

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

WELL API NO. <u>30-015-37423</u>
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name SRO State
8. Well Number: 15H
9. OGRID Number 229137
10. Pool name or Wildcat <u>Tecolote Peak</u> Delaware
11. Elevation (Show whether DR, RKB, RT, GR, etc.)

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.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

COG Operating LLC

3. Address of Operator

One Concho Center, 600 W. Illinois Ave, Midland, TX 79701

4. Well Location

Unit Letter D : 660 feet from the North line and 330 feet from the West line

Section 17 Township 26S Range 28E NMPM County Eddy

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

DOWNHOLE COMMINGLE ☐

CLOSED-LOOP SYSTEM ☐

OTHER: Recomplete in Delaware ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☐

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.

COG Operating LLC respectfully request to abandon the Bone Spring in the SRO State #15H and recomplete in the Delaware.

Please see attached recompletion procedure with before and after well bore schematics

All operations will be conducted using a closed loop system

NM OIL CONSERVATION

ARTESIA DISTRICT

SEP 15 2014

RECEIVED

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

SIGNATURE Brian Maiorino TITLE Regulatory Analyst DATE 9/11/14

Type or print name Brian Maiorino E-mail address: bmaiorino@concho.com PHONE: 432-221-0467

For State Use Only

APPROVED BY: T. C. Shepard TITLE "Geologist" DATE 9-23-2014

Conditions of Approval (if any):

SRO State Unit 15H
660' fnl, 330' fwl
D-17-26S-28E
Eddy Co., NM
30-015-37423
Delaware Recompletion Procedure
9 Sep 14

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 15 2014
RECEIVED

Basic Data:

13-3/8" @ 300' Circ. Cmt.

9-5/8" @ 2288' Circ. Cmt.

5-1/2" @ 10725' MD, DV @ 6056' & DV/ECP @ 2007', Circ. Cmt. Stgs. 1 & 3, Circ. Red Dye Stg. 2

5.5"/17ppf/P-110/LTC Burst=10640 psi, 8512 psi at 80% Nom. ID=4.892" Drift ID=4.767"
(.0232 B/F capacity)

2.875"/6.5ppf/J55/EUE Burst=7260 psi, 5808 psi at 80% Nom ID=2.441" Drift ID=2.347"
Collapse=7680 psi, 6144 at 80%
Tensile=99700 lb with no safety factor

Objective: Test Delaware Sands and plug well if non-productive.

Procedure:

1. MIRU WSU, kill well if necessary, NU double ram BOP (2-7/8", blind rams) and TOOH with tubing. Look at tubing to verify that it doesn't have scale or paraffin deposition on the inside. If there is scale or paraffin, a decision might be made to pick up a 2-7/8" work string.
2. RIH with bit and scraper to 6750' MD. Pick up CIBP, RIH cautiously to 6700', set CIBP, close pipe rams and test plug to 500 psi. Spot 25 sx Class C neat (14.8 ppg, 1.32 cfps) on top of CIBP. Pull 10 stands, reverse circulate tubing clean, WOC 3-4 hrs and tag plug. If tag deeper than 6600', contact OCD Artesia to see if they want plug re-spotted. (25 sx "C" should occupy 253' of casing and be 6700-6450')

Note: This plug is set in the Avalon Shale and is less than 100' above the lateral in true vertical depth. The CIBP will be set at approx. 6700' MD, 6613' TVD, 56 deg inclination. The lateral is 6705' true vertical depth.

3. Pull end of tubing to 6205' and spot 25 sx Class C to cover top of Bone Spring 6154' and DV tool at 6056'. Pull 10 stands, reverse circulate tubing clean, WOC 3-4 hrs and tag plug. If tag deeper than 6000', spot another plug sized to place TOC in the 5950-6000' range. (25 sx "C" should occupy 253' of casing and be 6205-5950')
4. RU lubricator, run GR/CCL from PBD to 3300' and perf the Delaware Sand 1 with 3-1/8" casing guns loaded 2 spf at any phasing using deep penetrating charges at the depths shown below.

Delaware 1: 5864-5870' (12 shots) OH Log

5. RIH with packer assembly to approx. 5800', pump acid close to packer, close bypass and acidize with 750 gals. NE Fe 7.5% HCl acid at 3-5 bpm while limiting treating pressure to 5000 psi and holding 500

psi on annulus. Drop slug of 10 ballsealers after pumping 500 gals acid. Swab/flow test to evaluate oil/gas show. Swab into a drum if necessary for accurate oil cut data.

6. If decision made to frac, install frac valve on tubing and frac down tubing at 10-12 bpm with low gel load borate crosslink fluid carrying approx. 25,000 lbs. 20/40 CRC sand per attached frac outline. Limit treating pressure to 5000 psi while holding 500 psi on annulus. Have pump on backside in case well screens out and we need to reverse circulate the well clean. When sand concentration falls below 4 ppg, bypass blender and go to quick flush. Shut in for 24 hrs to let resin cure then flow well down while limiting flow back rate to 2 bpm.
7. If fraced, will PWOP and produce this zone before continuing with procedure. Well will be rod pumped and A/L design will be issued. Will likely run seating nipple on bottom of tubing, TAC 100' above top perf with SN landed approx. 50' below the bottom perf.
8. When/if ready to abandon Delaware 1, install lubricator, run gauge ring/JB to 5825' and set CIBP + 35' cement at 5800' (top perf at 5864').
9. RU lubricator and perf the Delaware Sand 2 with 3-1/8" casing guns loaded 3 spf at any phasing using deep penetrating charges at the depths shown below.

Delaware 2: 4914-4918' (12 shots) OH Log

10. RIH with packer assembly to approx. 4875', pump acid close to packer, close bypass and acidize with 500 gals. NE Fe 7.5% HCl acid at 3-5 bpm while limiting treating pressure to 5000 psi and holding 500 psi on annulus. No ball sealers will be used. Swab/flow test to evaluate oil/gas show. Swab into a drum if necessary for accurate oil cut data.
11. If decision made to frac, install frac valve on tubing and frac down tubing at 7-8 bpm with low gel load borate crosslink fluid carrying approx. 10,000 lbs. 20/40 CRC sand per attached frac outline. Limit treating pressure to 5000 psi while holding 500 psi on annulus. Have pump on backside in case well screens out and we need to reverse circulate the well clean. When sand concentration falls below 4 ppg, bypass blender and go to quick flush. Shut in for 24 hrs to let resin cure then flow well down while limiting flow back rate to 2 bpm.
12. If fraced, will PWOP and produce this zone before continuing with procedure.
13. When/if ready to abandon Delaware 2, install lubricator, run gauge ring/JB to 4900' and set CIBP + 35' cement at 4875' (top perf at 4914').
14. RU lubricator and perf the Delaware Sand 3 with 3-1/8" casing guns loaded 1 spf with deep penetrating charges at any phasing at the depths shown below.

Delaware 3: 3552-3570' (18 shots) OH Log

15. RIH with packer assembly to approx. 3500', pump acid close to packer, close bypass and acidize with 1000 gals. NE Fe 7.5% HCl acid at 3-5 bpm while limiting treating pressure to 5000 psi and holding 500 psi on annulus. Drop 12 ballsealers after pumping 650 gals acid. Swab/flow test to evaluate oil/gas show. Swab into a drum if necessary for accurate oil cut data.

16. If decision made to frac, install frac valve on tubing and frac down tubing at 10-12 bpm with low gel load borate crosslink fluid carrying approx. 20,000 lbs. 20/40 CRC sand per attached frac outline. Limit treating pressure to 5000 psi while holding 500 psi on annulus. Have pump on backside in case well screens out and we need to reverse circulate the well clean. When sand concentration falls below 4 ppg, bypass blender and go to quick flush. Shut in for 24 hrs to let resin cure then flow well down while limiting flow back rate to 2 bpm.
17. If fraced, will PWOP and produce this zone.
18. When/if ready to abandon Delaware 3, pick up CIBP on tubing, RIH cautiously, set CIBP at 3500' and spot 25 sx Class C on top of CIBP. Pull 10 stands, reverse circulate tubing clean, WOC 3-4 hrs and tag plug. If tag deeper than 3450', re-spot plug. (25 sx "C" should occupy 253' of casing and be 3500-3250')
19. Spot 20 bbls mud laden fluid on bottom (9 ppg brine with 25 sx salt gel per 100 bbls of brine). This will place mud from approx. 3250' up to 2400'.
20. Pull end of tubing to 2460' and spot 60 sx Class C to cover top of Delaware at 2408', 9-5/8" shoe at 2288', base of salt at 2200' and DV tool at 2007'. Pull 25 stands, reverse circulate tubing clean, WOC 3-4 hrs and tag plug. If tag deeper than 1960', re-spot plug. (60 sx "C" should occupy 608' of casing and be 2460-1850')
21. Spot 30 bbls mud laden fluid on bottom (9 ppg brine with 25 sx salt gel per 100 bbls of brine). This will place mud from approx. 1850' up to 560'.
22. Pull end of tubing to 690' and spot 25 sx Class C with 2% CaCl₂ to cover top of salt at 634'. Pull 10 stands, reverse circulate tubing clean, WOC 3-4 hrs and tag plug. If tag deeper than 575', re-spot plug. (25 sx "C" should occupy 253' of casing and be 690-440')
23. Pull end of tubing to 350' and spot 40 sx Class C with 2% CaCl₂ to cover 13-3/8" shoe and fill casing to surface. Top off casing with cement after POOH with tubing if/as needed.
24. Cut off well head and weld plate onto 9-5/8" stub. Weld a 4' long, 4" diameter dry hole marker onto plate. The following information needs to be placed on the marker:

COG Operating LLC, SRO State Unit 15H, 660' fnl, 330' fwl, Unit D, Sec. 17, T26S, R28E, date well plugged
25. Cut off anchors, and reclaim location per NMOCD specs.

Kbc/sro st unit 15h Delaware recompl proc 9 sep 14



Job Number: 700002137 WT-WT
 Company: COG OPERATING LLC
 Lease/Well: SRO STATE UNIT #15H
 Location: EDDY COUNTY, NM
 Rig Name: JW 3
 RKB: 19
 G.L. or M.S.L.: GL

State/Country: NM/ USA
 Declination: 7.72
 Grid: -0.12
 File name: C:\DOCUME~1\PDS\DESKTOP\SROSTA~1\002137.SVY
 Date/Time: 13-Apr-11 / 17:17
 Curve Name: WORK CURVE

Pathfinder Drilling

WINERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 179.27
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
TIE-IN FROM GYRO SURVEY									
6136.00	.90	211.89	6133.63	-44.60	92.21	45.77	102.43	115.81	.00
6156.00	.88	185.98	6153.63	-44.89	92.11	46.06	102.47	115.98	2.00
6184.00	.79	189.73	6181.62	-45.29	92.06	46.46	102.59	116.20	.38
6216.00	3.34	181.12	6213.60	-46.44	92.00	47.61	103.06	116.78	8.01
6247.00	7.74	175.60	6244.45	-49.43	92.14	50.60	104.56	118.21	14.28
6278.00	12.31	175.34	6274.97	-54.80	92.57	55.98	107.58	120.63	14.74
6310.00	16.88	178.74	6305.93	-62.85	92.95	64.03	112.21	124.07	14.52
6340.00	20.93	182.20	6334.30	-72.57	92.84	73.74	117.84	128.01	14.00
6372.00	24.27	183.17	6363.84	-84.85	92.26	86.02	125.34	132.60	10.50
6403.00	27.17	184.45	6391.77	-98.27	91.36	99.42	134.17	137.09	9.52
6435.00	30.16	185.35	6419.84	-113.56	90.04	114.70	144.92	141.59	9.44

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
6466.00	33.24	185.40	6446.22	-129.78	88.51	130.89	157.09	145.70	9.94
6497.00	36.05	184.95	6471.72	-147.33	86.93	148.42	171.06	149.46	9.10
6528.00	38.51	183.93	6496.38	-166.04	85.48	167.12	186.75	152.76	8.18
6558.00	41.24	183.02	6519.40	-185.24	84.32	186.30	203.53	155.53	9.31
6589.00	44.23	182.55	6542.17	-206.25	83.30	207.29	222.44	158.01	9.70
6621.00	47.66	181.30	6564.42	-229.23	82.53	230.26	243.64	160.20	11.08
6652.00	50.91	180.75	6584.64	-252.72	82.11	253.75	265.73	162.00	10.57
6683.00	54.61	180.31	6603.39	-277.39	81.89	278.41	289.23	163.55	11.99
6715.00	58.30	180.50	6621.07	-304.06	81.70	305.08	314.84	164.96	11.54
6746.00	61.91	180.63	6636.52	-330.93	81.43	331.94	340.80	166.18	11.65
6777.00	65.69	180.82	6650.21	-358.74	81.08	359.74	367.79	167.26	12.21
6809.00	68.24	181.50	6662.73	-388.18	80.48	389.17	396.43	168.29	8.21
6840.00	70.52	182.29	6673.64	-417.17	79.52	418.15	424.68	169.21	7.73
6871.00	73.34	182.80	6683.26	-446.61	78.21	447.57	453.41	170.07	9.23
6901.00	77.56	182.82	6690.79	-475.61	76.79	476.55	481.77	170.83	14.07
6932.00	81.07	182.80	6696.54	-506.03	75.30	506.95	511.60	171.54	11.32
6963.00	83.19	181.91	6700.78	-536.71	74.04	537.61	541.79	172.15	7.41
6995.00	85.38	181.27	6703.97	-568.53	73.15	569.42	573.22	172.67	7.13
7026.00	87.58	180.58	6705.87	-599.47	72.65	600.35	603.86	173.09	7.44
7053.00	87.76	180.26	6706.97	-626.45	72.46	627.32	630.62	173.40	1.36
EOC- 3.29' ABOVE, 20.98' LEFT									
7084.00	89.52	180.35	6707.71	-657.44	72.29	658.30	661.40	173.73	5.68
7179.00	90.31	179.73	6707.85	-752.44	72.22	753.29	755.89	174.52	1.06
7271.00	90.48	177.97	6707.21	-844.41	74.07	845.29	847.65	174.99	1.92
7366.00	89.43	177.97	6707.29	-939.35	77.44	940.26	942.54	175.29	1.11
7460.00	89.34	177.45	6708.30	-1033.27	81.19	1034.22	1036.45	175.51	.56
7553.00	89.69	178.94	6709.08	-1126.22	84.12	1127.20	1129.35	175.73	1.65
7647.00	89.87	178.41	6709.44	-1220.19	86.29	1221.19	1223.24	175.95	.60
7740.00	90.48	177.45	6709.16	-1313.13	89.65	1314.16	1316.19	176.09	1.22
7833.00	90.40	179.73	6708.45	-1406.09	91.94	1407.15	1409.09	176.26	2.45
7926.00	90.40	181.14	6707.80	-1499.08	91.24	1500.12	1501.86	176.52	1.52
8021.00	91.19	180.79	6706.48	-1594.06	89.64	1595.07	1596.58	176.78	.91

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
8113.00	90.57	181.67	6705.07	-1686.03	87.66	1687.01	1688.30	177.02	1.17
8207.00	89.60	181.93	6704.93	-1779.98	84.71	1780.91	1781.99	177.28	1.07
8300.00	89.78	182.19	6705.43	-1872.92	81.37	1873.80	1874.68	177.51	.34
8395.00	88.72	180.44	6706.67	-1967.88	79.19	1968.73	1969.47	177.70	2.15
8489.00	88.64	180.96	6708.84	-2061.85	78.04	2062.67	2063.32	177.83	.56
8583.00	88.37	180.88	6711.29	-2155.80	76.53	2156.60	2157.16	177.97	.30
8676.00	88.64	181.75	6713.72	-2248.75	74.39	2249.51	2249.98	178.11	.98
8769.00	89.60	181.23	6715.15	-2341.70	71.98	2342.43	2342.81	178.24	1.17
8864.00	89.34	180.61	6716.02	-2436.69	70.45	2437.39	2437.70	178.34	.71
8958.00	91.28	180.26	6715.52	-2530.68	69.74	2531.36	2531.64	178.42	2.10
9050.00	89.43	179.91	6714.95	-2622.67	69.60	2623.34	2623.59	178.48	2.05
9144.00	89.08	179.64	6716.17	-2716.66	69.97	2717.33	2717.56	178.52	.47
9238.00	89.60	179.64	6717.25	-2810.65	70.56	2811.32	2811.54	178.56	.55
9330.00	90.31	180.17	6717.32	-2902.65	70.71	2903.32	2903.51	178.60	.96
9425.00	90.75	180.00	6716.44	-2997.65	70.57	2998.30	2998.48	178.65	.50
9519.00	91.54	180.08	6714.57	-3091.63	70.51	3092.28	3092.43	178.69	.84
9611.00	90.66	180.35	6712.80	-3183.61	70.16	3184.25	3184.38	178.74	1.00
9705.00	90.92	180.17	6711.50	-3277.60	69.74	3278.22	3278.34	178.78	.34
9799.00	90.57	179.21	6710.28	-3371.59	70.24	3372.21	3372.32	178.81	1.09
9893.00	90.04	179.91	6709.78	-3465.58	70.97	3466.21	3466.31	178.83	.93
9986.00	91.54	180.70	6708.50	-3558.57	70.47	3559.18	3559.27	178.87	1.82
10080.00	89.60	180.00	6707.56	-3652.56	69.90	3653.15	3653.23	178.90	2.19
10174.00	89.08	178.94	6708.65	-3746.55	70.77	3747.14	3747.22	178.92	1.26
10268.00	89.16	179.29	6710.09	-3840.52	72.22	3841.13	3841.20	178.92	.38
10363.00	88.55	178.94	6711.99	-3935.49	73.68	3936.11	3936.18	178.93	.74
10456.00	87.93	179.91	6714.85	-4028.44	74.62	4029.07	4029.13	178.94	1.24
10550.00	88.55	179.91	6717.73	-4122.40	74.77	4123.02	4123.08	178.96	.66
10644.00	89.69	179.12	6719.18	-4216.38	75.56	4217.00	4217.06	178.97	1.48
10693.00	90.13	179.12	6719.25	-4265.38	76.31	4266.00	4266.06	178.98	.90
STRAIGHT-LINE PROJECTION TO BIT @ TD									
10750.00	90.13	179.12	6719.12	-4322.37	77.19	4323.00	4323.06	178.98	.00

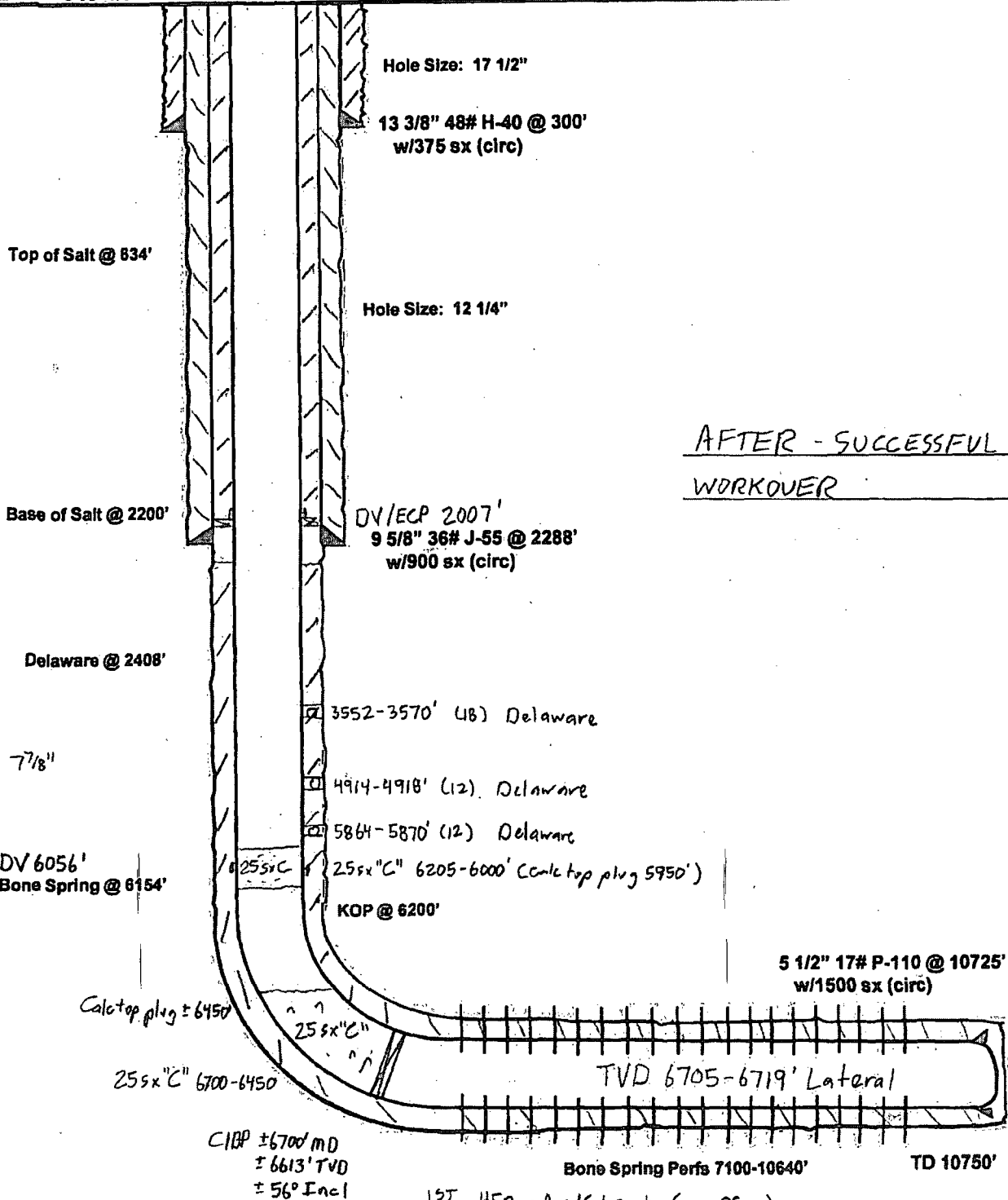
SRO State Unit #15H
Wildcat; Bone Spring
API: 30-015-37423

Eddy County, NM
Section 17 T26S R28E

SHL
660' FNL
330' FWL

BHL
334' FSL
348' FWL

KB: 3141'
GL: 3122'



AFTER - SUCCESSFUL
WORKOVER

1st: 450sx Acid Sol. Gmt (Circ 95sx)

2nd: 550sx HLC + 100sx"C" (Circ colored dye, no amt)

3rd: 300sx HLC + 100sx"C" (Circ 135x)

6/25/11 - ad

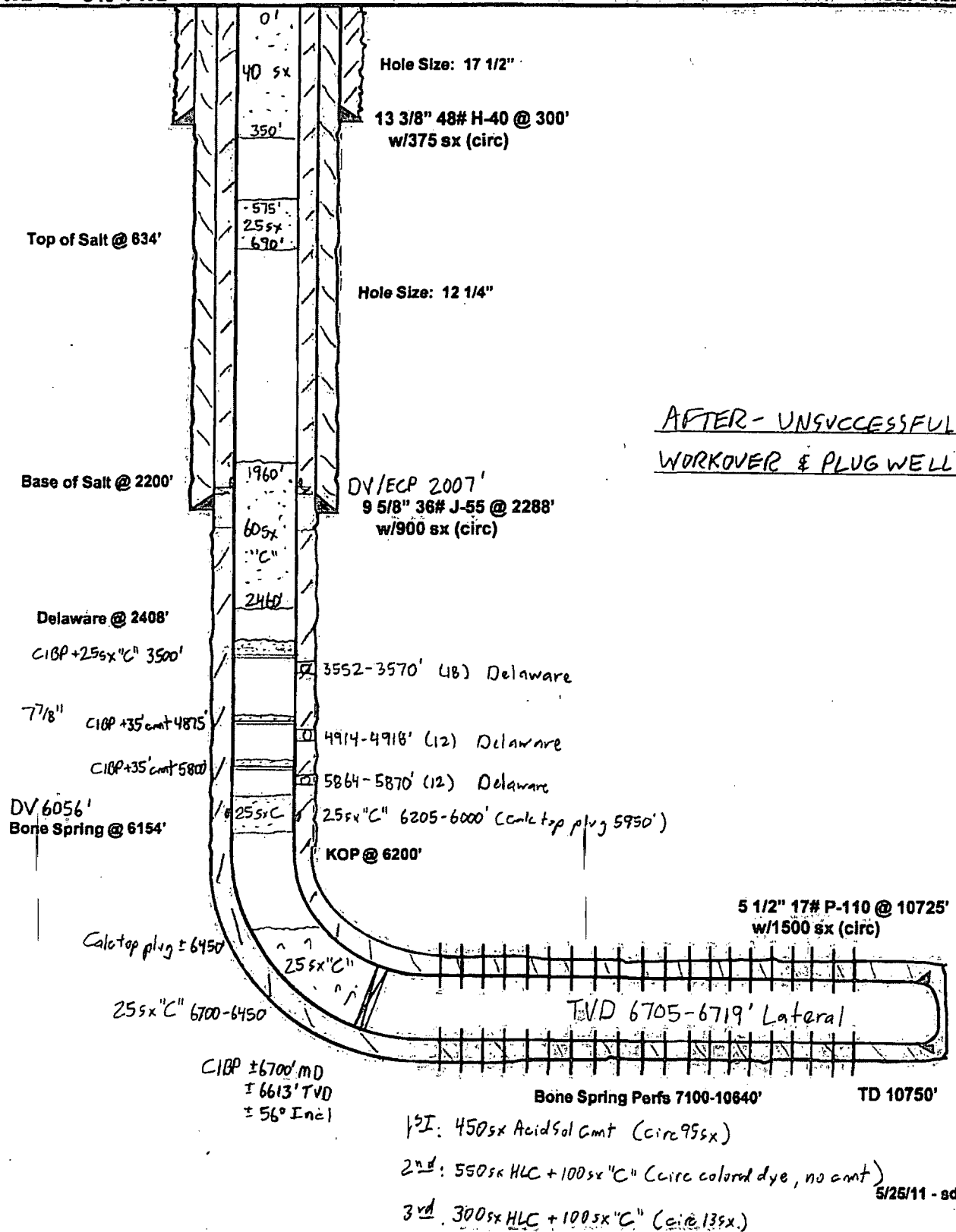
SRO State Unit #15H
Wildcat; Bone Spring
API: 30-015-37423

Eddy County, NM
Section 17 T26S R28E

SHL
660' FNL
330' FWL

BHL
334' FSL
348' FWL

KB: 3141'
GL: 3122'



AFTER - UNSUCCESSFUL
WORKOVER & PLUG WELL

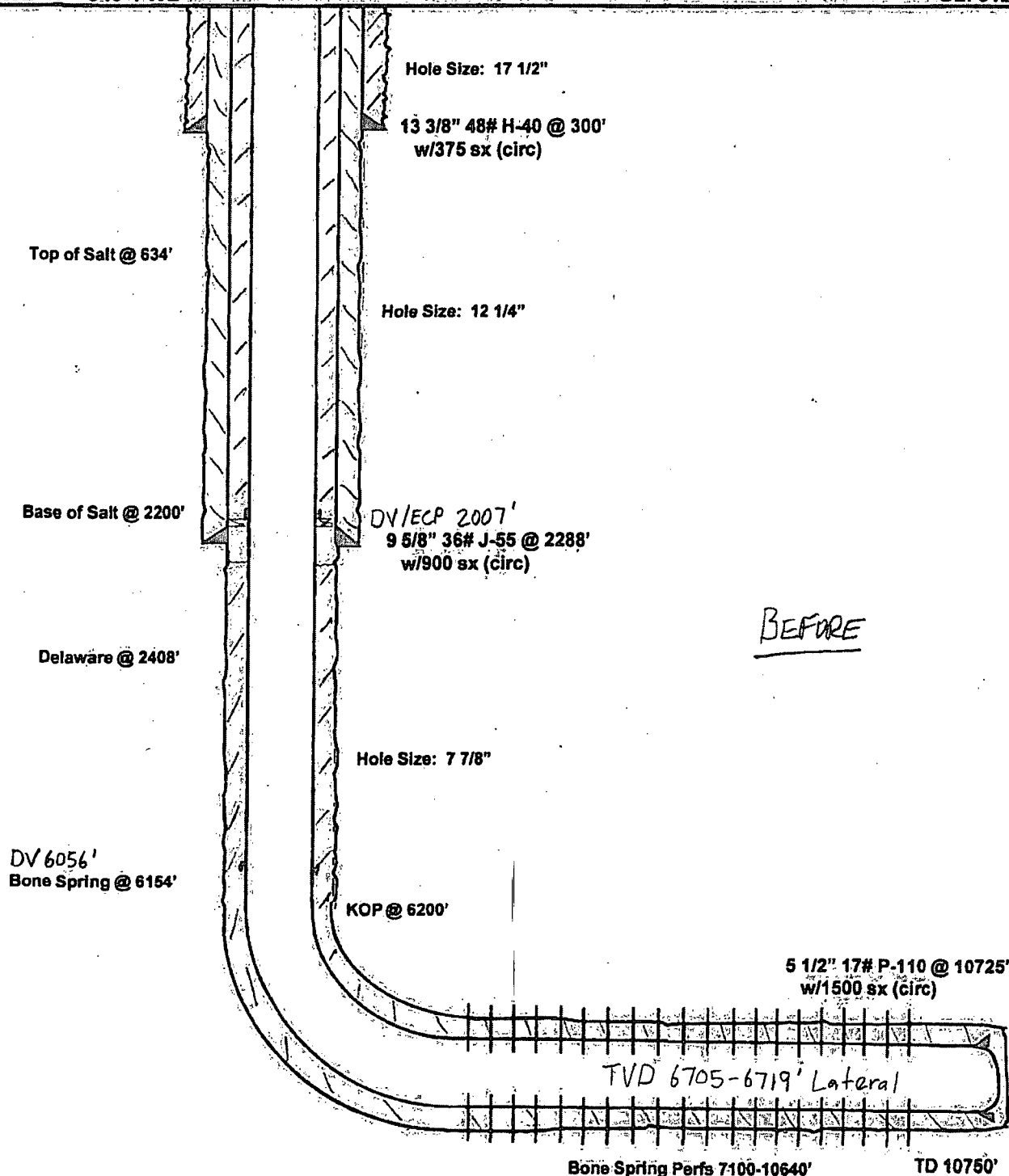
SRO State Unit #15H
Wildcat; Bone Spring
API: 30-015-37423

Eddy County, NM
Section 17 T26S R28E

SHL
660' FNL
330' FWL

BHL
334' FSL
348' FWL

KB: 3141'
GL: 3122'



BEFORE

1st: 450sx Acid Sol. Gmt (circ 95sx)

2nd: 550sx HLC + 100sx "C" (circ colored dye, no amt)

3rd: 300sx HLC + 100sx "C" (circ 13sx)

5/25/11 - ad