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

HOBBS OCD

NOV 13 2013

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State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised November 14, 2012

☐ AMENDED REPORT

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

1. Operator Name and Address	2. OGRID Number
ConocoPhillips Company P. O. Box 51810 Midland, TX 79710	217817
	3. API Number 025-32128

4. Property Code	5. Property Name	6. Well No.
31667	Hardy 36 State	01

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
K	36	20S	37E		1980	South	2230	West	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name	Pool Code
Skaggs; Abo South	56650

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
recomplete/PB	Oil	Rotary	State	3489' GL
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
	10,625'	Skaggs Abo South		11/16/1993
Depth to Ground water	Distance from nearest fresh water well		Distance to nearest surface water	

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
surf	17 1/2"	13 3/8"	61#	533'	on record	0
Interm	12 1/4"	9.63"	40#	3900'	on record	0
prod	8 3/4"	7"	26#	10,625	on record	9756'

Casing/Cement Program: Additional Comments

cmt program on file. Please see attached procedure & current/proposed schematic

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.** Signature: Rhonda Rogers	OIL CONSERVATION DIVISION Approved By:
Printed name: Rhonda Rogers	Title: Petroleum Engineer
Title: Staff Regulatory Technician	Approved Date: / Expiration Date:
E-mail Address: rogerrs@conocophillips.com	DEC 02 2013
Date: 11/11/2013 / Phone: (432)688-9174	Conditions of Approval Attached

DEC 02 2013

ConocoPhillips

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Hardy 36 Ste # 1
API #30-025-32128
Recompletion/Plug back.
Lea County, New Mexico

During a remedial operation back in **July 2012** some problems were encountered and in order to help understand the magnitude of the problem and solution the following summary is presented:

From the reports:

7/11/2012 DTL.JSA GO CARD. RU HOT OILER. PUMPED 70BBLS HOT WATER TREATED WITH 2.5 GALLON WRH/211, 5 GALLONS M153, 1.5 GALLONS OF BIOCIDE. RD HOT OILER. RU SCANALOG. POOH SCANNING TBG. HAD 287 YELLOW. 10 BLUE. 23 GREEN. 1 RED. ***(HOLE IN 255 JT FROM SERVICE. 8,037 FT FROM SURFACE)*** RD SCANALOG TUBG TESTERS. RU TUBG TESTERS. PU 6 1/8" BIT AND 7" CASING SCRAPER. TEST TBG TO 5000# BELOW SLIPS TO 3250" SION.

7/12/2012 DTL. JSA AND GO CARD. RIH TESTING TBG TO 5000# BELOW SLIPS. ***TAGGED UP WITH BIT @ 8,003"*** ATTEMPTED TO WORK THROUGH TIGHT SPOT WITH TBG TONGS. COULD NOT MAKE ANY HOLE. POOH WITH 2000' OF TBG. FINISHED TESTING IN HOLE WITH REMAINDER OF TBG. POOH WITH BIT AND SCRAPER TO 2600'. SION

7/13/2012 DTL, HELD JSA GO-CARD. POH W/ TBG AND CASING SCRAPPER. **P/U 6-1/8" BOTTOM HOLE TAPERED MILL**, 4-3/4" JARS, 6-4-3/4" DRILL COLLARS, TIH ON 2-7/8" TBG, ***TAG AT 7997'***. P/U POWER SWIVEL, N/U STRIPPER HEAD. BREAK CIRCULATION, MAKE 1.5 FTTO 7998.5 CIRCULATE CLEAN. PULL ABOVE TIGHT SPOT. SIOWE.

7/16/2012 CREW TO SAFETY STAND-DOWN, DTL, HELD JSA GO-CARD. POH W/ TBG, DRILL COLLARS AND MILL. ***MILL SHOWED SOME WEAR ON VERY END AND 15" UP ON O.D. OF MILL SHOWED WEAR PATTERN OF 5-5/8" O.D***. CALL IN FOR ORDERS. RIH W/ DRILL COLLARS AND LAY DOWN SAME. RIH WITH KILL STRING TO 2000'.

As seen above the problem at first seemed to be a tight spot around 8003' which according to the History of the well is where the DV tool was located during the primary cementing operation. This was first identified as tight spot back in 1/12/94 as possible source of leaking but it was later dismissed. Last year during the remedial operation in 7/2012 it was aggravated by the milling operation carried on during the job (According to wear pattern observed on mill).

In order to better assess the problem and thoroughly study the alternatives for a possible fix it was decided then to run a Downhole camera on 4/10/2013:

From the reports:

4/10/2013 DTL CONDUCT JSA AND GO CARD MEETING SICP 0 PSI SITP 0 PSI OPEN WELL TOOH W/ TBG, SCRAPER, AND BIT TIH OPEN ENDED EOT @ 8000' CIRCULATE 200 BBLS OF FRESH WATER RU WIRELINE TRUCK TIH W/ DOWN HOLE VIDEO CAMERA INSPECT CSG FROM 8000' DOWN TO 8009' PULL TBG TO 7994' COULD NOT GET CAMERA TO WORK RUN TBG BACK TO 8000' CAMERS STILL NOT WORKING TOOH W/ CAMERA LENS OVER LIGHT BROKEN LIGHT SHORTED OUT RD WIRELINE TRUCK SWION

The video assessment showed a poor integrity of the casing at the 8000 ft. mark and below, which in turn will prevent any operation deeper than this point as seen in the some of the remarks of past operations.

Conclusion and Recommendation:

New potential intervals have been identified up hole (ABO @ 6950' – 7130') and it is our intention to explore these intervals . However, being Conoco Phillips a responsible operator we want to meticulously guarantee that we are giving our best effort to remediate the situation and abandon the wellbore below 8000'. All the facts exposed above and the evident amount of resources and time invested on this well we think reflect that. It is why we put to your consideration the following plan to abandon the wellbore below **8000'** and recomplete the upper zones. Here a brief summary:

1. Run with a packer to 7900'. Pump 560 sacks of class H cement (16.4 # /gal) in an effort to cap the Bridge Plug set @10'130 and isolate the Simpson McKee perforations.
2. Set a Bridge Plug @ 7780' capped with 35ft of class C cement.
3. Set a Bridge Plug @ 7500' capped with 35ft of class C cement.
4. Perf and Complete the **ABO** Intervals **6950-6990 7070-7130** by acid fracturing.

WELL CATEGORY, BOP CLASS AND EXCEPTIONS

Well Category One:

H2S: 0 ppm.
Well Rate:

H2S	ROE- ft.
100 ppm	0
500 ppm	0

BOPE Class One: Hydraulic BOP w/ hydril.

PROCEDURE

1. MI & RU well service unit. The following is a summary of current well configuration:

Hardy 36 Ste 1 (API: 30-025-32128)			
1980 FSL & 2230 FWL, 36-20S-37E			
Elev.: 3500 KB; 3489 GL (DF - GL: 11 ft.)	**Depth: RKB**		
	top	btm	
9-5/8", 40#, K-55 (12-1/4" hole)	surface	3900	11.24.93: Cmt w/ 833 sx. Circulated cmt to surface.
7", 26# , L80 (8-3/4"" hole)	surface	10625	12.16.93: Cmt w/ 926 sx. Reported TOC: 1613
			03.14.1994: Sqzed perforations 6705-6746
Completion Interval:			
Perforated Interval	7562	7706	04.15.98: Perforate Strawn@ 1 spf.
RBP	7760	7770	07.18.2012
Perforated Interval	9940	10006	03.14.94: Perforate Mckee @ 1 spf
CIBP	10130	10135	03.20.1996
Perforated Interval	10165	10480	02.13.09: Perforate Ellenburger @ 1spf

2. ND Wellhead. NU 7 1/16" with 3 ½ "pipes rams and blinds "10K BOPS. Rig down floor and tongs. RU Scanning services.

3. PU & RIH with 6-1/8" bit, 4: 3-1/2" DC and casing Scrapper on WS. Clean out to PBTD @ 7500.

4. POOH with Bit, DC and Casing Scrapper on WS. PU & RIH with Retrieving tool on WS. Release and pull out of hole with 7" RBP set @ 7500' on WS. Verify well is still dead.

5. RIH with retrieving tool on WS. Release and pull out of hole with 7" RBP set @ 7780' on WS. Monitor backside pressure and if needed have ready 10 # brine in case of pressure swabbing when pulling with RBP out of hole.

6. RIH with WS open ended. Try to tag obstruction @ 8003'. If possible get past obstruction and record tagging depth. RBP @ 10'130. If a tagging of the RBP is possible dump 25 sxs of class H cement. Balance Plug considerations: Displace the 25 sxs of cement with 11 bbls of water. Height of plug: 604'. Top of plug depth 9526'. Thickening time @ depth: 90 Minutes.

7. POOH with WS.PU & RIH with cement retainer on WS. Set cement retainer @ 7950'. Pump 560 class H cement (16.4 ppg). Sting out of retainer and circulate wellbore clean. POOH with WS. PU & RIH with 6 1/8" bit, 3 4 ¼ DC on WS. Drill out Cement Retainer. Tagging might be required to assess cement final depth. Communicate results **to Libardo Gonzalez 432 202 8536**

8. RIH w/ tbg & CIBP-1. Set CIBP-1 @ 7880. POOH w/ tbg. Spot 35 ft. of cement on top of CIBP (if dump bailer is to be used tag cement cap afterwards). Test plug to 500 #.

9. TIH with open ended tubing. Fill hole with 6 bbl of 14.8 ppg mud up to 7706 '. POOH.

10. RIH w/ tbg & CIBP-2. Set CIBP-2 @ 7500. POOH w/ tbg. Spot 35 ft. of cement on top of CIBP (if dump bailer is to be used tag cement cap afterwards). Test plug to 500 #.

11. MI-RU Apollo perforating services with hydraulic pack off (or full lubricator, shop tested to 3,000 psig, if needed).

12. PU GR/CCL tool and Composite Bridge Plug (CBP). RIH and set CBP @ 7250' RKB. POOH.

13. Note: Correlate depth control to **Schlumberger Cement Bond Variable Density Log dated 01.13.94**

Collars Depth	Length
6820	
6863	43
6909	46
6953	44
6995	42
7041	46
7088	47
7134	46
7180	46
7224	44
7269	45

14. PU-RIH to perforate using TITAN (or equivalent) 3-1/8" guns with deep penetrating charges (0.40" EH, 40.8") loaded @ 2 SPF on 60 degree phasing. Perforate the casing from the bottom up as follows:

PROPOSED ABO

Formation	Perf Top	Perf Bottom	Interval	SPF	Total Shots
ABO	6950	6990	40	2	80
ABO	7070	7130	60	2	120
TOTAL			100		200

15. PU 7 "treating packer. RIH with Packer on WS. Set PKR @ 7020.

16. ND BOPE and NU 10k psi Frac Stack.

17. Bring adequate horsepower to accomplish up to 20 bpm @ 6,000 psi. An acid ball-out will be part of the procedure, so a remote ball launcher and N2 operated relief valve are required. Place a pressure gauge on the tubing-casing backside and monitor 3 ½" x 7" backside pressures throughout job.

18. MI-RU Acid service provider to treat the first set of ABO perforations (7070-7130) w/ a total of 8,000 gallons 15% NEFE-HCL (double inhibited) acid as follows:

Acidize ABO perforations (7070'– 7130') as follows:

i. Establish injection rate and pressure.
ii. Monitor 3½" x 7" annulus looking for signs of communication
iii. Pump inhibited 2% KCL water to break down perforations (record rate & pressure which must adequate to support dropping ball sealers)
iv. Pump a minimum of 100 bbl inhibited 2% KCL water pad.

Acid blend (Gelled Acid) - 8,000 gallons (~190 bbls) of 20% NE Fe HCL, non-emulsifier, iron reducer, and corrosion inhibitor (double inhibited)
Pump 50 bbl. acid @ at rate > 10 BPM (record pressure and rate)
Drop 30 - 5/8" RCN balls every 50 bbls of ACID.
a total of 90 RCN balls will be used. Flush to packer with Water (+/- 61 bbls)

19. ND frac stak and NU BOPE.

20. Confirm / release any remaining pressure on work string, then release treating packer. POOH with packer on WS. Monitor casing pressure for surge in pressure when pulling packer.

21. PU CBP. RIH with CBP and packer on WS. Set CBP @ 7020' and packer @ 6900'.

22. ND BOP. NU Frac Stack.

Acidize ABO perforations (6950'– 6990') as follows:

i. Establish injection rate and pressure.
ii. Monitor 3½" x 7" annulus looking for signs of communication
iii. Pump inhibited 2% KCL water to break down perforations (record rate & pressure which must adequate to support dropping ball sealers)
iv. Pump a minimum of 50 bbl inhibited 2% KCL water pad.

Acid blend (Gelled Acid) - 6,000 gallons (~143 bbl.) of 20% NE Fe HCL, non-emulsifier, iron reducer, and corrosion inhibitor (double inhibited)
Pump 50 bbl. acid @ at rate > 10 BPM (record pressure and rate)
Drop 30 - 5/8" RCN balls every 50 bbls of ACID.
a total of 60 RCN balls will be used. Flush to packer with Water (+/- 60 bbls)

23. RDMO Service Company. Allow Acid to spend on perforations for at least 4 hrs.

24. ND frac stack and NU BOPE.

25. Confirm / release any remaining pressure on work string, then release treating packer. POOH with packer on WS. Monitor casing pressure for surge in pressure when pulling packer.

26. POOH with Packer on WS.

27. PU & RIH with 6-1/8" bit, 4: 3-1/2" DC and casing Scrapper on WS.Drill out CBP's set @ 7020'. Clean out to 7200'.POOH with bit and DC. LD bit, DC and WS.

28. PU-RIH w/ 2 7/8" (4.7#/ft, L-80) production tubing. Hydro-test production tubing, below slips to 5000 psi. Set landing nipple @ 7150'.

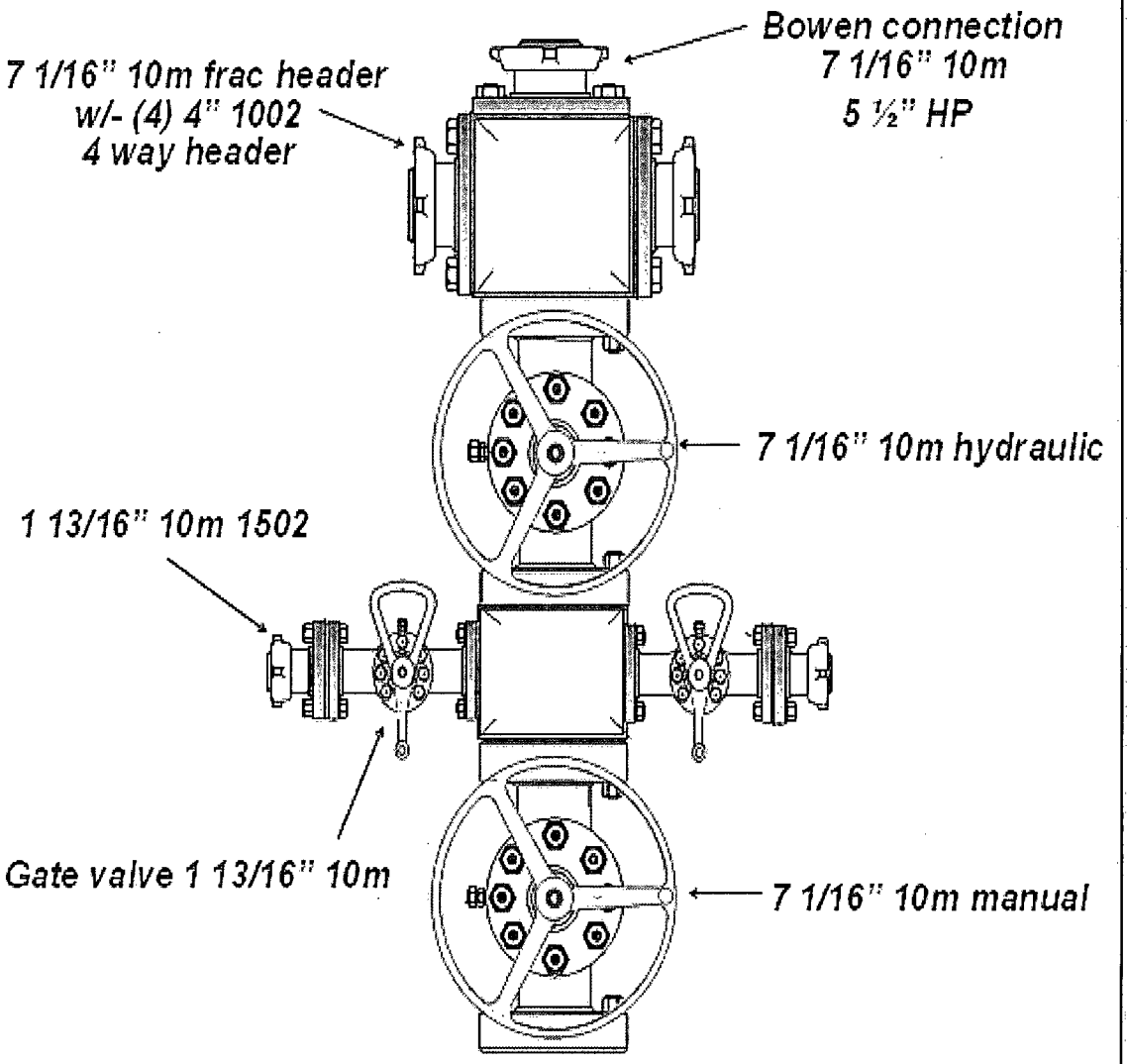
29. ND BOP.NU WH. RIH with pump and rods as per consigned in WELLVIEW prepull attached below.

30. Space pump, hang well, load tubing and check pump action. RDMO. Handover to Operations.

31. Clean up location; remove produced liquids, trash, and debris.

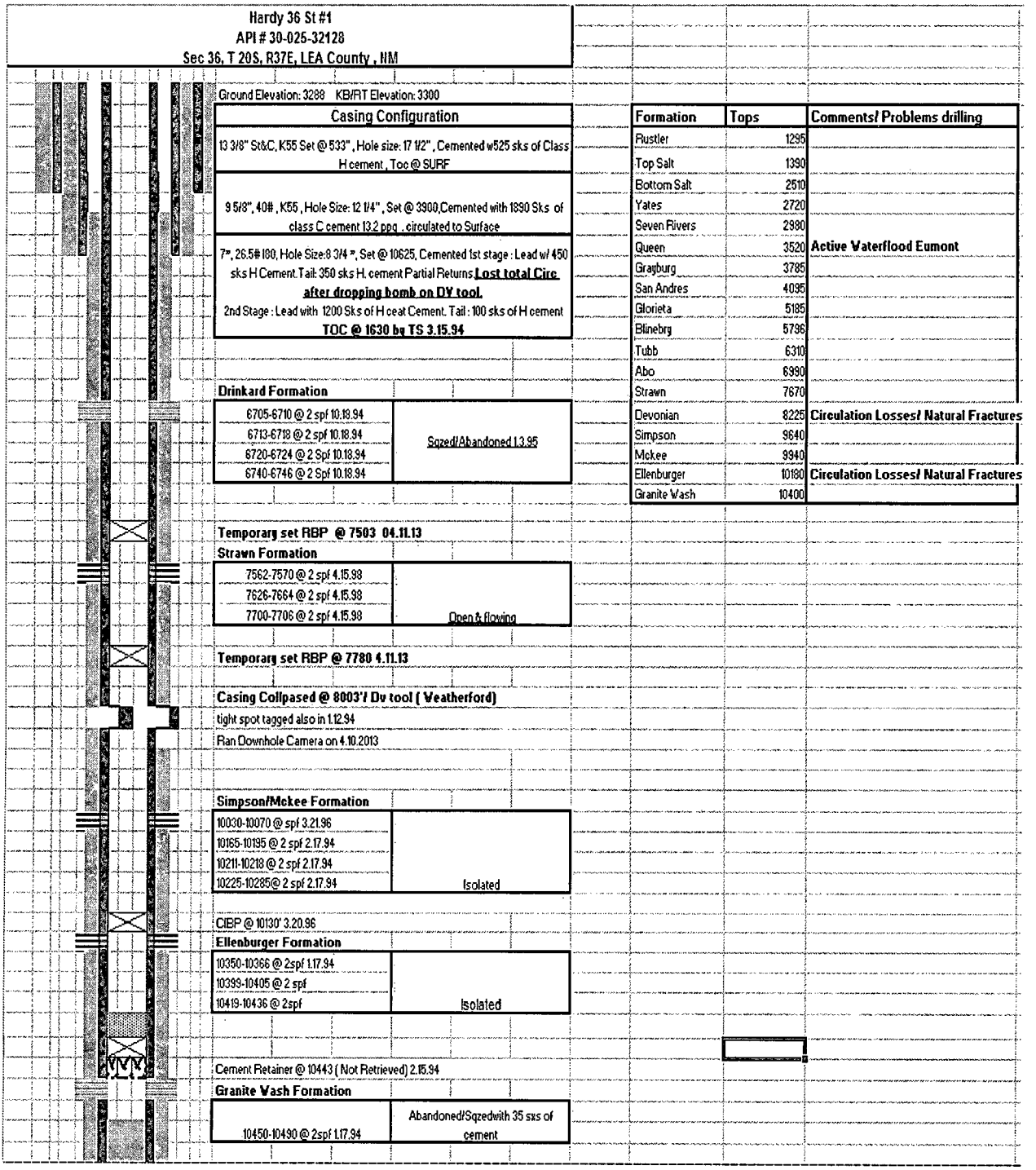
Attachments:

COPC
7 1/16" 10m frac stack



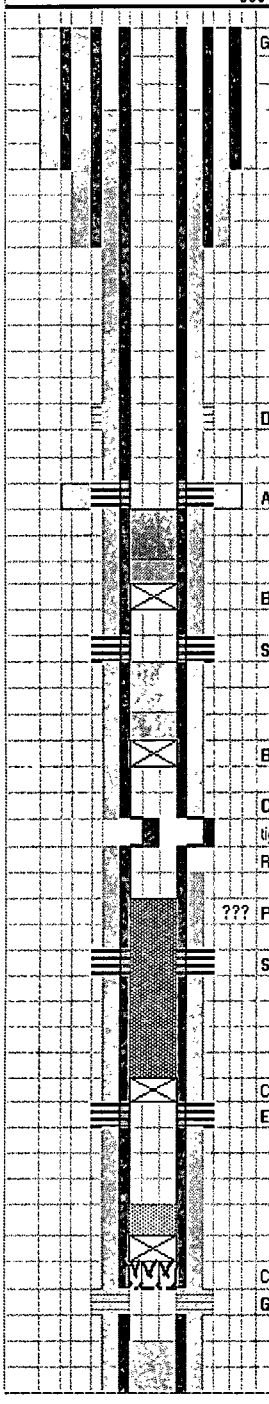
Need complete accumulator set up for hydraulic valve
Crane truck and torque wrenches
Need to have available: 4" 1002 back to 3" 1502 connections

Current Well Schematics.



Proposed Well Schematics

Hardy 36 St #1
API # 30-025-32128
Sec 36, T 20S, R37E, LEA County , NM



Ground Elevation: 3288 KB/RT Elevation: 3300

Drinkard Perforations Sqzed & Abandoned 1.3.95

ABO Perforations Proposed (6950-6990, 7070-7130) @ 2 SPF
Acid fracture Abo with 20 % NEFE gelled Acid.

BP Above Strawn @ 7503 capped with 35 ft of Class C ceme

Strawn Formation. OPEN

BP @ 7880 capped with 35 ft of Class C cement

Casing Collpased @ 8003'/ Dv tool (Weatherford)
tight spot tagged also in 1.12.94
Ran Downhole Camera on 4.10.2013

??? Planned to fill with cement . Tag Depth will be required showing good faith

Simpson/Mckee Formation. OP

CIBP @ 10130' 3.20.96
Ellenburger Formation

Cement Retainer @ 10443 (Not Retrieved) 2.15.94
Granite Wash Formation

Formation	Tops	Comments/ Problems drilling
Rustler	1295	
Top Salt	1390	
Bottom Salt	2510	
Yates	2720	
Seven Rivers	2980	
Queen	3520	Active Waterflood Eumont
Grayburg	3785	
San Andres	4095	
Glorieta	5185	
Blinebry	5796	
Tubb	6310	
Abo	6990	
Strawn	7670	
Devonian	8225	Circulation Losses/ Natural Fracture
Simpson	9640	
Mckee	9940	
Ellenburger	10180	Circulation Losses/ Natural Fracture
Granite Wash	10400	

PROPOSED

Current