271' to 4305' Pumping high visc sweeps every 90' AROP 34 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft*lbs Differential, 300-500 psi
Drilling Slide 7 7/8" production hole from 4305' to 4316' AROP 20 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 1500 psi, Differential 200 psi
Drilling Rotating 7 7/8" production hole from 4316' to 4351' Pumping high visc sweeps every 90' AROP 35 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft*lbs Differential, 300-500 psi
Drilling Slide 7 7/8" production hole from 4351' to 4360' AROP 18 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 1500 psi, Differential 200 psi



# Summary Report

Drill  
Drill and Suspend  
Job Start Date: 8/7/2013  
Job End Date: 8/21/2013

Well Name CENTRAL VACUUM UNIT 437		Lease Central Vacuum Unit	Field Name Vacuum	Business Unit Mid-Continent	
Ground Elevation (ft) 4,004.00	Original RKB (ft) 4,022.50	Current RKB Elevation 4,022.50, 7/9/2013		Mud Line Elevation (ft)	Water Depth (ft)

Com  
Drilling Rotating 7 7/8" production hole from 4360' to 4450' Pumping high visc sweeps every 90'

AROP 45 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft\*lbs  
Differential, 300-500 psi

**Report Start Date:** 8/16/2013

Com  
Drilling Rotating 7 7/8" production hole from 4450' to 4756' Pumping high visc sweeps every 90'

AROP 34 FPH, WOB 16-18 Klbs, TD RPM 65, SPM 210, Motor RPM 167, GPM 493, SPP 2500 psi, Torque 4-5 Kft\*lbs  
Differential, 300-500 psi

Make connection & Survey , attempted to rotate top drive and pipe stalled. Worked stuck pipe while waiting on EZ spot pill to be built. (Max overpull 125k)

Pump 30 bbl EZ spot pill, wait 30 mins, and continue working stuck pipe.

C/O top drive grabber dies.

Circulate EZ spot pill out

PJSM with Grey Wireline crew

RU wire line, hang sheave from crown, install 4" pack off, and PU free point tool

**Report Start Date:** 8/17/2013

Com  
Operations suspended to weather

Continue R/U wire line, hang sheave from crown, install 4" pack off, and P/U free point tool

RIH with free point tool. Pipe free @ 4384'. POH.

M/U charge on free point tool, RIH to 4,384' & back off. POH.

PJSM with CVX, H&P, Gray's & Petro. R/D Gray's wire line & tool's.

TOH from 4,384' to 3,100'

Pull rotating head. Install trip nipple.

Continue TOH from 3,100 to to surface.

Note:  
TOH with 4,384' of Drill string. 87 jt's DP. 13 jt's HWDP.  
Clean rig floor

L/O, P/U Fishing BHA as follows

- Screw in sub
- B sub
- Jars
- XO
- 9 DC 6 1/2"
- 12 HWDP 4 1/2"
- XO
- Accelerator
- XO

TIH with fishing tools. Tagged the top of fish @ 4320

Screw into fish at 4320'. Jarred on fish, max pull 265k. Stopped hourly to inspect the top drive and derrick.

**Report Start Date:** 8/18/2013

Com  
Continue Jarring on fish, max pull 265k.

PJSM with CVX, H&P, Petroplex & Petro. R/U pump truck. Spot 30 bbls acid with 15% corrosion inhibitor and displace w/11ppg

Let acid set for 20min. set jars off one time and fish came free. Drill string free @ 3:00. Work drill string while circulating acid out of hole.

TOH from 4,740' to 3,085'

Flow check @ 3,085' well static.

Pull rotating head. Install trip nipple.

Continue TOH from 3,085 to surface. Break bit, L/D Fishing BHA,

Note:  
Hole took Porper fill  
Clean rig floor

Service rig, Inspect derrick, top drive, drawworks



# Summary Report

Drill and Suspend  
Job Start Date: 8/7/2013  
Job End Date: 8/21/2013

Well Name CENTRAL VACUUM UNIT 437	Lease Central Vacuum Unit	Field Name Vacuum	Business Unit Mid-Continent
Ground Elevation (ft) 4,004.00	Original RKB (ft) 4,022.50	Current RKB Elevation 4,022.50, 7/9/2013	Mud Line Elevation (ft) Water Depth (ft)

Com

Load BHA of pipe racks and strap

BHA

- 12ea 4 1/2" HWDP
- 1ea 6" Jars
- 3ea 4 1/2" HWDP
- 9ea 6 1/2" DC
- 1ea 6 1/2" Non-magnetic Flex Collar
- 1ea 6 1/2" MWD Pulse Sub
- 1ea 6 1/2" Non-magnetic DC
- 1ea 6 1/2" 1.5deg Motor (0.28 rev/gal)
- 1ea 7 7/8" PDC Bit

Held PJSM w/scientific and MU directional tools

PU BHA and TIH to 3160'

Review JSA on cutting drill line

Report Start Date: 8/19/2013

Com

Slip & Cut 100' Of Drill Line

Continue TIH from 3160' to 4759', Precautionary washed down last 90', Hole was slick

Drilling Rotating 7 7/8" production hole from 4759' to 4772' Pumping high visc sweeps every 90'

AROP 26 FPH, WOB 8-12 Klbs, TD RPM 70, SPM 210, Motor RPM 167, GPM 493, SPP 2800 psi, Torque 4-5 Kft\*lbs  
Differential, 300-500 psi

C&C while working on mud pump, changed out packing & plunger

Drilling Rotating 7 7/8" production hole from 4772' to 4800' Pumping high visc sweeps every 90'

AROP 18.6 FPH, WOB 8-12 Klbs, TD RPM 70, SPM 210, Motor RPM 167, GPM 493, SPP 2800 psi, Torque 4-5 Kft\*lbs  
Differential, 300-500 psi

Drilling Slide 7 7/8" production hole from 4800' to 4815'

AROP 30 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 2000 psi, Differential 200 psi

Drilling Rotating 7 7/8" production hole from 4815' to 4937' Pumping high visc sweeps every 90'

AROP 49 FPH, WOB 12-15 Klbs, TD RPM 70, SPM 210, Motor RPM 167, GPM 493, SPP 2800 psi, Torque 4-5 Kft\*lbs  
Differential, 300-500 psi

Drilling Slide 7 7/8" production hole from 4937' to 4952'

AROP 15 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 2300 psi, Differential 200 psi

Drilling Rotating 7 7/8" production hole from 4952' to 5015' Pumping high visc sweeps every 90'

AROP 78 FPH, WOB 15-20 Klbs, TD RPM 70, SPM 210, Motor RPM 167, GPM 493, SPP 2800 psi, Torque 4-5 Kft\*lbs  
Differential, 300-500 psi

Drilling Slide 7 7/8" production hole from 5015' to 5025'

AROP 20 FPH, WOB 5-10 Klbs, Motor RPM 120, SPM 150, GPM 352, SPP 2300 psi, Differential 200 psi

Drilling Rotating 7 7/8" production hole from 5025' to 5160' Pumping high visc sweeps every 90'

AROP 90 FPH, WOB 15-20 Klbs, TD RPM 70, SPM 210, Motor RPM 167, GPM 493, SPP 2800 psi, Torque 4-5 Kft\*lbs  
Differential, 300-500 psi

Pump 2 40 bbls High Vis Sweeps & Circulate Hole clean

Monitor Well (Well Static)

TOH From 5160' To 4400' Pump Slug Continue TOH to 3093'

PJSM For Tripping Pipe, Pull Rotating Head, Install Trip Nipple Monitor Well

Continue TOH From 3093' to 120'

PJSM, Retrieve MWD, Lay Down Scientific Directional BHA, Break bit & laydown handling tools

Clean rig floor and pull wear bushing

PJSM, review JSA on R/U CRT

Report Start Date: 8/20/2013

Com

Continue R/U 5 1/2" CRT & handling tools.

Run 5 1/2" casing. Tag bottom @ 5,160' L/D tag joint, P/U Landing joint & hanger. Land casing @ 5,153'. *Paul*



# Summary Report

Drill  
Drill and Suspend  
Job Start Date: 8/7/2013  
Job End Date: 8/21/2013

Well Name CENTRAL VACUUM UNIT 437		Lease Central Vacuum Unit	Field Name Vacuum	Business Unit Mid-Continent	
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Com

Circ 1 1/2 times casing volume

PJSM with CVX,H&P rig crew & Petro & Halliburton. R/U cementing equip.

Test lines to 4000 psi, Cement per Halliburton pump schedule. Displace 117.4 bbls of FW & acid. Bumped plug and held 2400 psi for 5 minutes (FCP=1900 psii), test good. Checked floats, bled back 2 bbls. Full returns throughout the job. Returned 30 bbls of spacer to surface.

Pressure up and set Weatherford external pack off with 3000 psi. (Set @ 3,167')

PJSM with CVX, H&P, Petro & Halliburton.R/D Halliburton cement equip.

Review JSA, R/D 5 1/2" CRT, Flush surface lines, R/D H&P 5 1/2" CRT Clean mud tanks

Back out landing joint, set pack-off and test to 4400 psi. Set back pressure valve.

PJSM with Mann N/D crew and H&P. N/D BOPE.

Install tubing head. Test to 5000 psi.

Clean mud tanks. Power down top drive & drawworks. Dock top drive. Scope in derrick. Begin R/D front and back yard rig components. NOTE: Release H&P 356 @ 12:00