Form 3160-5 (March 2012)	UNITED STATES ARTMENT OF THE IN	C	CD Artesia		FORM APPROVED OMB No. 1004-0137 xpires: October 31, 2014
	EAU OF LAND MANA	TERIOR		5. Lease Serial No.	
SUNDRY N	OTICES AND REPOR	RTS ON WELLS		NMLC028784 6. If Indian, Allottee of	
	orm for proposals to Jse Form 3160-3 (AP				· ·
	IN TRIPLICATE – Other in	structions on page 2.		7. If Unit of CA/Agree	ement, Name and/or No.
I. Type of Well Oil Well X Gas W	ell 🚺 Other		•	8. Well Name and No. Grayburg Dee	p Unit 1
2. Name of Operator ConocoPhillips Company	. '			9. API Well No. 30-015-04187	
a. Address		b. Phone No. (include a	- ·	10. Field and Pool or	Exploratory Area
P. O. Box 51810 Midland T		(432)688-917	4	Blinebry 11. County or Parish,	94-40
Location of Well (Footage, Sec., T., K UL F, 1980' FNL & 1984' F	WL, Sec 18, 17S, $30E$			Eddy	NM
12 CHEC	K THE APPROPRIATE BOX				······································
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TYPE OF SUBMISSION		Dage-14	TYPE OF AC		Water Shut-Off
X Notice of Intent	Acidize	Deepen Fracture Treat		duction (Start/Resume)	Well Integrity
Subsequent Report	Casing Repair	New Construction		omplete	Other
	Change Plans	Plug and Abando		nporarily Abandon	
Final Abandonment Notice	Convert to Injection	Plug Back	Wa	ter Disposal	
following completion of the involve testing has been completed. Final A determined that the site is ready for ConocoPhillips would like to Placing perf f/5081'-5461'.	bandonment Notices must be final inspection.)	results in a multiple cor filed only after all requi	npletion or recom rements, including	pletion in a new interval g reclamation, have been	
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GRAYBURG DEEP UNIT #1 RECOMPLETE PROCEDURE API #: 30-015-04187

OBJECTIVE OF THIS WORK

Grayburg Deep Unit #1 well was drilled and completed in 1954, producing from the Morrow through 5½" casing. The well has a history of liquid loaded and formation blockage. It is recommended the well be recompleted to the Blinebry and returned to production.

Present status: Well is in-active producer

Well Control Information

ConocoPhillips is committed to operating in a safe and environmentally sound manner. Our goals include: ensuring the health of all ConocoPhillips and contractor personnel, as well as other persons in the vicinity of ConocoPhillips' operations; preserving the environment; and protecting the assets of the Company, contractors, and civilians. To further these goals ConocoPhillips has developed guidelines for well operations, especially when removing and installing well control equipment.

BOPE Class: <u>1</u> This well will require Class 1 BOPE or better since it is not capable of building up to 1000 psi.

Well Control Calculations and Considerations

	OD (in)	lD/Drift (in)	Weight (#/ft)	Grade	Yield (Ibs)	Burst (psi)	Collapse (psi)	Volume (Bbls/Ft)
Intermediate Csg	9 % "						· ·	
Production Csg	51⁄2"	6.366	17	C-75		7,250	6,070	.0232
Production Tbg	2-3⁄8"	1.995	4.7	N-80	104,340	11,200	11,780	.00387
Annulus .5½ x 2 ⅔								.0313

Location: 1980' FNL & 1894' FWL, Sec. 18, T17S, R30, Eddy Co., NM

RKB: 3656' GL: 3642'

Spud Date: 5/30/1954

PROCEDURE

1. Hold a safety meeting and review JSA prior to proceeding. Notify Champion before MIRU.

2. Confirm wellbore is static.

recomplete to Blinebry

Hold tail-gate Safety meeting and review JSA prior to proceeding: (Ensure all sources of stray current are off including personal cell phones)

 MI-RU Schlumberger cased hole logging services w\ a packoff (or 2000 psi shop tested lubricator, if required). PU RIH w\ a combination GR/CBL/CCL/USI tool from 8000'± to surface (correlate depth to Schlumberger GR-Neutron Log dated 8/20/58) to determine and record the new top of cement and condition of casing in the proposed recompletion area.

NOTE: Notify David McPherson with results of CBL and casing inspection log before proceeding.

- 4. PU-RIH w/ a CIBP and set CIBP @ 7,400'±, then POOH.
- 5. PU-RIH w/ a dump bailer & spot 35' (~ 5 sacks) of class "H" cement atop CIBP. POOH.
- 6. Perforate squeeze perfs from 5800-5802'; set cement retainer @ 5790'±. RD-MO cased hole logging services.
- 7. MI-RU WSU and ancillary equipment. Test anchors as necessary.
- 8. MI-RU a hydro-test services to test work string in while RIH.
- TIH with 2⁷/₈", 6.5#/ft N-80 work string. Hydro-test tubing to 85% of burst (or 5,000 psi whichever is less) while RIH. All tubing testing will take place below surface. On on depth, release hydrotest services.
- 10. Sting into retainer at 5790'±. Hold 300-500 psi on back side while cementing. Monitor the annulus with a pressure gauge.
- Pressure down tubing string w/ 10# brine or lease water in an attempt to establish circulation to the surface.
 Note: it may take several hours to establish initial circulation due to dehydrated mud. It may also be necessary to hold pressure on tubing and shut-down for night to allow brine time to move up hole.
- 12. Once circulation is established. Circulate the wellbore a minimum of three bottoms up (or longer) if circulation is poor or shows signs of improving with continued circulation.
- 13. MI-RU cementing services. Rig up and pressure test surface lines. Note: provide cementing services with a sample of mixing water prior to job
- 14. Establish circulate with cementing equipment then circulate cement to surface:
 - with ___ sx Class C lite weight cement. If can not circulate to surface, establish injection rate. Squeeze perfs with 150 sxs Class C cement.
 - Catch several (~4) cement samples during the job and hold to confirm cement performance

15. RD-MO cement service provider.

16. Pull out of cement retainer and reverse out any excess cement. POOH with workstring.

17. Allow cement adequate time to set (based on cement service provider thickening times. Note: allow a minimum of 48hours (or longer based on cementing services recommendation)

18. TIH with bit and scraper (for 5½" 17# casing) on workstring and cleanout/circulate out wellbore to top of cement retainer at 5790'±. POOH laying down work string. RD-MO WSU.

19. RU cased hole logging tools. Re-run CBL log from retainer @ 5,790' to find top of cement.

NOTE: Notify David McPherson with results of CBL log before proceeding. Good cement must be above 5000'.

20. MI-RU cased hole perforating services w a packoff (or 2000 psi shop tested lubricator, if required). RIH w/ a Schlumberger 3-3/8" gun system loaded with 25 gm HMX charges (or equivalent). Stagger shots to accomplish 60° phasing and perforate @ as follows (correlate depth to GR/CBL/CCL log).

Formation	Top Perf	Bottom Perf	Feet	SPF	Total Shots
Blinebry	5081	5089	8	2.	16
Blinebry	5170	5180	10	2	20
Blinebry	5262	5282	20 ·	1	20
Blinebry	5375	5384	9	2	18
Blinebry	5451	5461	10.	2	20
		******	· ·	Total Shots	<u> </u>

- 21. POOH. Confirm all shots fired.
- RDMO e-line perforating services.
- Set frac water tanks according to stimulation proposal.
- 24. MI-RU a hydro-test services to test work string in while RIH in preparation for fracture treatment.
- 25. PU-RIH with a treating packer on a 2%", 6.5#/ft N-80 work string. Hydro-test work string to 5000 psi, note all testing will be performed below grade. Once on depth release hydro-test and set treating packer @ 4,800'± (or a minimum of 100' above top perforation).
- 26. MI-RU Halliburton stimulation services. RU frac valve directly onto 27/8" work string to frac the Blinebry @ 20± bpm as per attached procedure. Bring adequate horsepower to accomplish 20± bpm @ 3,500 psi. An acid ball-out will be part of the procedure, so a remote ball launcher and N₂ operated relief valve are required. Monitor the 21/3" x 51/2" annulus.
- 27. Prime pumps and lines back to the blender and verify flow meter agreement. Pressure test liquid lines against Frac Valve to 5,000 psi for a minimum of five (5) minutes. An acceptable test is 100 psi/min or 300 psi in 3 minutes.
- 28. Frac the Blinebry zone from 5081-5461' with # 20/40 resin coated sand. Perform facture treatment per the attached proposal @ 20± bpm @ 3,500 psi. Shut down and monitor the pressure decline for 15 minutes.

TREATING LINE TEST PRESSURE: A minimum 500 psig over MAWP. Acceptable test will be no more than 300 psi leak off in 5 minutes, with no more than 1% leak off in last minute, AND NO VISIBLE LEAKS).	5000	PSIG
MAXIMUM ALLOWABLE WORKING PRESSURE: Based on	4,090	PSIG

weakest component in system (85% of 15:5# J=55 casing burst)		
NITROGEN POP-OFF SETTING: the valve is to be tested prior to pumping, and must pop within 500 psi of set pressure.	4,000	PSIG
TRUCK KILL SETTING	4,000	PSIG
MAXIMUM ALLOWABLE TREATING PRESSURE: If reached, human action required.	3,500	PSIG
MAXIMUM ANTICIPATED TREATING PRESSURE: Based on frac design	3,500	PSIG

- 29. Obtain ISIP. Continue monitoring and recording for 20 minutes following shut-in (every 5 minutes).
- 30. RD-MO stimulation equipment.
- 31. Shut-in well overnight to allow Resin to cure (or as directed by stimulation company representative).
- 32. Open well and begin flowing /unloading the well. Flow well until it loads up / dies. POOH with work string.
- TIH with bit for 5½" 17# casing. Clean out to Cement retainer at 5790'±. Do not drill up retainer. Circulate hole clean and spot biocide treatment per Champion's instructions. POOH laying down work string.
- 34. Change out BOP rams for 2%" production tubing. Test BOP according to the ConocoPhillips Well Control Manual.
- 35. PU-RIH w/ 23/3" production tubing and land EOT @ 5465't.
- 36. ND BOPE and NU WH according to standard ConocoPhillips policy (well falls under Category 1 blanket exception).
- 37. PU-RIH w/ pump and rod string as per Rodstar design (see in Wellview).
- 38. Long stroke to confirm good pump action. Hang well off.
- 39. RDMO WSU and ancillary equipment.
- 40. Clean- up location, remove trash, dispose of produced fluids, and release any remaining ancillary equipment.
- 41. Record all well work performed in WellView.
- 42. Contact Production Specialist before turning well over to operations. Place on production, report production rates, and fluid levels in Avocet.

Conditions of Approval Grayburg Deep Unit 1 30-015-04187 ConocoPhillips Company

- 1. Contact BLM 575-361-2822 a minimum of 24 hours prior to performing operations.
- 2. Tag PBTD and spot 25 sx class H cement on top of existing plug at approximately 10790'. This was required in previous TA sundry and operator did not comply with Conditions of Approval.
- 3. Pump a minimum of 25sx class H cement from 9357-9162'. WOC and tag at 9162' or higher. (Covers casing leak)
- 4. Submit a Copy of the CBL to the BLM Carlsbad Field office.
- 5. Amend steps 4 and 5 Depending on TOC determined by CBL the operator will have two options for the Wolfcamp plug:
 - a. If top of cement is above this plug then operator can pump a minimum of 25sx class H cement from 7615-7435'. (Covers top of Wolfcamp)
 - b. If top of cement is below 7615' then the operator must perforate casing and squeeze a class H cement from 7615-7435' WOC and Tag at 7435' or higher.
- 6. Depending on TOC determined by CBL the operator will have two options for the Abo plug:
 - a. If top of cement is above this plug then operator can pump a minimum of 25sx class H cement from 6375-6165'. (Covers top of Abo)
 - b. If top of cement is below 6375' then the operator must perforate casing and squeeze a class H cement from 6375-6165' WOC and Tag at 6165' or higher.
- 7. Surface disturbance beyond the originally approved pad must have prior approval.
- 8. Closed loop system required.
- 9. 3000 (3M) BOP to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the size of the work string shall be adequate. Tapered work strings will require an additional pipe ram.
- 10. Operator to have H2S monitoring equipment on location as H2S has been reported from wells in the area.

- 11. Completion report and subsequent sundry with well test and wellbore schematic required.
- 12. Plug back operations shall commence within <u>ninety (90)</u> days from the approval date of this Notice of Intent.
- 13. The proposed well is not within a participating area. A commercial well determination must be submitted to the BLM Carlsbad Office.

CRW 121112